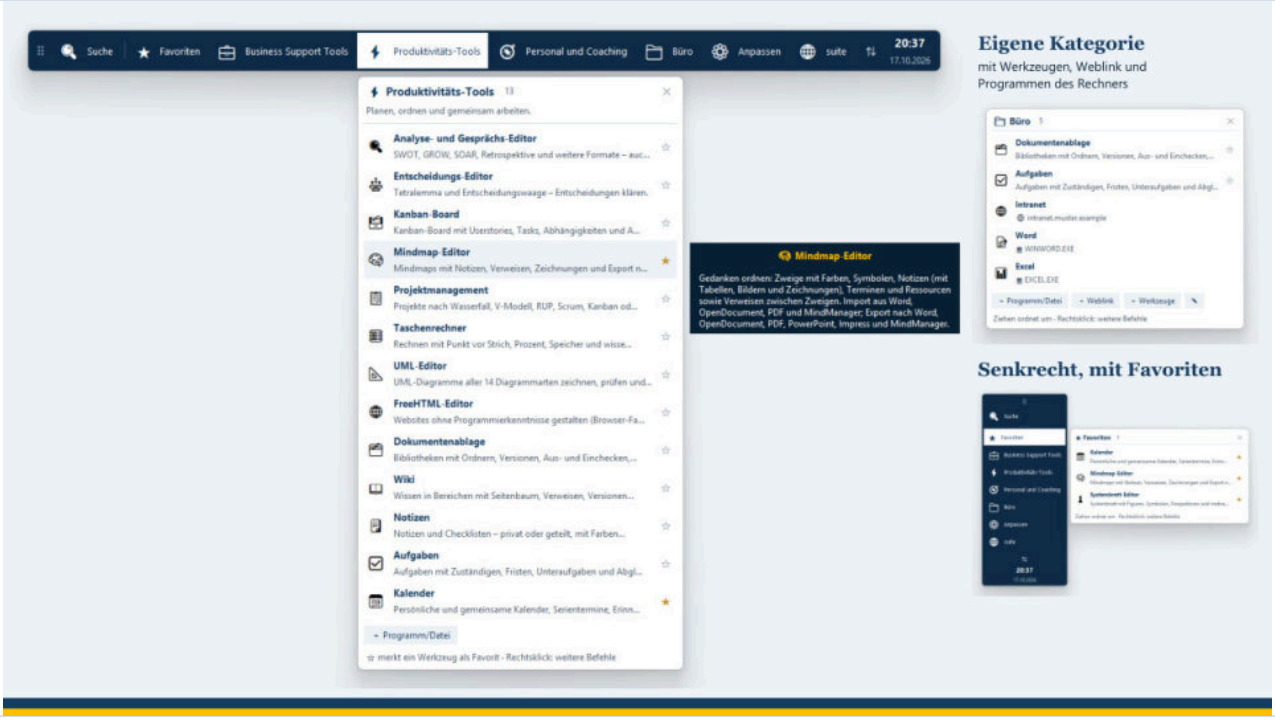
MY COACHING FOR YOU

USER MANUAL

MC4Y Suite user manual – portal, tools and games

MC4Y Suite user manual: portal, tools, questionnaires, games and taskbar – with the differences between Windows, macOS, Linux and browsers.



Two clicks in the taskbar – category, tool – open any tool of the suite – this manual describes what happens next, on Windows, macOS and Linux

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This manual is the reference work for the MC4Y Suite: every module of the portal, every tool, every questionnaire and every game has a chapter of its own – with purpose and use, step-by-step instructions, all functions and buttons, saving, export and handovers, use on a phone, the differences between operating systems and browsers, and tips. Before that come the basics that apply to everything: which systems and browsers I test and how, how saving and opening work and how the portal is organised. How to set up the suite on a computer or server is described in the installation manual.

This manual is as of 21 November 2026: MC4Y Suite 0.4.68, MC4Y Taskbar 1.7.9. Every tool shows its own build version at the top right of its header.

At a glance

- **One chapter per tool:** 99 chapters on all modules, tools, questionnaires, games and the taskbar – each with instructions, all functions and buttons and tips; as a PDF with contents and index for printing.
- **Three ways to every tool:** directly on the website, as a downloaded file on your computer or in the MC4Y Suite with shared storage on the server.
- **98 entries in the suite's catalogue:** seven modules in the portal, 63 tools, seven questionnaires and 21 games. Released are the mind map, the 3D and the 2D systemic board, master data, the ITSM tool, the Kunden-Navigator and the Vertriebs-Navigator, the text editor and the game Technical Debt (on the website under Resources); all others are still beta and not fully tested.
- **Your data stays with you:** without the suite, all entries stay on your device; with the suite, on your own server. Merely opening a tool creates nothing in the browser.
- **Chrome and Edge** save directly to a file or folder; **Safari and Firefox** save via the browser's downloads folder. Folder features are only available in Chrome and Edge.
- **German or English** in every tool, in the portal and in the taskbar – switchable with "DE" and "EN".
- **Phone and tablet:** the board tools have their own controls for your finger; the portal adapts to narrow screens.
- **Tested** on Windows with Edge or Chromium and Firefox, for Safari with its browser engine WebKit, and on Linux in a real Ubuntu (WSL). I do not have a Mac of my own for this, and a real phone only for the 3D systemic board – what that means is stated for each topic.

How to use this manual

- **Basics first:** what is part of the suite, operating systems and browsers, the operation all tools have in common, and the portal.
- **Then the chapters** – in the order of the catalogue's categories: modules in the portal, Business Support Tools, productivity tools, people and coaching, questionnaires, games and the taskbar.
- **Every chapter** has the same sections: purpose and use, step by step, functions and buttons, saving, export and handovers, phone, systems and browsers, tips. The game chapters are shorter: purpose, how to play, controls, phone, tips.
- **Labels** of buttons, menus and messages are given in quotation marks – exactly as they appear in the English interface of the tool.
- **For printing:** the manual is available as a PDF under Resources in the eBooks section – with contents, bookmarks and an index.
- **More on the method:** almost every tool has a blog post of its own with the background; the chapter links to it.

What is part of the MC4Y Suite?

The suite is not a single program but a construction kit. You can use each part on its own or everything together.

Tools, questionnaires and games

Every tool is a single HTML file. It runs in a current browser, without installation and without signing in. The suite's catalogue sorts them into four categories:

- **Business Support Tools:** running and managing a business – model, master data, accounting, sales, customers, projects, IT service.
- **Productivity tools:** planning, organising and working together.
- **People and coaching:** coaching, constellation and reflection tools – reflection and conversation models, not diagnostic instruments.
- **Games:** small games for a break in between, plus simulations to think about.

A fifth category, "Other", takes in new tools that have not yet been sorted in.

The portal for working together

If you work in a team, you install the MC4Y Productivity Suite on a server of your own or on a single computer. The portal in the browser comes with seven modules: document library, wiki, notes, tasks, calendar, CMDB and solution database. All tools open and save there via the shared storage, with permissions, versions and locks.

The taskbar for the desktop

The MC4Y Taskbar is a small program for Windows, macOS and Linux. It floats above all windows and opens the suite's tools with two clicks (category, tool) – plus your own programs, files and web links.

Where do I find the tools?

- **On the website:** the released tools are under Resources, all others under Experimental. One click opens the tool in the browser.
- **As a file:** every tool can be downloaded and then runs on its own, without the website. All programs together are available as a complete package in one download.
- **In the suite:** in the portal's toolbox or in the taskbar.



What do "released" and "Experimental" mean?

Currently released are the mind map, the 3D systemic board and the 2D systemic board, the master data, the ITSM tool with its solution database, the Kunden-Navigator, the Vertriebs-Navigator, the text editor and the game Technical Debt, plus the installation packages of the MC4Y Taskbar and of the agents and crawlers for the CMDB.

They are on the website under Resources. All other tools are still beta and not fully tested; the questionnaires have not yet been validated. I test every new version with an extensive test bench, but a beta tool can still contain errors. So please back up your files regularly. I welcome bug reports and suggestions for improvement.

Which operating system and which browser?

The tools and the portal run in every current browser: Edge, Chrome, Firefox or Safari. Differences arise mainly when saving and with features that work with whole folders. The following overview shows how I test before every new version.

Use	Windows	Windows Server	macOS	Linux
Tool via the website	Chromium (Edge/Chrome) and Firefox	–	WebKit browser engine (as in Safari)	Ubuntu in WSL: Firefox, Chromium, WebKit
Tool opened as a file	Chromium with the real Save and Open windows	–	WebKit	Ubuntu in WSL: Firefox
Handovers between tools	Chromium and Firefox	–	WebKit	Ubuntu in WSL
Tools in the suite and portal	Edge, with and without the Save window	own trial installation; IIS additionally on my own PC	WebKit; since 21 Nov 2026 also Safari 27.2 on a real Mac (macOS 15): all tools with Save, Save as, opening from the storage, PNG export	Ubuntu in WSL: Chromium, Firefox, WebKit
MC4Y Taskbar	my own use on Windows 11, test bench	–	test bench on a real Mac (macOS 15, 21 Nov 2026); dragging with the real mouse not yet confirmed	Ubuntu in WSL with a virtual screen

What does this mean for you?

- **Windows and Linux:** every way of use in the overview is tested there – on Linux in a real Ubuntu, not on every Linux distribution.
- **macOS:** I test Safari with its browser engine WebKit and, since 21 November 2026, also in Safari 27.2 on a real Mac (macOS 15): Save, Save as, opening from the suite's storage, PNG export and the file in the "Downloads" folder. The Mac's own windows – the save window with the choice of location and the open window – cannot be remote-controlled. The tips below on choosing the location yourself and finding your files again when opening come from the test on this Mac.
- **iPhone and iPad:** all browsers there work with WebKit; Chrome on the iPhone, too, behaves like Safari. I have not tested this on real devices.
- **Firefox in the suite on Windows:** if your suite's certificate is installed in Windows, Firefox only uses it once the setting `security.enterprise_roots.enabled` is switched on. This is usually set up by the person who looks after the suite.

What is explicitly not tested?

- the Mac's windows for saving with a choice of location and for opening (by hand only) as well as real iPhones and iPads,
- operation with your finger on real phones and tablets (it is tested in simulated screen sizes with touch, the 3D systemic board also on a real phone),
- dragging onto the taskbar with the real mouse on a Mac as well as the taskbar on real Linux computers,
- network drive and calendar sync with the individual programs (Finder, file managers, Thunderbird, Apple Calendar, DAVx[5]; Windows Explorer I have only tested against a single-user suite) – more on this in the section on the network drive.

How do I use a tool?

All tools follow the same layout. At the top is the header with the buttons, below it the work area, depending on the tool with a bar on the left for elements and one on the right for properties. Depending on the tool, you will find “New”, “Open”, “Save”, “Save as”, a menu for exporting, “Example” and “Help” at the top.

Opening and saving in Chrome and Edge

Chrome and Edge allow a web page, with your consent, to write directly to a file or folder on your computer. The first time, “Save” opens your operating system’s save window; after that the tool saves to the same file. “Open” shows the usual window for selecting a file.

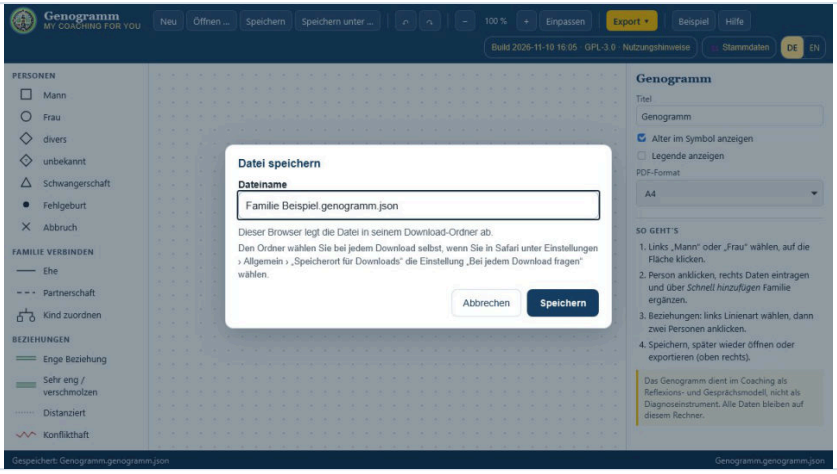
On the Mac, Chrome and Edge show the “Save As” window small at first. The arrow ∨ next to the file name expands it to show the folder tree and “New Folder”.

Opening and saving in Safari and Firefox

Safari and Firefox do not offer this interface. There, the tools save via the browser’s download – your data still stays on your device:

1. Click **Save** or **Save as**.
2. The **Save file** window suggests a name. Change it if needed and confirm with **Save**. While the window is open, “Save file: please confirm the name in the window …” appears at the bottom.
3. The tool then reports “Saved in the browser’s downloads folder” with the file name.

The first time you save, the tool asks for the name; after that it saves without asking again; “Save as” always asks. If you cancel, the tool reports “Not saved – cancelled.” If you leave the page without having saved, the browser warns you. The same applies to Chrome when a tool is opened over an unencrypted connection (http).



Choosing the storage location yourself (“Save as” to another location): without further settings, Safari and Firefox put every file in the “Downloads” folder – with “Save as” too; in these browsers a web page cannot offer a location. In Safari, choose “Ask for each download” under Safari › Settings… › General › “File download location:”. In Firefox, under Settings › General › Downloads, switch on “Always ask you where to save files”. After the name window, the save window of your Mac or of Firefox then opens; there you choose the folder or create one with “New Folder”. In the suite there is also the storage on the server with folders of your own (“ + Folder”) – the same in every browser.

Finding files again on the Mac: the Open window shows the same favourites on the left as the Finder. If “Downloads” is hidden in the Finder, the folder is missing there too, even though Safari saves everything there. Right away, press Command + Shift + G in the Open window, enter `~/Downloads` and press Return. Permanently: Finder › Settings… › Sidebar › under “Show these items in the sidebar:” tick “Downloads”. If you chose another folder when saving, open the file from exactly that folder.

iPhone and iPad: you will find saved files in the “Files” app under “Downloads”.

More on this in the post MC4Y tools on Mac and Linux.

What only works in Chrome and Edge?

Some tools work with a whole folder: the 8EM Modeller with its model folder, the accounting tool with its storage including receipts and the mind map with a project folder. These folder features are only available in Chrome and Edge; the tool tells you so at the relevant point. In Safari and Firefox you work with single files – in the 8EM Modeller, for example, with "Create as a single file". The accounting tool keeps data and receipts there in the browser storage, with the same receipt storage functions. The FreeHTML Editor opens and saves a website project there as a ZIP file.

Shaping lines and several elements at once

Since version 0.4.67 all graphical tools work the same way here:

- **Handles on lines:** click a line; dragging " + " inserts a handle, dragging "◆" shapes the line, double-clicking "◆" removes it, "⟋ Straight" removes all of them. Handles snap horizontally and vertically to their neighbour, with `Alt` freely. Right-angled lines – for example in the organisation chart or in the process model – stay right-angled and run through the points. Every drag is one undo step.
- **Multiple selection:** `Ctrl` +click or `Shift` +click adds an element or removes it, a frame on an empty area selects everything inside it (where dragging an empty area pans the view, with the `Shift` key held down), `Ctrl` + `A` selects all. Dragging a selected element or the arrow keys move all of them together – lines and their handles move along; `Del` deletes all after one confirmation, `Esc` clears the selection.
- **Phone and tablet:** the "Multiple selection" button switches the mode: tapping adds or removes, dragging on an empty area draws a frame. In the board tools the button sits at the bottom left of the picture. The " + " and "◆" grips are finger-sized.
- **Where it differs:** tools that calculate their lines themselves and snap them again when something moves (for example Kanban, the service catalogue, the context diagram and the value stream map in the 8EM Modeller) have no handles there; where the position follows from a structure (for example five whys, SIPOC, the timeline, the organisation chart in master data), dragging together moves nothing – selecting and deleting together still work. In the tools "Force field analysis", "Pain points in the process" and "Responsibility and delegation" and in the force field analysis of the "Change" tool, the position follows from strength or order – there dragging together reorders. The 3D tools have no frame: select several with `Ctrl` + click or `Shift` + click, all with `Ctrl` + `A` or "Select all"; the 3D lifeline has no multiple selection because only the walking figure can be moved freely there. The tool's chapter gives the details.

Files and formats

Every tool saves to a file of its own, for example `.genogramm.json` or `.kanban.json`. A file you saved in Safari opens just as well in Chrome, Edge or Firefox – and vice versa, on every operating system. Many tools also output their result, depending on the tool as PDF, image, PowerPoint, Word, Visio, OpenDocument or CSV.

Your data and browser storage

Without the suite, all entries stay on your device; the tool transmits nothing. There is one exception, and I name it for the tool concerned: the company search in the Vertriebs-Navigator. A team session in the "Analysis and conversation" tool runs only via the server of your suite or via your own server whose address you enter yourself – nothing goes to me or to third parties.

Merely opening a tool creates nothing in the browser. Only when you change a view or explicitly have something remembered in the browser does the tool store anything there. What is stored where is set out in the privacy policy.

German or English

At the top right, next to the build version, "DE" and "EN" switch the language – immediately, without reloading and without losing data. If you have not made a choice yourself, the tool follows your browser: German if German is your preferred language, otherwise English. From the English website, the tools open in English straight away. The

interface, help, messages, printouts, exports and the built-in examples are translated; your own texts stay as you wrote them. The choice is only stored if you click "DE" or "EN" yourself – and only in your browser. Even in English, the accounting tool stays with German tax law. More on this in the post All tools are now available in English too.

Help, licence and liability

The "Help" button explains how to use the tool. The button with the build version at the top right ("Build … · GPL-3.0 · Terms of use") shows the licence and the disclaimer. All tools are free software under the GNU General Public License, version 3 or later. Every tool is an aid for reflection, conversation and documentation, not a diagnostic instrument, and it does not replace psychotherapeutic, medical, legal or other professional advice.

Master data in every tool

In almost every tool, the "👥 Master data" button is at the top. One click shows the master data tool directly inside the tool. If you link a tool to it, it offers your people, organisations, units, roles, cost centres and locations in input fields; after that the master data lead. As long as you link nothing, every tool works on its own as before. Whether the buttons are offered at all is something you set for each tool by right-clicking "👥 Master data".

On phone and tablet

The board tools – the systemic board, the 3D tools and most coaching boards – have their own controls for narrow screens (up to 900 pixels wide or 500 pixels high):

- The header is collapsed to one line; "☰" expands it, for example for the export menu. On a phone its menus open as a window from below, on a tablet below the header at the right edge – always fully on screen.
- Two fixed buttons open the bars as windows: on the left "+ Elements" (depending on the tool "Figures", "Inputs" or "Areas"), on the right "✎ Properties". On the phone the window comes up from the bottom, on the tablet from the side.
- **Placing a figure:** you tap the element in the bar. In some tools it is then already on the board; in others – for example the systemic board, the social atom, the genogram, the lifeline, the resource tools and all 3D tools – you then tap the spot on the board. The chapter of the tool says which applies.
- Swiping on the drawing area rotates or moves the board instead of scrolling the page; you zoom with two fingers.

The questionnaires also run on phones and tablets. I tested this in simulated screen sizes with touch, not on real devices; only for the 3D systemic board did I also test the operation on a real phone.

The suite portal

This section and the next two only apply if an MC4Y Suite is running in your organisation. The person who looks after it gives you the address and your user name.

How do I sign in?

Open the suite's address in the browser. On a server it looks something like `https://server/`; on a single computer it is `http://127.0.0.1:8090/`. Sign in with your user name and password.

- **Unencrypted connection:** if your suite also allows `http://`, the sign-in page points out that your user name and password then travel across the network unencrypted, and links to the encrypted address. Use `https://` wherever possible.
- **Browser warning:** if, with `https://`, the browser reports that the connection is not private, your suite has a certificate of its own. Compare the fingerprint with the one on the "Other devices" page, or have the person who looks after the suite install the certificate.
- **Signing in with your Windows account:** if domain sign-in is switched on, you sign in with your Windows name – as `name`, `name@company.local` or `COMPANY\name`. On a Windows server with IIS there may also be the button "Sign in with the signed-in Windows account".
- **Forgot password?** There is no reset by e-mail. The person who looks after the suite creates a recovery code; it is valid for 30 minutes and only once. On the sign-in page you click "Forgot password?" and enter your user name, the code and a new password. All your other sessions then end. For accounts in the Windows domain, you change the password as usual on a Windows computer in the domain.
- **Protection:** after five failed attempts the suite locks the account temporarily – first for five minutes, longer after further failed attempts, for at most one hour. It sets exactly one cookie, the session key.

The "Workspace" start page

After signing in, the "🏠 Workspace" opens. There you see your appointments for today and tomorrow, due tasks (including those from the tools), pinned notes, recently edited documents, wiki pages and tool documents, your favourites and notifications. The search finds documents, wiki pages, notes, tasks, appointments (not private ones) and tool documents.

The toolbox: tiles or taskbar

The toolbox only shows the tools you are allowed to use – arranged by the catalogue's categories, with the recently edited documents at the top. One click opens a document in the right tool; with the star you mark a tool as a favourite.

Whether you see the tools as **tiles** or as a **taskbar** is up to you. The tiles show a short description, and the full one when you move the mouse over them. The taskbar in the browser at first shows only the categories; one click expands their tools. There is also a search, favourites you can drag and a clock that takes you to the calendar. The bar lies horizontally or vertically and can be moved by its handle; on a phone it is always at the bottom. You switch it on under "Your account" › "Appearance"; it closes with the browser window.

With "⚙ Customise categories …" you drag categories into a different order, hide them or create custom categories with tools and web links. You drag a link from the browser directly onto a category; it becomes a web link. Your customisations apply to your account – in the browser as well as in the MC4Y Taskbar program.

In Edge and Chrome, the suite can also be installed as an app, with its own window and icon.

Language, notifications and other devices

- **Language:** at the top right, "DE" and "EN" switch the portal, administration and open tools together. Without a choice, your browser's language applies. The interface is translated, not your content – only the wiki and the solution database keep a German and an English version of each page.
- **Bell 🔔 (button "Notifications" at the top of the header):** it tells you, for example, that someone has assigned you a task, invited you to an appointment or shared a note with you, plus replies, declines and

comments.

- **Other devices:** at the bottom of the portal, this page shows all addresses of the suite with a QR code, a copy button and the certificate's fingerprint. On a phone, scan the QR code or type the address in full with `https://` – and do not choose a search suggestion. On a phone, the IP address is usually a more reliable way than a name.

Your account

Under "Your account" you set, among other things:

- **Appearance:** taskbar in the browser on or off.
- **Network drive and calendar:** the addresses for the drive and the calendar app and your access passwords per device (see below).
- **E-mail notifications:** none, every notification immediately or once a day as a summary, in German or English; plus "Appointment and task reminders by e-mail too" (reminders then come by e-mail immediately, even if you otherwise chose no e-mails or only the daily summary).
- **Desktop taskbar and app:** download the MC4Y Taskbar program with the address already filled in. You also see and disconnect the taskbar's connected devices in your account.

Who may do what?

The administration assigns permissions via permission groups, in three levels: "Read", "Read and write" and "Full access" – for a whole tool or for areas such as a library, a wiki space or a shared calendar. If you belong to several groups, the highest permission applies for each tool; the "Who may do what?" view shows where it comes from. Whoever administers the suite therefore does not automatically see all content. With domain sign-in, the permissions come from the groups in your directory.

Undo and redo

Next to the title of each module – Workspace, Tasks, Calendar, Notes, Wiki, Document library and CMDB – there are two large curved arrows, as in the tools: ↶ takes back your last step, ↷ redoes it. When you point at an arrow, the tooltip names the step, for example "Undo: Task created: "Write offer" (Ctrl+Z)". The small ▾ in between opens the history with up to 50 steps; clicking an entry takes back all steps up to that point at once. On the keyboard, Ctrl+Z undoes and Ctrl+Y or Ctrl+Shift+Z redoes (on a Mac ⌘ instead of Ctrl). While you are typing in a text field, these keys belong to the text field: they take back your last input there, not the last saved step.

The common steps can be taken back: creating (the new item goes to the recycle bin or is deleted), changing (the previous state is written back – in the wiki as a new version), moving, status and check marks, archiving, pinning and deleting (back from the recycle bin; the suite re-creates deleted appointments from the remembered state). Still only possible via the versions or the recycle bin: new versions of a document, folders, sharing, comments and permanent deletion. The solution database uses the interface of the ITSM tool and its arrows ↶ ▾ ↷ next to the title: creating, changing, rating and deleting a solution can be undone and redone there as well – if someone else has changed the solution in the meantime, the suite declines with a notice; older states remain available via the versions.

So that nobody loses work, the suite checks before every undo whether someone else has changed the same item in the meantime. In that case it overwrites nothing and reports, for example, "The task has since been changed by Anna. Undo not possible." – the step is then removed from the history. The history applies only to this browser window and only while it is open: reloading or signing out clears it, and nothing is stored in the browser for it.

Signing out

When you sign out, the suite clears away the tools' intermediate states in your browser – drafts, remembered files, backups. On a computer that only you use, you can opt out of this. If another person signs in on the same browser, the suite always clears up.

The modules in the portal

The following chapters apply if an MC4Y Suite is running in your organisation. Which modules you see and what you may do in them depends on your permissions – see “Who may do what?” in the section on the portal.

Document library



Document library: purpose and use

The document library is the team's shared place for files: contracts, quotations, templates or minutes are kept centrally on the computer running the MC4Y Suite instead of on individual devices. Files are organised in libraries with folders and custom columns. Every change becomes a new version, longer edits are checked out, and finished material moves to the read-only archive with a retention period and checksums. The search also finds text inside the files.

Typical use: the administration creates libraries such as Contracts, Projects or Templates and assigns permissions. Staff upload their files, organise them with classification, keywords and categories, approve drafts and archive what is finished.

The document library is a module of the MC4Y Suite and exists only there, without a file or file extension of its own. Like the whole suite it is experimental, i.e. still being trialled; the installation package is on the website under Experimental – to try out. In the toolbox it appears with the 🗄 symbol under “Productivity tools” and “Business Support Tools”. More in the posts All tools under one roof – the MC4Y Productivity Suite and MC4Y suite: network drive, calendar sync and e-mail notices.

What you may do depends on your permission in the library, if required down to individual folders:

- **“Read”:** see, preview and download documents, download and compare versions, verify checksums.
- **“Read and write”:** also upload, create folders, check out and in, approve, change properties, restore versions.
- **“Full access”:** also move, archive, retrieve from the archive, delete, use the recycle bin, manage folders, cancel another person's checkout or lift another person's network drive lock.
- **Full access to the whole module:** create, configure and delete libraries, create views for everyone.

Administrators therefore do not automatically see all documents. Permissions in general are described in the chapter ‘The suite portal’.

Document library: step by step

1. Open the “Document library” in the toolbox. The overview shows your libraries as tiles with the number of documents and your permission.
2. With full access to the module, create a library with “ + Library” (name, description, versions, retention period, custom columns) and “Save”.
3. Open the library with “Open” and create folders with “ + Folder”. The path above the list always takes you back.
4. Drag files into the list or choose “⬆ Upload”. If a file already exists, the library asks “File already exists” and offers “Check in as new version”.

5. Click a document. Next to the list (below it on narrow screens) you see the preview, “Properties” and “Versions”.
6. Fill in classification, keywords, categories and custom columns; each entry is saved when you leave the field.
7. To edit for longer, choose “🔒 Check out”: the file is downloaded and the others can only read it.
8. Upload the edited file with “Check in” – with a comment, as a minor version (draft) or major version (approved).
9. Approve a finished draft with the tick button ✓; it names the next major version, such as 1.0, and asks for a “Comment on the release”.
10. Under “Versions”, tick two versions and choose “⇄ Compare selected”; keep frequent filters with “☆ Save view”.
11. Archive finished material with “🗄 Archive” (full access). For Explorer or Finder, use “🖧 Connect as network drive” (see below).

Document library: functions and buttons

Overview of the libraries

- Search field “Search all libraries …” – from two characters, with the match highlighted.
- “+ Library” and “⚙ Settings” on each tile – only with full access to the module; “Open” opens a library.
- “🖧 Connect as network drive” – leads to “Your account” › “🖧 Network drive and calendar”.
- The ⌛ button – appears when retention periods of archived documents have expired or expire within 90 days, and opens the list “Retention periods”.

Library: bar, tabs and filters

- Tabs “Documents”, “🗄 Archive” and “🗑 Recycle bin” – only people with full access see the recycle bin.
- “⬆ Upload” and “+ Folder” – with write permission on the “Documents” tab; “⚙ Library” opens the settings. Files above the configured maximum size are rejected.
- Search field “Search – also in the text of the files …” (“Search …” if full-text search is not available on the server), plus “Classification”, “Status”, “Category”, “Keyword” and one filter per custom column.
- “with subfolders” – also searches all folders below; the ✕ Filter button resets everything.
- “☆ Save view” – saves filters and location under a name, optionally “only for this library” or, with full access to the module, “visible to all users”. Saved views appear as buttons (☆ own, 👥 shared); × deletes one.

List

- Columns for name, version with “Draft” or “approved”, classification, custom columns, date and person of the last change; a symbol shows the file type.
- 🔒 with a name – the document is checked out; “🔒 name · drive” – someone has it open via the network drive, in the portal it is read-only meanwhile (the document says since when).
- For folders, with full access: ✎ “Rename folder” (permissions move along), 🗄 “Archive folder” (including subfolders) and 🗑 “Delete empty folder”.
- Select a row and press `Enter` to open the document.

Document

- “⬇ Download” – the current version; ✕ closes the panel.
- “🔒 Check out” – locks for others and downloads; “Discard checkout” takes this back.
- “Check in” (after checking out) or “New version” – file, “Comment”, type of version; a different file extension triggers a question.
- “Cancel checkout” – with full access, ends another person's checkout; their changes not yet checked in can be lost.
- “Lift lock” (in the notice “🔒 … open on the network drive by …”) – with full access, ends another person's network drive lock after a confirmation with the name and “since”; the log records it. Their program can then no longer save into the storage (the suite refuses), their unsaved changes remain only with them – best agree on it first.
- Tick button ✓ – approval as the next major version, only in libraries with minor versions.
- “↪ Move”, “🗄 Archive”, “🗑 Delete” (to the recycle bin) – with full access. When moving, separate subfolders with a slash; missing folders are not created.

- In the archive: "✓ Verify checksums" (SHA-256), "Retrieve from archive" and, once no retention period runs, "Delete permanently".
- In the recycle bin: "↩ Restore" and "Delete permanently" (cannot be undone).
- Preview for images (PNG, JPEG, GIF, WebP), PDF and text files.
- "Properties": name, description, classification ("public", "internal", "confidential", "secret"; new documents are "internal"), keywords (separated by commas), categories (choose or type a new one, then `Enter`), custom columns, "Keep earlier versions of this document" and "Retain until".
- Columns for people, organisations, cost centres, locations, roles and similar suggest master data entries; free text remains possible. Deleted entries show "no longer in the master data".
- "Versions": number, status, time, person, size, comment; ⬇ downloads a version, ↺ restores it as a new version.
- "⇄ Compare selected" – two ticked versions of text, Word, OpenDocument, Excel and PowerPoint files line by line, changes marked in colour; formatting is not compared.
- "Used in" – the tool documents to which it is attached; places you may not read are only counted.
- "Referenced in the CMDB by" – components of the CMDB that link to this document (only with read permission for the CMDB); a click opens the component.
- If a date column has a calendar reminder, the date field shows " 🔔 Reminder on …" with a link to the appointment. Without a date, the note tells you when the reminder would be created.

Library settings

- Name – the administration assigns the permissions under Administration › Permission groups (module "Document library", area = name of the library or library/folder); when renaming, they move along.
- "Keep earlier versions", "Minor versions: drafts 0.1, 0.2 …, release as 1.0" and "At most this many versions per document" (default 50; older ones are removed at check-in).
- "Retention period after archiving (years, 0 = none)" – please check the appropriate period in each case.
- "Custom columns" with " + Column": text, selection, date, number or a master data type such as person, organisation or location; ▲ moves up, × removes (stored values remain).
- For a date column, " 🔔 Reminder in the calendar": pick a calendar you may write to (👤 your own, 👥 a shared one) and the "Lead time" (on the day itself, 1 day, 1 week, 2 weeks, 30, 60 or 90 days before). Every document with a date in that column then has exactly one all-day appointment " ⏳ column date: document name" in that calendar, on the day "date minus lead time", with a reminder that morning (bell, e-mail, calendar app). Change the date and the appointment moves along; an empty date, the recycle bin, the archive or final deletion remove it, "Restore" brings it back. If you change the lead time or the calendar, the library updates the appointments of all documents in it. Do not edit the appointment in the calendar – change the date on the document; the library overwrites changes made to the appointment.
- "Delete library" – only when it is empty, including recycle bin and archive.

Document library: saving, export and handovers

All files are kept in the suite's data folder; properties are saved immediately, files when uploading and checking in. With minor versions, drafts count as 0.1, 0.2 … and approvals as 1.0, 2.0 …; otherwise each version gets the next whole number. Every version can be downloaded individually. Archived documents are stored packed, with all versions and checksums.

- **Wiki:** links `[[dok:Nr]]` are inserted there with " 🖇 Document"; they are only visible with your own read permission.
- **Notes and tasks:** documents can be linked as a reference or attachment.
- **Tools:** on the MC4Y-Suite panel you attach documents under " 🖇 Attachments from the document library"; only the reference is stored, and the current version is always opened. The library shows this under "Used in". More in the chapter 'Tools in the suite: working together'.
- **Master data:** if you rename a location or cost centre in the master data, the library shows the new name.

Network drive (WebDAV): the libraries appear in Explorer, the Finder or a Linux file manager as folders of a drive. The address is shown under "Your account" › "🖧 Network drive and calendar", in the form `https://server/dav.php/dokumente/`. There you create one access password per device under "New access password for" with "+ Create"; it is shown only once and can be withdrawn with "Revoke". You sign in with your suite user name and this access password, never your own password. "How to connect …" gives the steps:

- **Windows:** This PC › "Map network drive …" › address › "Connect using different credentials" › user name and access password.
- **macOS:** Go › "Connect to Server …" (`⌘` + `K`) › address › "Registered User" › user name and access password.
- **Linux:** Files (GNOME) › "Other Locations" › "Connect to Server" with the `davs://` address shown; Dolphin (KDE) with `webdavs://`.

The drive applies the same permissions as the portal; deleting and moving folders require full access, and deleted items go to the recycle bin. Every save creates a new version – the safe saving of Word and Excel with its temporary files exactly one. Helper files stay out of the library, and an empty file never overwrites a document. A file opened through the drive is locked for others – at the drive as in the portal, where it can be neither checked out nor uploaded anew while it is open (reading still works); checked-out documents are not accepted, archived ones not shown.

Document library: phone, systems and browsers

The library runs in current Edge, Chrome, Firefox and Safari on Windows, macOS and Linux and needs no browser folder functions: you upload via file selection or dragging, and downloads go to the download folder.

On narrow screens the document panel sits below the list, and the page scrolls there when you tap a document. Below about 1000 pixels the column of the person who changed it and the custom columns are left out, on the phone also classification and date. There you choose files with "⬆ Upload". I have checked the modules at a simulated phone width of 375 pixels in Edge and WebKit (Safari's engine), in German and English; not other sizes or real devices.

Windows only sends a network drive password over HTTPS with a trusted certificate. If you open the portal via `http://`, "Your account" points this out. On a single-user computer without HTTPS, the suite shows a separate drive address after you create an access password; it only works on that computer, contains the access password and must not be passed on. So far I have only partly tested the drive with real programs (Windows Explorer against a test server).

Document library: tips

- For short changes "New version" is enough; checking out pays off for longer work on a file. A comment on each check-in turns the list of versions into a change log.
- Set the retention period in the library: archiving adopts it, and the ⏳ button reminds you of expiring periods.
- Licences, contracts, warranties: a library "Licences" with a column "Supplier" (organisation) and a date column "Expiry date" with "🔔 Reminder in the calendar" (say 30 days before, in the IT team's shared calendar) – the calendar then reminds you of every licence about to expire without anyone creating an appointment by hand.
- Attach documents instead of copying them – then everyone works with the same version.
- Create one access password per device; if a laptop is lost, revoke exactly that one.

Wiki



Wiki: purpose and use

The wiki records a team's knowledge: procedures, instructions, project knowledge, checklists or a handbook. It is divided into spaces, such as Handbook, Projects or Knowledge; within each space you arrange the pages as a tree. You write in Markdown, i.e. with simple characters for bold, lists or headings. Pages link to each other and to documents in the document library with `[[double brackets]]`, each page shows what links to it, and every change is kept as a version.

One special feature: every page exists in German and in English. A new page is created in both languages with the same text. As long as the other version is an unchanged copy, it changes along with it. Once you have translated it – by hand or with a translation program of your choice – it is never overwritten again; if the original changes afterwards, it shows "⚑ Check translation".

The wiki is a module of the MC4Y Suite and exists only there, without a file or file extension of its own. Like the suite it is experimental. In the toolbox it appears with the 📖 symbol in the categories "Productivity tools" and "Business Support Tools". More in the post All tools under one roof – the MC4Y Productivity Suite.

Your permissions apply per wiki space:

- **"Read":** read and search pages, view and compare versions, print and export.
- **"Read and write":** also create, edit, translate and move pages and restore earlier versions.
- **"Full access":** also delete pages and use the space's recycle bin.
- **Full access to the whole module:** create, configure and delete spaces, set the start page.

Who sees which space is set by the administration under Administration › Permission groups (module "Wiki", area = name of the wiki space). Permissions in general are covered in the chapter 'The suite portal'.

Wiki: step by step

1. Open the "Wiki" in the toolbox. The overview shows your spaces with the number of pages, your permission and the most recently changed pages.
2. With full access to the module, create a space with "+ Space" – name, description and, if you like, "Name in English (optional)".
3. Open the space. The page tree is on the left, the start page on the right.
4. Create a page with "+ Page" or, on an open page, a page below it with "+ Subpage". The title initially applies to both languages.
5. Write the text. The buttons above the text field set bold, italic, headings, lists, tasks, quotes, code, tables and links.
6. Link to another wiki page with "[[ ]] Page" and to a document in the library with "📎 Document".
7. Check the result with "👁 Preview".
8. Note briefly under "What was changed? (optional)" what you changed, and choose "Save" (`Ctrl` + `S`) or "Save and close".

9. Arrange the tree by dragging pages or choosing "↪ Move".
10. Switch to "English" with "🌐 Language version:" and translate the page with "✎ Translate". "English version alongside" shows the original while you work.
11. Look at earlier states with "🕘 Versions" and compare them.
12. Print a page or the whole space or save it as PDF; "⬇ Export" downloads all pages as Markdown files.

Wiki: functions and buttons

Overview

- Search field "Search the whole wiki …" – finds pages in all spaces, with the match highlighted.
- "+ Space" and, on each tile, "⚙ Settings" – only with full access to the module; "Open" opens the space.
- "🌐 Language version:" with "German" and "English" – which version is shown; without a choice, the interface language applies.
- Tile labels: number of pages, ⚑ with the number of pages whose translation needs checking, last change, your permission.
- "🕘 Recently changed" – the latest changes in all your spaces.

Sidebar of a space

- "← all spaces", "🌐 Language version:" and the search field "Search this space …".
- "+ Page" – a new page at the top level (write permission).
- A ⚑ notice with the number of pages changed in the other language since this version was last synchronised.
- Page tree: ▸ and ▾ expand and collapse, 🏠 marks the start page, ⚑ a translation to check. Dropping on a page makes it a subpage, on its upper edge places it before, on the empty tree moves it to the top level.
- "🖶 Print" – print all pages with a table of contents or save them as PDF.
- "⬇ Export" – all pages in both languages as Markdown files (ZIP).
- "🗑 Recycle bin" with a count (full access) and ⚙ for the settings (full access to the module).

Bar above a page

- "✎ Edit" and "+ Subpage" (write permission).
- "🕘 Versions" – versions of this language version, optionally "Show versions of both languages"; tick two and "⇄ Compare", "View" for each version, with write permission ↺ restores one as a new version.
- ⇄ DE / EN – German and English versions side by side; if a translation needs checking, the comparison also shows what has changed in the original since the last synchronisation.
- "↪ Move" – as a subpage of another page or to the top level.
- 🏠 – "Set as start page of the space" (full access to the module).
- "⬇ .md" – this page as a Markdown file; 🖶 – "Print or save as PDF".
- "🗑 Delete" (full access) – moves both language versions to the recycle bin; subpages move up one level, and links to the page then appear red.
- Below the text, a list of all pages that link here.
- Below that, "Referenced in the CMDB by:" – components of the CMDB that link to this page (only with read permission for the CMDB); a click opens the component.

Notices about the language version

- ⧉ Copy – the version shown is still an unchanged copy; with "✎ Translate" and "Show English version" or "Show German version".
- "Check translation:" – the original has changed since the last synchronisation; with "⇄ Compare", "✓ Is up to date" and "⧉ Take over from the German version" or "⧉ Take over from the English version" (replaces title and text; the previous version stays in the versions).

Editing

- Title field; if you change the title of a page that other pages link to, a tick box appears with which the wiki also updates the links in those pages.

- Format buttons: B (“Bold”), I (“Italic”), H2 (“Heading”), H3 (“Subheading”), “• List”, “1. List”, “☐ Task”, “❝ Quote”, code, “▦ Table”, “🔗 Link”, “[[ ]] Page” and “🕯 Document” (searches the library by name, keyword or content).
- “👁 Preview” – shows the finished page; the button then reads “✎ Text”.
- “English version alongside” or “German version alongside” – the other language next to the text, with “⧉ Copy” for a translation program.
- “Save” (`Ctrl` + `S`), “Save and close”, “Cancel”.
- Below the buttons, tick boxes control whether the other version is marked “Check translation” and whether the edited one is up to date again afterwards.
- Markdown in brief: `**bold**` , `*italic*` , `# Heading` , `- List` , `- [ ] Task` , `> Quote` , `[[Page]]` , `[[Page|Text]]` , `[[Space:Page]]` , `[[dok:number]]` , `[Text](https://…)` .

Lock, draft and conflict

- While you are editing, the page is locked for others; they see who is editing it and since when.
- If someone is editing the page, the wiki reports “Page is being edited”. Anyone with full access, or who has the page open in another window themselves, can take over with “Take over editing”; the other person's unsaved changes are then lost.
- If you leave the page without saving, the wiki keeps the changes as a draft in your browser. The next time you edit, it asks “Draft found” – continue with “Use draft”.
- “Cancel” with unsaved changes asks “Close without saving?”; “Discard” confirms.
- If someone has saved the page in the meantime, “The page has since been changed” shows the difference; you choose “Save my version anyway” or “Cancel (text stays in the editor)”.

Space settings

- Name, description, “Name in English (optional)”, “Description in English (optional)”, “Start page”; when renaming, the permissions move along.
- “Delete area” – only if the space contains no pages apart from the unchanged start page, not even in the recycle bin.

Wiki: saving, export and handovers

Every page is stored with all versions in both languages on the suite's server. Every save creates a new version with time, person and comment. If you rename a page, the wiki updates the links in the other pages – except in pages someone is currently editing, which it names in its message. A link whose target does not exist yet appears red; clicking it creates the page. `[[Title]]` first finds a page with this title in the language shown, then in the other one.

- **Printing and PDF:** 🖶 for one page, “🖶 Print” for the whole space – with a header of space, language version and date; as PDF via the browser's print dialogue.
- **Markdown:** “⬇ .md” for the page shown (English version with (EN) in the file name), “⬇ Export” for all pages in both languages as a ZIP.
- **Document library:** `[[dok:Nr]]` links to a document; anyone who may not read the document does not see the link as a link.
- **Notes:** notes link to wiki pages with “📖 Wiki page”.
- **CMDB:** a component links to a page with “📖 Link wiki page” – for example the page with the component diagram from the UML tool; the page lists the component under “Referenced in the CMDB by:”.
- **Search:** wiki pages also appear in the search on the “🏠 Workspace” start page.

Drafts are kept only in the browser until you save; when you sign out, the suite clears them together with other temporary data.

Wiki: phone, systems and browsers

The wiki runs in current versions of Edge, Chrome, Firefox and Safari on Windows, macOS and Linux; it needs no browser folder functions. Below a width of about 900 pixels the sidebar with the tree sits above the text. Without a mouse, arrange pages with “↪ Move” instead of dragging. The shortcut `Ctrl` + `S` works while editing; on a Mac

`⌘` + `S` as well.

I have checked the suite's modules at a simulated phone width of 375 pixels in Edge and WebKit, in German and English; not other sizes or real devices. What the printed PDF looks like depends on the browser.

Wiki: tips

- Simply write links as `[[Title]]`, even if the page does not exist yet – the structure grows as you write, and red links show what is still missing.
- A short comment when saving makes the list of versions readable.
- Translate with “English version alongside” and “⧉ Copy”; you choose your translation program yourself.
- Check pages marked ⚑ with “⇄ Compare”: the wiki shows what has changed in the original since the last synchronisation. If nothing needs doing, “✓ Is up to date” is enough.
- Give every space a start page that explains it and links to the most important pages.

Notes



Notes: purpose and use

Notes are for everything that needs to be captured quickly: a thought from a conversation, a shopping list for the office, a checklist for the next workshop, a remark about a document – or the outcome of a constellation as a screenshot. Each note is a small card with a title and text in Markdown; lines with `- [ ]` become boxes that you tick directly on the card. Images (screenshots, photos, sketches) are pasted with `Ctrl` + `V`, dragged into the text field or chosen with “🖼 Image”, and the card shows them. Colours, keywords and pinning help to keep things in order, and links lead to documents, wiki pages, websites or the tool document the note belongs to.

A note is private until you share it – with individual people or groups, for reading or for editing. Anyone who receives a shared note learns of it through the bell, i.e. the “Notifications” button with the bell symbol 🔔 at the top of the portal header, and finds it under “👥 Shared with me”. In addition, every tool in the suite has a quick entry, “🗒 Quick capture”, if you like with a link to the document that is open.

Notes are a module of the MC4Y Suite and exist only there, without a file or file extension of their own. Like the suite they are experimental. In the toolbox they appear with the 🗒 symbol in the category “Productivity tools”. More in the post All tools under one roof – the MC4Y Productivity Suite.

Permissions apply to the whole module; there are no areas here:

- **“Read”:** see and edit notes that others have shared with you – depending on the share, read-only or with changes.
- **“Read and write”:** also create your own notes and share them with people or groups.
- **“Full access”:** also share with all users of Notes.

Nobody else sees your own notes, not even the administration – unless you share them.

Notes: step by step

1. Open “Notes” in the toolbox. The tabs are at the top, below them the field for a new note.

2. Click into “Write a note …”. The field grows and shows “Title (optional)”, the colours and “☐ List”.
3. Write your text. “☐ List” turns the lines into tasks to tick off.
4. Add an image: paste a screenshot into the text field with `Ctrl` + `V` (on a Mac ⌘ + `V`), drag an image file into it or choose “🖼 Image” (on a phone this also offers the camera). The suite uploads it and puts an image line into the text at the cursor (a Markdown image with the address `datei.php?notizbild=Nr`); a thumbnail appears below the text field.
5. Choose a colour if you like and save with “Save” or `Ctrl` + `Enter`. `Esc` closes the field again.
6. Tick off completed items directly on the card; the note saves this immediately.
7. Click a card to edit it: title, text, colour, images, “Keywords” and “Links”. The thumbnails sit below the text field; a click opens an image in full size, × takes it out of the note.
8. Link what the note refers to with “🕯 Document”, “📖 Wiki page” or “🔗 Website”, and save.
9. Pin important notes with 📌; they then appear at the top under “📌 Pinned” and on your “🏠 Workspace” start page.
10. Share a note with “👥 Share …”: choose a person or group, set read or edit for each entry, “Save”. Everyone the note is shared with sees its images.
11. Filter with the keyword buttons or the colour dots above the cards, or search with “Search notes …”.
12. File what is finished with “🗄 Archive”; “🗑 Delete” moves a note of your own to the recycle bin.

Notes: functions and buttons

Tabs and search

- “Notes” – your own notes and those shared with you.
- “👥 Shared with me” – only notes others have shared with you.
- “🗄 Archive” and “🗑 Recycle bin”.
- Search field “Search notes …” – searches title, text and keywords.

New note

- Field “Write a note …” with “Title (optional)” – only on the “Notes” tab and only with write permission.
- Colour choice: no colour, yellow, orange, red, pink, purple, blue, turquoise, green, grey.
- “☐ List” – turns the lines into “Lines as tasks to tick off”.
- “🖼 Image” – insert an image or screenshot; equally `Ctrl` + `V` with an image on the clipboard, or drag an image file into the text field. PNG, JPEG, GIF and WebP up to 5 MB are accepted; the browser scales down larger photos and converts other formats (such as HEIC from an iPhone) first, longest side at most 2560 pixels.
- “Save” (`Ctrl` + `Enter`) and “Close” (`Esc`).

Filters

- Keyword buttons (#keyword) – one click shows only notes with this keyword, a second click removes the filter.
- Colour dots – show only notes of one colour.
- The ✕ Filter button removes keyword and colour filters.

Card

- 📌 – “Pin” or unpin again; pinned notes are at the top, the rest under “Others”.
- Title and text; with edit permission, boxes can be ticked directly. Images appear in the card (at most about 240 pixels high); you see them in full size when editing, via the thumbnail.
- Links as small labels: 🕯 document, 📖 wiki page, 🧰 tool document, ✅ task, 🔗 website.
- Keywords as #word.
- Footer: “🔒 private”, “👥 shared” (hovering shows the people and groups) or, for other people's notes, 👥 with the owner's name and, where applicable, “read-only”; plus the time of the last change.
- With the keyboard: select a card and press `Enter` to open it.

Editing a note

- Title and text (Markdown: `**bold**`, `*italic*`, `- list`, `- [ ] task`, `[text](https://…)`; an image appears in the text as a Markdown image with the address `datei.php?notizbild=Nr`).
- "🖼 Image" with the hint "Paste a screenshot with Ctrl+V or drag an image into the text field."; below it the thumbnails (click = full size, × = take out of the note).
- Colour choice and "Keywords" (separated by commas; existing ones are suggested).
- "Links" with "☝ Document" and "📖 Wiki page" (search dialogue, "select") and "🔗 Website" (address with `https://`); × removes a link.
- "Save" (`Ctrl` + `Enter`).
- "👥 Share …" and "🗄 Archive" or "↩ Unarchive" – only for your own notes.
- "🗑 Delete" for your own notes (to the recycle bin; the people it is shared with then no longer see it either) or "Hide" for other people's (only for you; it remains for the others).
- At the bottom you see who owns the note and who last changed it and when.

Sharing a note

- "Add person or group …" – choose under "People" and "Groups"; with full access also "All users of Notes".
- Read or edit for each share. Edit allows changes to the text; deleting remains reserved for you.
- × removes a share. Without shares the dialogue shows "Private – not shared with anyone yet."
- "Save" – people newly given access receive a notification through the bell.

Recycle bin

- "↩ Restore" and "Delete permanently" (cannot be undone).

Edited at the same time

- If someone has changed a shared note in the meantime, "Note has been changed in the meantime" shows the difference; with "Save my version" you keep yours. When you tick a box, the note takes over the latest state by itself and then ticks it.

Quick capture in the tools

- On the MC4Y-Suite panel of a tool there is "📋 Quick capture" with the field "Capture thoughts … (Ctrl+Enter saves as a note)".
- A tick box adds a link to the open document or to the tool.
- "As a note" saves (`Ctrl` + `Enter`), "✅ As a task" creates a task instead (first line = title); plus links to the Notes and Tasks modules.
- Quick capture requires "Read and write" in Notes or Tasks. If you have it only for Tasks, the section is called "✅ Quick task".

Notes: saving, export and handovers

Notes are stored in the suite's database on the server or on your single-user computer – images as well, so they are part of every backup. You save new notes explicitly; ticks and pinning take effect immediately. A pasted image is on the server as soon as you insert it, but only belongs to the note once you save; if the note is never saved, the suite deletes the image after a day. An image the text no longer mentions disappears at the next save (at the earliest ten minutes after it was inserted); "Delete permanently" takes all images of the note with it. Pinning applies per person: if you pin a shared note, this only affects your own view. There is no export; if necessary, copy the text from the editing window, and open an image via its thumbnail to save it with the browser.

- **Start page:** pinned notes appear on "🏠 Workspace", and the search there also finds notes.
- **Bell:** anyone who is given access receives a notification under the "Notifications" button (🔔) and, if they wish, by e-mail; how to set up e-mails is described in the chapter 'Network drive, calendar app and e-mail'.
- **Document library and wiki:** links open the document or wiki page – with the permissions of the person who clicks the link.
- **Tools:** "📋 Quick capture" creates notes with a link to the tool document; the link opens it again in the right tool. More in the chapter 'Tools in the suite: working together'.

Notes: phone, systems and browsers

Notes run in current versions of Edge, Chrome, Firefox and Safari on Windows, macOS and Linux and need no browser folder functions. On a phone the cards are arranged one below the other; you tick boxes with a tap, and "🖼 Image" also offers the camera there. On a Mac, ⌘ + `Enter` works as well as `Ctrl` + `Enter`, and you paste a screenshot with ⌘ + `V`. I have checked the suite's modules at a simulated phone width of 375 pixels in Edge and WebKit, in German and English; not other sizes or real devices. Inserting images I checked in Edge and WebKit with file selection, a simulated paste and dragging – not with the real clipboard of an operating system.

Notes: tips

- Use "☐ List" for checklists: you tick off completed items directly on the card without opening the note.
- Use a few fixed keywords; the buttons above the cards then become a quick filter.
- Pin what you need every day – it then also appears on your start page.
- Share for reading when others only need to be informed, and for editing when a list is worked through together.
- Note down thoughts while working in a tool with "⬚ Quick capture" – with a link to the document you will find the context again later.
- To record the outcome of a constellation on the 3D system board, paste a screenshot of the board into a note with `Ctrl` + `V` and add two sentences below it. If the image should live in the document library (with versions), upload the tool's PNG there and link it with " 🕯 Document".

Tasks



Tasks: purpose and use

Tasks bring together what needs to be done: your own tasks and those you assign to others, with assignees, priority, due date, subtasks, comments and attachments from the document library. The views "Today", "This week" and "Overdue" show what is coming up. Anyone who is assigned a task, or whose task receives a comment, learns of it through the bell, i.e. the "Notifications" button with the bell symbol 🔔 at the top of the portal header.

The same list shows cards from the Kanban board and work packages from project management that are assigned to you – via the link to the master data or via the same name. If you complete something there, the card moves on in the board, according to the board's rules and only if nobody is editing it at that moment. In addition there are measures from tools such as Five whys, Pre-mortem, Incident timeline and review, Cause-and-effect diagram or Force field analysis, which were handed over there as tasks.

Tasks are a module of the MC4Y Suite and exist only there, without a file or file extension of their own. Like the suite they are experimental. In the toolbox they appear with the ✅ symbol in the categories "Productivity tools" and "Business Support Tools". More in the post All tools under one roof – the MC4Y Productivity Suite.

Permissions apply to the whole module:

- **"Read":** see tasks assigned to you and tasks visible to the team, set the status and comment.
- **"Read and write":** also create and edit tasks.

- **“Full access”:** see, edit and delete all tasks.

Whoever created a task may also delete it. To change the status of a Kanban card or work package, you need at least “Read and write” in the tool concerned.

Tasks: step by step

1. Open “Tasks” in the toolbox. You start in the “Today” view.
2. Type a title into “New task … (Enter creates it)”, choose “Due on” if you like, and press `Enter` or “ + Create”. New tasks are assigned to you; in the “Today” view, without a date they are due today.
3. Click the task. The detail panel opens next to the list (below it on narrow screens).
4. Set “Status”, “Priority”, “Due on”, “Start” and “Responsible”. Every change is saved immediately; the new assignee receives a notification. Under “Reminder” you choose when the suite reminds you of the due date – by default “1 day before” (at 8 a.m.).
5. Assign the task to a “List”, for example the office or a project, and add “Keywords”.
6. If the whole team should see the task, tick “Visible to all task users (team)”.
7. Write details under “Description” in Markdown, including items to tick off with `- [ ]`.
8. Under “Links and attachments”, attach documents, wiki pages, websites or master data entries.
9. Break larger tasks down with “Add subtask … (Enter)”.
10. Coordinate under “Comments”: “Write a comment … (Ctrl+Enter)” and “Comment”.
11. When the task is done, tick the box in front of its title in the list.
12. Use the filter to switch between “My tasks”, “Assigned by me” and “All visible”.

Tasks: functions and buttons

Header and views

- Search field “Search tasks …”.
- Tabs “Today”, “This week”, “Overdue”, “All open”, “Done” and “🗑 Recycle bin”, each with a count; the number for “Overdue” is red.
- “New task … (Enter creates it)” with “Due on” and “ + Create” – only with write permission and not under “Done” or in the recycle bin.

Filters

- “My tasks”, “Assigned by me”, “All visible”.
- “All lists” or one particular list.
- “from Kanban and projects” – shows or hides the tasks from the tools; for a file with several projects (project collection) those of all its projects, each with the name of its project. If the suite cannot read a board or project, a ⚠ notice appears with the number of such documents.
- Your browser remembers the choice of assignment and whether tasks from the tools appear.

List

- Groups for overdue, today, “Tomorrow”, this week, “Later” and “No due date”, each with a count; within them sorted by due date, priority and title. “Done” shows the most recently completed first.
- Box in front of the title – done or open again. If subtasks are still open, the suite points this out.
- Symbols in the row: ‼ urgent, ! high; 🗓 due date in words (today, tomorrow, yesterday, for … days, in … days), red when overdue; “in progress” or “waiting”; 👤 assignee; ↳ parent task; 🏷 list; ☑ completed out of all subtasks; 💬 comments; 🔗 links; 👥 visible to the team.
- Tasks from tools carry ▦ (Kanban board) or 📋 (project) with name and column; ↗ opens them (“Open in the tool”).
- Select a row and press `Enter` to open the task.

Detail panel of your own task

- “Title”, “Status” (“open”, “in progress”, “waiting”, “completed”), “Priority” (“low”, normal, “high”, “urgent”), “Due on”, “Start”, “Responsible” (or “– nobody –”), “List” (existing ones are suggested), “Keywords” (separated by

commas).

- “Reminder”: “none”, “on the due date (8 a.m.)”, “1 day before” (default, also for actions handed over from tools), “2 days before”, “3 days before”, “1 week before”, “2 weeks before” – counted from 8 a.m. on the due date. Below it you see when the reminder comes (“Reminder on … in the bell and, if switched on, by e-mail.”). The reminder goes to the assignee, or without an assignee to the person who created the task: as a notification under 🔔 and – if under “Your account” you chose notifications “immediately” or “Appointment and task reminders by e-mail too” – by e-mail. Each reminder comes exactly once; if you move the due date, the suite reminds you again for the new date. Completed tasks and tasks whose due date has passed do not remind (they are listed under “Overdue”). The suite needs no service of its own for this: it checks whenever an open portal queries the bell (at most once a minute), in the e-mail task every 5 minutes and after the nightly backup.
- “Visible to all task users (team)” – without the tick, only you, the assignee and people with full access see the task.
- “Description” in Markdown; it appears formatted below.
- “Links and attachments”: “ Document” (dialogue “Attach document”), “📖 Wiki page”, “🔗 Website” (address with `https://`) and “🏷 Master data” – in the dialogue “Reference to the master data” you choose “Type” and “Entry” and confirm with “Link”. Only an entry from the master data counts here, no free text; if it is deleted there, the name remains, marked “missing”. × removes a link.
- Subtasks with boxes and “Add subtask … (Enter)”; a new subtask takes over assignee, list and visibility.
- “Comments” – “Comment” or `Ctrl` + `Enter`; you delete your own comments with ×. The creator and the assignee receive a notification.
- Created and last changed, each with the person; “🗑 Delete” moves the task with its subtasks to the recycle bin. ✕ closes the panel.
- If someone has changed the task at the same time, the suite loads the new state (“The task has since been changed – reloaded.”).

Recycle bin

- “↩ Restore” and “Delete permanently” – the latter deletes subtasks and comments as well.

Tasks from the Kanban board and project management

- In the detail panel you change only the status. The suite saves it in the board – according to its rules (dependencies, WIP limit, Ready/Done) – or in the project, provided nobody has it open at that moment. It shows notices from the board in its message.
- “↗ Open in the tool” – opens the board or project. You edit the title, description and other details there.

Measures from tools

- In tools with measures you hand them over with a button such as “📋 Hand over as tasks …” or ☑ Hand over measures as tasks. A dialogue shows the measures with tick boxes and the destination; after sending, “Open task” leads to the new task.
- Each measure becomes a task visible to the team, in a list named after the tool and with a link to the tool document. The assignee is the account of the person responsible (via the master data or the same name); if they have none, their name appears in the description.
- If you hand over again, the suite updates the same task. Status and comments belong to the task; the tool shows the status again.
- If you lack “Read and write” in Tasks, the measures go to the inbox of the Kanban board.

Tasks: saving, export and handovers

Tasks are stored in the suite's database on the server or on your single-user computer. Every field is saved immediately when changed. If you change the status of a Kanban card or work package, the suite writes it into the tool's document; as with every save, the previous version is kept. There is no export of the task list.

- **Calendar:** due tasks and deadlines from Kanban and projects can be shown in the calendar as the layers “✅ due tasks” and “▦ Kanban, projects, milestones”.

- **Calendar app:** in calendar sync (CalDAV), next to your calendars, the calendar “Task deadlines” appears – read only, with your open tasks as all-day entries “Due: …” and an alarm at the same time as the reminder. If you change the due date or the reminder in the suite, the app picks up the new state at its next sync.
- **Start page:** “🏠 Workspace” shows your due tasks, including those from the tools; the search there finds tasks.
- **Bell and e-mail:** assignments and comments appear under the “Notifications” button (🔔), and by e-mail if you wish – see the chapter ‘Network drive, calendar app and e-mail’.
- **Tools:** on the MC4Y-Suite panel, “✅ As a task” in the quick capture creates a task for you (first line = title), with a link to the open document if you like.
- **Master data:** if you rename, say, a location or cost centre in the master data, the tasks show the new name.

Tasks: phone, systems and browsers

Tasks run in current versions of Edge, Chrome, Firefox and Safari on Windows, macOS and Linux and need no browser folder functions. Below a width of about 1000 pixels the detail panel sits below the list, and the page scrolls there when you open a task; on the phone the fields are arranged one below the other. You mark a task as done with a tap on its box. I have checked the suite's modules at a simulated phone width of 375 pixels in Edge and WebKit, in German and English; not other sizes or real devices.

Tasks: tips

- Create tasks on the “Today” tab if they are due today – the suite then sets the due date itself.
- Use “Assigned by me” to keep track of what you have handed to others.
- Complete Kanban cards conveniently in the task list; you continue to change title and description in the board.
- Link customers or contacts via “🏷 Master data” instead of typing them – the name then stays up to date.
- Tick off subtasks instead of maintaining long descriptions: ☑ shows the progress in the list straight away.

Calendar



Calendar: purpose and use

The calendar brings together the appointments of a person and a team: everyone has their personal “My calendar”, and there are also shared calendars, for example for a team, training sessions or a meeting room. There are day, week, month and list views, recurring appointments with exceptions, invitations that can be accepted, and reminders. Others see private appointments only as *busy*. Deadlines from tasks, Kanban boards and projects can be shown as a layer of their own.

Invitees learn of an appointment through the bell, i.e. the “Notifications” button with the bell symbol 🔔 at the top of the portal header; likewise the person who invited learns of acceptances and declines. Appointments come in and go out via `.ics` file, a subscription link shows a calendar in other programs, and calendar programs with CalDAV synchronise appointments in both directions. You choose the place from the locations in the master data or type it freely.

The calendar is a module of the MC4Y Suite and exists only there, without a file or file extension of its own. Like the suite it is experimental. In the toolbox it appears with the 🗓️ symbol in the categories “Productivity tools” and “Business Support Tools”; in the taskbar the clock leads to the calendar. More in the posts All tools under one roof – the MC4Y Productivity Suite and MC4Y suite: network drive, calendar sync and e-mail notices.

Your permissions in the Calendar module:

- **“Read”:** read shared calendars and answer invitations.
- **“Read and write”:** also a calendar of your own (created the first time you use it) and appointments in shared calendars, as far as the calendar concerned is released to you.
- **“Full access”** to a shared calendar: also set its name, colour and subscription link and delete the calendar. You always manage your own calendar yourself.
- **Full access to the whole module:** create new shared calendars.

Who sees a shared calendar is set by the administration under Administration › Permission groups (module “Calendar”, area = name of the calendar).

Calendar: step by step

1. Open the “Calendar” in the toolbox. Your calendars and the deadlines are on the left, the view on the right.
2. Browse with ◀ and ▶, jump back with “Today” and switch between “Month”, “Week”, “Day” and “List”.
3. Create an appointment with “ + Appointment” – or click a day in the month view, or an hour in the week and day views.
4. In the “New appointment” window, enter the title, “Calendar”, “Start” and “End”, and if needed “all-day”, “Place” and “Description”.
5. If the appointment is to repeat, choose the rhythm and the end of the series under “Recurrence”.
6. Choose a “Reminder”, such as “15 minutes before”.
7. If the appointment is only for you, tick the private box; others then see only *busy*.
8. Under “Participants”, invite with “Invite a person of the suite …” or enter guests under “additional person (name)”.
9. Save with “Save”. Invited people of the suite receive a notification.
10. If you are invited, open the appointment and answer with “✓ Accept”, “? Maybe” or “✗ Decline”.
11. In the sidebar, show or hide calendars and deadline layers with their tick boxes.
12. Switch on “🔔 Reminders in the browser” once and allow the notifications.
13. Via the ⚙ next to a calendar you import or export `.ics` files and create a subscription link.
14. For your calendar program choose “⟳ Sync with calendar programs” (see below).

Calendar: functions and buttons

Header

- ◀ (“Back”) and ▶ (“Next”) – one month, week, day or six weeks on; “Today” jumps to the current day.
- Title – month and year, calendar week with period, the day with date or the start of the list.
- “Month”, “Week”, “Day”, “List” – the view.
- “ + Appointment” – only with write permission.

Sidebar

- “Calendar” – each calendar with a colour dot and a tick box to show or hide it; ⚙ (“Settings, export, subscription link”) appears with write permission in that calendar.
- “Invitations” – appointments you are invited to, including from calendars you do not otherwise see.
- “ + Shared calendar” – with full access to the module.
- “Deadlines”: “✅ due tasks” and “▦ Kanban, projects, milestones” – read-only; milestones carry ◆ and the name of their project (for a project collection from all projects in the file), and changes from the ITSM tool with their time window are added. One click opens the task or tool.

- "🔔 Reminders in the browser" – asks the browser for permission to show notifications; "Reminders appear as long as the suite is open in a window."
- "⟳ Sync with calendar programs" – leads to "Your account" › "🖧 Network drive and calendar".
- "✉ Invitations by e-mail" – leads to the e-mail notifications in your account.
- Your browser remembers the view, hidden calendars and deadline layers.

Views

- Month – six weeks from the Monday of the week in which the month begins; up to four entries per day, beyond that a note such as +2 more. The day number opens the day view, a click into the free part of a day creates an appointment.
- Week and day – at the top the "all day" row for all-day and multi-day appointments and deadlines, below it an hourly grid from 0 to 24 hours positioned at 7 o'clock; a click into an hour creates an appointment there. Overlaps appear side by side, a line shows the current time.
- List – six weeks from the chosen day, day by day; deadlines are marked "Deadline".
- Symbols: ↻ recurring appointment, ✉ invitation not yet answered.

Appointment

- Title, "Calendar" (only calendars you may write to), "all-day", "Start" and "End" with date and time, "Place" ("Location from the master data or free text"), "Description". If the end is before the start, the calendar does not save.
- "Recurrence": "none", "daily", "weekly" (with weekdays), "monthly", "annually"; every … days, weeks, months or years; end never, "on" a date or "after" a number of "occurrences".
- "Reminder": "none", "at the start", "5 minutes before", "15 minutes before", "30 minutes before", "1 hour before", "1 day before".
- Private tick box – only the person who entered the appointment sees the details; others see *busy*.
- "Participants": "Invite a person of the suite …" (people with access to the calendar) and "additional person (name)" with suggestions from the master data; `Enter` adds them. The chips show 👤 or 🏷 and the answer (✓, ✗, ?); × removes.
- "Your answer:" with "✓ Accept", "? Maybe", "✗ Decline" – for invitations.
- "Save", "Delete" (invitees receive a notification) and "Cancel", or "Close" for other people's appointments.
- For series, changing and deleting ask: "Only this appointment" or "All appointments in the series". An appointment changed on its own becomes an exception in the series and an appointment of its own; if you move the whole series, its start shifts by the same amount.

Calendar settings (⚙)

- Name, "Colour" and description – with full access or for your own calendar.
- "Import and pass on appointments": "📥 Import .ics" (the import skips appointments that already exist and gives their number) and "📤 Export as .ics". Series whose rule the calendar cannot keep as a series – such as "last Thursday of the month" or "first Monday of the month" from Outlook – are imported as single appointments on the right days (open series for two years, limited ones up to their end, at most ten years), and the import says so for each series; importing the same file again later only adds what is still missing.
- "Subscription link" – with full access or for your own calendar: "Create subscription link", "↻ Generate new link" (the old one becomes invalid) and "Switch off subscription link".
- "Delete calendar" – only shared calendars, together with all their appointments.

Calendar: saving, export and handovers

Appointments are stored in the suite's database on the server or on your single-user computer and are saved with "Save".

- **iCalendar (`.ics`):** import and export per calendar, with series, exceptions and time zones.
- **Subscription link:** with this secret address, calendar programs display a calendar without signing in – for reading. Anyone who knows the address sees the appointments; private ones only appear as *busy*. A new link

invalidates the old one. Outlook does not support CalDAV; there you add the subscription link as an internet calendar.

- **CalDAV:** the address is shown under “Your account” › “🖧 Network drive and calendar” and has the form `https://server/dav.php/` ; you sign in with your user name and an access password per device (create with “＋ Create”, withdraw with “Revoke”). New appointments, changes, series with exceptions and reminders are synchronised in both directions; other people's private appointments appear as *busy* and cannot be changed. The suite does not accept a series with a rule the calendar cannot keep as a series (such as “last Thursday of the month”); the program then reports an error and keeps the appointment on its side – create the series differently there (for example monthly on the same day) or as single appointments. Appointments from other calendars to which you are only invited do not appear there. Programs also find the calendars from the server name alone, because the suite redirects the short address `/.well-known/caldav` – always under Apache, nginx and the built-in server, and under IIS (Windows Server) if the installation script was able to set up the IIS feature “HTTP Redirection”. “Your account” checks this and tells you; entering the complete calendar address remains the safest choice.
- **Steps according to “How to connect …”:** Thunderbird: Calendar › “New Calendar …” › “On the Network” › user name and calendar address. iPhone, iPad, Mac: Settings › Calendar › Accounts › “Add Account” › Other › “Add CalDAV Account”. Android: DAVx^5 app › “Add account” › “Login with URL and user name”.
- **Reminders:** your browser shows them as long as the suite is open in a window – as a notice in the portal and, if allowed, as a notification; clicking it opens the appointment. In “Your account” you can also switch on “Appointment reminders by e-mail as well”, for your own appointments and invitations, at the same time. More in the chapter ‘Network drive, calendar app and e-mail’.
- **Start page and search:** “🏠 Workspace” shows your appointments for today and tomorrow; the search finds appointments, except private ones.
- **Master data:** if you rename a location in the master data, the calendar shows the new name; a deleted location remains with the note “Location no longer in the master data”.
- **Document library:** a date column with “🔔 Reminder in the calendar” (such as a licence's expiry date) creates one all-day appointment per document in the chosen calendar, “⏳ column date: document name”, on the day “date minus lead time”, with a reminder that morning and a link to the document in the description. It belongs to the library: change the date on the document, not the appointment.

Calendar: phone, systems and browsers

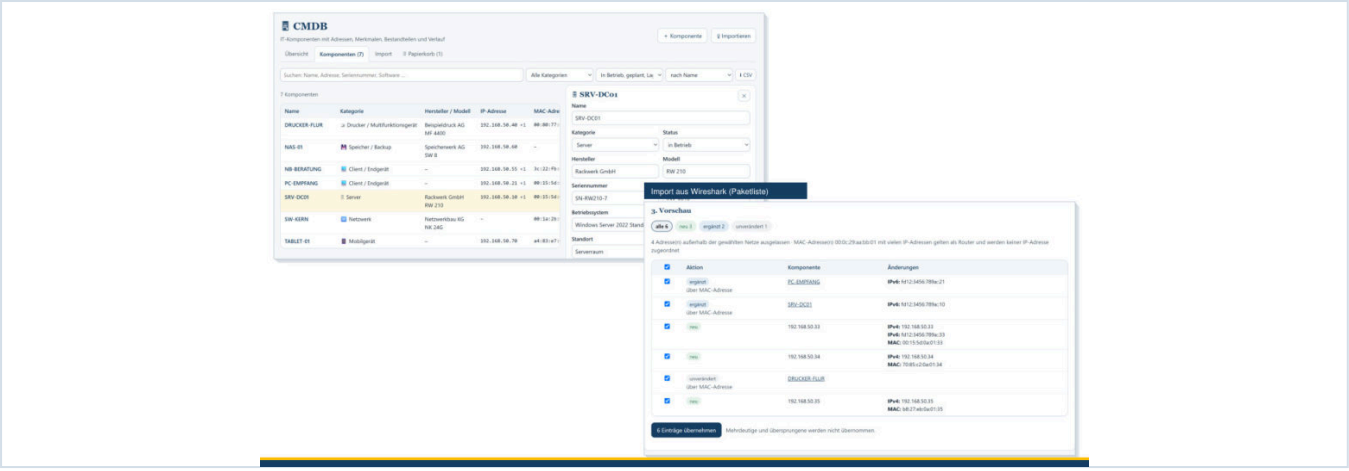
The calendar runs in current versions of Edge, Chrome, Firefox and Safari on Windows, macOS and Linux. Below a width of about 900 pixels the sidebar sits below the view; on the phone the calendar opens the list view the first time and then remembers your choice. It shows the “🔔 Reminders in the browser” button only if the browser supports notifications; if the browser refuses, allow notifications in its site settings.

I have checked the suite's modules at a simulated phone width of 375 pixels in Edge and WebKit, in German and English. Not checked are real operating system notifications, the subscription link in Outlook, Thunderbird and on the phone, and CalDAV sync with real programs: so far I have only tested it with my own test bench according to the rules of the standard. I would welcome feedback.

Calendar: tips

- Use shared calendars for everything that concerns several people, for example a team or a meeting room; private appointments still stay confidential there.
- Show the deadline layers when you plan – you then see appointments and due tasks at a glance.
- For the phone, CalDAV with DAVx^5 or Apple Calendar is the route with write access; the subscription link is enough for reading.
- Only pass a subscription link on to people who may see all appointments, and create a new one if it has fallen into the wrong hands.
- Switch on the e-mail reminders if you do not have the suite open all the time.

CMDB



CMDB: purpose and use

The CMDB is the configuration management database of the MC4Y Suite: one place for all of your organisation's IT components – servers, virtual machines, workstations, laptops, mobile devices, printers, network and security components, storage, telephony, peripherals and building services, plus applications, platforms, technical architecture plans and software. It answers the questions almost every fault begins with: which device is it exactly, where is it, who is it assigned to, what address does it have, what runs on it?

It is meant for everyone who looks after IT in a small or medium-sized business. You can record by hand, import existing lists (Excel or CSV, Active Directory, DHCP, Wireshark) or, if you wish, collect automatically with agents and a crawler. Every component knows its origin, its history, its costs and its relationships to other components. The ITSM tool assigns tickets to components, and the 8EM Modeller transfers its IT systems, platforms and components here.

The CMDB has the status **Experimental**. It is a module in the suite's portal – not a file of its own, so it has no file extension – and you find it in the toolbox under Business Support Tools. You download the suite itself as a trial version from the website's 'Experimental' page. The data is kept in a database of its own in the suite's data folder, on your computer or on your server; the CMDB sends nothing outside. I describe it in detail in the articles The MC4Y Suite CMDB – your IT components at a glance and Agents and crawler: IT into the CMDB automatically.

What you may see and do is set by the permission groups, as described in the chapter 'The suite portal'. With "Read" you see the overview, the list, the costs and discovery. "Read and write" lets you create, edit and import, add your own categories and ask the agents to report at once. Only with "Full access" do you delete permanently, merge, clean up, rename categories, maintain the group rules and set up discovery.

CMDB: step by step

1. In the portal, open the toolbox and, under Business Support Tools, the CMDB. The "Overview" shows one tile per category with the number of components.
2. Click "⇪ Import". Drag an inventory list onto "Drag file here" or pick it with "Choose file …" – CSV, Excel (.xlsx), text or a CMDB export (.json).
3. The CMDB recognises the format itself. Check under "take over as" which column goes where; take over anything unknown "as attribute (column name)" or leave it out.
4. Decide whether to "Create unknown devices as new components" and which category new components without a recognisable category receive. Click "Calculate preview" – nothing is saved yet.
5. Check every row in "3. Preview": "new", "added", "unchanged" or "ambiguous". Untick what should not be imported and click the import button, which shows the number of entries.
6. For a single device, click " + Component". The form " + New component" opens.
7. Enter name, category, status, classification, manufacturer, model and serial number. If you type a category that does not exist yet, the CMDB creates it after asking.
8. Choose location and the person responsible from the master data; below the field you see " 🔗 from the master data" or "entered freely".

9. Add IP, MAC or DNS addresses with "+ Address", details such as processor or warranty end with "+ Attribute", and purchase, maintenance or licence costs with "+ Costs".
10. Click "Save".
11. Once the component is saved, link it to others under "Relationships": choose the type, search for a component, "🔍 Search", pick the result.
12. Point to the documentation under "📖 Wiki pages and documents": "📖 Link wiki page" or "🔗 Link document", type a search term, "select". A click on the link opens the page or document; there, "Referenced in the CMDB by" leads back.
13. In the "💶 Costs" tab, evaluate what the components cost by cost centre and cost type.
14. To back up or pass on: in the "Overview", "⬇ Everything as CSV (Excel)" and "⬇ Everything as JSON" create a complete export.

CMDB: functions and buttons

Header and tabs

- "+ Component" – create a component; "⇪ Import" – import a list (both from "Read and write").
- "Overview" – tiles per category, boxes for status, "Origin" and "Classification" (a click filters the list), "Last changed" and "Recent imports". Notices about orphaned components (full access) and about free texts that match the master data also appear here.
- Tabs "Components" (with the total), "💶 Costs", "Import", "📡 Discovery", "🏷 Categories" (from "Read and write"), "🧰 Group rules" (full access) and "🗑 Recycle bin" (with the count).

List of components

- Search field "Search: name, address, serial number, software …" – also finds attributes and addresses.
- Filters by category ("All categories", "Uncategorised"), status (default "In operation, planned, in stock, defective" – retired and decommissioned entries only on request), "any origin", "any classification" and "any deployment".
- Sorting "by name", "by category", "by manufacturer", "by location", "last modified", "last created", "last seen".
- "⬇ CSV" – the filtered list as CSV for Excel; "Load more" – show further entries.
- A click on a row opens the form beside it.

The form of a component

- At the top: origin, creation, last change and "last seen"; ✕ closes the form.
- Status: in operation, planned, in stock, defective / under repair, retired, and the life-cycle phases as in the 8EM Modeller: idea, project, introduction, operation (here "in operation" – the same status as for devices), decommissioning planned, decommissioned.
- Classification: physical, software or abstract – pre-set from the category, freely changeable; anything an agent or the crawler reports becomes physical automatically.
- The sign ✎ next to a field means: maintained by hand – no import overwrites this value.
- Next to a freely entered location or person responsible: "+ Create person in the master data", "+ Create organisation in the master data" or "+ Create location in the master data" (with a permission in the master data tool).
- "Addresses" – IPv4, IPv6, MAC and DNS name, "+ Address"; attributes – "+ Attribute" with suggestions.
- "Parts" – services, shares, disks with partitions, internal and external devices, network adapters and the always collapsed "System packages" (dependencies on Linux). Installed software is not a part but a component of its own per product and major version.
- "💶 Costs, version and deployment" – "Version (major version)", "Deployment" (local, on a server, internal or external cloud) and the cost entries: "+ Costs", amount, frequency ("annually", "monthly", "one-off"), status actual, plan or forecast, cost type, cost centre, note. The total shows the annual value and one-off amounts, per cost type actual before forecast before plan.
- "Save", "Discard", "🗑 Move to recycle bin" and "⇄ Merge with …" (full access).
- "History" – who changed what and when, before and after: also new addresses, parts with their kind and name ("Service added") and software that is added, removed or changes its version (💿) – also when an agent reports

it. For the first report of a device there is one summary line (“Software recorded: 113 programs”), likewise when more than 25 programs change with one report.

- “🛠 Tickets in the ITSM tool” – incidents, problems and changes that name the component.
- “💻 Installed on” (for software, with the number of devices currently reporting) or “💿 Installed software” (for devices).
- Group / suite: “＋ To group/suite”; a group lists its “Members”, and “automatic” means: assigned by a rule.
- “Relationships” – “Uses”/“Is used by”, “Runs on”/“Runs”, “Supplies data to”/“Receives data from”, “Is connected to”, “Backs up”/“Is backed up by”, “Is part of”/“Consists of”; new relationships and × take effect at once.
- “📖 Wiki pages and documents” – links to wiki pages (📖) and to documents of the library (☃); “📖 Link wiki page” and “ ☃ Link document” open a search, “select” sets the link, × removes it – both at once and recorded in the history. Linking requires “Read and write” in the CMDB and read permission for the target. Anyone who may not read a target only sees “a link without read permission”; deleted targets are marked “deleted” or “in the recycle bin”.

Merging and deleting

- “⇄ Merge with …”: search for the component, “Select”, check the preview, “⇅ Swap direction” if needed, then “⇄ Merge”. Existing values of the remaining component take precedence, the duplicate goes to the recycle bin, and its identifier keeps leading to the remaining one; its links to wiki pages and documents move along.
- “🗑 Move to recycle bin” first shows the consequences. Under “Orphaned as a result”, the CMDB suggests software and empty automatic groups for deletion as well (“move all to the recycle bin too”); with full access you deregister an agent of the device in the same step.
- In the “🗑 Recycle bin”: “↩ Restore” and, with full access, “Delete permanently”. If further components came along in the same deletion run, the CMDB asks whether all of them or “Only this one”.

The “💶 Costs” tab

- Choice of status (“Actual, otherwise forecast, otherwise plan” or just one), category and values (“Annual values” or “one-off amounts”), plus “⬇ CSV”.
- Table cost centre × cost type with totals, plus “Per cost type group” and “Per component”. Monthly amounts count twelve times; components in the recycle bin do not count; ⚠ means: no longer present in the master data.

The “Import” tab

- “1. Choose file” – drag, “Choose file …” or “… or paste a table or text” with “Import”. “Where do I get the lists?” gives the commands for Active Directory and DHCP, the way in Wireshark and “⬇ Template (CSV)”.
- Step 2 names the detected format; “Other format:” chooses “List (CSV/Excel)”, “Active Directory – computer accounts”, “DHCP – assigned addresses”, “Wireshark – Endpoints”, “Wireshark – Packet List”, “Wireshark – Resolved Addresses” or “CMDB export (JSON)”.
- “Only addresses from these networks” – pre-filled with the private ranges, so internet addresses from captures drop out. A CMDB export (JSON) does not have this field: it takes over its addresses unchanged, public ones included. For DHCP and Wireshark a tick box records “last seen”; for Active Directory, “skip disabled computer accounts” leaves out disabled accounts.
- “Calculate preview”, then “3. Preview” with filter buttons “new”, “added”, “unchanged”, “ambiguous”, “skipped”, “invalid”. Matching uses serial number, MAC address, name without domain and finally IP address.
- After “Imported”: “To the components” or “Import another file”. An import creates no categories.

The “🏷 Categories” tab

- Table with symbol, name, “Suggested classification”, “to choose from” (hide) and the number of components; per row “Save”, ↑ and ↓, × to delete with “Move and delete” or “Delete”, or “Cancel”.
- “＋ Create your own category” with name, symbol and classification, then “Create”. “Software / service”, “Group / Suite” and “Other” can be renamed but not deleted; when you rename, all components follow.

The “🧰 Group rules” tab (full access)

- Rules “Product (word in the name)”, “Manufacturer (optional)” → group, “active”; “ + Rule” and × for one more or one fewer.
- “🕐 Silent devices and 🧹 clean-up” – “Days without a report” (default 30), “ 🧹 Clean up – trial run” and “ 🧹 Clean up now”.
- “Save and apply” or “Only apply now”.

The “ 📡 Discovery” tab

- “ 📡 Agents and crawlers” – list with type, component, interval, “Last heartbeat” and “Last report”; “⟳ Collect all now” and ⟳ per row request a report at once; ✎ and ✕ (full access) change or remove.
- “🌐 Networks for the crawlers” – “Network (CIDR)”, IPv4 or IPv6, crawler, interval, “Category for discovered devices”, “Create unknown devices”, “active”; “ + Add network”.
- “🔑 Set up agents and crawlers” – “Create setup key” with “For” (“Agents and crawlers”, “agents only”, “crawlers only”), “Device interval (minutes)”, “Valid for (days, 0 = no expiry)” and “At most … devices (0 = any)”. The key is “visible only now”; “⬇ Setup file (mc4y-erkennung.json)” contains address and key. Below are “Existing setup keys” and “Download packages”.
- “🕐 Recent runs” and “🏷 Manufacturer list (OUI)” with “Import manufacturer list” for the complete IEEE list.
- “📱 Connect devices …” (full access) rolls out the agent or crawler to many devices at once: download the deploy helper, “Computers (one per line: name, FQDN or IP)”, “Administrator account” or “SSH user”, “Check connection”, “Roll out”. For Home Assistant the view shows a guide.

CMDB: saving, export and handovers

“Save” writes to the suite's database – there is no file dialogue. Every change is in the history, deleted items go to the recycle bin first, and the suite's daily backup includes the CMDB. An import never overwrites what you have maintained by hand, so you can import a list from Active Directory every week.

Exports: “⬇ Everything as CSV (Excel)” and “⬇ Everything as JSON” in the overview, “⬇ CSV” for the filtered list and for the cost evaluation. Another MC4Y Suite reads the JSON export back in, for example when moving to a server; identifiers, relationships, group assignments and master data references go along; installations, history and the links to wiki pages and documents do not (they point to pages and documents of this one suite).

Handovers: in the ITSM tool you assign tickets to components; a device newly recorded there appears with the origin “recorded in the ITSM tool”. The wiki and the document library show under “Referenced in the CMDB by” which components link to a page or document – so you can put a diagram from the UML tool on a wiki page and link to it from the system it belongs to. When you save a model of the 8EM Modeller in the suite, it transfers IT systems, architecture plans, platforms and components with their phase as the status; anything you have moved to the recycle bin it does not create again. Location, person responsible, cost type and cost centre come from the master data, which then lead. Free texts from earlier imports are linked in one step via the notice in the overview, on the page “ 🔗 Link free texts to the master data”.

CMDB: phone, systems and browsers

The CMDB runs in the browser you open the portal with. Import and export use the browser's normal file selection and download; the CMDB does not need the folder functions of Chrome and Edge. In narrow windows up to 1000 pixels wide, the form sits below the list and the view jumps there. Wide tables scroll within their frame, the page itself does not.

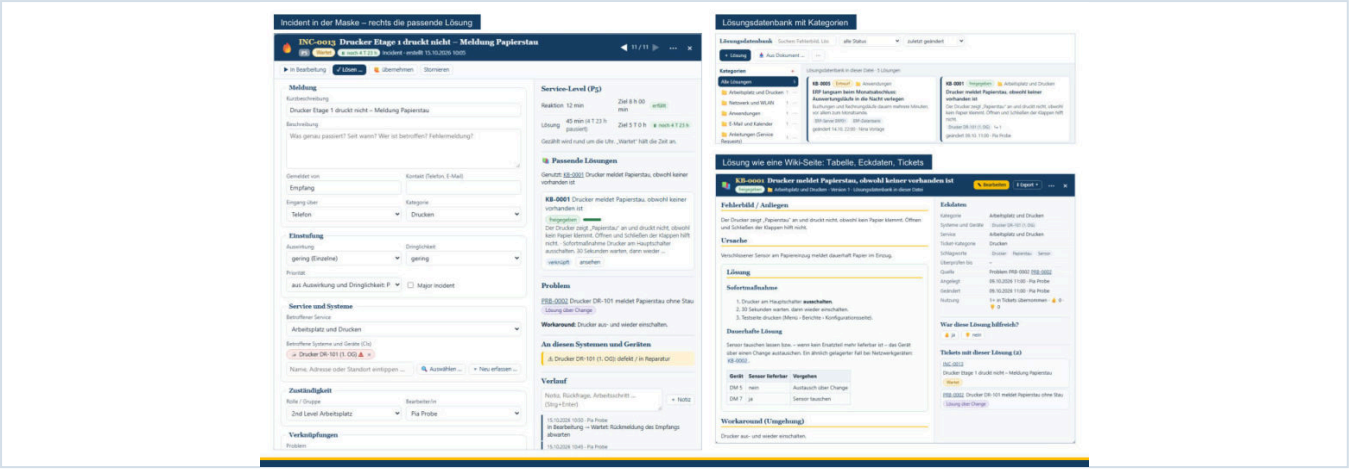
On phones and tablets, buttons and fields have been at least 40 pixels high since 12 November 2026. I checked this in Edge and in WebKit, the engine behind Safari, at 375 × 611 pixels with simulated touch – creating a component, linking master data. Not checked are a real phone or tablet, Firefox on a phone, a browser on Linux and Safari on a real Mac.

Discovery is available for Windows 10/11 and Windows Server 2016 or later, Linux, Raspberry Pi, macOS 12 or later, Android via Termux and Home Assistant; the crawler runs on Windows, Linux and macOS. According to the package guide, the Windows route is checked on Windows 11, Windows 10 and Windows Server are not; real Linux, macOS, Android and Home Assistant devices and a real network scan are not checked either. The deploy helper for “📱 Connect devices” runs on a Windows workstation.

CMDB: tips

- Import devices from Active Directory, the DHCP server or an inventory list first. Wireshark usually knows only addresses and then adds addresses and "last seen".
- If the preview shows "ambiguous", the CMDB prefers not to import the row. Open the components named and merge duplicates.
- Create categories such as "Machine / plant" under "🏷 Categories", or simply type them in the form.
- Attach the documentation to the system, not the other way round: operating manual and diagrams live in the wiki or the library, and the component points to them with "📖 Link wiki page" – a diagram nobody can find is no help in the next incident.
- Before a big clean-up, "🧹 Clean up – trial run" shows what would go to the recycle bin.
- An agent needs only outgoing HTTPS to the suite. If your suite has a self-issued certificate, the setup file contains its public part – put it next to the installer.
- Device data can relate to people, such as a laptop with a name. Record only what you need, and capture with Wireshark only in your own network.

Solution database



Solution database: purpose and use

The solution database collects proven solutions and instructions – structured like a wiki. Each solution is a page with symptom, cause, a step-by-step solution with headings, lists, tables and images, a workaround, keywords, affected systems, service and attachments. Categories work like nested folders, references link solutions, and every saved version is kept.

It is meant for small IT teams and for colleagues who only look things up. Its value comes from the ITSM tool: when a ticket is recorded, it suggests matching solutions, and a tick box turns resolved tickets into drafts. Every solution exists in German and English.

The solution database has the status **Experimental**. In the MC4Y Suite it is a module in the toolbox under Business Support Tools – with no file or extension of its own; the data is on your server, shared by everyone. Its interface is that of the ITSM tool, which therefore has to be installed too; no permission in the ITSM tool is needed. Without the suite, the solution database sits in the ITSM tool's file (`.itsm.json`), where it is the view "📚 Solutions". More in the article ITSM tool: incidents, requests, solutions, CMDB.

Permissions come from the module "Solution database", as described in the chapter 'The suite portal': "Read", "Read and write" (create, edit, import, maintain categories, move to the bin) and "Full access" (recycle bin, restore, delete permanently, delete categories).

Solution database: step by step

1. In the portal, open the "📚 Solution database" under Business Support Tools – or the view "📚 Solutions" in the ITSM tool.
2. On the left under "Categories", create a category with ＋, for printers or the network, say; ⋯ next to a category creates subcategories.

3. Click "＋ Solution" (key `N`). The form opens for editing.
4. Enter the title – how the problem can be recognised – then symptom, cause and, under "Solution – step by step", the instructions. Paste images, drag them in or fetch them with 🖼.
5. Add the workaround and, on the right under "Classification", category, status, "Review by", keywords, systems and devices, service and ticket category.
6. Attach files if needed: drag them in or use "🖱 Choose files …".
7. Under "Change", note briefly what you changed, and click "💾 Save" (`Ctrl` + `S`).
8. Check the solution in the reading view and set the status to "approved" via ⋯.
9. Bring in existing instructions with "📥 From document …" – Word, PDF, PowerPoint, LibreOffice or images.
10. In an ITSM ticket, matching solutions appear on the right under "📚 Matching solutions"; "✓ Apply" enters solution and workaround into the empty fields.
11. A resolved ticket becomes a draft with the tick box "Add as a permanent solution suggestion to the solution database". Revise it and approve it.
12. To pass a solution on, "⬇ Export ▾" offers Word, LibreOffice, PDF, PowerPoint, web page or ZIP.

Solution database: functions and buttons

List toolbar

- Search field "Search: symptom, solution, keyword, attachment …" – finds solutions in both languages.
- Choice of language version (🌐 German or English), status ("all statuses", "Draft – still to be checked", "approved", "outdated") and sorting ("best matches first" or "last modified", "by title", "by number", "most frequently used").
- "⚑ Check translation" – only solutions whose other language version has changed since the last comparison.
- "＋ Solution", "📥 From document …" (write permission) and ⋯ with "All solutions as Word document (.docx)", "All solutions as PDF (Print)", "List as CSV (Excel)", the transfer from a file into the suite and the switch "Suggest matching solutions in tickets".

Category tree on the left

- "All solutions", the categories with their counts, "no category" and, with full access, "🗑 Recycle bin".
- ＋ creates a category; ⋯ next to a category offers "Rename …", "Name in English …" or "Name in German …", "Create subcategory …", "Move under …", "Move up", "Move down" and, with full access, "Delete (solutions move up one level)".

Cards

- Per solution: number (KB-…), status, category, title, excerpt, systems, attachments, use and ratings; "check" means the review date has passed, "⧉ Copy" that it is not yet translated.

Reading view of a solution

- Header: language version, "✎ Edit", "⬇ Export ▾", ⋯ and ×; opened from a ticket, also buttons back to the ticket and to apply the solution to it.
- Sections "Symptom / concern", "Cause", "Solution", "Workaround" and "Attachments" (a click opens or downloads the file).
- On the right "Key data" (category, systems and devices, service, ticket category, keywords, "Review by", source, use, language versions), "Was this solution helpful?" with "👍 yes" and "👎 no", the tickets with this solution and "Referenced from".
- ⋯ offers "Versions and comparison …" (with "compare" and "restore"), "German and English side by side …", the status, "Create new as a copy", "Move to bin" and, in the bin, "Restore" and "Delete permanently".

Editing

- Fields "Title – how can the problem be recognised, or what is it about?", "Symptom / concern (symptoms, error messages – this is what gets searched)", "Cause", the solution in the editor and "Workaround (until the cause is fixed)".

- Editor toolbar: ¶ “Paragraph”, “Heading”, “Subheading”, “Bold (Ctrl+B)”, “Italic (Ctrl+I)”, “Underline (Ctrl+U)”, “Crossed out”, “Bulleted list”, “Numbered steps”, “Quote / note”, “Code / command”, “Insert table”, 🔗 for links, “Reference to another solution”, “Insert image (GIF, JPG, PNG)”, “📥 Insert document” (at the cursor) and “Clear formatting”.
- Write references as `[[KB-0003]]` or `[[Title of the solution]]`.
- On the right “Classification” with category (+ for a new one), status, “Review by”, “Keywords (separate with commas)”, systems and devices (“Type a name, Enter …”), service and “Ticket category or type of request”; “Change” with “Briefly: what was changed? (for the versions)”.
- “💾 Save”, “Cancel”; for an existing solution ⇄ “View the English version” or “View the German version” – the saved other version, for translating.

Language versions

- A new solution starts in both languages with the same text; the other version follows until someone translates it.
- If the original changes later, “⚑ Check translation” appears with “⇄ Compare”, “✓ Is up to date” and “⧉ Take over from the German version” or “⧉ Take over from the English version”.

In an ITSM ticket

- “📚 Matching solutions” with an excerpt, “✓ Apply” and “View”; solutions already connected show “linked”.
- Tick box “Add as a permanent solution suggestion to the solution database” – at once if a solution is already entered, otherwise on resolving.

Keys

- `N` new solution, `Ctrl` + `F` search, `Ctrl` + `S` save, `Esc` close, `F1` help.

Solution database: saving, export and handovers

In the suite, “💾 Save” saves on the server; every version is kept, deleted items go to the recycle bin first. Without the suite, everything is in the ITSM tool's `.itsm.json` file, attachments embedded (at most 15 MB each) – saving works as described in the chapter ‘How do I use a tool?’. ⋯ transfers solutions from such a file into the suite; afterwards they exist only there, and ticket references point to the new numbers.

Importing with “📥 From document …”: Word (.docx), LibreOffice Writer (.odt), PDF, PowerPoint (.pptx), LibreOffice Impress (.odp), images (GIF, JPG, PNG), text and HTML – text, headings, lists, tables and images. With several files choose “one solution per file (saved as a draft straight away)” or “everything into one solution (opens for editing)”, plus “Also attach the original files (pictures are in the text anyway)” and the category, then “Import”. Older formats (.doc, .ppt) and spreadsheets are only attached; scanned PDFs without a text layer appear as images.

Exporting with “⬇ Export ▾”: Word, LibreOffice Writer, PDF (via Print › Save as PDF), PowerPoint, LibreOffice Impress, a web page with embedded images and, with attachments, a ZIP. “Both languages in one document” offers Word, LibreOffice Writer and PDF. Your browser does the work; nothing goes to outside services.

Handovers: the ITSM tool suggests solutions and takes over resolved tickets as drafts; according to the catalogue, the cause-and-effect diagram also passes confirmed causes here.

Solution database: phone, systems and browsers

The solution database runs in current versions of Edge, Chrome, Firefox and Safari, without folder functions. Without the suite, the ITSM tool saves in Safari and Firefox via the download folder, as described in the chapter ‘How do I use a tool?’.

On phones and tablets (up to 900 pixels wide or 500 pixels high), the ITSM tool's buttons and fields are at least 40 pixels, and the toolbar scrolls sideways. I measured this at simulated screen sizes with simulated touch, and the portal page in Edge and WebKit (the engine behind Safari) at 375 × 611 pixels. Not checked: a real phone or tablet, Safari on a real Mac, Firefox on Linux, LibreOffice itself, very large or unusual documents.

Solution database: tips

- Write the symptom the way users describe it – that is what gets searched.

- Before approving a solution from a ticket, remove names and case-specific details, screenshots included.
- Give solutions that can go out of date a “Review by” date; the card then shows “check”.
- If the portal says the solution database uses the interface of the ITSM tool, include the “ITSM” tool in the next update.

Tools in the suite: working together

In the suite, all tools work with the shared storage on the server.

Opening, saving and versions

Instead of your computer's file window, a window of the suite opens: you choose a folder and document, and a double-click opens it. Every save keeps the previous version; 🕘 "Earlier versions" brings back an older state with "Restore" (by default the last 20). Tools that store their document as a folder (8EM Modeller, Accounting, FreeHTML Editor) do not keep this list. If your browser has no save window of its own (Safari, Firefox, or Chrome over http), the window also offers "On this computer …" (download) and "From this computer …" (select a file).

When someone else is editing the document

If you open a document that someone is currently editing, you get it read-only – with a notice of who is editing it and since when. You can save your own changes as a copy. When the document becomes free, the suite reports "It is free now" within half a minute at the latest. After an hour without input, the suite asks and otherwise releases the document. People with full access can take over an editing session; the other person learns of this within half a minute at the latest.

At the bottom right, a small display shows which suite and which account you are working with; "–" shrinks it. On phones and tablets only the 🗄 button appears.

Attachments from the document library

On a tool's "MC4Y Suite" panel, you attach documents with " 📎 Attachments from the document library" – select, search or upload anew. Only the reference is stored; what opens is always the current version.

Handovers between tools

Tools pass results to one another: invoices from project management, won customers from the Vertriebs-Navigator and incoming invoices from the Kunden-Navigator appear in the accounting tool; the goal system and the pain points pass their results to the 8EM Modeller at the press of a button. Handovers can only be read by the tools involved.

Master data and projects together

If several people change different master data entries at the same time, the suite merges the changes; other people's changes reach you within half a minute at the latest. If you rename a location or a cost centre, all modules show the new name. A deleted entry remains as a name and is marked as "missing".

In project management, your role – project manager, team member or read-only – follows from your permission in the suite and your role in the project. If two people change the same entry, the tool shows both states. More on this in the post Project management as a team.

Network drive, calendar app and e-mail

The document library as a network drive

The suite's libraries appear in Windows Explorer, in the Mac Finder or in the file manager on Linux like a drive – with the same permissions as in the portal. The address is shown under "Your account › Network drive and calendar"; it has the form `https://server/dav.php/dokumente/`, and each library is a folder.

- **Signing in:** with your suite user name and an **access password** – never with your sign-in password.
- **Saving:** every save results in a new version. The safe saving of Word and Excel with temporary files results in exactly one version; helper files do not end up in the library.
- **Deleting:** deleted items go to the suite's recycle bin.
- **Locks:** a file opened via the drive is locked for others – at the drive as in the portal, where it can be neither checked out nor uploaded anew, changed, moved, archived or deleted while it is open; reading and downloading still work. The document storage list then shows "🔒 name · drive", the document shows who has had the file open and since when. Users with full access can end the lock there with "Lift lock" (with a confirmation, recorded in the log) – the program at the drive can then no longer save into the storage; whoever worked there saves their changes as a copy. The drive does not accept a document that is checked out in the suite either – already when opening it. If the program crashes, the file is free again after one hour at the latest.
- **Windows:** Windows only sends the password of a network drive over an encrypted connection with a trusted certificate. Your suite therefore needs `https://` with an installed certificate. On a single-user computer without a certificate, the suite shows a drive address of its own that only works on that computer.

Access passwords per device

Under "Your account › Network drive and calendar" you create an access password for each device, with a name such as "Laptop" or "Phone". The suite shows it only once and afterwards stores only a check value. If a device is lost, you revoke exactly that one access password; the administration can revoke all access passwords of an account at once.

The calendar in your own app

Calendar apps that support the CalDAV standard are added with the address `https://server/dav.php/`; they find your calendars themselves. New appointments, changes, series with exceptions and reminders are synchronised in both directions. Other people's private appointments only appear as "busy". With the server name alone (without `/dav.php/`), programs find the calendars through the short address `/.well-known/caldav`, which the suite redirects – on a Windows server with IIS only if the installation script set up the IIS feature "HTTP Redirection" there. "Your account" measures this and otherwise asks you to enter the full address. Appointments from the document library (reminders from date columns such as "Expiry date") come along like every other appointment of the calendar. Outlook does not support CalDAV; there you use the subscription link for reading. Appointments from other people's calendars to which you are only invited do not appear via CalDAV.

Calendar apps also find the calendar **"Task deadlines"**: your open tasks (assigned to you, or created by you without an assignee) as all-day entries "Due: …" on the due date, each with an alarm at the same time as the suite's reminder (default: the day before at 8 a.m.; "none" = no alarm). It is read only – you change due date and reminder in Tasks, and the app takes them over at its next sync; completed tasks disappear from it.

The sync is built according to the rules of the standard and tested with a test bench of my own. I have not yet tried it with Thunderbird, Apple Calendar or DAVx^5 on Android.

Notices by e-mail

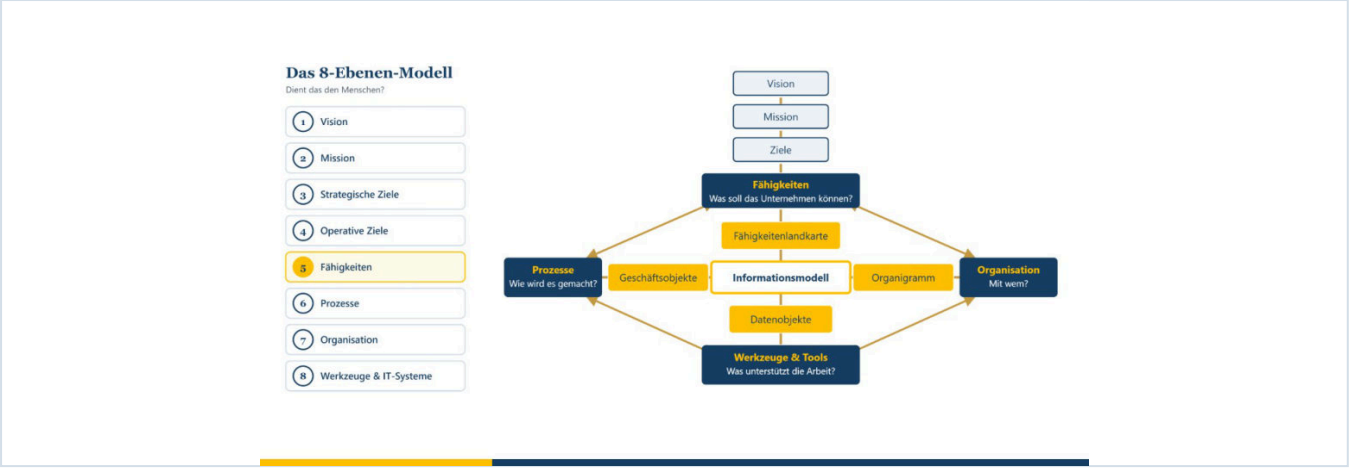
If the administration sets up a mail server, you choose in "Your account" whether you receive notifications by e-mail: none, each one immediately or once a day, in German or English. If you wish, reminders of your own appointments and invitations and of due tasks are added ("Appointment and task reminders by e-mail too"). Task reminders always appear in the bell, even without a mail server. The suite sends the e-mails every five minutes –

with web hosting only with a cron job of its own (installation handbook) – exclusively through the mail server that has been entered. Mail providers that only allow sign-in via OAuth are not supported. More on this in the post Network drive, calendar sync and e-mail notices.

Business Support Tools

Tools with which you describe, run and manage a business. The tools for architecture and IT operations are aids for conversation and decision-making; they do not replace specialist advice in individual cases, legal advice or operational implementation.

8EM Modeller



8EM Modeller: purpose and use

With the 8EM Modeller you map a company in my 8-Level Model: vision, mission, strategic goals, operational goals, capabilities, processes, organisation, and tools & IT systems. For each level you create elements and link them. This makes visible which capabilities a goal needs, which processes put them into practice, who is responsible and which IT systems support them. Sub-levels complete the picture: 2a architecture principles, 5a products, 5b value streams, 6a functions, 7a organisation with data protection, information security and cost centres, 7b projects, 7c data and information, 7d glossary; the Modeller keeps the location model as level 9. Every element and every level carries the guiding question “Does it serve people?”.

The Modeller is made for small and medium-sized enterprises – for senior management, IT management, data protection and the business departments. Typical uses: an inventory from the vision down to the IT system, to-be pictures with a roadmap, architecture management and reports as a basis for decisions. You ask questions in everyday German; the answers are produced locally by fixed rules, without any AI service.

The Modeller is still under development (status *Experimental*) and is available on the website under *Experimental – to try out*, to download or to open straight away. In Chrome and Edge a model lives in a **model folder** with the file `modell.8em.json` and a subfolder for the documents of each level; in Safari and Firefox you work with a single file `.8em.json`. In the MC4Y Productivity Suite the model is kept on the server. More in the posts Mapping a company in the 8-Level Model and Architecture management tools in the 8EM Modeller.

The 8-Level Model is a model for description and dialogue. It does not replace specialist advice in individual cases – including legal advice on data protection or information security – nor operational implementation.

8EM Modeller: step by step

1. Open the Modeller. The start window asks “8EM Modeller – where would you like to start?”; to get to know it, choose “View example”.
2. For a new model, enter the “Name of the model” and, in Chrome or Edge, choose “Choose and create a storage location …” – in Safari and Firefox “Create as a single file”.
3. Open an existing model with “Choose model folder …” or “open a single model file (.8em.json)”. If you answer the browser’s prompt with “Allow on every visit”, the Modeller opens the last model directly from then on.
4. Start with vision and mission in the “Levels” view: “+” creates an element, and the text editor opens with a template and guiding questions.
5. Derive the goals and describe the capabilities, most conveniently in the “🧩 Capability model” (menu “Editors ▾”).

6. Capture the processes in the "🗺 Process map" and draw flows as EPC, BPMN or SeeMe; roles, data and IT systems in them land in their level automatically.
7. Build the organisation in the "🏢 Organisation chart"; in responsibility fields you type or choose roles and people.
8. Capture the IT in the "🖥 IT system landscape" and with the " 📝 Input form".
9. Link the levels with "↗ Connect" (`V`) or in the Matrix view by clicking a cell.
10. Look at the "Check": it shows gaps and contradictions.
11. Create a target picture with " + To-be picture" and follow the route in the Roadmap view.
12. Ask a question in the " 📊 Analysis" or choose a report, and output it with "🖶 Print / PDF", " 📄 Word" or "⬇ CSV".
13. Save with "Save" (`Ctrl` + `S`); the previous version goes into `_Sicherungen` .

8EM Modeller: functions and buttons

Header

- The large curved arrows at the top left – undo and redo (`Ctrl` + `Z` / `Y`); the small arrow ▾ between them shows the history, and a click restores the state before that step (up to 300 steps per session).
- "New / Open …" – the start window; "Save" (`Ctrl` + `S`); "Save copy …" – the model file additionally in another place.
- "Colours …" – colour coding of the capabilities.
- "Editors ▾", "EAM ▾", "Import ▾" and "Export ▾" – see below; "Help" – the detailed help.
- "👥 Master data" – shows the master data tool; "🔗 Link" takes over the employees, unit heads and roles of the as-is picture, after which name, initials and role assignment are read-only here.

Start window

- "Choose and create a storage location …" or "Create as a single file"; "Which folders will be created?" shows the folder structure.
- "Choose model folder …", "open a single model file (.8em.json)", "View example"; the most recently used model as a large button.
- "open directly at start, without this window" switches direct opening on or off.

Views

- "Levels" – all levels one below the other, each element as a card; a click highlights an element's chain. Move cards freely and enlarge them at the corner, "Reset arrangement" arranges them automatically again; nest capabilities up to 5 steps deep (▾ / ▸).
- "Capability map" – nested, coloured by colour coding, maturity gap, priority, make/buy or guiding question.
- Matrix – two (sub-)levels against each other; a click in a cell links or unlinks.
- Roadmap and " 📊 Analysis" – see below.
- "Guide" – through the levels with guiding questions, notes, assessment and document store; switchable to "ADM phases".
- "Document store" – all documents per level; "Check" – gaps and contradictions, the number on the tab gives the notes.
- Next to them on the right, the 🅘 selection for the picture shown.

Working in the "Levels" view

- Double-click opens the matching editor (text editor, data model or graphical editor), right-click shows all options; `F2` or a second click on the name renames.
- **A click on a process opens the process window** (since version 0.4.67): at the top process type, responsibility, maturity level, pain points, automation and trigger → result; below it the flow as EPC, BPMN or SeeMe, fitted into the window (switchable at the top if there are several notations, "Edit model" opens the editor); below that tiles without lines – goals, key figures, capabilities, products, value streams, interfaces with other processes, organisational units, roles, people, processing activities, risks, measures, information, IT systems, steps, findings.

If something essential is missing (no goals, no key figure, no model), the gap is shown in orange. An entry in a tile leads to the element in the model; “Print / PDF” prints the window. On the right, for the selected process, “▣ Show process in a window” opens the same window; rename with `F2`.

- Click “↗ Connect” (`V`) or the ↗ handle, then the target; “↗ connect” joins two marked cards, ⇄ reverses. Between levels a link is created, within a level a relationship with a type.
- Drag a line end onto another card to re-attach it, onto empty space to detach it, or click the line and choose ⤺ (source) or ⤻ (target); 🗑 or `Del` deletes.
- “Lines: all / selection / off” (`B`; the default is “selection” – only the lines of the selected card), plus “between levels” and “within a level”. On a line: arrow direction, line shape, swap ends, label; dragging adds a handle ◆, double-clicking ◆ removes it.
- Several cards: `Ctrl` +click, a frame on empty space or `Ctrl` + `A` – drag together, arrow keys, `Del`; on phones “☑ Multiple selection”.
- Under “Colour”: “per element” (colour of the element on the upper level) or “single colour”.
- With nothing selected, you enter the participants in the model and the design factors on the right.
- `Esc` ends connecting or clears the selection.

As-is and to-be pictures

- Each picture is a complete model. “ + To-be picture”, “ + New to-be picture” (🅘 selection) or “ + Copy” in the “⚙ Manage pictures” dialogue copies the picture shown; ◀ ▶ switch, and you change name and target date directly.
- Marked is what is new (green), changed (blue) or dropped in the next picture (orange, dashed); dropped elements can be brought back with “bring back”.
- By right-click or under “🅘 In the pictures”: “Carry changes over into later pictures”, “Add to later pictures”, “Also remove from later pictures”.
- “reached” turns the first to-be picture into the new as-is.
- The roadmap shows a bar per element across the pictures, projects by start and end and replacements as an arrow; output as PNG, SVG, PowerPoint or PDF.

Text editor (levels 1 to 4 and projects)

- A template with sections; on the right guiding questions, key data, a quality check (operational goals by SMART) and links; on the left the outline and building blocks such as “Business model at a glance”. Formatting as in Word, `Tab` = indent or next cell.
- “To the document store as Word” files a Word document in the level’s folder; “Include guiding questions” produces a workshop worksheet; on the right “ 📝 Develop text” or “Edit text”.
- Projects: the “Project order” template; “✎ Edit project organisation” opens the project organisation as a graphic, “← Project order” takes you back. The timeline draws itself from the milestones with the status “open”, “achieved”, “at risk” or “postponed”.

Graphical editors (menu “Editors ▾”)

- “🧩 Capability model” (map or portfolio, heatmaps), “📦 Product model”, “🌊 Value streams” with value stream map, “🗺 Process map”, “🌳 Function tree” and “🏢 Organisation chart” with staffing plan.
- “📋 Record of processing activities”, “🤝 External parties”, “🛡 Measures (TOMs, ISO 27001)”, “⚠ IT risks”, “💶 Cost centre management” and “💶 Cost centres (editor)”.
- “🛢 Data model” and “📖 Glossary” (reports terms used with two meanings).
- “🖥 IT system landscape”, “▦ Technical architecture plan”, “▦ Platforms”, “⚙ IT components”, “🧩 Component catalogues”, “🖧 ICT objects”, “🛎 Service catalogue”.
- “📐 UML tool” – all 14 diagram types of UML 2.5.1; “⚙ Generate from the 8EM model” builds, for example, classes from the data model.
- “📍 Location model” – places from country down to room and server room, “Access and use” and the IT at each place, plus the access matrix.

Using the graphical editors

- On the left the palette or outline, in the middle the canvas, on the right the properties. Drag symbols onto the canvas; dropped onto an object they land inside it (green = possible, red = too deep); a click on a symbol places it with the next click (Shift = several).
- "Nested boxes" or "Tree with lines"; "▦ Arrange" arranges automatically. In the tree every line of super-/subordination has handles (click the line, + /◆, "⟋ Straight").
- On the selected object a context bar, yellow + and ↗; click maturity and "Does it serve people?" directly in the object.
- "⊕ Assign: …" by right-click; typing filters, " + Create … new" creates what is missing.
- "Assignments" shows linked items as cards; re-attach cards by dragging (`Ctrl` = additionally), onto empty space = detach; "Only this branch".
- "⇝ Relationships" (`B`) hides relationships; "⚙ Display › Line colour" by type or by source object.
- `Alt` + `↑` / `↓` swaps with the neighbour; "⤒ Foreground / ⤓ Background"; `Alt` while dragging drops an object freely.
- RACI matrix in the process map and function tree: a click cycles empty → R → A → C → I.
- "Export": PowerPoint, LibreOffice Impress, Visio, PDF, SVG, PNG; "Save to document store": SVG and PNG in the level's folder.
- Keys: `Enter` creates at the same level, `Tab` one level down, arrow keys move, `Del` deletes, `Ctrl` + `A` all, `Ctrl` + `D` duplicates, mouse wheel zooms, Space+drag pans, `F` fits, `G` grid, `Esc` cancels. `Ctrl` / `Shift` +click or `Shift` +drag = select several.

Process models

- On the right for the process choose EPC, "BPMN 2.x" or "SeeMe"; SeeMe describes socio-technical flows with roles, activities and entities. Objects from the lower levels are on the left; the Modeller sorts new ones into their level. Connect at the yellow handle; "Save to document store" files the model in "06 Prozesse". Shape lines (+ , ◆, double-click, "⟋ Straight"); move several objects together; BPMN: "External participant (pool)" as a band above or below the pool and "Message flow" (dashed, circle at the start, open arrowhead).

Data model

- An attribute table per object: "no key", "primary key (PK)" or "foreign key (FK)" with "→ refers to …", data type, mandatory, personal; " + Attribute" or `Enter` creates one.
- "Assign CRUD …" sets C, R, U, D per process, function, IT system, role or unit; "⇣ to all attributes" copies the object's row; plus the CRUD matrix view.
- A master object receives "★ MASTER" and a leading system.

IT (level 8)

- " 📝 Input form" – all details in sections from general to costs; ◀ ▶ or `Alt` + `←` / `→` page through, `Esc` closes.
- Lifecycle with one date per phase – "Idea", "Project", "Introduction", "Operation", "Decommissioning planned", "decommissioned"; the status follows as of today or as of the to-be picture's target date, "Current status" sets it by hand if needed. IT services and products have the same phases; for products the development in the market (idea / development, introduction, growth, maturity, decline / phase-out) remains as a separate field "Market phase". The Modeller takes over older models when they are opened ("in operation" is now called "operation", interfaces "in planning" are now "project").
- Interfaces: "sends data to" and "receives data from"; ⇄ creates the opposite direction. Status in the same six phases as the lifecycle.
- "🕸 Context diagram" – one system with its neighbours up to five steps away.
- Grid editor for architecture plans and platforms: insert rows and columns anywhere, " 📥 From Excel / CSV …", right-click in a cell or " + Building block" chooses several building blocks; at the bottom the platform layer, and platforms can be nested.
- ICT objects bundle releases and versions. Each IT system gets an IT component of the same name ("Create automatically again").

- Right-click › "👤 Assign responsibility (role, person) …".

Influence relationships: supports, is a prerequisite for, conflicts with

- Between goals (levels 1 to 4), architecture principles, capabilities, products, value streams, processes and projects – within one level and between levels: "supports" (progress here brings the other one closer), "is a prerequisite for" (without this one the other cannot be reached), "conflicts with" (goal conflict).
- On the right at the element, in the section "⚖ Influence relationships", first the type, then the counterpart in "… choose" – the relationship is created at once; ✎ shows the line, × deletes.
- In the "Levels" view set "Connect as: link | supports | is a prerequisite for | conflicts with" at the top, then connect as usual (↗ on the card, or mark two cards with `Ctrl` + click and "↗ connect"). The switch "Influence relationships" shows and hides the lines.
- "supports" and "is a prerequisite for" between different levels also create the link; "conflicts with" does not. Between two capabilities the relationships of the capability editor apply ("supports", "needs", "conflicts with (goal conflict)").
- A goal conflict appears as ⚡ on the card. Click the line – record under "Decision on the goal conflict" what applies (priority, balance or a changed goal).
- Evaluate: report "⚖ Influence relationships and goal conflicts"; the check reports goal conflicts without a decision, circles of "is a prerequisite for" and pairs that support and conflict with each other at the same time.

Data protection, security, responsibility and costs

- "📋 Record of processing activities" under Art. 30 GDPR with a threshold check for a data protection impact assessment; "🤝 External parties" with data processing; "🛡 Measures" under Art. 32 GDPR and ISO/IEC 27001 with "From suggestions …" and "📑 Applicability"; "⚠ IT risks" with BSI threats and a 4 × 4 matrix. Protection requirements pass on to IT and locations.
- Responsibility is always a role or person from level 7a; "👤 Assign role / person …" also sets the type of employment (internal, external, service provider; "ext" or "DL").
- "💶 Costs" for almost every element: cost type, amount, frequency, status (actual, plan, forecast), cost centre; "+ Personnel costs", "+ Licence costs" and so on, or "+ other cost type". The "💶 Cost centre management" has the tabs for costs, cost centres and cost types.
- Service catalogue with service levels, RTO and RPO (based on ITIL® 4); goals cascade with capability level (based on COBIT® 2019); architecture principles, the report "Architecture: gaps and cycle" and report packs (based on TOGAF® 10).

Menu "EAM ▾"

- "📊 Application portfolio" – business value and technical condition, suggestion invest, tolerate, migrate or phase out; you make the decision, with a justification.
- "☁ Cloud and migration planning" – migration path, target environment, date, effort, with notes from the model.
- "🕴 Interface catalogue" – profile, matrix and data flow map.
- "📡 Technology radar" – with the second view "In-house development or purchased solution".
- "🚦 Initiative prioritisation" and "⚖ Architecture governance" (decisions, time-limited exceptions, reviews).
- "🌊 Value streams", "📖 Glossary", "📝 IT survey form", "🧭 EAM maturity check" and "📁 Architecture management report pack".

Analysis

- On the left the report catalogue with around 40 reports, from the model overview through "Does it serve people?", process-IT coverage, record of processing activities and IT risk analysis to costs, projects and as-is/to-be change; an element's profile also by right-click "🔎 Profile and impacts …".
- Questions in your own words – the Modeller understands German only – for example *Welche Prozesse haben kein IT-System?* ("Which processes have no IT system?"); names are suggested, "Did you mean …?" helps with partial matches, and above the report it says how the question was understood.

- "✎ Adjust query" opens the query builder; "Paths" sets the intermediate steps; "→ Continue with these" builds a follow-up question.
- "☆ Save" keeps a report or query under "☆ Saved".
- Output: "🖶 Print / PDF", " 📄 Word", "⬇ CSV", "⧉ Copy".

Questionnaires on the organisation

- For the organisation, units, locations and people, "▶ Values Profile" (colour profile based on Spiral Dynamics®), "▶ Theory U" and "▶ Compass" open the questionnaire; back with "Hand over result to the 8EM Modeller" or " 📂 Import result …". Only shares are taken over; the questionnaires must be in the same folder as the Modeller.
- The questionnaires are not scientifically validated; their result is orientation, not a label. I use Spiral Dynamics and Theory U each as a reflection and conversation model, not a diagnostic instrument.

8EM Modeller: saving, export and handovers

Saving

- Model folder: `modell.8em.json` and a folder for documents per level. Add files in the "Document store" or put them into the folders in Explorer (then "Refresh"). Each save keeps the previous version in `_Sicherungen`, removed files go to `_Papierkorb`.
- Unsaved changes from the last session are back when you open the model; "load saved version" in the status bar discards them.
- In Safari, Firefox and over http, "Save" stores a single file `.8em.json` via the download, as described in the chapter *How do I use a tool?*; the document store per level is then not available.

Menu "Export ▾"

- "Print / PDF", "Table (.csv)" with all elements and links, "ArchiMate® exchange format (.xml)" for other architecture tools, "Template for bulk import (.csv)" and " 📤 Project charter to project management".
- Graphics, grids and UML diagrams go out as PowerPoint, LibreOffice Impress, Visio, PDF, SVG and PNG (grids also as Excel), reports as PDF, Word or CSV, texts as a Word document.

Menu "Import ▾"

- "⬆ Bulk import (Excel/CSV)" – choose a level, map columns, preview, take over; elements with the same name are supplemented, all in one undo step. This is also how the tables from the IT map (areas and systems) and from the SIPOC tool (process with steps in level 6, suppliers and customers in level 7a) get into the model. The IT map can also be chosen directly as a file (`*.it-landkarte.json`): the Modeller sets the level "Tools & IT systems › IT systems" and the columns itself; the business area becomes the business-responsible department (existing ones assigned, missing ones created), "Responsible" a role or person of level 7a, "In use since" the lifecycle. Identical names or the same CMDB ID count as the same system. The columns "supports", "is a prerequisite for" and "conflicts with" (names, separated by ;) create influence relationships.
- "⬆ ArchiMate® exchange format (.xml)", "⬆ IT survey form (.json)" and "⬆ EAM maturity check (.json)". Opened from the Modeller, the survey form is pre-filled with the chosen IT system, and "Hand over to the 8EM Modeller" enters everything.
- " 📋 Project status from project management", "↻ Synchronise all linked projects", " 🎯 Goal system from the coaching tool", " 🧳 Pain points from the coaching tool", " 🕸 Impact Network" – see below.
- " 🏢 Organisational units and relationships from the master data" and " 🔗 Link to the master data" – maintain cost centres, cost types, units and locations only in the master data; you check every suggested row.

Handovers

- Project management: in the " 📋 Project management" section of a project, " 📋 Take over project status" fetches traffic lights, milestones with milestone trend, costs, risks and team – in the same browser without a file, otherwise from `*.projekt.json`; if you wish, also milestone planning, costs per cost type and the project team. "↻ Synchronise" fetches the latest status, " 📤 To project management" hands the project charter over.

- Goal system and pain points: "📥 To the 8EM Modeller" there, "Import ▾" here (without a file in the same browser or in the suite, otherwise `*.zielsystem.json` or `*.schmerzpunkte.json`). Goals become elements of levels 1 to 4, goal conflicts show as ⚡ on both goals; the pain points attach to a process on level 6 without names. Taking over again updates.
- Impact network: "📥 Hand over to Outage simulation and 8EM Modeller" there, "Import ▾ › 🕸 Impact Network" here (without a file in the same browser or in the suite, otherwise "📂 Choose file …" with `*.wirkungsgefuege.json`). In the preview you choose the "Level for all factors" (suggested: operational goals) and, per factor, a different level – strategic or operational goals, capabilities, processes – or "do not take over". Same-direction effects become the influence relationship "supports", opposite-direction ones "conflicts with" (both can be switched off); the check "Goal conflicts without a decision" then shows where a decision is missing. On the right of the element, "🕸 From the Impact Network" shows the role and the active and passive sums; "✕" removes the link while elements and influence relationships stay. Factors are matched by their identifier or by level and name – taking over again creates nothing twice; taking over is one undo step and applies to the picture shown.
- CMDB of the suite: when saving, the Modeller synchronises IT systems, architecture plans, platforms and components with lifecycle, relationships and costs; what is maintained in the CMDB stays. "do not transfer to the CMDB" excludes an entry. Without the suite, a handover file is created for the CMDB's "Import".
- The UML tool also exists as a tool of its own; it takes over diagrams from a model file.
- In the suite the model and all its storage folders are kept on the server, and whoever is editing keeps it locked for others (chapter *Tools in the suite: working together*); "📊 Cost centre × cost type" opens the shared cost analysis.

8EM Modeller: phone, systems and browsers

- **Model folder only in Chrome and Edge**, and only when the Modeller is not opened over http; otherwise the start window gives the reason. In Safari and Firefox you work with "Create as a single file" and save via the download.
- **Phone and tablet:** the Modeller runs there in the browser too. Up to 900 pixels wide or 500 pixels high, the "+" buttons for creating elements are 40 × 40 pixels, and the interface tables of the input form scroll on their own. All drop-down menus – "Editors ▾", "EAM ▾", "Import ▾", "Export ▾", the context menu of the level view and the menus of the editors – open there as a window from below, fully on screen and scrolling on their own. The Modeller does not have the phone controls of the board tools with "＋ Elements" and "✎ Properties"; below 700 pixels the graphical editors hide their side panels (‹ › shows them), process models and UML show the symbols as a narrow column; "☑ Multiple selection" replaces `Ctrl` / `Shift`.
- **Tested** with the engines of Chrome/Edge and Safari (WebKit under Windows), creating and saving as a single file also in Firefox, the phone at a simulated size (375 pixels) with touch.
- **Not tested:** a real Mac with Safari, and real phones and tablets.

8EM Modeller: tips

- Start with "View example" – the fictitious example shows levels, editors and reports.
- Choose "Allow on every visit", then the Modeller opens your model without a detour.
- The arrow ▾ between undo and redo jumps back several steps.
- Keep recurring questions with "☆ Save" and run them for other pictures too.
- After linking with the master data, save the model – the link is stored in the model file.

Master data



Master data: purpose and use

The master data tool is the shared data set of all MC4Y tools: people and organisations with address and contact details, organisational units, roles, cost centres, cost types, locations and the relationships between organisations and units. The other tools take these data over if you wish, instead of you typing them in everywhere again. As long as you link nothing, every tool works on its own as before.

It is meant for everyone who uses several of my tools – the same people turn up as customers in the accounting tool, in the team of the Kanban board and as responsible persons in the 8EM Modeller. Unlike an address list, the tool knows the relationships: who belongs to which unit, which roles someone takes on, whom someone reports to and who is responsible for a cost centre. Well-kept master data show where roles are vacant and where people carry too much – an occasion for the guiding question of my work: Does it serve people?

The tool is released and available on the website under *Resources*. It does not create a tool file of its own but keeps a data set: every change is stored immediately in your browser's storage; in addition you save the data set as a file (suggested name `stammdaten.json`). In the MC4Y Productivity Suite the data set is kept on the server and applies to everyone. More in the post Maintain master data once, use it in every tool.

The tool is an aid for maintaining and analysing your own master data. It replaces neither a personnel administration system nor a data protection review. The analyses describe your data; they do not assess people.

Master data: step by step

1. Open the tool. If the data set is empty, the start page offers "🧩 Create first unit", "👤 Create first person", "⬆ Import list (CSV, vCard, accounting, Kanban)", "🏷 Take over cost type suggestions" and "View example (fictitious)".
2. To get to know the tool, load the fictitious example; afterwards you start afresh with the undo arrow or "Clear everything (start afresh)" in the "⋯" menu.
3. In the "☰ Tables" view, choose the type at the top, for example people, and create an entry with "+ Person" or the `N` key.
4. Type straight into the fields of the row and move on with `Tab`; you choose unit, organisation and cost centre from lists.
5. A click on a row shows all details on the right: there you assign roles, members and managers and add addresses, bank accounts and ways to get in touch.
6. Create your own organisation and tick "This is my own company" – it then becomes the sender for all modules.
7. In the "⧉ Graphic" view, build up the units in the "🧩 Organisation chart" and assign people by dragging.
8. Check staffing and data quality in "📊 Reports" and print them with "🖶 Print / PDF".
9. Back up the data set as a file with "Save" (`Ctrl` + `S`).
10. Open another tool, click "👥 Master data" there and choose "🔗 Link …": the tool's people and roles arrive in the master data as "⚑ to be checked".

11. Tidy up under "🔗 Synchronisation": merge duplicates with "⇢ Merge …" and confirm entries that stand on their own with "✓ checked".
12. Right-click "👥 Master data" to switch on "Field help in this tool" if you want to take values over as you type.

Master data: functions and buttons

Header

- Undo and redo (arrows, `Ctrl` + `Z` / `Y`); the arrow ▾ between them jumps back several steps.
- "Open" – open a master data file; after a prompt it replaces the data set in the browser (undo is possible). A file from the accounting tool or a Kanban board is imported instead.
- "Save" – save the data set additionally as a file (`Ctrl` + `S`).
- "⋯" – "Save as …", stop writing to the current file, "Backups in the browser …" (with "restore"), "Load example (fictitious)" and "Clear everything (start afresh)".
- "Help" (`F1`) – the help on all functions.

Views

- "☰ Tables" – a table per type for direct editing.
- "⧉ Graphic" – organisation chart and relationship network.
- "📊 Reports" – key figures, charts and check notes.
- "🔗 Synchronisation" – check the entries taken over from tools and merge duplicates; a number on the tab gives the entries still to be checked.
- "🔌 Connection" – how the other tools use the master data, the state of the data set and the tools with a connection.
- In the suite, people with administration rights also see "🔐 Users" and "🔑 Permissions" – the portal's administration, embedded here.

Table toolbar

- Tabs for people, organisations, units, roles, cost centres, cost types, locations and relationships, each with the count.
- The search box "Search (Ctrl+F)", for people the selection "all types", for people and organisations "active only", and for entries taken over "only ⚑ to be checked".
- "+ Person", "+ Role" and so on (`N`) – creates an entry of the chosen type; for cost types, "🏷 Take over suggestions" adopts the suggestions of the 8EM Modeller.
- "⬆ Import …" – import CSV, vCard, an accounting file or a Kanban board.
- "⬇ Export ▾" – each type as CSV for Excel, "Addresses, bank accounts and ways to get in touch as CSV", "People as vCard (address book)" and "Everything as a master data file (JSON)".
- In the table, the column headers sort; without sorting, units, cost centres and locations appear as a tree. In each row ☰ opens the details and × deletes.

Types of entry

- People with a type (internal, freelance, service provider, contact at customers, suppliers or partners), contact details, start and leaving dates; anyone who has left becomes inactive and disappears from the selection lists. Organisations with customer number, VAT ID and contacts.
- Organisational units on any number of levels with head and cost centre; roles, several per person.
- Units of the type "Retirees" for former employees you continue to keep on record – for invitations, the company pension or benefits, for example: their people remain active and reachable in all tools, but do not count as active employees. The header lists them separately ("… · 2 retirees"), the analyses show them in their own tile, row and column, a head is not required, and the organisation chart sets the unit apart with a dashed outline in grey – in the image as well. Right-clicking a free spot in the organisation chart creates one ("Unit of the type "Retirees""); through the connection, the tools receive the attribute "retiree" for these people.
- Cost centres with number, hierarchy, responsible persons and budget; cost types in seven groups with frequency – the suggestions are the 19 cost types of the 8EM Modeller with the same identifiers.

- Locations as a tree location › building › floor › room, plus “Area”; people and units choose their location from this list.
- Relationships between organisations and to units, for example supports or supplies; all of them are in the “🔗 Relationships” table.

Properties on the right

- At the top “⧉ in the graphic”, “Copy”, “⇢ Merge …” and “Delete”; the cross closes the panel (`Esc`).
- For entries taken over, the origin with “✓ checked – own entry” and “⇢ merge into another entry …”; “Used in:” names the tools that use the entry.
- The main address (supplement, street, postcode, town, country) and the main details e-mail, phone, mobile and website; below them the collapsible sections “📍 Further addresses” (billing, delivery, visiting, postal or private address), “🏦 Bank accounts” (IBAN, BIC, bank, account holder, what it is used for) and “📨 Further ways to get in touch” (second e-mail address, further numbers, fax, LinkedIn, Xing), each with + .
- If a module asks for an address type that does not exist, it uses the main address. Invoices and forms use the first bank account; the IBAN check digits are not verified.
- For organisations “This is my own company” and “+ Contact person”, for units “+ Sub-unit” and “+ new person”, for locations buttons for the next step down.
- “+ Relationship …” on organisations and units creates relationships to several targets in one step; on a relationship, “⇄ Reverse direction” turns it round.

Graphic

- “🧩 Organisation chart” – units with head (★) and members, arranged as a tree at first; the tick boxes “People”, “Roles instead of function” and “Organisations and contact persons” control the display. Dragging a unit moves it freely – its sub-units move along (with `Alt` only this box), the lines and handles follow, and the position is saved; the arrow keys do the same (with `Shift` in larger steps). Released on another unit, it becomes subordinate to that unit and appears below it, all others stay where they are. “Rearrange” restores the tree. Drag a person onto a unit to assign them, onto “No unit” to detach them. Small buttons on each unit create a sub-unit or person; right-click sets the head. Click a line: dragging “+” adds a handle, dragging “◆” shapes it (snaps horizontally or vertically, with `Alt` freely), double-click removes it, “／ Straight” removes all; `Del` detaches the subordination.
- “🕸 Relationship network” – all elements except cost types and locations; tick boxes per type, “Label lines”, “Rearrange”. Dragging the ↗ handle onto an element connects: person onto unit (with `Alt` : head), role, person (reports to) or cost centre, unit onto unit (belongs to), cost centre onto person (responsible); for organisations you choose the type of relationship.
- Relationships appear as red, labelled arrows; double-click or right-click edits, clicking a line and pressing `Del` detaches. Every selected line can be shaped: dragging “+” adds a handle, dragging “◆” shapes it (snaps, `Alt` = freely), double-click removes it; “／ Straight” (button at the bottom left or right-click) removes all.
- On the left under “New” you drag or click new elements onto the canvas. Double-click or `Enter` opens the properties, `F2` renames, the mouse wheel zooms, dragging on empty space pans; at the top − , + and “⤢ Fit to view” (`F`). “🖼 PNG” saves the graphic as an image (at least 2000 pixels wide, for print), “SVG” as a vector image – exactly as arranged, without selection and handles. In the organisation chart, the image shows all texts in full (the boxes become as wide as necessary, the spacing is stretched just far enough that nothing overlaps); it shows the “No unit” box only with the tick box “‘No unit’ in image”.
- Multiple selection: `Ctrl` or `Shift` +click adds or removes elements, holding `Shift` draws a frame on an empty area, `Ctrl` + `A` selects all, `Esc` clears. Dragging and the arrow keys move all selected ones together; in the organisation chart, dragging onto a unit assigns all selected ones to it. `Del` deletes all after one confirmation. On phones and tablets: the “☑ Multiple selection” button, “🗑” deletes the selected ones.

Reports

- Key figures, people per unit (including sub-units), people by type, spans of control, staffing of roles, roles per unit, cost centres, organisations with contacts, joiners and leavers, plus sections of their own for cost types and locations. You see, for example, which roles are vacant and which cost centre has no one responsible for it.

- Check notes on data quality: missing e-mail, unit without a head, possible duplicates, a leaving date already passed and an IBAN that does not look like an IBAN.
- "active people only", "🖶 Print / PDF" and "⬇ CSV".

Synchronisation

- "⚑ To be checked" lists the entries taken over from tools with their origin; under "Possible duplicates" similar names appear as ⇢ buttons, and "✓ checked" confirms an entry that stands on its own. "⇢ Merge all entries with the same name …" and "✓ mark all as checked …" deal with many at once.
- When merging, you choose the target under "– choose entry –", "⇄ reversed" swaps the direction, and for each differing detail you choose the value that stays. Roles, assignments and the tools' references move to the remaining entry – also for cost centres, cost types and locations.
- "Linked data sets" shows the linked tool files and their last synchronisation.

Connection

- The page explains linking, field help and where the data are, and shows "Tools with the connection"; at the top "💾 Save to file …" and "📂 Open file …".

The "👥 Master data" button in the other tools

- A click shows the master data as a window inside the tool; "↗ own window" opens them separately, ⚙ shows the settings, ✕ *Close* takes you back (`Esc`). At the top it says whether the tool is linked, with ⟳ *Synchronise* or "🔗 Link …". On the button, ✓ shows a link, ⚠ missing or different master data in the browser.
- Right-click opens the connection settings: "Field help in this tool", below it *Suggestions while typing*, "Offer form blocks", *Load master data file …*, *Reload* and "🔗 Link …" or *Remove link …*. The field help applies only to this tool and this browser.
- Initial linking: the window says how many people and roles will be taken over; a tick box connects entries with the same name that already exist instead of creating them anew; *Link and take over* starts it.
- Field help: `Ctrl` + Space in an input field or the small 👥 button on the field opens the selection, and suggestions appear as you type. E-mail, phone, postcode, town and address fields receive the matching value, otherwise the name; a field for the cost type offers only cost types, fields for location, storage location or room only locations. If someone is missing, "+ … as person" creates the entry straight away (⚑ to be checked).
- Form blocks: at sender, company details, invoice recipient, client or reporter there is "👥 Master data …". "⤓ Take over" fills the fields once – a copy that you can then change freely. "🔗 Connect" remembers the record: the fields show the master data values, are locked and follow along; "✂ Release the connection" frees them, and the values stay.

Keyboard

- `N` new entry (tables), `Del` delete selection, `F2` rename, `Ctrl` + `F` search, `Ctrl` + `Z` / `Y` undo or redo, `Ctrl` + `S` save to file, `F` fit graphic, `Esc` clear selection, `F1` help.

Master data: saving, export and handovers

Where the data are stored

- Every change is stored immediately in this browser's storage; tools opened from the same location (all from your folder or all from the same website) see the same master data. The tool also keeps regular backups in the browser.
- "Save" also creates a file, into which Chrome and Edge then write every change; in Safari and Firefox it saves via the download (chapter *How do I use a tool?*) – there you save again after changes.
- For another computer or browser: "💾 Save to file …", and there load the master data file in the tool via "👥 Master data".
- Which person in a tool belongs to which master data entry is recorded in the tool's file – so after linking, save the tool as well.

Importing

- CSV lists, for example from Excel or an address book; columns such as first name, surname, e-mail, phone, company, department, role, cost centre and location are recognised.
- vCard files (`.vcf`), the customers of an accounting file and the team of a Kanban board. The same people are supplemented instead of being created twice.
- Cost types and locations: the CSV export contains the identifier, and it is recognised again on import – known entries are updated, and the tools' references stay valid.

Handovers to the tools

- All tools that keep their own people or roles can be linked: the ITSM tool, the Kanban board, project management, accounting (customers), the Vertriebs-Navigator and Kunden-Navigator (contacts and companies), the 8EM Modeller (employees, unit heads and roles of the as-is picture), as well as the systemic board and 3D systemic board, social atom, genogram, stakeholder map, Riemann-Thomann cross, change curve and team clock.
- After that the master data lead: you maintain names, initials, contact details and role assignments here only, in the tool these fields are read-only, and the 👥 button next to them opens the entry. People and roles newly created in a tool arrive here automatically as "⚑ to be checked"; if there is exactly one entry with the same name, it is connected. An entry deleted here stays in the tool but is no longer linked.
- Coaching tools: for each figure you decide in its properties under "In the master data" whether it is taken over "as a person", "as a role" or not at all; only the name is taken over. A "Mother" on one board is never connected automatically to the "Mother" on another.
- Form blocks exist in the Vertriebs-Navigator and Kunden-Navigator (sender), in accounting (company details), in project management (client and invoice recipient) and in the ITSM tool (reporter, as a copy only). Tools without a list of people of their own, such as Ikigai or the questionnaires, use the field help.
- Tools store only the identifier and the last name of an entry; if you rename something here, they show the new name.

In the suite

- The data set is kept on the server and applies to everyone; other people's changes reach you within half a minute at the latest, and simultaneous changes to different entries are merged by the suite. A deleted entry stays in the modules as a name and is marked "missing" – as described in the chapter *Tools in the suite: working together*.
- If the data set on the server is still empty, the tool offers to take over your previous master data from your browser.

Master data: phone, systems and browsers

- **Phone and tablet:** up to 900 pixels wide, the properties panel lies over the table and opens only when you want it – with ☰, a tap on the row or when creating an entry; its header with the close cross stays in place as you scroll. Up to 600 pixels wide or 500 pixels high you swipe the toolbars sideways, the table toolbar sits in two rows, and in the graphic, zoom and "⛶ Fit to view" come first. Most buttons are 40 pixels high there; a tap anywhere in the "active" cell sets the tick.
- **Folder functions:** the tool does not work with folders. Continuous writing into the saved file exists only in Chrome and Edge.
- **Browser storage:** another browser or computer sees the master data only once you load the master data file there.
- **Tested:** with the browser engines of Chrome and Edge and of Safari (WebKit, under Windows), the connection additionally in the installed Firefox; phone and tablet at simulated sizes (375 × 611, 667 × 375 and 768 × 1024 pixels).
- **Not tested:** real finger touch and swipe gestures on real devices, Safari on iPhone and iPad, a real Mac and real Linux.

Master data: tips

- Look at the fictitious example first; it shows all functions before you enter your own data.

- Link one tool first, tidy up the list under “ 🔗 Synchronisation”, and only then add the next one.
- Only merge entries when you are sure that it really is the same person.
- Set people who have left to inactive instead of deleting them – that way assignments stay traceable.
- Master data are personal data: record only what you need for your work, no special categories such as health data, and inform the people concerned where necessary.
- Back up your data regularly with “Save” as a file.

Accounting



Accounting: purpose and use

The accounting tool is my bookkeeping for the self-employed and small businesses: record receipts, issue invoices under § 14 UStG (also as XRechnung), determine profit as a cash-basis income statement (Einnahmenüberschussrechnung, EÜR) or with double-entry bookkeeping, prepare the advance VAT return (Umsatzsteuer-Voranmeldung) with an ELSTER file, reconcile bank statements, hand over to your tax adviser in DATEV format and produce reports as PDF. Private tax-relevant receipts are kept separate. The tool does not replace tax advice.

Typically, you record receipts as they come in, write and issue invoices, reconcile the bank statement monthly or quarterly, prepare the advance VAT return and lock the period. At year end the tool compiles the Annex EÜR, the values for the tax return and the posting batch for your tax adviser.

The tool is an aid for keeping your own books. It is not tax or legal advice, not a program certified by the tax authorities and it transmits nothing to ELSTER. The tax rules are stored to the best of my knowledge; what counts are the laws, the official forms and the information from your tax adviser. Please check every figure before you use it. Even in English, the tool follows German tax law.

The accounting tool is experimental, i.e. still in beta. It has no file extension of its own but works with a storage (see below). You will find it on the website under Experimental, as a single file to download and in the MC4Y suite. The posts Accounting in the browser: from receipt to VAT return and Accounting: cost centres, dunning and input VAT refund describe it in detail.

Accounting: step by step

1. Open the tool. The window “Open bookkeeping” asks where your data should be kept. To get to know it, choose “ 🍼 View example”: a fictitious company, nothing is saved. “Start your own bookkeeping” takes you back to the choice.
2. For your own books, choose “ 📁 Choose folder …” in Chrome or Edge and pick an empty folder, for example in your cloud storage. If the browser asks, choose “Allow on every visit”. Without a folder, choose “ 🌐 Save in browser”.
3. A new set of books opens in “Settings”. Under “Company”, enter name, address, tax number, VAT ID, bank details and the “Federal state of the tax office” (for the tax number in ELSTER format).
4. Under “Tax and bookkeeping”, set “Profit calculation”, “Small business (§ 19 UStG)”, “Taxation basis”, “Advance return period”, the permanent deadline extension and “Start of the records in this tool” (the overview does not

check advance return periods before it for deadlines; if left empty, the first business receipt, issued invoice or posting counts); under “Invoices”, the “Invoice number pattern”, payment terms, texts and dunning.

5. In the “Receipts” tab, record a receipt with “ + Receipt” (key `N`): “Receipt date”, “Receipt type”, “Seller / invoice issuer”, “Invoice number”, amount, “Tax rate”, “Tax case”, “Paid on” and payment method. Drag the receipt file – PDF, photo, scan or e-invoice – into the window. “Save” (`Ctrl` + `S`).
6. Download the transactions from online banking as a CSV or CAMT file and import them in the “Bank” tab. Check the suggestions (green unambiguous, yellow please check) and accept them with “✓ Accept suggestions”.
7. In the “Invoices” tab, write an invoice with “ + Invoice”, add services with “ + Item”, keep it with “Save draft” and check it with “Preview”.
8. “Issue invoice …” assigns the sequential number, locks the invoice and files the documents in the chosen “Format”: “PDF”, “XRechnung with PDF” or “ZUGFeRD” (a PDF/A-3 file with the XRechnung embedded, profile XRECHNUNG). Preselected is the format of the last invoice to the same customer, otherwise the default under “Settings” › “Invoices”. Then send it with “✉ Send …”.
9. Record incoming payments on the invoice or take them over at the next bank reconciliation; if the customer deducts the agreed cash discount, use “with cash discount: …” or “Book the remainder as cash discount”. If an invoice remains unpaid, use “✉ Create reminder …”.
10. For the advance VAT return, open the report “Advance VAT return” under “Reports”, choose the period and use “ 📄 Save PDF”, or “ 📑 ELSTER file” for the XML import in Mein ELSTER.
11. After transmitting, choose “Mark as transmitted …”; the tool offers to lock the period. Under “Settings” › “Locking and log” you can lock at any time with “Lock up to …”.
12. At year end, open “Cash-basis income statement (Annex EÜR)” and “Transfer to tax programs”; create the posting batch for your tax adviser with “ 📤 DATEV export”.
13. Back up regularly via “ 📁 Storage” › “ 📦 Download data package (ZIP: data, CSV, log, receipts, invoices)” – essential with browser storage.

Accounting: functions and buttons

Header

- Selection “Financial year” – the year shown in all tabs and reports.
- Large arrows – undo and redo (`Ctrl` + `Z` / `Ctrl` + `Y`).
- Save indicator – where the data is stored or that a change is still pending; “Example – not saved”, in the suite “👁 read only – changes are not saved”, on an error “Saving failed”.
- “ 📁 Storage” – opens the window “Storage and data backup”.
- “ 🔎 Search” – receipts and invoices of all years by number, invoice number, partner or customer, text, amount, file name or checksum; for each hit, cancellation and correction in both directions (invoice → cancellation → new invoice), the files with checksum and the retention period. It does not search the contents of the files – the document storage of the suite does that.
- 👥 Master data – as described in the chapter ‘How do I use a tool?’.
- “Help” (`F1`); the build-version button shows licence and disclaimer.

Window “Storage and data backup”

- “ 📦 Download data package (ZIP: data, CSV, log, receipts, invoices)” – everything in machine-readable form, for your tax adviser, a tax audit and as a long-term backup.
- “ 💾 Download data only (buchhaltung.json)”.
- “ 📤 DATEV export for your tax adviser (posting batch) …”.
- “ 📁 Transfer to a folder …” – from browser storage into a folder (Chrome and Edge only).
- “ 🔁 Open another storage …”.

Overview tab

- Key figures “Business income”, “Business expenses”, “Profit (EÜR)” and “Open invoices”, plus the advance VAT returns with amount, deadline and status – periods before the start of the records show “before records began”

(no deadline check, with a note and a link to “Tax and bookkeeping”).

- Chart “Income and expenses per month” and the list “To be checked”: receipts with notes or without a file, unmatched bank transactions, drafts, overdue invoices; notes on waiting handovers from other tools.

“Receipts” tab

- Filters by period, business, “Private” or “All”, receipt type, search and “with notes only”; an exclamation mark marks a receipt with a note.
- “ + Receipt” (`N`); the files button imports PDF, images, XRechnung or ZUGFeRD; “Import Excel/CSV” takes over previous lists; “🏦 Bank statement”.
- Form: business or private, “Expense” or “Income”, “Invoice received on” (only if the invoice arrived later – the input VAT then counts from that day), “Tax case” or “Turnover type”, “Business share %”, “Cost centre”, “Cost type”.
- Several tax rates on one receipt, for example books at 7 % and accessories at 19 % (“ + Tax rate”).
- Purchases: “Fixed asset”, “Useful life (years)”, “Disposal (sale/scrapping) on”.
- “Choose file …” attaches the receipt file; further buttons open it or rebuild its name from the pattern. “Save”, “Discard”, “Copy”, “Reverse”, “Delete”, “Close” (`Esc`).
- Below the receipt file: “🔐 SHA-256 …” (checksum when filed, “no checksum” for older files) and “🗄 retain until …” (8 years from the end of the calendar year, § 147 AO; private receipts have no retention period). “New version …” replaces the file and asks for the reason; the previous one stays unchanged under “Earlier versions (…)” with date, reason and checksum – for locked receipts too.
- Cash discount on an incoming invoice: “Cash discount until” and “Cash discount %” or “or cash discount amount”, payment method “still open”; the overview lists every discount deadline in the next 14 days. After payment, “Cash discount deducted” (the button next to it enters the agreed discount); the input VAT is adjusted proportionally in the period of payment.
- The “Copy” of a cancelled receipt remembers which receipt it replaces; “🔎 Search” shows both directions (“replaces the cancelled receipt …”, “replaced by receipt …”).

Tax cases on a receipt (as the help explains them)

- German VAT at 19 % or 7 % – deductible as input VAT if the invoice contains the mandatory details and the expense is for business purposes.
- Without VAT – for example insurance, fees, postage, invoices from small businesses.
- § 13b for businesses from other EU countries – you owe the tax and deduct it as input VAT at the same time (often software and cloud services); also § 13b for other services and intra-Community acquisitions.
- Foreign VAT – not deductible as input VAT; a refund is possible at most through the input VAT refund procedure.
- Purchases: up to €250 net a business expense at once, up to €800 net a low-value asset, above that depreciation over the useful life.

“Bank” tab

- Import a CSV or CAMT file (XML, also as ZIP); transactions already imported are skipped. Unclear columns are assigned once in the window “Bank statement: assign columns”.
- Show “open”, “assigned”, “ignored” or “all”.
- Matches: incoming payments to open invoices (also partial), debits to unpaid receipts, otherwise a new receipt, a private drawing or contribution, or “ignore”.
- “✓ Accept suggestions” – all visible suggestions at once (undo reverses them); the tick in a row only that transaction; a match can be released again.

“Invoices” tab

- “ + Invoice” (`N`), “👥 Invoice recipient from the master data …”, “ + Item”, “Save draft” (`Ctrl` + `S`), “Preview”, “Delete draft”.

- In the draft, “Cash discount % (optional)” and “Cash discount period (days)” (default under “Settings” › “Invoices”): the invoice states the deadline, discount amount and amount payable, the XRechnung the discount in the prescribed form (`#SKONTO#TAGE=7#PROZENT=2.00#`).
- “Issue invoice …” – number, locking and files in the chosen “Format”: “PDF”, “XRechnung with PDF” or “ZUGFeRD”; afterwards corrections only by reversal. “ 📄 PDF” or “ 📄 ZUGFeRD-PDF”, “ 📑 XRechnung”, “regenerate …” (also in another format; the previous files remain under “Earlier versions (…)”), “View PDF”. Below the files: format, checksum and “ 🗄 retain until …”.
- Cancellation and correction refer to each other: “Cancellation of invoice …”, “cancelled by cancellation …”, on the “Copy” of the cancelled invoice “replaces the cancelled invoice …” and conversely “replaced by invoice …”.
- “✉ Send …” – “ 📤 Share …” hands both files to your e-mail program where the system offers this; “✉ Prepare e-mail” opens an e-mail and downloads the files; “Mark as sent” records date and recipient.
- Recording a payment (with “Book the remainder as cash discount” or “with cash discount: …” – the VAT is adjusted proportionally in the period of payment), “Save note”, “Copy”, “Reverse”, “✉ Create reminder …”.
- Under “ 📥 from project management”, handed-over invoices wait to be imported as a draft or discarded. Invoices with reminders are marked M1 to M3.

Window “Create reminder”

- “Reminder level” – “Payment reminder”, “1st reminder” or “2nd reminder (final reminder)”; “Date of the letter”, “New payment deadline”, “Reminder costs” (default €0), “Debtor is”.
- Default interest under § 288 BGB with “In default since” – only once you have entered the base rate under “Settings” › “Invoices” › “Dunning”; no value is preset. The flat-rate fee of €40 applies only to businesses, once per invoice.
- “Preview” and “Create and file reminder” – a PDF next to the invoice; the invoice stays unchanged, the reminder is logged. The amounts are suggestions, not legal advice.

Further tabs

- Customers: “ + Customer”, “ 👥 from the master data …”, “Invoice to this customer”, “Delete”, “⬇ Customer status for the Kunden-Navigator” (for another browser; treat as confidential); a default cost centre per customer.
- “Private”: private receipts, per person if you wish, only for the summary for the income tax return.
- “Fixed assets”: “ + Fixed asset without receipt (e.g. legacy asset)”, “Report / PDF”.
- “Entries” (double-entry only): “Book”, “Enter opening balances …”, “Trial balance”, “Balance sheet and P&L”, “ 📤 DATEV export”.

“Reports” tab

- VAT: “Advance VAT return”, “VAT – annual overview”, “Input VAT refund (other EU countries)”.
- Profit: “Cash-basis income statement (Annex EÜR)”, “Income and expenses by quarter”, “Fixed asset register”, “Costs by cost centre and cost type”.
- Books: “Receipts list (journal)”, “Sales invoice register”, “Open items”, “Cash discounts” (used, open and expired discounts, own and incoming invoices); double-entry “Journal”, “Trial balance”, “Account ledgers”, “Balance sheet and profit and loss account”.
- Also the summary for the income tax return, “Transfer to tax programs”, “Change log”, “Receipt storage (checksums, versions, retention)”, “Procedural documentation (template)”.
- Buttons: “ 📄 Save PDF”, “Download PDF”, “CSV”, “ 📤 DATEV export”, “ 📑 ELSTER file”, “Mark as transmitted …”, “▦ Cost centre × cost type”; in the report “Transfer to tax programs” also “ 📋 Step by step …” and “ 📤 File for the assistant”.

“Settings” tab

- “Company” (logo via “Choose image …”), “Tax and bookkeeping”, “Invoices” with dunning.
- “Receipt storage” – “Pattern for receipt file names”, “Import receipt files from a folder …” and “Checksums, versions and retention”: “ 🔐 Verify checksums” (reads every stored file and reports “unchanged”, “File changed”

or “File missing”), “Add missing checksums (…)” for files from before (valid from today), the “Receipt storage” report, “🔎 Search”.

- “Invoices” – additionally “Cash discount % (default for new invoices, empty = no cash discount)”, “Cash discount period (days)” and “Format when issuing (default)”.
- “Receipt types” – assignment to the Annex EÜR, default cost type and cost centre; “+ Expense type (business)”, “+ Income type (business)”, “+ Type (private)”.
- “People”, “Accounts” (double-entry only) and “Locking and log” with “Lock up to …”, “Check log”, “Procedural documentation (template)”.

Keys

- `N` new receipt or invoice, `Ctrl` + `S` save form, `Ctrl` + `Z` / `Ctrl` + `Y` undo and redo, arrow keys scroll through lists, `Esc` closes the form, `F1` help.

Accounting: saving, export and handovers

The tool saves every change to its storage by itself; there is no save button in the header. A folder holds `buchhaltung.json`, the receipt files under a consistent name, invoices and reminder letters, reports, automatic backups in `_Sicherungen` and deleted files in `_Papierkorb`. Browser storage keeps the data in this browser only – download a data package regularly. “📄 Open data backup (buchhaltung.json or ZIP) …” opens a backup again.

Outputs and formats

- Invoice in the chosen format: PDF only, XRechnung (UN/CEFACT CII) with a PDF as readable version, or ZUGFeRD – a PDF according to PDF/A-3 with the XRechnung embedded (profile XRECHNUNG). Check the first e-invoices with a validation tool, for example the KoSIT validator, and ZUGFeRD files additionally with a PDF/A checker.
- The tool reads back every file it stores (receipt, invoice, dunning letter) and records its SHA-256 checksum with the date; replaced files remain as earlier versions. This works the same in a folder, in the browser storage and on the server of the suite.
- Receiving e-invoices: drag an XRechnung (XML) or ZUGFeRD/Factur-X PDF into the window; the tool displays it, suggests the receipt and keeps the original – for an e-invoice the XML file.
- ELSTER file for the XML import in Mein ELSTER: it only pre-fills the form; you check and send yourself. If ELSTER rejects it, transfer the figures from the PDF.
- “Transfer to tax programs”: all values for Annex EÜR, annual VAT return and private details in the order of the forms; totals marked “comparison only” are for checking. Tax software such as Lexware QuickSteuer offers no import for values from other bookkeeping programs – hence two ways without retyping:
- “📋 Step by step …” (any system): shows the next value with its location and description; “📋 Copy and next” puts it on the clipboard, and in your tax software you paste it with `Ctrl` + `V` (⌘ + `V` on a Mac). Bar “… of … values transferred”, “◀ Back”, “Skip ▶”, a click in the list chooses a different value, “Decimal comma” off = decimal point. The progress lasts as long as the page is open; nothing is saved. If the browser does not allow copying, the value is shown selected so that you can copy it with `Ctrl` + `C`.
- “📤 File for the assistant” (Windows): saves `*.uebertragung.json` (with folder or server storage also in the year’s “Berichte” folder) and shows the next steps. The Transfer Assistant (download `uebertragungs-assistent.zip` in the “Experimental” area of the website; needs Python for Windows, no administrator rights) shows the next value in a window that stays in the foreground: click in the field of your tax software and press `F8` – the value is typed in. Settings: a different hotkey, “paste (clipboard)”, “Select field content first (Ctrl+A)”, “then Tab”, “Decimal comma”; language “DE | EN”. Every entry is recorded in `<file>.protokoll.txt` next to the transfer file. Try it in Windows Notepad first.
- “Lexware” and “QuickSteuer” are trademarks of their respective owners; Lexware QuickSteuer is a product of Haufe-Lexware GmbH & Co. KG.
- Annex EÜR: according to the help, the 2025 and 2026 forms are stored; later years follow the 2026 form with a note in the report.

DATEV export for your tax adviser

- Posting batch in DATEV format (EXTF) for a month, quarter or year, accounts based on SKR 03 or SKR 04 – for EÜR and double-entry alike. “Adviser number” and “Client number” come from your tax adviser.
- VAT as “Gross entries with BU key (usual)” or “Tax as separate entry lines”; § 13b or entertainment remain separate tax entries. The tool warns against exporting a period twice.
- Cost centres with a number appear in column KOST1; KOST2 remains empty.
- Personal accounts only after agreement with your tax adviser: debtors per customer from 10000, creditors per invoice issuer from 70000 (“Debtor accounts from number”, “Creditor accounts from number”). “⬇ Debtor/creditor master file (DATEV)” writes name, address, contact details, VAT ID and bank details in the DATEV format “Debitoren/Kreditoren”, imported before the posting batch; according to the tool, not yet tried out in DATEV itself. “⬇ List of personal accounts (CSV)” lists the same accounts.
- “Generate file” writes the file. Have the first file imported as a trial.

Handovers to and from other tools

- Project management: invoices with items by service type and a statement of services appear under “📥 from project management” (same browser) or as a file `*.rechnung.json`; number, date, dispatch, payment and reminder level go back. See Project management.
- Kunden-Navigator: services arrive as drafts, incoming invoices at the top of the “Receipts” tab (from another browser as `*.beleg.json`). After “Connect to accounting” there, the tool provides revenue, invoices and open items; private receipts never.
- Vertriebs-Navigator: newly won customers wait in the customers tab.
- Master data: company details, customers, invoice recipients, cost centres and cost types can come from the master data tool, which is then leading.

In the suite

In the MC4Y suite the storage is on the server. The start window offers “🗄 Open accounting on the server …”, “＋ Create new bookkeeping on the server …” and, in Chrome and Edge, “⇧ Transfer a folder from this computer to the server …”. One person at a time edits a storage; others can only read it. See the chapter ‘Tools in the suite: working together’.

Accounting: phone, systems and browsers

- **Chrome and Edge:** only they offer storage in a folder, “📁 Transfer to a folder …”, “Import receipt files from a folder …” and transferring a folder to the server – and only via `https`.
- **Safari and Firefox:** they cannot open folders. Choose “🌐 Save in browser”: the receipt files are then also kept in the browser storage – checksums, earlier versions, retention periods and “🔎 Search” work as in a folder. Download a data package regularly via “📁 Storage”; it lands in the download folder, as described in the chapter ‘How do I use a tool?’.
- **In the suite:** data and receipt files are on the server, in every browser.
- **Phone and tablet:** the tool runs without installation on phones and tablets; the cost centre and cost type fields and “Step by step” work there too. Tested in simulated screen sizes with touch, not on real devices.
- **Transfer Assistant:** Windows only (Python 3.8 or later); on a Mac, Linux or a tablet use “Step by step”. Over `http` (the Suite at an address without `https`) the browser copies via a selected field instead of the clipboard interface – the result is the same.
- **E-invoices in the KoSIT validator:** tested since version 0.4.66 – 15 kinds of invoice pass the validator with the XRechnung configuration 3.0.2: domestic with one and with two VAT rates, with cash discount and with a service period, small business, Section 13b, reverse charge within the EU, intra-community supply, third country, export, tax-exempt, not subject to VAT, cancellation and the XRechnung embedded in ZUGFeRD. With reverse charge (including Section 13b) the e-invoice needs the customer’s VAT ID; if it is missing, the “Issue invoice” window lists it under “The following are missing for a valid XRechnung”.
- **Not tested:** importing posting batch and master file into DATEV, Mein ELSTER, the Federal Central Tax Office portal, ZUGFeRD files in a PDF/A checker, acceptance of e-invoices by real recipients (invoice receipt platforms), real Macs and Linux computers (Safari only via its engine under Windows). Firefox only with the test cases for cash discount, invoice format, receipt storage and search as well as the handovers to other tools.

Accounting: tips

- Drag receipt files, e-invoices and bank statements into the window – that saves most of the clicks.
- A bank statement does not replace an invoice for deducting input VAT: for receipts created during bank reconciliation, compare tax rate and amount and attach the invoice.
- Lock a period after the advance VAT return; corrections are then only possible by reversal, and the tool warns if transmitted figures change.
- "Check log" shows whether the checksum chain is complete and every record matches its logged state – this reveals changes made outside the tool, but not someone who recalculates the data and checksums together; "🔐 Verify checksums" whether a stored file was changed or is missing. Accounting receipts must be kept for eight years, books and records for ten years, from the end of the calendar year – the period is shown on every receipt.
- Finding an invoice again: "🔎 Search", type the number – invoice, cancellation and new invoice appear as hits one below the other and refer to each other.
- With double-entry bookkeeping, agree the chart of accounts – and before the first DATEV handover personal accounts and tax keys – with your tax adviser.

Project management



Project management: purpose and use

With the project management tool you plan and control projects of small and medium-sized businesses – using waterfall, V-model, RUP, Scrum, Kanban or hybrid: work breakdown structure, Gantt chart with dependencies and critical path, backlog and board, times, costs, risks and changes. Billing is by effort, fixed price, sprint, story point or phase; you hand the invoices over to the accounting tool. Status reports and earned value show where the project stands.

Each of the six process models comes with a template. **Waterfall:** phases one after another, with a quality gate with review criteria and approval at the end of each phase. **V-model** (in the general sense, not the V-Modell XT): each design level has a test level opposite it. **Rational Unified Process (RUP):** four phases – inception, elaboration, construction, transition – with iterations and disciplines. **Scrum:** sprints of equal length, product backlog with user stories and story points, velocity, burndown. **Kanban:** flow without sprints, with WIP limits and lead time. **Hybrid:** a classic framework with quality gates, implementation in sprints. You can switch the model later; plan, backlog and times are kept.

The tool is experimental, i.e. still in beta. It saves files with the extension `.projekt.json`; a file can hold one project or several (project collection, view "🗂 Projects"). You will find it on the website under Experimental, as a single file to download and in the MC4Y suite, where several people work on the same project at the same time. The posts Project management tool: traditional, agile, hybrid, Project management as a team: working on one project together and Analysing project costs by cost centre and cost type describe it in detail.

Time recording and utilisation reports can be used to monitor performance and behaviour – in companies with a works council, introducing them is subject to co-determination. Record personal data only as far as planning and billing require. The tool does not replace tax or legal advice; the invoice with the mandatory details is created in

the accounting tool.

Project management: step by step

1. Open the tool. On the empty “🏠 Overview”, choose “🍼 View example project …” (six fictitious projects, one per process model), “📂 Open project file” or “⚙ Enter project data and team”.
2. Under “⚙ Project and team” › “Project”, enter name, “Client (organisation)”, “Project manager”, “Project start”, “Target end (planned)”, “Budget approved (€)” and the project cost centre, and choose the process model. “Apply template” creates phases or sprints and milestones with review criteria.
3. Under “People”, build the team with “ + Person” or take it over with “👥 from the master data …”: weekly hours, share for the project, absences, cost rate and billing rate. Under “Roles”, add the project roles with “ + Role”; under “Calendar”, public holidays and days off.
4. In “🗓 Plan and Gantt”, structure the project with “ + Task”, “↳ Subitem”, “◆ Milestone” and “📁 Phase”. Enter name, duration in working days, effort in hours and progress directly in the table; `Enter` creates a new task below.
5. Connect the tasks in the Gantt chart: drag the dot at the end of a bar onto another bar. The critical path appears in red. Before the start, capture the baseline under “⚙ Project and team” › “Baseline and exchange” with “📌 Capture baseline now”.
6. For agile work, create user stories, tasks and bugs in the “📋 Backlog”, estimate story points and drag the rows into the right sprint. On the board (▦ Board) you change the status by dragging.
7. Assign people: a click on the initials or + in a row opens the window “Responsible”. Whoever is at the top is the lead.
8. Choose your name at “I am” on the right of the view bar and book times in “⏱ Times” in the week view or with “⏱ Book time”.
9. In “💶 Costs”, record material and third-party costs with “ + Actual costs” and “ + planned costs”, each with a cost type and, if needed, a cost centre of its own; mark expenses for the client with “pass on”.
10. In “⚠ Risks and changes”, maintain risks with “⚠ + Risk” and change requests with “✎ + Change request”.
11. In “🧾 Billing”, choose the billing type, put an invoice together with “🧾 Create invoice …” and hand it over with “📤 To accounting”.
12. In “📊 Reports” you see traffic lights, dates, costs and billing; “📌 Record status report” files the status with the date, “🖨 All reports” prints everything or saves it as a PDF.
13. Save with “Save” (`Ctrl` + `S`) to a file `*.projekt.json`.
14. Create further projects in the same file under “🗃 Projects” with “ + New project in this file”; the selection next to the name at the top switches between them.

Project management: functions and buttons

Header

- Field for the project name, next to it the process model; a click on it leads to “⚙ Project and team”.
- Large arrows – undo and redo; ▾ (“Several steps back”) shows the history.
- “New” – new, empty project; “Open” – project file, also `*.kanban.json` and `*.projektauftrag.json`; “Save” (`Ctrl` + `S`).
- ⋯ – “Save as”, “Load example project …” (including “All six examples in one file (project collection)”), “New project in this file …”, “All comments …”, “Take over from a Kanban board …”, “Export backlog as Kanban board …”, for printing or PDF “Schedule (Gantt)”, “Work breakdown structure” and “Project report (all analyses)”, as CSV “Plan (tasks)”, “Backlog”, “Time entries”, “Costs” and “Billing runs”.
- “Help” (`F1`) and 👥 Master data as described in the chapter ‘How do I use a tool?’.

Views

- “🗃 Projects” (all projects of the file), “🏠 Overview”, “🗓 Plan and Gantt”, “🌳 Structure”, the view of the process model (“🚦 Phases and gates”, “✓ V-model”, “🔁 Phases and iterations”, “🏃 Sprints”, “▦ Flow” or “🧩 Phases and sprints”), “📋 Backlog”, the board, “👥 Resources”, “⏱ Times”, “💶 Costs”, “🧾 Billing”, “⚠ Risks and changes”, “📊 Reports” and “⚙ Project and team”.

- On the right, “I am” – who is working at the moment; suggested when recording time.

Projects (project collection)

- “🏢 Projects” – all projects of the file with traffic light, progress, start, forecast end, delay, planned, actual and forecast costs, cost centre and project manager; “Edit” chooses a project (as does the selection next to the name at the top), ▲/▼ change the order, 🗑 removes it from the file (undo is possible), plus “Name of the project collection”.
- “＋ New project in this file” (name, process model, template if you wish; calendar from the project being edited), “📂 Add projects from a file …” (the same identifier is skipped), “💾 Save as a file of its own …” (only the project being edited).
- “Utilisation across all projects in this file” (per person and week; red above 110 % of the weekly hours; same person via master data link or same name) and “Costs by cost centre and cost type (all projects in this file)” with “Actual costs”/“Planned costs” and “🔍 Window with CSV …”.
- “⚙ Project and team” › “People”: “Take over from the other projects in this file” – one click takes over abbreviation, contact, rates, weekly hours and roles; then check the share for this project.
- Undo switches to the project a step belongs to when needed.

Plan and Gantt

- Display “▤ Table + Gantt”, “☰ Table” or “▬ Gantt”; scale “Days”, “Weeks”, “Months” or “Quarters”; a button jumps to today. When you open the view, the Gantt chart shows today if today lies within the project; if the project is over, the first open task or milestone, otherwise the project start.
- “＋ Task”, “↳ Subitem” (`Insert`), “◆ Milestone”, “📁 Phase”, with Scrum and hybrid “⛹ Sprint”, with RUP “🔁 Iteration”.
- Arrow buttons → ← ↑ ↓ – indent, outdent, move up, move down (`Alt` + arrow keys).
- Tick boxes “critical path” and “Baseline”.
- ⋯ – “Capture baseline”, “Expand all”, “Top level only”, “Forecast based on progress”, “Print schedule / PDF”, “Plan as CSV”, “Apply template …”.
- In the Gantt chart: dragging a bar sets a fixed start, dragging its right end changes the duration, dragging the dot at the end onto another bar connects both. A click on a line chooses the type – finish → start, start → start, finish → finish, start → finish –, a lag or deletion. In the pure table there is a “Predecessor” column, for example `1.2; 2.1EA+3` .
- Red is the critical path (no float), striped the forecast from actual progress, grey underneath the baseline.
- A work package with subitems becomes a summary task. Sprints and iterations keep their length as a time box; if the content reaches beyond it, the overhang is hatched.
- A right-click on a row or bar offers all commands: subitem, after, milestone, user story or task here, indent and outdent, move, delete.

Structure

- Work breakdown structure as a tree: “📁 ＋ Subproject / phase”, “↳ Subitem”, “📘 ＋ Entry”, “▾ all”, “▸ collapse”, “🖶 Print”.
- The tick box “Backlog entries” shows user stories and tasks under their sprint, iteration or work package. Dragging a box onto another places it there.

View of the process model

- Waterfall and hybrid: phases and quality gates with review criteria and approval, “📁 ＋ Phase”.
- V-model: the “V” with design and test levels and the status of both sides.
- RUP: distribution of the work by discipline across the iterations, switchable between “planned effort” and “booked effort”; “🔁 ＋ Iteration”.
- Scrum: sprints with sprint goal, velocity, burndown and release burnup; “⛹ ＋ Sprint”, “📋 Sprint planning in the backlog”, the board.
- Kanban: throughput, lead time, cumulative flow diagram and “WIP limits …”.

Backlog and board

- Grouping "▤ by time frame" or "⛰ by epics"; "📘 + User story", "⛰ + Epic", "🐞 + Bug", "📄 + Requirement", "▦ Kanban board …".
- User stories in the form "As a … I want …, so that …", with story points and definition of done ("Take list from the settings"). Dragging rows into a sprint, iteration or work package assigns them; each sprint shows story points, capacity and velocity so far.
- On the board you change the status by dragging; WIP limits show overload.

Assignees

- Window "Responsible": type a name and press `Enter` – an existing person is assigned, a new name creates the person in the team; or "From the team" or "👥 from the master data …".
- Whoever is at the top is the lead ("★ Lead", a gold ring around the initials). Change the order by dragging, with ▲▼ or ★. The planned effort is shared among all assignees.

Resources, times and costs

- Resources: utilisation per week with "◀ 4 weeks", today, "4 weeks ▶" and "👥 People and capacity"; overbooked weeks are red.
- Times: "🗓 Week" or a list view, "this week", "⏱ Book time", "CSV".
- Costs: "+ Actual costs", "+ planned costs", "CSV". Passed-on expenses – materials and goods, third-party services, licences, maintenance and operation, travel costs – get quantity and unit, mark-up or fixed sales price and, for licences, the service period (click the row, properties on the right).
- Choose cost type and cost centre from the master data as you type (`Ctrl` + `Space` opens the selection, "+ … create" adds an entry); without master data the field suggests the usual cost types. The project cost centre is the default for all costs; personnel costs always count on it.
- Block "Costs by cost centre and cost type" – switchable between "Actual costs" and "Planned costs", "🔍 Window with CSV …".
- Earned value: planned value from the baseline, earned value from progress, actual costs; cost and schedule index and a cost forecast for the remaining work.

Billing

- Selection "Type": "Time and materials (hours × billing rate)", "Fixed price with payment plan (milestones)", "Flat rate per sprint or iteration", "Per completed story point or entry" or "Per phase or iteration (time and materials or flat rate)".
- "🧾 Create invoice …", "⟳ Status from accounting", "CSV"; with a fixed price "+ Instalment" and "Propose payment plan from the milestones". Approved changes with a price are added as a supplement.
- In the window "Create invoice": "Services from" and "until (cut-off date)", the scope ("entire project" or a phase or work package), "Show line items" per service type, how working hours are summarised, and the annex.
- On a billing run: "📇 Service record", "📤 To accounting", "+ free item", "⟳ Fetch status", "💾 Handover file", "↩ Withdraw handover".
- Block "Invoice recipient and defaults" with "Working hours on the invoice", "Annex to the invoice" and "Name suppliers in the annex".

Risks, changes and reports

- "⚠ + Risk" with a matrix of probability and impact, measures and owners. "Responsible" (in the table and on the right for the risk): type a name – an existing person of the team (name or initials) is chosen, a new name is added to the team with `Enter`; an empty field removes the assignment. With master data connected, the list also suggests their people (👥, taken over with initials and e-mail), and the "👥" button picks from the master data. Risks from a pre-mortem arrive with their responsible persons; "✎ + Change request" with effort, costs and schedule impact; "🗓 schedule as work package", "🗑 Delete", "CSV".
- "📋 Measures as tasks …" hands over the measures of open risks.
- Eight reports: "🚦 Project status", "🗓 Dates and milestone trend", "💶 Costs and earned value", "👥 Resources and times", "⛹ Sprints, velocity and flow", "🚦 Phases, gates and disciplines", "🧾 Billing, invoices and

contribution margin", "⚠ Risks and changes".

- "📌 Record status report", "🖴 This report", "🖴 All reports", "CSV".

Project and team

- Tabs "Project", "People", "Roles" (with the column "Access in the suite"), "Calendar", "Estimation and rules" (sprint length, forecast), "Traffic light" (from which deviation the light turns yellow or red), "Baseline and exchange" (baseline, Kanban board, 8EM Modeller).
- "+ Person", "👥 from the master data …", "+ Role", "Board WIP limits …", "📌 Capture baseline now", "Delete baseline".

Comments

- Comments can be attached to every element: the project (overview), tasks, phases, sprints, milestones, backlog entries, risks, change requests, billing runs and costs in the properties, and time entries, people, roles, instalments and status reports via the 💬 button in the row.
- 💬 with a number shows how many there are; "Add comment" writes a new one. ⋯ › "All comments …" lists all of them by element, filters by type, creates new ones with "New comment on" and jumps there with "Go to entry". Comments of deleted elements remain under "on deleted entries".

Keys

- `N` new entry in the current view, `Insert` subitem, `Del` delete the selected entry, `Esc` clear the selection, `Ctrl` + `Z` / `Y` undo and redo, `Ctrl` + `S` save, `F1` help; `Enter` in the name and `Alt` + arrow keys in the plan.

Project management: saving, export and handovers

Saving creates a file `*.projekt.json`; in addition, the browser keeps an interim state. You open older project files as usual, and a new file can also be opened with an older version. Outputs: printing or PDF for schedule, work breakdown structure, service record and reports; CSV for plan, backlog, times, costs, billing runs and reports. The cost CSV contains the columns "Cost type (master data)", "Cost centre no." and "Cost centre". A file with several projects keeps the first project at the top in the usual format and the others below it; older versions open the first one and leave the others unchanged.

Handovers

- Accounting: "📤 To accounting" hands the invoice over as a draft to the accounting tool in the same browser; for accounting elsewhere, save a file `*.rechnung.json`. Number, date, dispatch, payment and reminder level come back. The reminder level appears on the invoice, in the report "📄 Billing, invoices and contribution margin" (column and key figure "Invoices with reminders") and in the CSV, not on the service record. A billing run locks its times and expenses; a cancellation releases them again.
- Kanban board: take over cards from a file `*.kanban.json` or from the Kanban tool in the same browser – with status history, story points, amounts and assignees. Conversely, export the backlog as a board file; the entries are matched to each other. The Kanban board knows one person per card – the lead goes there.
- Tasks: "📋 Measures as tasks …" hands the measures of open risks to the tasks of the MC4Y suite, otherwise to the Kanban board in the same browser; the status "completed" comes back.
- 8EM Modeller: after every change the tool provides the calculated project status, which the Modeller reads with "📋 Import project status". A project order from the Modeller ("📤 To project management") appears in the overview under "📥 From the 8EM Modeller": "Create as project …" or "Discard"; also "📂 Project order from a file …" and "↻ Check for project orders".
- Project analysis: evaluates several project files together – files with several projects are split into their projects; see the chapter Project analysis.

Working together in the suite

If you open a project from the storage on the server in the MC4Y suite, everyone who has it open works on it together. A band below the views shows "Shared project", your role, who is in the project and whether everything is saved. Every change goes to the server at once; changes by others appear after a few seconds. "🕘 History"

shows who last changed what.

- Roles: “Project manager” plans and changes everything; “Team member” books their own times, sets status, progress, actual dates and notes of their own work packages and backlog entries and writes comments; “Read” sees everything and changes nothing.
- The role follows from your permission in the suite and the column “Access in the suite” of your project role; full access always means project manager, read permission always read. In a file with several projects the role applies per project: a changed or removed project is saved only by its project manager; the suite does not check newly added or unchanged projects.
- If two people change the same entry, the window “Changed at the same time” shows both states: “Reload and set again” merges them, “Take the state from the server” discards your change to this entry.
- A file with several projects only opens for one person at a time in the suite. The suite’s tasks and calendar show the work packages, backlog entries and milestones of all projects in the file, each with the name of its project; “↗ Open in the tool” opens the file at that project. To work together, save each project with “🗁 Projects” → “💾 Save as a file of its own …” to the document store.
- Without the suite, the tool works with files as before. More in the chapter ‘Tools in the suite: working together’.

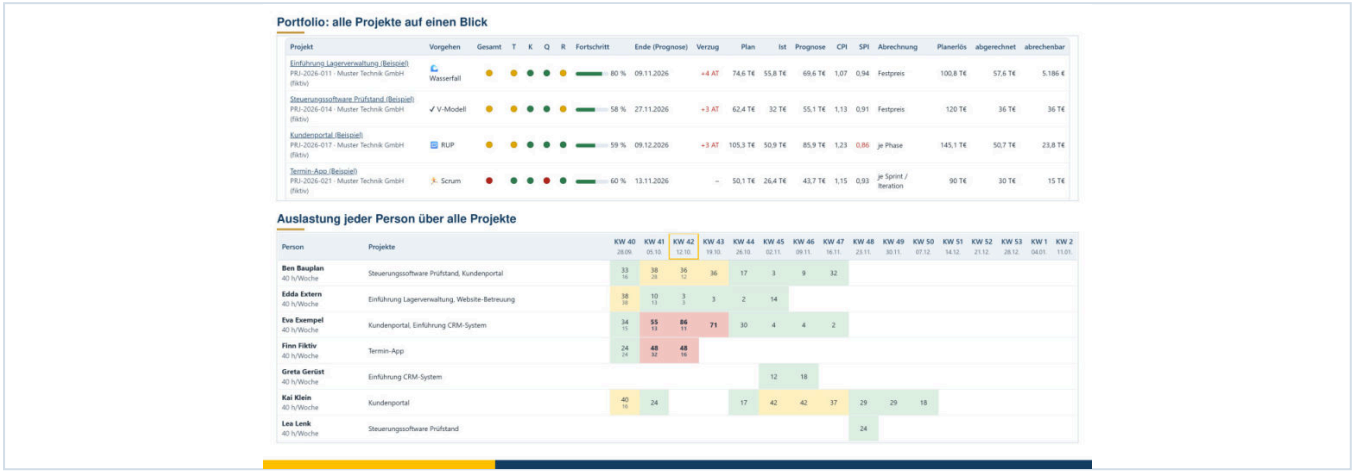
Project management: phone, systems and browsers

- **Browsers:** Chrome or Edge are recommended. In Safari and Firefox the tool saves via the download, as described in the chapter ‘How do I use a tool?’.
- **Phone and tablet:** the tool runs without installation on phones and tablets too. The button bars wrap on narrow screens, rows can be tapped and the comment buttons are big enough for a finger. I tested this in simulated screen sizes with touch, not on real devices.
- **Not tested:** real Macs, iPhones and Linux computers (only the browser engines under Windows), Firefox only for the handovers, not for operation; in shared use more than three people at once and very large projects.

Project management: tips

- The six example projects are set relative to today, with booked times, billing runs and status reports – ideal for getting to know every view.
- Capture the baseline before the start; the Gantt chart then shows in grey where your project deviates from the original plan.
- Record a status report regularly; the milestone trend analysis then shows whether dates are slipping.
- Maintain people in the master data; the project analysis then recognises the same person across all projects.
- Bill by cut-off date – end of month, end of sprint or milestone reached – and select or deselect individual services in the window “Create invoice”.

Project analysis



Project analysis: purpose and use

The project analysis reads several project files of the project management tool (`*.projekt.json`) and evaluates them together: traffic lights, deadlines, the utilisation of people across all projects, costs, billing by service type and open invoices; files with several projects (project collection) are split into their projects. It does not change any projects – planning, time booking and billing happen in the project management tool.

It helps when several projects run at the same time: which one needs attention? Where is money waiting to be billed? Who is planned in several projects and therefore overbooked? It is meant for anyone who steers several projects, for example in a project office.

The tool is experimental, i.e. still in beta. It has no file extension of its own and saves nothing; it only reads project files. You will find it on the website under Experimental, as a single file to download and in the MC4Y suite. The post Project analysis tool: portfolio, utilisation, billing describes it in detail.

Utilisation and time reports can be used to monitor performance and behaviour – in companies with a works council, introducing them is subject to co-determination. The reports describe projects; they are not meant to assess individual people.

Project analysis: step by step

1. Open the project analysis. The empty page offers "📂 Load project files …", "📁 Choose folder …", "Draft from this browser" and "🧪 View example projects".
2. To get to know it, load the examples: six fictitious projects, one per process model, with a partly shared team.
3. For your own projects, choose a folder in Chrome or Edge; the analysis reads all `*.projekt.json` in it and in subfolders up to two levels deep. Otherwise, load one or several files.
4. Under "Projects" in the bar, hide individual projects from the analysis or remove them with ×.
5. In "📋 Portfolio", check traffic lights, progress, forecast end and key figures of all projects.
6. In "🗓️ Dates", see the durations and the milestones of the next twelve weeks.
7. In "👥 Utilisation", check who is overbooked across all projects.
8. In "🧾 Billing", see what has been billed, what is open and what is billable now; you then put invoices together in the project management tool.
9. In "💶 Costs" and "⛹️ Agile and flow", evaluate costs, cost centres and agile key figures.
10. "🖨 Print" outputs the current view, "🖨 Complete report" everything in one report, "CSV" the key figures for a spreadsheet.

Project analysis: functions and buttons

Bar

- "☁ Server" (suite only) – reloads all projects you may read from the server.
- "📂 Load …" – choose one or several project files.
- "📁 Folder …" – read all project files in a folder; Chrome and Edge remember the folder, and next time the empty page offers to read it again with one click.
- "🧪 Examples" – the six example projects.
- "Projects" – list of the loaded projects with tick boxes to show or hide them and × to remove them.
- "🖨 Print", "🖨 Complete report" (portfolio, dates, utilisation, billing and costs), "CSV".
- On the right of the view bar you see how many of the loaded projects are being evaluated, as of today.

View "📋 Portfolio"

- Key figures "Projects", "Traffic light", "Planned costs", "Actual costs", "Planned revenue", "Billable".
- Table per project: process model, traffic lights for overall, schedule, costs, quality and risks, progress, forecast end, delay, planned, actual and forecast costs, CPI and SPI, billing type, planned revenue, billed and billable.
- Chart "Cost and schedule index": top right cheaper and faster than planned, bottom left more expensive and slower; the circle size stands for the planned costs.
- "Next milestones" and "Notes from the projects", for example overdue quality gates, overbookings and billable amounts.

View "🗓️ Dates"

- "Durations": bars from start to forecast end, darker part progress, red line target end, diamonds milestones (green reached).
- Milestones of the next twelve weeks and overdue ones, with the deviation from the baseline.

View "👥 Utilisation"

- Planned hours of each person from all projects per week, compared with the full weekly hours minus nationwide public holidays and absences. Green within limits, yellow tight, red overbooked; in small print the booked hours. Pointing at a week shows which project claims how many hours.
- Key figures "People", "in several projects" and "Overbooked weeks".
- Scroll with ◀, today and ▶; period of 8, 12, 16 or 26 weeks.
- The analysis recognises the same person by the link to the master data or by the same name.

View "🧾 Billing"

- Key figures "Planned revenue", "Billed", "Open receivables", "Billable now", "Contribution margin so far" and "Result (forecast)".
- "Per project" with billing type, paid, open, actual costs, contribution margin, margin and result forecast; "By billing type"; "Billed per month" for the last twelve months, stacked by project.
- "By service type": working hours, flat-rate services, materials and goods, third-party services, licences/maintenance/operation and travel costs – billed and billable now.
- "Open invoices" with due date; if the accounting tool runs in the same browser, the column "Accounting" shows the current status of the invoice including the reminder level.
- Billable now: the items per project by service type. For fixed prices, the analysis counts the work done at least as a share of the order value according to progress.

View "💶 Costs"

- Key figures budget, "Planned costs (BAC)", "Actual cost (AC)" and "Forecast (EAC)"; "Actual costs and forecast per project" against the budget.
- "Actual costs by cost type (all projects)" and "Personnel costs per person (all projects)" with hours, costs and billable value.
- "Costs by cost centre and cost type (all projects)" – switchable between "Actual costs" and "Planned costs", "🔍 Window with CSV …". Personnel costs count on the project cost centre of each project.

Views "🤸 Agile and flow" and "🔎 Single project"

- Agile and flow: "Sprints and story points" with velocity and remaining sprints, a chart of planned and completed per Scrum project, plus "Flow (completed entries)" with throughput and lead times.
- Single project: choose a project; on the left the eight reports as in the project management tool, from "🚦 Project status" to "⚠ Risks and changes".

Project analysis: saving, export and handovers

The project analysis saves no file of its own and does not change the project files. Printing or saving as a PDF works for the current view or as a complete report in landscape format; the view "🔎 Single project" prints all reports of that project. The CSV file contains the key figures per project, the costs by cost centre and cost type and the utilisation per person and week.

Where the data comes from

- Project files from the project management tool, individually, as a folder or as "Draft from this browser" – the project currently open in the project management tool (same browser, same storage location).
- Cost types and cost centres as they are in the project files, i.e. as you chose them from the master data in the project management tool.
- The status of the invoices from the accounting tool in the same browser.

In the suite

In the MC4Y suite, the analysis automatically loads all projects you may read directly from the server when it opens; "☁ Server" fetches the latest status. More on this in the chapter 'Tools in the suite: working together'.

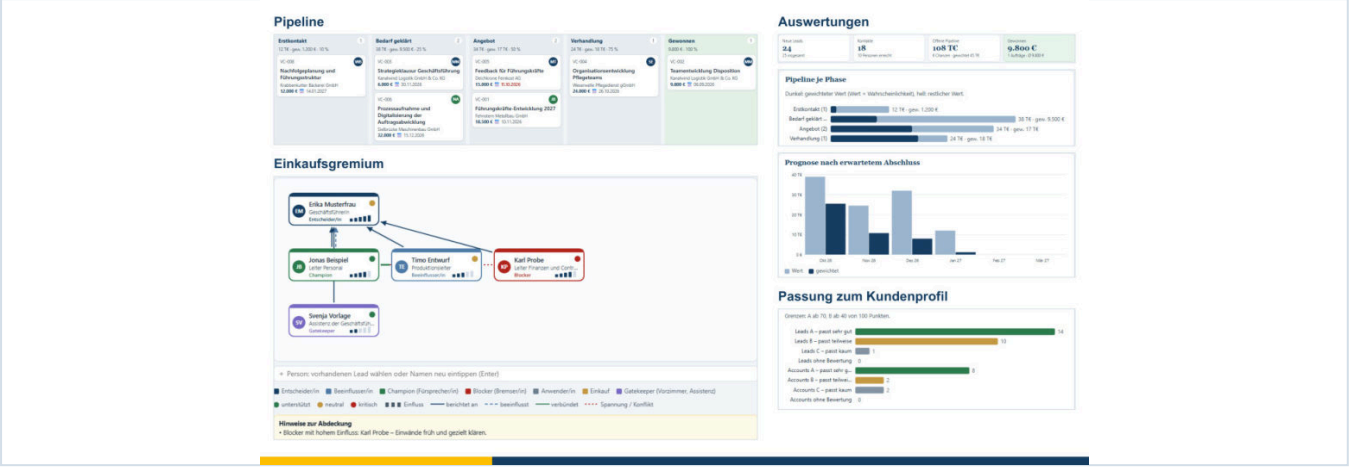
Project analysis: phone, systems and browsers

- **Chrome and Edge:** only here can folders be chosen; other browsers report "Folders can only be chosen in Chrome or Edge – please load files individually." Via `http` instead of `https`, choosing folders is not available there either.
- **Safari and Firefox:** load the project files individually or several at once with "📂 Load …".
- **Phone and tablet:** the analysis runs without installation on phones and tablets too. I have not tested this on real devices.
- **Not tested:** real Macs, iPhones and Linux computers; I test Safari only with its browser engine under Windows.

Project analysis: tips

- Maintain people centrally in the master data: the utilisation view then recognises the same person even if the name is spelt differently in one project.
- Keep all project files in one shared folder; in Chrome and Edge one click is then enough next time.
- The result forecast compares planned revenue with the cost forecast and shows early whether a fixed-price project is heading into the red.
- For invoices, switch to the project management tool – to the view "🧾 Billing" or to the report "🧾 Billing, invoices and contribution margin".

Vertriebs-Navigator



Vertriebs-Navigator: purpose and use

The Vertriebs-Navigator supports prospecting in small and medium-sized enterprises: who suits your offer, whom do you know there, who has a say in the decision, what is the next step – and what does data protection require? It brings the ideal customer profile and fit, leads and companies, the buying committee as a map, opportunities in the pipeline, follow-ups and signals together in one tool. Its way of working is modelled on prospecting tools such as LinkedIn's Sales Navigator. The tool, however, does not access LinkedIn, reads out no profiles and harvests no data from the web. It organises what you yourself know and record.

It is intended for anyone in a small company who wants to win new customers and has so far relied on an Excel list, calendar notes and a great deal kept in their head. A typical use: you first define your ideal customer profile, import your existing contacts, add new companies through the research, maintain the buying committee of the most important companies and take your opportunities through to closing. You pass customers you have won on to bookkeeping, project management and the Kunden-Navigator.

All entries remain on your device. The only exception: only if you use the company search in open data under "🔎 Research" are the search terms (region, categories) sent to OpenStreetMap or Wikidata servers. Search links open a new browser tab only when you click; the tool reads nothing there. The data protection notes are working aids and not legal advice; the tool replaces neither a full CRM system nor a review under data protection or competition law.

The Vertriebs-Navigator is released. On the website you find it on the Resources page; it is also available as a single HTML file to download and in the MC4Y Suite in the Business Support Tools category. It saves files with the extension `.vertrieb.json`. I describe it in detail in the article Targeting new customers – the Vertriebs-Navigator.

Vertriebs-Navigator: step by step

1. Open the tool. To get to know it, choose "🧪 Load example (fictitious)"; all sample data are entirely made up. For your own data, start with "New" and enter the name of the data set at the top.
2. In the "🎯 Ideal customer profile" tab, specify which industries, company sizes, regions (federal state or postcode area), functions and hierarchy levels suit you, and weight each criterion. Describe your typical contact persons with "+ Persona".
3. Bring in existing contacts with 📥 "Import" – your LinkedIn data export (`Connections.csv`), a CSV or Excel list, or Outlook contacts as CSV or vCard. The preview shows what is new, what will be supplemented and what will be skipped.
4. Record contacts from business cards or conversations with "+ Lead" and "+ Account" or with "⚡ Quick entry".
5. Look for new companies in the "🔎 Research" tab: via "🔗 Search links", the "🗺 Company search in open data" or "🤖 Own research" with your AI assistant.
6. In "👤 Leads" and "🏢 Accounts", check the fit A, B or C and narrow the list with ⚙ "Filter". Save recurring searches with "☆ Save search".
7. For important companies, record in the "🕸 Buying committee" tab who decides, who influences and who is putting on the brakes.
8. Turn a conversation into an opportunity with "+ Opportunity" and drag its card through the phases on the board.
9. Log every contact in the lead and set the next step with "⏰ Follow-up". The "⚡ Signals and follow-ups" tab shows what is due.
10. Work through the open points in the "🛡 Data protection" tab, above all the information under Art. 14 GDPR.
11. Once an opportunity is won, confirm "✓ Won …" and choose whether the customer goes to bookkeeping, project management and the Kunden-Navigator.
12. Save with "Save" (`Ctrl` + `S`) and look at the pipeline, forecast and win rate in "📊 Reports".

Vertriebs-Navigator: functions and buttons

Header

- Name field – the name of this data set.
- The large arrows – undo or redo each step (`Ctrl` + `Z` / `Ctrl` + `Y`); the ▾ next to them shows the history.
- "New" – starts with empty data.
- "Open" – opens a file.
- "Save" – saves (`Ctrl` + `S`).
- 📥 "Import" – imports a LinkedIn export, CSV or Excel.
- The ⋯ button – further commands: "Save as …", "Import: LinkedIn export, CSV, Excel …", with the connection switched on "Take over from the master data …", "🧪 Load example (fictitious)", under CSV "Leads (filtered)", "Accounts (filtered)", "Opportunities" and "Contact history", plus "↻ Query status of handovers".
- "Help" – the help (`F1`); the build version next to it shows the licence and terms of use.
- "👥 Master data" – shows the master data, as described in the chapter 'How do I use a tool?'.

Tabs

- "🏠 Overview" – key figures on leads, accounts, open opportunities, follow-ups due, new signals and data protection; a click on a tile jumps to the matching view.
- "👤 Leads" – the people. Columns can be sorted; tick boxes select several rows for "🏷 Tag …", "📋 To list …", the status button, "⏰ Follow-up …" and "🗑 Delete …"; "Clear selection" removes the selection. "⬇ CSV" exports the filtered list.
- "🏢 Accounts" – the companies, with the same functions as the leads.

- "🔎 Research" – three sub-tabs: "🔗 Search links" (ready-made searches from the ideal customer profile: web search, map, business directory, LinkedIn company and people search and a company database), "🗺 Company search in open data" (OpenStreetMap or Wikidata, with "🔍 Check area", "🔍 Search region" and "🔎 Find companies"; selection with "choose matching (A/B)", "select all new" or "none") and "🤖 Own research" ("📋 Copy brief", "⬇ As text file", "📥 Paste result …").
- "📋 Lists and searches" – lists that you fill by hand ("+ List") and saved searches that count new hits since you last looked.
- "🕸 Buying committee" – the map for each account (see below).
- "💼 Pipeline" – the opportunities as a board or as a "☰ List", with "+ Opportunity".
- "⚡ Signals and follow-ups" – sub-tabs "⏰ Follow-ups", "⚡ Signals" and "📭 Contact history", with "+ Follow-up", "+ Signal" and "+ Activity". The ⏰ button turns a signal into a follow-up.
- "📊 Reports" – pipeline by phase, weighted forecast, wins and losses per month, win rate, contacts per week, fit, origin, loss reasons and data protection status; "Period" selects the time span, "🖨 Print / PDF" and "⬇ CSV" export.
- "🎯 Ideal customer profile" – criteria with weights and buyer personas ("+ Persona", "🗑 Delete persona").
- "🛡 Data protection" – sub-tabs "Information under Art. 14", "Do-not-contact list (objection)", "Deletion periods", "Contact channels and consents", "Origin of the data" and "Notes".
- "⚙ Settings" – sub-tabs "General and sender", "Pipeline phases" ("+ Phase"), "Message templates" ("+ Template", "Add sample templates"), "Industries and loss reasons" and "Data and connection" with "💾 Save", "📂 Open", "📥 Import (LinkedIn, CSV, Excel)", CSV exports, "👥 Take over entries from the master data …", "↻ Query status of handovers" and "Clear all data …".

Ideal customer profile and fit

The criteria and their weights give every account and lead a fit from 0 to 100 and the class A, B or C. If a detail is missing, a question mark shows where further research is worthwhile. The tool recognises function and hierarchy level from the position (for example, a head of HR becomes HR, head of department); you can change this in the lead. Leads are assigned to the matching persona automatically.

Leads and accounts in detail

A click on a row or card shows all details on the right; changes take effect immediately. Assignment fields (account, main contact, industry, persona, tags) take an existing entry or create a new one with the name you type. In the lead you find:

- "✉ Message" – fills in a template with placeholders such as {anrede}, {vorname}, {firma}. The tool sends nothing: you copy the text or hand a draft over to your email program and log the contact.
- "⏰ Follow-up", "💼 Opportunity" and "⚑ Signal" – create the respective element for this lead.
- "🔎 Research ▾" – "Open LinkedIn profile", "Search on LinkedIn (people)", "Web search"; in the account "Open website", "Open LinkedIn company page", "Search on LinkedIn (companies)", "Company register (name is copied)" and "Commercial register (name is copied)".
- "✓ informed today" – records the information under Art. 14.
- "⛔ Record objection …" – puts the person on the do-not-contact list; "Lift objection (only in case of a mistake)" reverses this.
- "🖨 Compile access information" – prints all details about a person (Art. 15 GDPR).
- The ⋯ button in the details – "Create opportunity", "Compile information (Art. 15)", "Open in the master data", "Delete lead …"; in the account "Open buying committee" and "Delete account …"; in the opportunity "Create copy" and "Delete opportunity …".

Buying committee

For each account a map shows the roles "Decision-maker", "Influencer", "Champion (advocate)", "Blocker (obstructer)", "User", "Purchasing" and "Gatekeeper (reception, assistant)" – with attitude (dot at the top right) and influence (bar). You drag people freely; "↻ Rearrange" puts them in order again. Drag the golden ↗ handle of the selected person onto another (or click it and then the target person). This connects the two as "reports to",

“influences”, “allied” or “Tension / conflict”. Click a line to change it; ⇄ reverses the direction, “🗑 remove” or `Del` deletes it. On the selected line, “+” (or dragging the line) inserts a handle ◆; dragging ◆ shapes it, double-clicking ◆ removes it, “／ Straight” removes all; handles snap horizontally or vertically to the neighbouring point (`Alt` freely). Several people: `Ctrl` + click or `Shift` + click, a frame on an empty area or `Ctrl` + `A`; dragging a selected person moves all of them, and so do the arrow keys; `Del` deletes the selected leads after one confirmation; on phones and tablets “Multiple selection”. Notes point out gaps, for example no champion or a blocker with a lot of influence. “🖶 Print” and “⬇ SVG” export the map.

Pipeline

The standard phases are “First contact”, “Need clarified”, “Quotation”, “Negotiation”, “Won” and “Lost”, each with a probability; the weighted value gives the forecast. You change phases and probabilities under “Pipeline phases”. Drag cards on the board into another phase. With “✗ Lost …” the tool asks for the reason; “↺ Reopen” brings an opportunity back.

Data protection and competition law

- Every record remembers its origin. If the data do not come from the person themselves, they must be informed under Art. 14 GDPR – at the latest after one month, or earlier at the time of an earlier contact. “✉ Prepare information” uses the sample template, “✓ informed” records it.
- Objection (Art. 21 GDPR): the person is put on the do-not-contact list; imports skip them. “＋ Record objection without lead” is for people who are not in your data.
- Deletion periods: leads without contact over the set time (default 24 months) appear for review – with “🗑 delete” or “keep until …”.
- Contact channels (Section 7 of the German Act against Unfair Competition, UWG): for each lead and channel a traffic light shows what is recorded. Advertising by email generally requires prior express consent.

Keys

- `N` – new (in leads, accounts, pipeline).
- `Ctrl` + `F` – search; `Esc` – close; `Ctrl` + `S` – save; `F1` – help.
- `Ctrl` + `Enter` – enter a note in the contact history.

Vertriebs-Navigator: saving, export and handovers

The data are kept in a file `*.vertrieb.json`. Saving and opening work as described in the chapter ‘How do I use a tool?’; the browser additionally keeps the last state. The file contains personal data: back it up regularly and protect your device.

Importing: LinkedIn data export (`Connections.csv`), CSV and Excel (`.xlsx`) with column mapping, Outlook and Microsoft 365 contacts as CSV (German or English column names) or vCard (`.vcf`). In the import window you choose “📂 Choose file …” or “📋 Paste table …”. Anyone already in the tool is recognised by profile address, email address or name and company and only supplemented. A later LinkedIn export shows job changes, new positions and new connections as a signal.

Exporting: CSV for leads and accounts (each filtered), opportunities and contact history; the reports as a printout or PDF and CSV; the committee map as a printout or SVG; the access information as a printout.

Handovers: With “Won”, you can hand the customer over to bookkeeping, the order to project management and the customer for ongoing care to the Kunden-Navigator – with the contact persons except blocked ones, their contact channels and the contact history. Within the same browser this works through a shared store; the tools must be open in the same browser for this (same folder or the same website). Otherwise “⬇ File” creates a file to import. The opportunity shows whether the handover was taken over there; “↻ Query status of handovers” checks. Handovers are not possible in the example.

Conversely, the Kunden-Navigator passes additional business with existing customers back here: it appears in the overview and the pipeline for adoption and is created as an opportunity. The Vertriebs-Navigator reports phase and outcome back.

Master data: With the connection switched on, you link leads as people and accounts as organisations. After that, name, email, phone, position or address are maintained there; blocked leads are not passed on. Without the connection the tool works on its own.

In the Suite: Opening and saving run through the server dialog, and the file is locked for others while you edit it – as described in the chapter 'Tools in the suite: working together'.

Vertriebs-Navigator: phone, systems and browsers

The Vertriebs-Navigator is not a board tool; it has its own adaptation for narrow screens. Up to 900 pixels wide or 500 pixels high, buttons, tabs and input fields are at least 40 pixels high. The bar below the tabs can be swiped sideways, and the buttons for creating entries come first. In leads and accounts the filter box opens in an area of its own, so the last filter stays within reach. In landscape on a phone the tool hides its title in the header; in portrait and on the desktop it stays.

I have checked this in emulated screen sizes. Not checked are real devices and gestures, Safari on the iPhone, and dragging cards in the pipeline with a finger; I have checked dragging in the committee with a finger in the Edge emulation.

The tool needs no folder functions and therefore runs in Chrome, Edge, Firefox and Safari. In Safari and Firefox it saves via the browser's download, as described in the chapter 'How do I use a tool?'. The company search in open data needs an internet connection; it works on the website just as it does with the downloaded tool.

Vertriebs-Navigator: tips

- Start with the ideal customer profile, not with the address list. Only then does the fit tell you something.
- Take a hit from a LinkedIn search into the quick entry together with the profile address from the address bar. That way the contact stays linked to your export later on, once you connect.
- Have the research brief include the list of your existing companies so that nothing comes up twice. Spot-check the results – AI assistants make mistakes too.
- Do not collect addresses from website legal notices (Impressum) for mass emails. Check the traffic light for contact channels before every approach.
- Import your LinkedIn export again from time to time: job changes and promotions are often the best reason to get in touch.
- Record the reason for lost opportunities. The report on loss reasons shows what you can learn from.

Kunden-Navigator



Kunden-Navigator: purpose and use

The Kunden-Navigator helps small and medium-sized enterprises look after their existing customers: who are the contact persons, what was discussed last, which requests are open, which contracts are expiring, who has consented to marketing, how satisfied are the customers – and what is still outstanding in the accounts? It brings together the customer record, requests, contracts, consents, satisfaction and customer value, plus documents and emails.

You also keep your own service providers here – suppliers, tax advisers, hosting, software, insurance – because their contracts, too, quietly renew for another year. A partner can be both customer and service provider.

New customers come from the Vertriebs-Navigator. Invoices, receipts and payments are created only in the bookkeeping tool, which stays in the lead. All entries remain on your device; the tool transmits nothing, does not fetch any mailbox and sends nothing itself. The notes on consent, marketing and data protection are working aids and not legal advice; the tool replaces neither accounting or legal advice nor a review under data protection or competition law.

The Kunden-Navigator is released. On the website you find it on the Resources page; it is also available as a single HTML file to download and in the MC4Y Suite in the Business Support Tools category. It saves files with the extension `.kunden.json`. I describe it in detail in the article Caring for existing customers – the Kunden-Navigator.

Kunden-Navigator: step by step

1. Open the tool. To get to know it, choose "👀 View example" or, in the ⋯ menu, "Load example (fictitious)"; all sample data are entirely made up. For your own data, start with "New" and enter the name of the customer data set at the top.
2. Create your customers with "+ Create first customer" or "+ Customer", or import an existing list from CSV or Excel with 📥 "Import". You create service providers in "🛠 Service providers" with "+ Service provider".
3. In the customer record on the right, add the contact persons with "+ Contact" and their role, for example "Main contact person" or "Accounting, invoices".
4. If you use my bookkeeping tool in the same browser, choose "📄 Connect to accounting" to see turnover, open items and payment behaviour.
5. Record contracts with "+ Contract": amount and interval, term, notice period, automatic renewal, cost centre and, for service providers, the cost type. "⏰ remind before the deadline" creates a follow-up.
6. When a customer gets in touch, create a request with priority and deadline using "+ Request". On the board you drag the card from new via "In progress" and "Waiting for customer" to "Resolved".
7. Drag emails as a file (`.msg` or `.eml`) into "📨 Emails, documents" or into the record. Confirm or change the suggested assignment.
8. Put documents such as the signed contract into the "📎 Documents" section of the record or the contract.
9. Prepare replies and messages from templates with "✉ Message", hand them over to your email program and record the contact afterwards with the ✓ button.
10. Record consents with "+ Consent" and check objections and former customers in the "🛡 Data protection" tab.
11. In the "💶 Invoices" tab, pass services rendered to accounting for billing, and pass your service providers' incoming invoices on as receipts with "📄 to accounting".
12. Save with "Save" (`Ctrl` + `S`) and look at customer value, satisfaction and payment behaviour in "📊 Reports".

Kunden-Navigator: functions and buttons

Header

- Name field – the name of this customer data set.
- The large arrows – undo or redo each step (`Ctrl` + `Z` / `Ctrl` + `Y`); the ▾ next to them shows the history.
- "New" – starts with empty data.
- "Open" – opens a file, including the customer status from the bookkeeping tool or a customer from the Vertriebs-Navigator.
- "Save" – saves (`Ctrl` + `S`).
- 📥 "Import" – imports customers from CSV or Excel.
- The ⋯ button – further commands: "Save as …", "Take over emails (.eml, .msg) …", "Import customers (CSV, Excel) …", "Connect to accounting" or "Customers from accounting …", with the connection switched on "Take over from the master data …", "Load example (fictitious)", CSV exports for customers, service providers, documents and emails, contact persons, requests, contracts, contact history and consents, plus "Query status from accounting and sales".
- "Help" – the help (`F1`); the build version next to it shows the licence and terms of use.

- "👥 Master data" – shows the master data, as described in the chapter 'How do I use a tool?'.

Tabs

- "🏠 Overview" – a traffic light for each customer, follow-ups due, overdue requests and contracts needing action soon; customers from the Vertriebs-Navigator appear here for adoption.
- "🏢 Customers" – the customer list with "+ Customer", 📥 "Import" and "⬇ CSV".
- "🛠 Service providers" – contact persons, contracts with notice periods, incoming invoices and expenses per service provider, with "+ Service provider".
- "💬 Requests" – as a board or as a "☰ List", with "+ Request".
- "📑 Contracts" – all contracts with "+ Contract" and the cost analysis.
- "📨 Emails, documents" – all emails and documents; "📥 Import emails …", "📋 from the clipboard" and "📎 Document …".
- "⏰ Follow-ups" – with the sub-tabs "⏰ Follow-ups" and "🕳 Contact history".
- "💶 Invoices" – sub-tabs "⏳ Open items", "💶 Still to be billed", "🧾 Handed over", "📥 Incoming invoices" and "🔗 Accounting"; "+ Service" records a service, "🧾 hand over to accounting …" passes it on, "✉ Remind …" prepares a payment reminder.
- "🛡 Data protection" – sub-tabs "✅ Consents", "🚦 Contact channels", "⛔ Objections", "🗑 Former customers" and "📄 Information".
- "📊 Reports" – customer value, turnover, payment behaviour, satisfaction, requests, expiring contracts and status of customer care; "🖨 Print / PDF", "⬇ CSV customer key figures" and the cost analysis.
- "⚙ Settings" – sub-tabs "Sender", "Documents and email", "Rules and deadlines", "Message templates" ("+ Template", "Add samples", "⧉ Copy"), "Industries" and "Data" (import, CSV exports, "Start afresh …").

Customer record

A click on a customer shows the record on the right: key figures (turnover, open items, contract value, customer value, satisfaction, last contact), basic details, contact persons, invoices, requests, contracts, feedback, follow-ups and contact history. For each partner you choose "Customer", "Service provider" or "both". Assignment fields take an existing entry or create a new one with the name you type. In the record you find:

- "✉ Message" – prepares a message from a template.
- "+ Contact", "⏰ Follow-up", "💬 Requests", "📑 Contract", "📎 Document", "📥 Email" and "💶 Service" – create the respective element for this customer.
- "📈 to sales" – passes additional business to the Vertriebs-Navigator as an opportunity.
- The ⋯ button in the record – "Message from template", "Additional business to sales …", hand over to accounting, "As a file to accounting", "Open in the master data" and "Delete customer …".
- For a contact person – "Compile information (Art. 15)", "Objection to marketing …" and "Delete contact person …".

Requests and complaints

You record enquiries, complaints, change requests, faults and also praise as requests with priority and deadline (suggested in working days by priority, changeable under settings). When closing with "✓ Solved …" you record the solution and – if asked – the satisfaction. "✉ Reply" takes the solution into the reply text, "↺ Reopen" brings a request back. The request's menu holds "Reply from template", "Record feedback on the solution" and "Delete request …".

Contracts and deadlines

A contract is "with a customer (income)" or "with a service provider (expense)", with amount, interval, term, notice period and automatic renewal. On renewal the tool rolls the end of the term forward and shows by when notice must be given. Further buttons:

- "⏰ remind before the deadline" – creates a follow-up before the deadline.
- "✉ Write notice of termination" and "Enter termination …" – prepare a notice of termination or record it.

- The option to bill via the Kunden-Navigator – creates a service for each period, which you pass on to accounting.
- "+ Attach file …" – stores a document with the contract.

Cost type and cost centre: Service provider contracts carry a cost type and a cost centre, customer contracts the cost centre for revenue – chosen from the master data in this browser or typed freely. The cost analysis (in contracts, service providers and reports) shows the costs from contracts by cost centre and cost type with totals and CSV. It counts active or terminated service provider contracts with an amount; quarterly amounts go in as an annual amount (× 4).

Documents

You can store any number of documents with customers, service providers, contracts, requests and emails: drag the file into the "📎 Documents" section or choose +. For each document you record the type, date, title and a note; the tool often recognises the type from the file name. On the document you find "↓ Open", "⬇ Download", "✉ Send by email" and "📄 to accounting"; the menu also holds "To accounting as an incoming invoice …" and "Delete document …".

Taking over emails

The tool reads `.msg` (classic Outlook: drag the email to the desktop or into a folder, or save it) and `.eml` (Thunderbird, new Outlook and webmail: save or download). Sender, recipients, date, subject, text and attachments are taken over; attachments become documents. The tool suggests the assignment – via a known address, the company domain or a contract or request number in the subject line. Every email taken over appears in the contact history. On the email you find "↩ Reply", "💬 Requests from it" and "📎 Add file", in the menu "Download original file" and "Delete email …".

Preparing emails

In the message window you prepare recipients, copy, subject, text and attached documents. There are three ways to your email program:

- "📧 Email file (Outlook, Thunderbird)" – a ready-made `.eml` file with attachments in the download folder. Classic Outlook opens it as a draft; in Thunderbird you edit it as a new message.
- "✉ Quickly open in the email program without attachments" – opens your default email program with recipient, subject and text, as do the ✉ symbols next to addresses. If the wrong program opens, set it in Windows under Settings › Apps › Default apps for MAILTO.
- "📋 Copy text" – text to the clipboard; you download attachments from the document.

With the ✓ button after sending, the message and its attachments are saved as a sent email in the record and logged in the contact history.

Consents and contact channels

Service messages (contract, invoice, request) need no consent. For marketing – including offers, newsletters and satisfaction surveys by email – the rules of Section 7 of the German Act against Unfair Competition (UWG) apply. For each contact person you record what consent was given for, when and how, and where the proof is kept. "⛔ Record objection to advertising" blocks all marketing channels; "withdraw (only if a mistake)" reverses this. Templates are marked as "Service" or "Advertising" – for advertising, the tool shows what is recorded before you prepare the message. "📄 Compile information" prints access information under Art. 15 GDPR.

Customer value and satisfaction

The customer value (A/B/C) ranks customers by turnover in the last 12 months from the bookkeeping tool, otherwise by the annual contract value: those making up 80 % are A customers, up to 95 % B, the rest C; the limits can be changed. Satisfaction comes from your feedback (1 to 5) and resolved requests. Both describe your own entries, not people.

Keys

- `N` – new (in customers, requests, contracts).
- `Ctrl` + `F` – search; `Esc` – close; `Ctrl` + `S` – save; `F1` – help.

Kunden-Navigator: saving, export and handovers

The data are kept in a file `*.kunden.json`; the browser also keeps the last state. Saving and opening work as described in the chapter 'How do I use a tool?'. The file contains personal data: back it up regularly.

Where the documents are kept: Under "⚙ Settings" in the "Documents and email" sub-tab you choose between two places. In the data set (default) the files are kept in this browser's storage and written into the `*.kunden.json` file when you save; the file grows accordingly. In a documents folder ("📁 Choose documents folder …") every document is stored as a normal file, in a subfolder per customer or service provider and per contract; the `*.kunden.json` file only remembers the path. "choose another folder …" and "Detach folder …" change the choice.

Exporting: the CSV lists from the ⋯ menu; the reports as a printout, PDF or CSV; the cost analysis as CSV; emails as an `.eml` file.

Bookkeeping: "📒 Connect to accounting" asks the bookkeeping tool to provide its customer status (customers, invoices, payments) in the shared store of this browser. Open the bookkeeping tool in the same browser with your filing for this. Assignment is by customer number, otherwise by name.

You pass services on collectively per customer; the bookkeeping tool creates a draft invoice, and status, number, dispatch and payment come back. If a draft is discarded, deleted or cancelled, the services can be billed again. Incoming invoices (PDF, image or e-invoice) go over as a receipt with file, number, date, amount and the contract's cost type and cost centre. You can pass customers to the bookkeeping tool or take them over with "Take over customers from accounting …". In another browser this works via files, for example with "📁 Customer status from file …".

Vertriebs-Navigator: When an opportunity is won there, the customer can be handed over here with contact persons, consents or objections and the contact history so far; they appear in the overview for adoption. You pass additional business back with "📈 to sales"; phase and outcome appear in the customer record. "↻ Request status" queries the status of the handovers.

Master data: With the connection switched on, you link customers as organisations and contact persons as people; name, address, customer number and contact details are then maintained there, everything else stays here.

In the Suite: Opening and saving run through the server dialog, and the file is locked for others while you edit it – as described in the chapter 'Tools in the suite: working together'.

Kunden-Navigator: phone, systems and browsers

The Kunden-Navigator also runs on phones and tablets without installation. It is not a board tool but has its own adaptation for narrow screens: up to 900 pixels wide or 500 pixels high, buttons, tabs and input fields are at least 40 pixels high, and in landscape on a phone the tool hides its title in the header. I have checked this in emulated screen sizes. Not checked are real devices and gestures, Safari on the iPhone, dragging request cards with a finger and the windows with file selection.

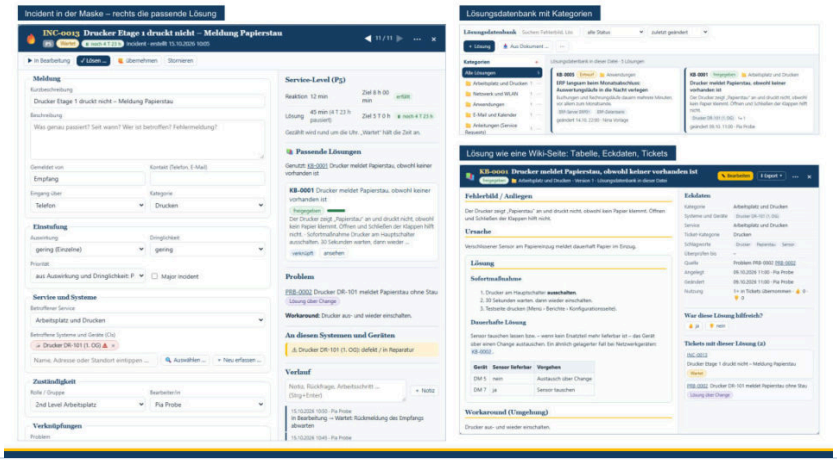
The documents folder is a folder function and is only available in Chrome and Edge, and only over an encrypted connection (https). In Safari and Firefox the documents stay in the data set; there the tool saves via the browser's download, as described in the chapter 'How do I use a tool?'.

Kunden-Navigator: tips

- With many or large documents, choose a documents folder early on, for example in your cloud storage; the files stay readable there even without the tool.
- Set "⏰ remind before the deadline" for every contract right away. That way you will not miss a notice period – not even with your own service providers.
- Mark your templates carefully as "Service" or "Advertising". The tool then shows you before every marketing message whether consent has been recorded.
- Resolve complaints promptly: this often gains more trust than there was before.
- A C customer deserves just as good care; the classification only shows where a regular conversation is particularly worthwhile.

- Late fees, default interest and court dunning procedures are deliberately not provided for; a friendly reminder with a follow-up usually suffices.

ITSM tool



ITSM tool: purpose and use

The ITSM tool supports the most important practices of IT service management: fixing disruptions (incidents), handling requests and orders (service requests), finding and removing causes (problems), implementing changes in a controlled way (changes) and collecting proven solutions (solution database). It is based on ITIL® 4 but deliberately kept lean – for small and medium-sized IT teams. It is not a certified product.

A typical use: in a small IT team, reports arrive by word of mouth, email and phone. The tool records each as a ticket with priority, service level and responsibility. You bundle similar incidents into a problem and fix it permanently through a change; the wiki-like solution database suggests matching solutions while you record.

The tool runs on its own in the browser – without sign-in and without installation; your entries remain on your device. In the MC4Y Suite it works with the CMDB and the shared solution database on your organisation's server. The tools for architecture and IT operations are aids for conversation and decision-making; they do not replace specialist advice in individual cases, legal advice or operational implementation.

The ITSM tool is released (including the solution database). On the website you find it on the Resources page; it is also available as a single HTML file to download and in the MC4Y Suite in the Business Support Tools category. It saves files with the extension `.itsm.json`. I describe it in detail in the article ITSM tool: incidents, requests, solutions, CMDB.

ITSM tool: step by step

1. Open the tool. To get to know it, choose “View example (fictitious)”; all sample data are invented. For your own data, start with “New” and enter the name of your organisation at the top.
2. With “Set up team and services”, set up people, roles / groups (for example Service Desk, 2nd Level) and services under “⚙ Team and settings”. Select your name at the top right under “I am”.
3. Adapt the target times under “Service levels and service hours” to your agreements.
4. Record a disruption with “ + Record first incident” or the plus button in the incidents tab (key `N`): what is disrupted, which service is affected, impact and urgency. This gives the priority P1 to P5.
5. Assign the devices in the field for affected systems and devices; if one is missing, create it with “ + Create new …”.
6. Check the matching solutions from the solution database on the right of the form and take one over with “✓ Apply”.
7. Assign the ticket to a role and a person or take it yourself with “ 🙋 apply”. Set it to “▶ In progress”.
8. Resolve the ticket with “✓ Resolve …”; the tool asks for the solution and its type. If useful, tick “Add as a permanent solution suggestion to the solution database”.
9. Record requests such as new access with “ + Service request” (key `R`) and complete them with “✓ Complete …”.

10. If similar incidents occur, bundle them with "🧩 Group into a problem …" or accept the suggestion "+ Create problem".
11. Implement the permanent fix through a change: request, assess, approve, schedule, implement, review.
12. Save with "Save" (`Ctrl` + `S`) and evaluate in "📊 Reports".

ITSM tool: functions and buttons

Header

- Name field – name of the organisation or area.
- The large arrows – undo or redo each step (`Ctrl` + `Z` / `Ctrl` + `Y`); the ▾ next to them shows the history for several steps.
- "New", "Open", "Save" – as in every tool; "Save" also with `Ctrl` + `S`.
- The ⋯ button – "Save as …", "Load example (fictitious)", under "Lists as CSV" the incidents, problems and changes (all), and the handovers to other tools (see below).
- "Help" – the help (`F1`); the build version next to it shows the licence and terms of use.
- "I am" – who you are; the filter "my open ones" then shows your tickets.

Tabs

- "🏠 Overview" – work status, service levels and suggestions for bundling similar incidents.
- "🔥 Incidents & Requests" – disruptions and requests together, as a "☰ List" or as a board.
- "🧩 Problems" – as a list, board or "📚 Known errors".
- "🔧 Changes" – as a list, board or "🗓️ Calendar".
- "📚 Solutions" – the solution database.
- "📊 Reports" – the reports.
- "⚙ Team and settings" – sub-tabs "People", "Roles / groups", "Services", "Systems and devices (CIs)", "Categories", "Service levels and service hours" and "General".

Bar above the lists

- Search field "Search (Ctrl+F)" and filters by status ("all open", "my open ones", "all" or a single status), priority, role, person ("no assignee"), service and system or device.
- For incidents the type: "Incidents and service requests", "🔥 incidents only (disruptions)" or "🙋 service requests only", plus the "no problem" tick box; for changes the type of change.
- The plus button of the respective type and "+ Service request" – create a new ticket.
- "⬇ CSV" – the list as CSV for Excel.
- Selection bar after ticking several incidents: "🧩 Group into a problem …", "Assign …", the status button and "Clear selection".
- On the board you drag cards into another column to change the status.

The ticket form

A click on a row or card opens the form: on the left the fields in groups, on the right service level, matching solutions, linked tickets, affected devices and history. Fields change immediately. `Alt` + `←` / `→` moves to the previous or next ticket in the list; `Esc` or a click beside it closes the form.

- Incident: "▶ In progress", "⏸ Waiting", "✓ Resolve …", "🙋 apply", "Cancel"; afterwards "Close", "↺ Reopen" or "↺ Restore".
- Service request: additionally "✓ Approve …" and "✗ Reject …"; it is completed with "✓ Complete …".
- Problem: "🔎 Start analysis", "📚 Known error", "✓ Resolve …"; plus "Pass the workaround on to the open incidents", "link all" and "+ New change".
- Change: "Request", "Start assessment" or, for standard changes, "Schedule (pre-approved)", "✓ Approve …", "✗ Reject …", "Schedule", "▶ Start implementation", "Implemented → Review …", "✓ Close …" and "Withdraw".
- "+ Note" – note in the history (`Ctrl` + `Enter`).

- The ⋯ button in the form – “Create copy”, “Problem from this incident”, “New change for this problem”, “Adopt into the solution database”, “Convert to service request” or “Convert to incident (disruption)”, “Hand over to the incident timeline”, “Start a five whys analysis”, “Start cause and effect (Ishikawa)” and “Delete (better: cancel)”.
- “On these systems and devices” – shows further open incidents, planned or recently implemented changes and known errors on the same systems.

Priorities, service levels and bundling

Impact and urgency give the priority P1 (critical) to P5 (“Planning”); you can override it by hand. Each priority has a target time for the first response and for resolution. Time counts either around the clock or only during service hours (weekdays and times, excluding public holidays). While an incident is set to “Waiting”, the resolution time stops. Colours: green = on track, yellow = less than a quarter of the time left, red = exceeded.

Incidents count as similar if they share a service and a system or device, or a service and a similar description; how strictly the tool compares you set under “General”. Once the cause of a problem is known, it becomes a known error, and new matching incidents get the workaround suggested.

Changes

Standard changes are pre-approved and recurring, normal changes are assessed and approved, emergency changes are accelerated. The risk results from the impact and likelihood of failure; the approver (change authority) is a role. The calendar shows all time windows; if two changes overlap on the same service or device, the bar has a yellow border. A change can resolve several problems and vice versa.

Solution database

The “📚 Solutions” view is built like a wiki: categories as a tree on the left, one page per solution with symptoms, cause, step-by-step solution, workaround, keywords, systems and attachments. You write links as `[[KB-0003]]` or `[[Title of the solution]]`; “Referenced from” shows the other direction. A status says whether a solution is “Draft – still to be checked”, “approved” or “outdated”.

- “+ Solution” – creates a new solution (key `N`).
- “📥 From document …” – imports Word (.docx), LibreOffice Writer (.odt), PDF, PowerPoint (.pptx), LibreOffice Impress (.odp), images (GIF, JPG, PNG), text and HTML as a new solution.
- “✎ Edit” – opens the editor with bold, italics, headings, lists, tables, links and images; “📥 Insert document” inserts a document at the cursor; “💾 Save” creates a new version.
- “⬇ Export ▾” – Word, LibreOffice Writer, PDF via printing, PowerPoint, LibreOffice Impress, “Web page (.html, pictures embedded)” and a ZIP with all attachments.
- “👍 yes” / “👎 no” – answer the question “Was this solution helpful?”.
- The solution's ⋯ button – “Versions and comparison …”, “German and English side by side …”, “Create new as a copy”, “Move to bin”; in the bin “Restore” or “Delete permanently”.
- The ⋯ button in the bar – “All solutions as Word document (.docx)”, “All solutions as PDF (Print)” and “List as CSV (Excel)”.
- A category's menu – “Rename …”, “Create subcategory …”, “Move under …”, “Move up”, “Move down” and “Delete (solutions move up one level)”.

Every solution exists in German and English; you choose the version at the top. A new solution is created in both languages with the same text. “✎ Translate” makes the other version independent; if the original changes afterwards, the translation gets the mark “⚑ Check translation”. “⇄ Compare” shows both versions side by side, “✓ Is up to date” removes the mark, “⧉ Take over from the German version” or “⧉ Take over from the English version” makes the version a copy again.

Matching solutions while recording

As soon as a ticket's short description or description is filled in, the tool searches the solution database – for shared terms (more in title and keywords than in the text), the same system and the same service, in both languages. “✓ Apply” enters the solution and workaround in the ticket's empty fields and links the two. Conversely, the tick box “Add as a permanent solution suggestion to the solution database” turns a resolved ticket into a draft that you revise and approve.

Systems and devices (CIs) and the CMDB

You assign any number of systems and devices to each ticket: type the name, address, location or model and choose a suggestion (arrow keys, `Enter`) – or several at once via "🔍 Choose …". × removes an assignment. "+ Create new …" opens a small form with name, category, manufacturer, model, location, address, status and service. Under "Systems and devices (CIs)" you find "+ System / device", "🔍 Take over from the CMDB …", "↻ Synchronise with the CMDB", "📂 Import CMDB export …", "🔗 link …" and "⇪ to the CMDB". ⚠ marks systems that are deleted, missing, retired or defective in the CMDB.

You maintain the categories in the section "🏷 Categories of the systems and devices": "+ Create category", rename, hide, delete; for a category in use, "Move and delete" reassigns the devices first.

Reports

Reports for a chosen period with key figures, charts and tables, as PDF ("🖶 Print / PDF") and CSV: "Overview: incidents, problems, changes", "Fault-prone systems and devices", "Systems by category, manufacturer and location", "Changes to systems and their consequences", "Problems and known errors per system", "File for a system / device", "Data quality: assignment and CMDB", "Service requests (enquiries and orders)" and "Solution database: usage and gaps". Follow-up incidents after a change are an indication, not proof. The reports describe tickets and systems; they are not meant to assess individual people.

Keys

- `N` – new ticket or new solution; `R` – new service request.
- `Ctrl` + `F` – search; `Esc` – close; `Ctrl` + `S` – save; `F1` – help.
- In dialogs, `Enter` in a single-line field (`Ctrl` + `Enter` in multi-line ones) confirms the highlighted button.

ITSM tool: saving, export and handovers

Without the Suite the tool saves everything in a file `*.itsm.json`, including the solution database and its attachments (at most 15 MB each); the browser also keeps the last state. Saving works as described in the chapter 'How do I use a tool?'. Nothing is transmitted.

In the Suite: the file and the CMDB are on your organisation's server. The solution database is shared there and also available as a module of its own, "Solution database", in the portal; you transfer solutions from a file to the Suite via the ⋯ button. The permission groups decide who may read, write or permanently delete – more in the chapter 'Tools in the suite: working together'.

With access to the CMDB, device suggestions come from the CMDB; chosen devices are kept as linked systems (🔗) and synchronised on opening, ↗ opens them in the CMDB. Anyone with write access there finds a tick box for also creating the device in the CMDB; it then appears there with the origin "recorded in the ITSM tool". In the Suite, the CMDB maintains the categories in its "🏷 Categories" tab.

Without the Suite you import the CMDB export under "Systems and devices (CIs)". It stays loaded for selection until the page is reloaded.

Analysis tools: Via the ⋯ button in an incident or problem you pass the ticket with description, history, service, systems, cause and workaround to the incident timeline, the five whys or the cause and effect diagram; there you take it over via 🔗 "Connection". Results are announced by a notice at the top; before adopting them the tool shows what will change and never overwrites silently. Earlier results are under "Results from analysis tools …".

Service tree and availability: "Hand over services and service levels to availability / service tree" (also "⇢ Hand over to availability / service tree" under "Services") passes on services, those responsible, importance, systems, target times and service hours. Without the Suite, handovers are kept only in this browser's shared store, created at the first handover; in the Suite on the server, and then also between computers and people.

Master data: With the connection switched on, you take over people with their roles ("👥 from the master data …") and choose the "Responsible" person of a service directly from there. For each service you record who provides it and for whom; the form then shows under "Organisations and relationships" what the master data know about those involved.

ITSM tool: phone, systems and browsers

The ITSM tool also runs on phones and tablets. It is not a board tool but has its own adaptation: up to 900 pixels wide or 500 pixels high, all controls are at least 40 pixels high. The bar does not wrap but can be swiped horizontally, with the buttons for creating entries first. The form and the device dialog fit on screen at 375 pixels wide.

I have checked this in emulated screen sizes with touch events, in German and English; not checked are a real phone and a real tablet.

The tool needs no folder functions and runs in Chrome, Edge, Firefox and Safari. In Safari and Firefox it saves via the browser's download, as described in the chapter ‘How do I use a tool?’.

ITSM tool: tips

- Adapt the service levels right at the start. The defaults are sample values, not a recommendation.
- If an incident was really a request, convert it; the former number remains in the history and search.
- Before approving a solution taken from a ticket, remove names and details that applied only to that case – on screenshots too.
- Record reporters and contact details only as far as needed; device data can also relate to people.
- If a change triggers new disruptions, enter it in the incident under “Triggered by change” – this feeds into the reports.
- The report “Solution database: usage and gaps” shows where solutions are missing and which resolved tickets are candidates.

IT map



IT map: purpose and use

The IT map is intended for the workshop in which someone writes down for the first time what IT the company actually has. No data model, no modelling: business areas as columns, systems as tiles, coloured by state or by age. For each system you enter only what comes easily – year of introduction, number of users, those responsible and the mode of operation.

The most important rule is completeness before precision. Better a roughly named system than a gap. That is why the map is organised by business areas rather than IT categories – you ask people along the lines of their own world. The result goes as a table into the 8EM Modeller and from there on into assessment and the roadmap.

The map is a snapshot from a conversation, not a verified inventory. Before decisions, the details need checking – especially user numbers, contracts and costs, which are deliberately not recorded here at all. The tools for architecture and IT operations are aids for conversation and decision-making; they do not replace specialist advice in individual cases, legal advice or operational implementation.

The IT map is still beta and not yet fully tested. On the website you find it on the Experimental page; it is also available as a single HTML file to download and in the MC4Y Suite in the Business Support Tools category. It saves files with the extension `.it-landkarte.json`. I describe it in detail in the article The IT map in 30 minutes – first

write down what there is.

IT map: step by step

1. Open the tool. “Example” shows a finished, entirely fictitious map; “New” starts empty.
2. On the right, enter the “Title of this work” and “Company / area”.
3. On the left, create the areas with “Create business area” – the way the company divides itself up (sales, production, administration …).
4. For each area, enter the systems with “ + System”. A roughly named entry is enough.
5. On the right, assess the “State” of each system: running, watch, critical, replacement needed or new.
6. Where it comes easily, add “In use since (year)” and “How many people work with it?”, plus operation and those responsible.
7. Switch the colouring at the bottom left from state to age and discuss what stands out.
8. Read the analysis on the right: systems without an assessment, duplicate names, old systems, missing user numbers.
9. Save with “Save” (`Ctrl` + `S`) and pass the systems to the 8EM Modeller via “ 🔗 Connection ▾”.
10. For the minutes, print the report via “Export ▾” or export the picture as a PDF.

IT map: functions and buttons

Header

- “Undo” and “Redo” arrows (`Ctrl` + `Z` / `Ctrl` + `Y`); the ▾ between them shows the latest changes and goes back several steps.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …”.
- − and + zoom out and in; “Fit to view” shows everything.
- “⛶ Large picture” – hides and shows the side panels.
- “ 🔗 Connection ▾” – exchange data with other MC4Y tools (see below).
- “Export ▾” – “PDF (A4 landscape)”, “PDF (A3 landscape)” for printing in the workshop, “PowerPoint (.pptx)” with individual, editable shapes, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG”, “PNG image”, “Print report” (picture, all entries, analysis, also as PDF) and “Entries as a table (CSV)”.
- “Example” and “Help”.

Left panel

- “Create business area” – a new column.
- For each area the list of its systems; a click selects the system, “ + System” creates one.
- “Without an area” – systems not yet assigned to an area.
- At the bottom left the colour legend; a click on it switches between colouring by state and by age.

Properties on the right

- A business area has a name, a description and its “Head”; “ + System in this area” creates a system there.
- A system has “Business area” (changes the column), “State” (“running – nothing to do”, “watch – minor shortcomings”, “critical – disrupts operations”, “Replacement needed”, “new / being introduced”), “In use since (year)”, “How many people work with it?”, “Operation” (“in-house operation”, “Cloud / SaaS”, “at the service provider”, “only at the workstation”), “Responsible”, “Manufacturer / provider”, “What stands out?” and “Identifier in the CMDB”.
- With nothing selected: “Title of this work”, “Company / area”, the settings “Colour by age instead of by state” and “From how many years is a system considered old?” (default ten years), a free note for the report and the analysis.
- The analysis counts areas, systems, critical or to-be-replaced systems and those without an assessment. It names systems in use for longer than the limit, duplicate names and missing user numbers.
- Notes on a system: an old system rated as running is possible – note why. A replacement needs a reason.

In the picture

- Right-click on a tile – "✎ Edit" (`F2`) and "🗑 Delete" (`Del`); on an area also " + System in this area".

IT map: saving, export and handovers

The map is kept in a file `*.it-landkarte.json`. Saving and opening work as described in the chapter 'How do I use a tool?'; nothing leaves your browser.

Via " 🔗 Connection ▾ ":

- " 📐 From the 8EM Modeller (model file)" – reads IT systems and organisational units from an `*.8em.json`; the map is created from the model.
- " 📐 Systems for the 8EM Modeller" – a table for the bulk import (level 8, IT systems). In the Modeller you read it in via "Import › Bulk import (Excel/CSV)" – or you choose the saved file of the map there directly. The Modeller sets the level and the columns itself: business area → business-responsible department, "Responsible" → role or person of the organisation, "In use since" → lifecycle ("introduced by"), "new / being introduced" → phase "introduction", "replacement needed" → portfolio decision "replace"; the remaining assessment and "What stands out?" go into the description. Identical names or the same CMDB ID count there as the same system; no duplicates arise, even if you hand the map over again later. A system in several areas is created once and linked to all of them.
- " 📐 Business areas for the 8EM Modeller" – the areas as organisational units (level 7a).
- " ⚡ To the outage simulation" – passes the systems on as applications (in the same browser).
- " 🗄 Read CMDB export (file)" – without the Suite: the CMDB export ("Everything as JSON") for reconciling and taking over.
- " 👥 Open master data" – you link a business area in the area itself via the field "Organisational unit in the master data" (choose a unit or create it with " + … as organisational unit"; the name of the area then follows the master data). "Link" takes over the heads of the areas and the persons responsible for the systems as people or roles.
- " ❔ How does this fit together?" – explains the routes and what they require.

In the Suite: " 🗄 From the CMDB of the MC4Y Suite" searches configuration items and takes them over linked (🗄). On opening, the tool reconciles name, status, those responsible and location with the CMDB; these fields are then locked here. ⚠ means: no longer present in the CMDB or switched off. "Reconcile with the CMDB" brings linked elements up to the CMDB's state, "Write to the CMDB" creates new systems as CIs. Opening and saving run through the server dialog, as described in the chapter 'Tools in the suite: working together'.

IT map: phone, systems and browsers

The IT map is a board tool and has the phone controls described in the chapter 'How do I use a tool?': on narrow screens, " + Elements" and "✎ Properties" open the two panels as windows; ☰ unfolds the header. You can use it with mouse or finger.

It needs no folder functions and runs in Chrome, Edge, Firefox and Safari; in Safari and Firefox it saves via the browser's download. I have checked it under Windows with Edge, Firefox and the WebKit engine, and under Linux (WSL Ubuntu) with Chromium, Firefox and WebKit, plus the phone controls in emulated sizes. Not checked are a real macOS with Safari and a real iPhone.

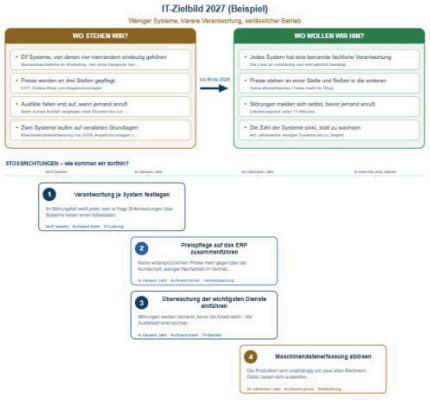
- For multiple selection, the "Multiple selection" button at the bottom left of the drawing area switches the mode: tapping adds an element or removes it, dragging on an empty area draws a selection frame.

IT map: tips

- Ask along the business areas, not by IT categories. Nobody has to decide whether something is an application or a platform.
- Even an entry such as *some program the technical team uses to record machine data* is useful; it will be made more precise later.
- Record year and number of users: both are available in seconds and say more about a system's importance than any description.
- Switch to age. Systems the group has just rated as running often stand out then.

- If a name appears several times, clarify: the same system in several areas (then merge) or really several installations?
- Hand the map over to the Modeller again even six months later – identical names update instead of creating duplicates.

Architecture target picture on one page



Architecture target picture on one page: purpose and use

After a stocktaking of the IT, almost always the same task follows: the result has to go to the management – on one page that is read in five minutes. That is what the architecture target picture is for: where do we stand, where do we want to go, and with which three to five strategic thrusts do we get there. Each thrust has a benefit, a time frame, a rough effort, those responsible and a first step. It is deliberately brief – not a model but a means of communication, and the smallest tool in this series.

You do not have to type the content from scratch: the tool adopts the finding of the IT map and the initiatives of the 8EM Modeller. A strategic thrust can be passed to project management as a project mandate. The tools for architecture and IT operations are aids for conversation and decision-making; they do not replace specialist advice in individual cases, legal advice or operational implementation.

The architecture target picture is still beta and not yet fully tested. On the website you find it on the Experimental page; it is also available as a single HTML file to download and in the MC4Y Suite in the Business Support Tools category. It saves files with the extension `.zielbild.json`. I describe it in detail in the article The architecture target picture: one page for the management.

Architecture target picture on one page: step by step

1. Open the tool. “Example” shows a finished, entirely fictitious target picture; “New” starts empty.
2. On the right, enter the “Title of this work” and, under “Settings”, the “Motto (one line above everything)” and the “Time horizon”. If the motto does not come out right, the target picture has not been thought through yet.
3. If available, read in the finding of an IT map or the initiatives of a model via “🔗 Connection ▾”.
4. On the left, under “Where do we stand?”, write three to five sentences with “+ Add” that do not gloss over anything – each with evidence.
5. Under “Where do we want to go?”, formulate target states, not projects, each with the answer to “How will we know that we are there?”.
6. Create three to five strategic thrusts, each with benefit, time frame, rough effort, those responsible and first step.
7. Order the entries with the ▲ and ▼ buttons and check the notes and the analysis on the right.
8. Save with “Save” (`Ctrl` + `S`).
9. For the meeting, export the picture as a PDF or PowerPoint via “Export ▾” and print the report with evidence and first steps.
10. Pass the strategic thrusts to the 8EM Modeller, as tasks or Kanban cards, or one of them as a project mandate.

Architecture target picture on one page: functions and buttons

Header

- "Undo" and "Redo" arrows (`Ctrl` + `Z` / `Ctrl` + `Y`); the ▾ between them shows the latest changes.
- "New", "Open …" (`Ctrl` + `O`), "Save" (`Ctrl` + `S`), "Save as …".
- −, + and "Fit to view" – the size of the view; "⛶ Large picture" hides the side panels.
- "🔗 Connection ▾" – adoptions and handovers (see below).
- "Export ▾" – "PDF (A4 landscape)", "PDF (A3 landscape)", "PowerPoint (.pptx)" and "LibreOffice Impress (.odp)" as individual, editable shapes, "Visio (.vsdx)", "SVG", "PNG image", "Print report" and "Entries as a table (CSV)".
- "Example" and "Help".

Left panel

- Three groups: "Where do we stand?", "Where do we want to go?" and "Strategic thrusts", each with the number of entries. A click selects an entry, "＋ Add" creates a new one.

Properties on the right

- Sentence under "Where do we stand?" – the sentence, "What makes this concrete?" (figure, observation, incident) and an "Explanation (appears only in the report)".
- Sentence under "Where do we want to go?" – the target state, "How will we know that we are there?" and an explanation.
- Strategic thrust – "What is it about?", "Benefit – what will get better as a result?", "Timebox" ("already under way", "this year", "next year", "in two to three years"), "Rough effort" ("small", "medium", "large"), "Responsible" and "First step".
- The ▲ and ▼ buttons – move the entry within its group.
- Notes: missing benefit, missing first step, a title that sounds like a project name, a sentence without evidence, a target without a recognisable sign.
- With nothing selected: "Title of this work", "Company / area", "Settings" with motto and time horizon, a free note and the analysis.
- The analysis counts the entries per group and reports: more than five strategic thrusts (no longer a target picture but a programme), more than six sentences under "Where do we stand", nothing starting this year, thrusts without a benefit or without those responsible.

In the picture

- The strategic thrusts are arranged by their time frame. If the early columns are empty, you see it immediately.
- Right-click on an entry – "✎ Edit" (`F2`) and "🗑 Delete" (`Del`).

Architecture target picture on one page: saving, export and handovers

The target picture is kept in a file `*.zielbild.json` . Saving and opening work as described in the chapter 'How do I use a tool?'; nothing leaves your browser. For the meeting, the export produces the picture as a PDF (A4 or A3 landscape), as PowerPoint and as an Impress file – there as individual, editable shapes, so you can take the slide into your own template. The report contains everything that does not fit on the slide: evidence, explanations, first steps.

Via "🔗 Connection ▾":

- "📐 Initiatives from the 8EM Modeller (model file)" – projects become strategic thrusts; usually there are too many, and cutting them down is the real work.
- "🗺 Finding from the IT map (file)" – critical and old systems become sentences under "Where do we stand", with evidence. Then put them into your own words.
- "📐 Strategic thrusts for the 8EM Modeller" – as initiatives (level 7b, bulk import), where they can be prioritised and put into a roadmap.
- "📋 One strategic thrust as a project mandate" – to project management in the same browser; a banner "Create as project" appears there.

- “Hand over measures as tasks” – creates one task per strategic thrust in the Suite, without the Suite a card on the Kanban board. The time frame is in the description; the target picture keeps no deadline. The status comes back.
- “👥 Open master data” – those responsible for the strategic thrusts can be taken over from the master data.

There is no direct connection to the CMDB and ITSM – the target picture talks about states, not about individual components or tickets. In the Suite, opening and saving run through the server dialog, as described in the chapter ‘Tools in the suite: working together’.

Architecture target picture on one page: phone, systems and browsers

The target picture is a board tool and has the phone controls described in the chapter ‘How do I use a tool?’: “ + Elements” and “✎ Properties” open the panels as windows, ☰ unfolds the header. It works with mouse or finger.

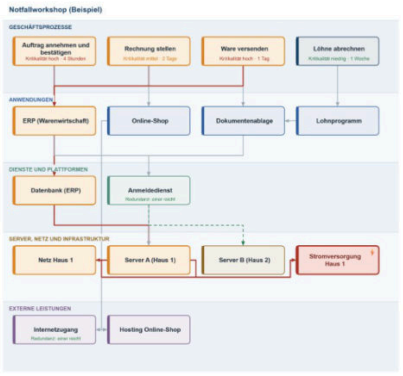
It needs no folder functions and runs in Chrome, Edge, Firefox and Safari; in Safari and Firefox it saves via the browser's download. I have checked it under Windows with Edge, Firefox and the WebKit engine, and under Linux (WSL Ubuntu) with Chromium, Firefox and WebKit, the phone controls in emulated sizes. Not checked are a real macOS with Safari and a real iPhone.

- For multiple selection, the “Multiple selection” button at the bottom left of the drawing area switches the mode: tapping adds an element or removes it, dragging on an empty area draws a selection frame.

Architecture target picture on one page: tips

- Formulate targets as a state, not an activity: every system has a named responsibility, rather than clarify responsibilities.
- Write the benefit from the business point of view, not the IT's. Less technical debt is not a benefit but a description of the problem in jargon.
- Give every sentence under “Where do we stand?” some evidence. A sentence without evidence will be disputed in the meeting.
- Stay with three to five strategic thrusts. The honest question is: which three really count?
- Put the adopted finding of the IT map into your own words; the raw form is a starting point, not a text for the management.

Outage simulation



Outage simulation: purpose and use

The outage simulation answers a single question, and quickly: what fails if this one fails? You record business processes, applications, services, servers and external services with their dependencies, declare one element failed and see which processes come to a halt. Redundancy is taken into account, several outages can be set at the same time, and a search finds single points of failure.

The tool is intended for the workshop, not for a complete model: in half an hour the chain from the business processes down to the power supply is in place. That is exactly when a technical drawing turns into a conversation about the business – the next question is no longer which server that is, but how long the outage can be tolerated.

It calculates no probabilities and replaces neither a business impact analysis according to ISO 22301 nor emergency planning. It does not check whether the dependencies entered are correct but takes them as you write them down; assessment and measures remain your decision. The tools for architecture and IT operations are aids for conversation and decision-making; they do not replace specialist advice in individual cases, legal advice or operational implementation.

The outage simulation is still beta and not yet fully tested. On the website you find it on the Experimental page; it is also available as a single HTML file to download and in the MC4Y Suite in the Business Support Tools category. It saves files with the extension `.ausfall.json`. I describe it in detail in the article What goes down when the server goes down?.

Outage simulation: step by step

1. Open the tool. “Example” shows an entirely fictitious scenario; “New” starts empty.
2. On the left under “New entry”, first create the business processes – the processes that matter.
3. Create the applications, services, servers and external services that carry these processes. Each element lands in the band of its type.
4. Connect: right-click on an element, “→ Connect from here …”, then click the target. The connection is always called “needs”.
5. For each element, set how it needs its prerequisites: all, one is enough, or at least n of several.
6. For the business processes, enter how quickly an outage becomes critical and the maximum tolerable downtime.
7. Set an outage: click an element and tick “Fails in this scenario”, or right-click and choose “ fails (scenario)”.
8. Read the impact on the right: failed elements, elements failing with them and affected business processes.
9. Use “Finding weak points …” to find the single points of failure and discuss the entries at the top.
10. Save with “Save” (`Ctrl` + `S`) and print the report via “Export ▾”.
11. Next time – say every quarter – open the file and choose “ Suggest another scenario”: the suggestion names an element that has never been played through or not for the longest time (never the last one); “ Play through” sets exactly this outage and records the scenario in the file, “Another suggestion” moves to the next one. Then save again.

Outage simulation: functions and buttons

Header

- “Undo” and “Redo” arrows (`Ctrl` + `Z` / `Ctrl` + `Y`); the ▾ between them shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …”.
- −, +, “Fit to view” and “⛶ Large picture” – the view; the mouse wheel also zooms, and dragging the background moves it.
- “🔗 Connection ▾” – adoptions and handovers (see below).
- “Export ▾” – “PDF (A4 landscape)”, “PDF (A3 landscape)”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG”, “PNG image”, “Print report” and “Entries as a table (CSV)”.
- “Example” and “Help”.

Left panel

- “New entry” – one button each for “Business process”, “Application”, “Service / platform”, “Server / infrastructure” and “External service”.
- Below them the entries by type; failed ones are marked “fails”, those failing with them “affected”.

Properties on the right

- Every element: name, “Description / remark”, “Fails in this scenario”, “Needs the prerequisites …” (“all – every outage hits”, “one is enough – redundancy”, “at least n of several” with “of which at least”), “Responsible”, “Location / operations” and “Identifier in the CMDB”.
- A business process additionally: “How quickly does the outage become critical?” (“high – comes to a standstill at once”, “medium – manages for a few hours”, “low – manages for a few days”) and “Maximum tolerable

downtime".

- Connection (click the line): the type "needs (fails with it)" or "stands in (alternative route)" – green and dashed; an available alternative route absorbs the failure of the ordinary prerequisites. "⇄ Reverse direction" turns the arrow round (the handles stay where they are), "／ Straight" removes all handles of the line, "Delete" removes the connection.
- With nothing selected: "Title of this work", "Company / area", the setting "Show only the affected chain", a free note and the analysis.
- Analysis "Impact of the scenario": number of failed elements and of those failing with them, affected processes with criticality and tolerable downtime. "Chain in between" lists the applications, services and servers that fail as well, with the cause; in the picture they have an orange border. Plus the buttons "Reset all outages", "Finding weak points …" and "Only the affected chain" or "Show all".
- "💡 Suggest another scenario" and – while an outage is set – "📌 Record scenario"; below that "Played through so far" (On, What failed, Processes; × removes an entry; the eight newest, all of them in the report). The selected element shows "Last played through on …".

Suggest another scenario

The window names the suggestion ("Suggestion: "…" fails."), when the element was last played and which business processes its failure alone would hit. The order is fixed, not random: elements with an effect before those without, among them first the ones never played through – the most effective at the front – then those not played for the longest time; never the scenario played last or outages currently set, never business processes. " ϟ Play through" resets earlier outages, sets exactly this element to "fails" and records the scenario with its date and the number of affected processes in the file (one undo step); "Another suggestion" moves to the next one, "Close" changes nothing. "📌 Record scenario" records an outage set by hand; the same scenario only once per day. Older versions of the tool leave the list in the file untouched.

Finding weak points

The button calculates for every single element what its failure alone would cause and ranks the elements by how many business processes they bring to a halt. What is at the top is a single point of failure: an element without an alternative route. The current scenario remains unchanged.

In the picture

- Elements can be moved freely; the band follows from the type. The arrow points from the element that needs something to what it needs – usually downwards. If both sit in the same row, it joins them from the side; lines are routed around other boxes, and connection labels sit clear next to their line.
- Right-click – "✎ Edit", "→ Connect from here …", " ϟ fails (scenario)" or "✓ fails – reset", and "🗑 Delete".
- Keys: `Del` deletes the selection (several selected elements after one confirmation), `F2` jumps to the name field, `Ctrl` + `Z` undoes, `Ctrl` + `A` selects all, arrow keys move (10 px, with `Shift` 1 px), `Esc` clears the selection.
- A selected line shows handles: dragging " + " inserts one, dragging "◆" shapes the line, double-clicking "◆" removes it. The line stays right-angled and runs through the points; they snap horizontally and vertically to their neighbour (`Alt` = free). A line with handles is no longer routed around other boxes automatically.
- "Rearrange" in the toolbar at the top puts all elements back into the bands of their type, just as when they were created – one undo step, `Ctrl` + `Z` brings your arrangement back.

Outage simulation: saving, export and handovers

The scenario is kept in a file `*.ausfall.json`. Saving and opening work as described in the chapter 'How do I use a tool?'; nothing leaves your browser.

Via "🔗 Connection ▾":

- "🗺 Systems from the IT map" – handed over in the same browser and taken over here; a notice reports when systems are waiting.
- "📐 From the 8EM Modeller (model file)" – IT systems, processes and interfaces from `*.8em.json`; the interfaces become dependencies.

- "🌳 From the service tree (file)" – the structure business service › technical service › configuration item becomes the dependency chain.
- "🕸 From the Impact Network" – factors and effects handed over by the impact network (the notice "An Impact Network is ready" reports them), or "📂 Choose file …" for a saved `.wirkungsgefuege.json`. The preview shows each factor's role and its "Type in the Outage simulation" – reactive factors and those highlighted with ★ are suggested as a business process, the others as a service / platform; "do not take over" leaves one out. "📥 Take over" creates the elements and turns every same-direction effect "A acts on B" into the dependency "B needs A"; opposite-direction effects say nothing about what fails along with it and are not taken over. Identical names count as the same element, connections are never created twice, taking over is one undo step, and the impact network learns that it was taken over (not from a file). Then use "⚡ fails (scenario)" and "Finding weak points …" to test which levers hold.
- "📐 Table for the 8EM Modeller" – a CSV file for the bulk import via "Import › ⬆ Bulk import (Excel/CSV)"; identical names count there as an update.
- "📈 Chain to the availability calculator" – the dependencies of a process as series and parallel connections (in the same browser).
- "🗄 Read CMDB export (file)" – without the Suite, read in the CMDB export.

In the Suite (with rights to the "CMDB" module): "🗄 From the CMDB of the MC4Y Suite" takes over configuration items linked (🗄); on opening, the tool reconciles name, status, those responsible and location, these fields are then locked, and ⚠ means no longer present or switched off. "⇄ Dependencies from the CMDB" takes over the relationships of the linked CIs as connections. "🗄 Write to the CMDB" creates new elements as CIs and returns connections as relationships, without duplicates and without touching relationships maintained by hand. Opening and saving run through the server dialog, as described in the chapter 'Tools in the suite: working together'.

There is no connection to ITSM, tasks or Kanban; you analyse disruptions in the incident timeline, and measures arise in the five whys or the pre-mortem. Those responsible can be taken over from the master data.

Outage simulation: phone, systems and browsers

The outage simulation is a board tool. On the phone, the "+ Elements" and "✎ Properties" buttons open the panels, as described in the chapter 'How do I use a tool?'; it works with mouse or finger. You set the outage in the properties with "Fails in this scenario".

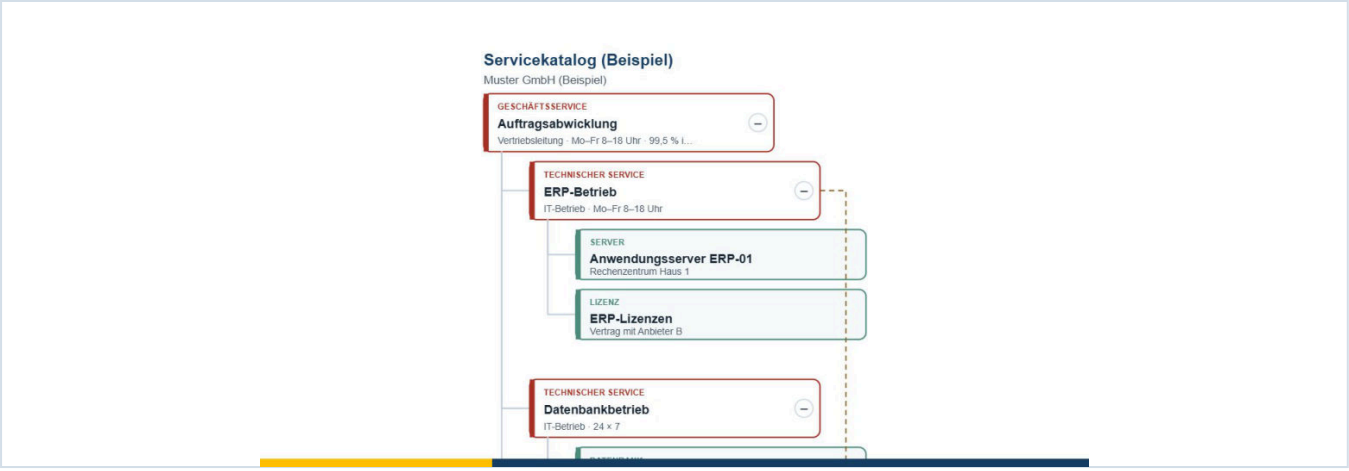
It needs no folder functions and runs in Chrome, Edge, Firefox and Safari; in Safari and Firefox it saves via the browser's download. I have checked it under Windows with Edge, Firefox and the WebKit engine, and under Linux (WSL Ubuntu) with Chromium, Firefox and WebKit, the phone controls in emulated sizes. Not checked are a real macOS with Safari and a real iPhone.

- For multiple selection, the "Multiple selection" button at the bottom left of the drawing area switches the mode: tapping adds an element or removes it, dragging on an empty area draws a selection frame. The handles of a selected line are finger-sized; tapping a "◆" twice removes it.

Outage simulation: tips

- Start with the business processes, not the servers. Then the conversation stays with the business.
- Represent redundancy honestly: two internet providers or two data centres get "one is enough – redundancy"; otherwise the picture is too pessimistic.
- Set multiple outages too, for example a power cut in one building plus the line, and see what remains.
- Play through a different system regularly – "💡 Suggest another scenario" keeps track of what has already been played. Save the file after every round for that.
- In the list of weak points, do not look only at big servers. Often a small service set up on the side holds everything together – name resolution, a certificate service, a file on a workstation.
- Take the results into emergency planning; you calculate downtimes and service level agreements in the availability calculator.

Service catalogue as a tree



Service catalogue as a tree: purpose and use

When a disruption occurs, two questions are asked, in this order: who is affected? And who is responsible? The service tree answers both with a service catalogue on exactly three levels: business service (what the customers order and notice) → technical service (what IT runs for it) → configuration item (what it runs on). The branches can be expanded and collapsed, so the catalogue can be read in thirty seconds.

For each service you record those responsible, service hours and criticality – these three details turn a list into a catalogue. The tool shows which technical service carries several business services; that is where an outage is most expensive. You take the entries over from the ITSM tool, the 8EM Modeller and the CMDB.

A service catalogue is an agreement between IT and the business, not a technical inventory; it says nothing about prices, quantities or contracts. The tools for architecture and IT operations are aids for conversation and decision-making; they do not replace specialist advice in individual cases, legal advice or operational implementation.

The service tree is still beta and not yet fully tested. On the website you find it on the Experimental page; it is also available as a single HTML file to download and in the MC4Y Suite in the Business Support Tools category. It saves files with the extension `.servicebaum.json`. I describe it in detail in the article The service catalogue as a tree – three levels are enough.

Service catalogue as a tree: step by step

1. Open the tool. “Example” shows an entirely fictitious catalogue; “New” starts empty.
2. If available, take over the services from the ITSM tool or the IT systems from a model via “🔗 Connection ▾”.
3. On the left, create the business services with “Create business service” – formulated from the users' point of view (“Order processing”, “Workplace”), not from the technology's.
4. Below them create the technical services and below those the configuration items; the + button appears at the right place in the picture each time.
5. For each service, enter “Responsible (service owner)”, “Service hours” and “Criticality” on the right.
6. Connect a service that additionally uses another one (for example sign-in) with “→ additionally uses …”.
7. Read the analysis on the right: services without those responsible or service hours, and technical services carrying several business services.
8. Look bottom up: choose a part (a server, for example) and “ What fails with it? (bottom up)”. The part turns red, everything that depends on it orange; on the right you see the business services affected with criticality, owners and the path to them – including via “additionally uses”. “End view” or `Esc` switches back.
9. For the meeting, fold the tree up and out again with “collapse everything” and “expand everything”.
10. Save with “Save” (`Ctrl` + `S`) and export the catalogue as a PDF or report via “Export ▾”.
11. Pass the tree on to the outage simulation or a service to the availability calculator.

Service catalogue as a tree: functions and buttons

Header

- “Undo” and “Redo” arrows (`Ctrl` + `Z` / `Ctrl` + `Y`); the ▾ between them shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …”.
- −, +, “Fit to view” and “⛶ Large picture” – the view.
- “🔗 Connection ▾” – adoptions and handovers (see below).
- “Export ▾” – “PDF (A4 landscape)”, “PDF (A3 landscape)”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG”, “PNG image”, “Print report” and “Entries as a table (CSV)”.
- “Example” and “Help”.

Left panel

- “Create business service” – a new entry at the top level.
- “expand everything” and “collapse everything” – for presenting in a meeting.
- “Catalogue” – the whole tree as a list, indented by level; a click selects an entry. Plus a colour legend.

Properties on the right

- Business service and technical service: name, description, “Responsible (service owner)”, “Stand-in”, “Service hours” (24 × 7, “Mon–Fri 8 am–6 pm”, “Mon–Sat 6 am–10 pm”, “according to the shift plan”, “different (see remark)”), “Criticality” (“1 – business-critical”, “2 – important”, “3 – supporting”), “Status” (”in operation”, “being set up”, “being phased out”, “planned”), “For whom? (user group)”, “Promised availability” and “Collapsed”.
- Configuration item: name, “Remark”, “Type” (for example server, database, network, licence), “Location / operations”, “Responsible”, “Identifier in the CMDB” and “Collapsed”.
- Buttons on the service: a plus button creates the technical service or configuration item below; “→ additionally uses …” connects to another service. The line is drawn dashed.
- Notes: a service without those responsible is nobody's business when a disruption occurs; without service hours no availability can be promised; a business service with no technical service below it.
- “ What fails with it? (bottom up)” – for technical services and configuration items (for business services only if another service uses them). Afterwards this place shows the box “ Bottom up: if “…” fails …” with the number of affected business services, technical services and business-critical services, the lists “These business services fail with it:” and “Technical services in between:” (each with its path; a click selects the service) and “End view”. The view does not change the file and is not an undo step; collapsed branches above the part are opened only for the view.
- With nothing selected: “Title of this work”, “Company / area”, a free note and the analysis. It counts business services, technical services, items and business-critical services, names gaps and shows which technical services carry more than one business service – through the structure or through additional use. If service levels from the ITSM are available, the resolution times per priority and the service hours appear here.

In the picture

- The circle at the right edge of an entry collapses the branch; the number next to it says how much lies below.
- Right-click – “✎ Edit”, “▾ collapse” or “▸ expand”, for a service the entry below it, for technical services and configuration items “ What fails with it? (bottom up)”, and “🗑 Delete”.
- In the bottom-up view: the failed part red (with), affected services orange (with ⚠), the path in the tree and via “additionally uses” in bold orange.
- With nothing selected, the analysis also shows “Bottom up: what has the most hanging on it?” – the parts with the most business services above them; a click on the row starts the view. The report contains “Bottom up: what fails with a part?” for all parts.

Service catalogue as a tree: saving, export and handovers

The catalogue is kept in a file `*.servicebaum.json` . Saving and opening work as described in the chapter ‘How do I use a tool?’; nothing leaves your browser.

Via “🔗 Connection ▾”:

- “🛟 From the ITSM tool (file)” – services and configuration items from an `*.itsm.json` ; you then arrange the structure here.

- "📥 Services from the ITSM (handover)" – what you passed on in the ITSM tool with "Hand over services and service levels to availability / service tree". Every service becomes a business service with its systems as configuration items; those responsible, criticality and service hours come along, and existing services of the same name are supplemented.
- "📐 From the 8EM Modeller (model file)" – IT systems become technical services.
- "⚡ File for the outage simulation" – saves the file; in the outage simulation you open it via 🔗 "Connection", and the structure becomes the dependency chain.
- "📈 Chain to the availability calculator" – the selected service with everything below it as a series connection.
- "📐 Services for the 8EM Modeller" – a table for the bulk import into level 8 (IT services in the service catalogue); in the Modeller choose "Tools & IT systems › IT services" as the target.
- "🗄 Read CMDB export (file)" – without the Suite, read in the CMDB export.
- "👥 Open master data" – service owner, stand-in and those responsible can be linked with the master data.

In the Suite (with rights to the "CMDB" module): configuration items come from the CMDB and stay linked (🗄); on opening, the tool reconciles name, status, those responsible and location, and ⚠ means no longer present or switched off. "⇄ Dependencies from the CMDB" turns the CMDB's relationships into the connection "additionally uses"; "🗄 Write to the CMDB" returns new configuration items and connections. In the Suite you fetch services and service levels directly from the ITSM. Opening and saving run through the server dialog, as described in the chapter 'Tools in the suite: working together'. Tasks and Kanban are not provided for – the catalogue is an agreement, not a list of measures.

Service catalogue as a tree: phone, systems and browsers

The service tree is a board tool. On the phone, "+ Elements" and "✎ Properties" open the panels as windows and ☰ unfolds the header, as described in the chapter 'How do I use a tool?'; it works with mouse or finger.

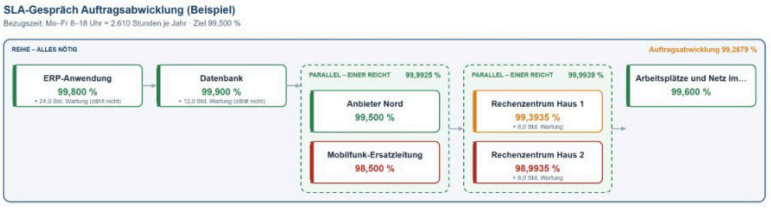
It needs no folder functions and runs in Chrome, Edge, Firefox and Safari; in Safari and Firefox it saves via the browser's download. I have checked it under Windows with Edge, Firefox and the WebKit engine, and under Linux (WSL Ubuntu) with Chromium, Firefox and WebKit, the phone controls in emulated sizes. Not checked are a real macOS with Safari and a real iPhone.

- For multiple selection, the "Multiple selection" button at the bottom left of the drawing area switches the mode: tapping adds an element or removes it, dragging on an empty area draws a selection frame.

Service catalogue as a tree: tips

- Start at the bottom if the top level is difficult – but do not leave it out. Where no business service can be named, IT is running something for which nobody in the business has formulated an expectation.
- Stay with three levels of criticality; five only lead to everything slipping into the middle.
- Always enter the service hours: 99.5 % around the clock means something completely different from Monday to Friday between 8 am and 6 pm.
- Look at the technical services that carry several business services – usually sign-in, the network or a database.
- Maintain the catalogue regularly. A catalogue that is a year old leads you astray when a disruption occurs.

Availability and SLA



Availability and SLA: purpose and use

Many contracts promise 99.9 per cent availability – calculated round the clock, that is almost nine hours of downtime a year. The tool "Availability and SLA" does two things: a **calculator** converts per cent into downtime per day, week, month and year. More important is the second part, the **chain**: what comes out when several promised figures work together? Three systems at 99.9 % each in series make 99.7 %; just under 9 hours become about 26 hours of downtime a year. Two independent paths at 99 % each, on the other hand, make 99.99 %.

I built the tool for anyone preparing a conversation about service level agreements or comparing designs with and without redundancy. Series and parallel groups nest as deeply as you like; maintenance windows count as downtime or not; the reference period can be changed.

The calculation assumes that the links fail independently of one another, and it works with figures from contracts, not from measurements. The tool is an aid for the SLA conversation, not a promise.

The tool is still in beta. You will find it on the Experimental page of the website, as a single file to download and in the suite in the category Business Support Tools. It saves to files with the extension `.verfuegbarkeit.json`. I describe the background in the article What 99.9 per cent means – and three of them in a row.

Availability and SLA: step by step

1. Open the tool. It starts with an empty series "Whole chain"; "Example" shows a finished chain with fictitious details.
2. Click on an empty spot and enter the "Title of this work" on the right; under "Settings" set the "Service hours (reference period)" and the "Aim of the negotiation".
3. Select the group that new items should go into – the left-hand panel names it below the buttons. Create the systems and services with "Link (system, service)"; the cursor then goes straight into the field "Name".
4. For each link, enter the "Promised availability", the "Provider / operation" and the "Reference in the contract" on the right.
5. Enter the "Planned maintenance per year" and tick "Maintenance does not count as an outage (as in the contract)" if the contract says so.
6. Where there is a standby path, create a "Parallel group (one is enough)" and the two links inside it. For clusters, set "Of these, this many must be running" to the number needed.
7. If something sits in the wrong place, choose the right group under "located in".
8. Read the "Result of the chain" on the right – per cent, downtime per year and month, target reached or not – and under "Biggest lever" which link costs the most downtime.
9. Save with "Save" and output the result via "Export ▾", for example with "Print report" for the conversation.

Availability and SLA: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); the small arrow between them shows the history and goes back several steps at once.

- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …” – as described in the chapter ‘How do I use a tool?’.
- Minus and plus – zoom out and in; “Fit to view” shows the whole chain; “⛶ Large picture” hides the side panels and shows them again.
- “🔗 Connection ▾” and “Export ▾” – exchange with other tools and output (both below).
- “Example” – loads an example chain; “Help” – the short guide with calculation rules and limits.

Left-hand panel

- “Link (system, service)”, “Series (everything needed)”, “Parallel group (one is enough)” – create a new element in the selected group, otherwise at the top level.
- “🧮 Per cent ↔ downtime” – opens the calculator.
- List “Chain” – shows the structure indented, with the percentage for each place; a click selects the element.

Properties on the right

- With nothing selected: “Title of this work”, “Company / area”, “Settings” with “Service hours (reference period)” – three fixed choices from round the clock to Monday to Saturday, or “own service hours (hours per year)” – and “Aim of the negotiation” (preset 99.5 %), plus a note for the report.
- “Result of the chain” – per cent, downtime per year and month; if the target is missed, by how much downtime per year.
- “Biggest lever” – up to six links with the gain if that one never failed; a click selects it.
- Link: “Name”, “Remark”, “located in”, “Promised availability” (preset 99.9 %), “Planned maintenance per year” (hours), “Maintenance does not count as an outage (as in the contract)”, “Provider / operation”, “Reference in the contract”, “Identifier in the CMDB”; below them “This place” with per cent and downtime.
- Series and parallel group: “Name”, “What does this series stand for?” or “What does this group stand for?”, “located in”, for the parallel group also “Of these, this many must be running”; the buttons “ + Link”, “ + Series” and “ + Parallel” create something inside it.
- “Delete” – removes the selected element.

In the picture

- Each group is a box with its result; parallel groups are dashed. Green means the target is reached, orange just below it, red clearly below it.
- A click selects, a double-click jumps into the name field, dragging the background moves the view, the mouse wheel zooms.
- Right-click on an element: “✎ Edit”, for groups also “ + Link inside it”, “ + Series inside it”, “ + Parallel group inside it”, plus “🗑 Delete”.

Calculator “Per cent ↔ downtime”

- “Own figure in per cent” converts immediately into downtime per year, month, week and day, based on the reference period set.
- “Usual promises” – a table from 99 % to 99.999 %. The calculator does not change the chain.

Keys

- `Del` deletes the selected element, `F2` jumps into the name field, `Esc` closes open menus; the other shortcuts are listed with the header above.

Availability and SLA: saving, export and handovers

“Save” creates a file `.verfuegbarkeit.json`. From the first change on, the tool also keeps a draft in the browser and restores it the next time you open it; “New” deletes it.

Under “Export ▾” you find “PDF (A4 landscape)”, “PDF (A3 landscape)”, “PowerPoint (.pptx)” with individual, editable shapes, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image” – each the picture as shown. “Print report” opens a window with reference period, target, result, structure and figures; print it there or save it as a PDF. “Entries as a table (CSV)” outputs all places for Excel.

Under "🔗 Connection ▾":

- "⚡ Chain from the outage simulation / the service tree" – takes over a chain that the outage simulation or the service tree has handed over in the same browser. The links arrive preset to 99.9 %; you fill in the real figures.
- "🛟 Services and service levels from the ITSM" (in the suite) or "📥 Services from the ITSM (handover)" – each service becomes a series with its systems as links, and the service hours become the reference period; the resolution times per priority are shown with their share of it. The ITSM holds no promised availability in per cent – you enter the target yourself.
- "🗄 From the CMDB of the MC4Y Suite", "🔄 Reconcile with the CMDB" and "🗄 Write to the CMDB" – in the suite, with rights to the module. Linked elements carry 🗄; name, status, those responsible and location then come from the CMDB and are locked here, ⚠ means: no longer present there or switched off. Without the suite: "🗄 Read CMDB export (file)".
- "🧮 Calculator: per cent ↔ downtime", "👥 Open master data" and "❔ How does this fit together?" – calculator, master data and an overview of all routes.

In the suite you open and save via the shared storage, as described in the chapter 'Tools in the suite: working together'.

Availability and SLA: phone, systems and browsers

On narrow screens the phone operation of the board tools applies: a button in the header expands it, "+ Elements" opens the left-hand panel and "✎ Properties" the right-hand one. When you create an element, the left-hand panel closes and the right-hand one opens with the name field. Swiping on the drawing area moves the view.

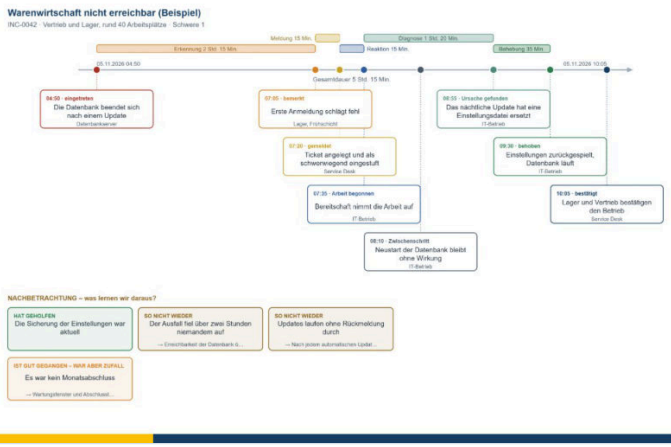
The tool needs no folder function and runs in all current browsers. In Safari and Firefox it saves via the downloads folder, as described in the chapter 'How do I use a tool?'. Handovers from the outage simulation and the service tree only work within the same browser. What has not been checked on real Macs and phones is set out in the chapter 'Which operating system and which browser?'.

- For multiple selection, the "Multiple selection" button at the bottom left of the drawing area switches the mode: tapping adds an element or removes it, dragging on an empty area draws a selection frame.

Availability and SLA: tips

- Do not ask how many nines you will get, but how much downtime is bearable – and when: two hours at month end weigh more than two hours at night.
- Calculate maintenance once with and once without the tick. The two figures side by side show what actually reaches the users.
- Two lines in the same cable duct are not two paths. A parallel group only helps if the paths really are independent.
- For each link, record who promises the figure and where it stands in the contract – in the SLA conversation that is half the battle.

Incident timeline and review



Incident timeline and review: purpose and use

After an outage the most important question is rarely who was to blame, but: where did the time go? The tool places the events of an incident on a time axis, from “occurred” to “confirmed”, and calculates from them the detection, reporting, response, diagnosis and resolution times as well as the outage duration (MTTR). Below that you record learning points with measures.

I use it for the meeting after a major outage, with IT operations, service desk and the business side at the table. The share of the detection time in the outage duration is particularly revealing: often most of the time passed before anyone noticed the fault at all. That is usually where the bigger and cheaper lever lies.

The review is deliberately blame-free: you write down roles and systems, not names, and the tool points out wording that points at a person. That is not politeness but the precondition for someone still reporting openly next time. The tool calculates with the times you enter; it does not check them.

The tool is still in beta. You will find it on the Experimental page of the website, as a single file and in the suite in the category Business Support Tools. It saves to files with the extension `.vorfall.json`. More in the article After the outage: where did the time go?.

Incident timeline and review: step by step

1. Open the tool; “Example” shows a fictitious incident from 04:50 to 10:05.
2. Click on an empty spot and enter the “Title of this work” on the right, and under “Settings” the “Severity”, “Who or what was affected?” and the “Ticket number”.
3. Click “Create all seven steps” on the left. The tool creates occurred, noticed, reported, “Work started”, “Cause found”, resolved and confirmed in one go.
4. Select the steps one after another and add the “Date”, the “Time of day” and, under “Name”, what happened – factually, without names.
5. Enter “Who or what (role, system)”, for example service desk or monitoring, and under “How do we know that?” the source: a record, a ticket or a memory.
6. Create further events with “Event with a time”; if it is none of the seven steps, “Role in the course of events” stays at “Intermediate step”.
7. Read the spans and the “Outage duration (MTTR)” in the times table on the right.
8. Create the learning points with “Learning point / measure”, choose the “Type” and enter “Measure”, “Responsible” and “By when?”.
9. If needed, pass the measures on as tasks via “🔗 Connection ▾”, or hand the incident to the five whys.
10. Save, and print the review with “Export ▾” › “Print report”.

Incident timeline and review: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); the small arrow between them shows the history of changes.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …” – as described in the chapter ‘How do I use a tool?’.
- Minus, plus, “Fit to view” and “⛶ Large picture” – scale, whole time axis, hide and show the side panels.
- “🔗 Connection ▾” and “Export ▾” – see below; “Example” and “Help” with the table of the seven steps.

Left-hand panel

- “Event with a time” – a new event with today’s date and the current time.
- “Learning point / measure” – a new learning point.
- “Create all seven steps” – creates those of the seven steps that are missing, each with its guiding question as details.
- Lists “History” and learning points – ordered by time; a click selects the entry.

Properties on the right

- With nothing selected: “Title of this work”, “Company / area”, “Settings” with “Severity” (“not classified”, “1 – severe (major)”, “2 – considerable”, “3 – minor”), “Who or what was affected?”, “Ticket number”; plus “Affected systems”, an ITSM section with the ticket taken over, “🛟 Result to the ITSM …” and “Remove ticket link”, and a note.
- Times – detection time (occurred to noticed), reporting time, response time, diagnosis time, resolution time, “Outage duration (MTTR)” (occurred to resolved) and “to confirmation”. If a point in time is missing, the tool names it; the related times stay empty.
- If the detection time reaches 40 % of the outage duration or more, a notice appears there.
- “Review” – number of learning points “helped” and “not like that again”, “open measures” as a list; “❓ To the five whys”.
- Event: “Name”, “Details”, “Role in the course of events”, “Date”, “Time of day”, “Who or what (role, system)”, “How do we know that?”. If the source is missing or the text points at a person, a notice appears.
- Learning point: “Name”, “Explanation”, “Type” (“helped”, “not like that again”, “it went well – but that was luck”), “Measure”, “Responsible”, “By when?”, “Status” (open, running, completed, discarded).
- “Delete” – removes the selected entry.

In the picture

- At the top title, ticket, what was affected and severity; below them the axis with start, end and total duration.
- Above the axis coloured bars for detection, reporting, response, diagnosis and resolution with their duration; below it the events as cards with time, step, text and role.
- At the bottom the learning points under the heading “REVIEW – what do we learn from this?”, coloured by type, with the measure.
- A click selects, a double-click jumps into the name field, right-click: “✎ Edit” and “🗑 Delete”.

Keys

- `Del` deletes, `F2` jumps into the name field, `Esc` closes menus; the other shortcuts are listed with the header.

Incident timeline and review: saving, export and handovers

“Save” creates a file `.vorfall.json`; from the first change on the tool also keeps a draft in the browser. “Export ▾” offers “PDF (A4 landscape)”, “PDF (A3 landscape)”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image”, plus “Print report” with picture, times, history and learning points by type, and “Entries as a table (CSV)” with events, learning points, systems and the times in minutes.

Under “🔗 Connection ▾”:

- “🛟 Fetch ticket from the ITSM” (in the suite) or “📥 Ticket from the ITSM (handover)” – reporting, start of work, solution and closure become events, the history becomes intermediate steps; the systems come along. Taking it over again only adds what is new.
- “🛟 Incident from the ITSM tool (file)” – without the suite: choose a file of the ITSM tool, then take over the incident in the window. In both cases you add “occurred” and “noticed” yourself – a ticket system does not know them.
- “🗄 From the CMDB of the MC4Y Suite” and “🔄 Reconcile with the CMDB” (in the suite) or “🗄 Read CMDB export (file)” – fill “Affected systems” with the status from the CMDB.
- “❓ To the five whys” – hands the incident over as a problem in the same browser; take it over there via the connection menu.
- “🛟 Review into the ITSM file” – you choose a file of the ITSM tool; the tool downloads a copy ending in `-mit-nachbetrachtung.json` in which the review stands as a draft entry of the solution database. Your original file remains unchanged.
- “🛟 Result to the ITSM (problem)” – cause, workaround, solution and measures back into the ticket.
- “☑ Hand over measures as tasks” – learning points with a measure become tasks in the suite, without the suite cards on the Kanban board; handing over again updates them, and the status is shown on the right with the learning point.
- The cause-and-effect diagram takes events and learning points from this tool in as causes.

In the suite you open and save via the shared storage, as described in the chapter ‘Tools in the suite: working together’.

Incident timeline and review: phone, systems and browsers

On narrow screens the phone operation of the board tools applies: a button in the header expands it, “ + Elements” and “✎ Properties” open the panels. After you create an event, the right-hand panel opens with the name field. You pick date and time with your browser’s input fields.

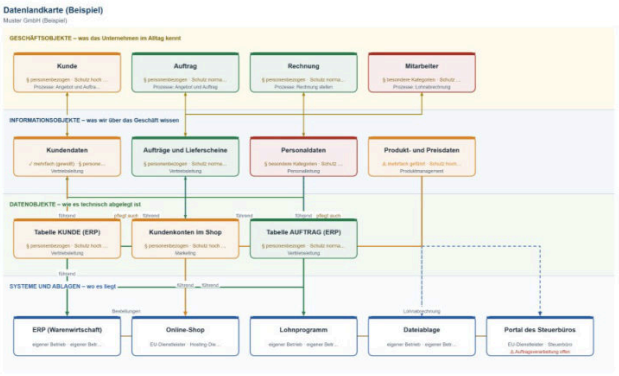
The tool needs no folder function and runs in all current browsers; in Safari and Firefox it saves via the downloads folder. This also applies to the downloaded ITSM file with the review. Without the suite, handovers to the five whys and the Kanban board only work within the same browser. What has not been checked is set out in the chapter ‘Which operating system and which browser?’.

- For multiple selection, the “Multiple selection” button at the bottom left of the drawing area switches the mode: tapping adds an element or removes it, dragging on an empty area draws a selection frame.

Incident timeline and review: tips

- Start with “occurred”: the moment is usually earlier than you think, and the larger part of the downtime often lies in between.
- Note for each event where the information comes from. A record, a ticket or a memory makes a difference later.
- Use the third kind of learning point: what went well, but only by luck? Near misses often say more than the damage itself.
- A learning point without a measure stays an observation – enter the measure, the responsible role and a deadline.
- Write roles instead of names, for example on-call or early shift.

Data map



Data map: purpose and use

Every system replacement and every data protection question starts with the same question: what information do we actually have, where is it held, and who is responsible for it in business terms? The data map answers it on one sheet – ordered by the object hierarchy of the 8EM Modeller: at the top the **business objects** (customer, order, invoice, employee – they belong to the processes), below them the **information objects** (customer data, orders, personnel data, for example), then the **data objects** (tables, files, logs) and at the bottom the **systems and stores** in which everything is held. These explicitly include spreadsheets on desktops and paper folders in a cupboard. A business object “is represented by” an information object, an information or business object “is stored in” a data object – readable in both directions.

For each object you record whether it is personal data (including special categories under Art. 9 GDPR), its protection requirement for confidentiality and for availability – separately, because they lead to different measures –, who is responsible for it in business terms, how long it is retained and on what basis it is processed. For each

object and system there is one role: **leading – arises here** (the leading system), **also maintains it** or **only reads it**. If more than one system creates or maintains the same object, it is "kept in several places" – a duplicate you decide on deliberately (intended or grown). Between systems you draw data flows with route and frequency.

The map is a working basis from a workshop. It supplies preparatory work for the record of processing activities, but it does not replace it and it is not legal advice. What it does: it makes visible what has to be decided.

The tool is still in beta. You will find it on the Experimental page of the website, as a single file and in the suite in the category Business Support Tools. It saves to files with the extension `.datenlandkarte.json`. More in the article The data map: what data do we have, and where does it live?.

Data map: step by step

1. Open the tool; "Example" shows a fictitious map with four business objects, four information objects, three data objects and five systems.
2. Click on an empty spot and enter the "Title of this work" and "Company / area" on the right.
3. On the left, create the objects – "Business object" (customer, order …; on the right "In which processes?"), "Information object" (customer data …) and, where the technology matters, "Data object" (table, file …). Each kind appears in its own band.
4. Connect the hierarchy: at the business object under "Object hierarchy" choose "is represented by (information objects)", at the information object "is stored in (data objects)". The reverse direction ("represents", "stores") appears at the other object by itself.
5. For each object enter "Personal data?", "Protection requirement (confidentiality)", "Protection requirement (availability)", "Functionally responsible" and "Retention" on the right; for personal data also the "Basis of the processing".
6. Create the systems with "System / store" – spreadsheets and paper folders too – and choose under "Where does it run?" where they are operated. For service providers, tick "Data processing agreement in place" as soon as the contract exists.
7. Mark the leading objects per system: select the system, add the objects under "Objects in this system" with "+ Assign object" and choose the role in each row – "leading – arises here", "also maintains it" or "only reads it". The same works at the object under "Where is it held? – Systems" ("+ Assign system").
8. If an object is created or maintained in more than one system, the tool reports "kept in several places". Record at the object under "Kept in several places – decision" whether that is intended or has grown (merge), with a reason.
9. If you connect two systems with "→ connect …" and a click on the target, the result is a flow ("flows to"); enter "By which route?" and "How often?". The object shows it under "Where does it flow?".
10. Work through the "Gaps" the tool reports on the right.
11. Save, output the "📋 Preparatory work for the record of processing activities" via "🔗 Connection ▾" and print the report via "Export ▾".

Data map: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); the small arrow between them shows the history of changes.
- "New", "Open …" (`Ctrl` + `O`), "Save" (`Ctrl` + `S`), "Save as …" – as described in the chapter 'How do I use a tool?'.
- Minus, plus, "Fit to view" and "⛶ Large picture" – scale, whole map, hide and show the side panels.
- "🔗 Connection ▾" and "Export ▾" – see below; "Example" and "Help".

Left-hand panel

- "New entry" with "Business object", "Information object", "Data object" and "System / store" – each kind goes into its own band. With the first data object, the systems move down one band (one undo step).
- Below that, a list for each kind with a count; objects kept in several places, personal-data objects and systems outside the EU are marked. A click selects the entry.

Properties on the right

- With nothing selected: “Title of this work”, “Company / area”, a note and the analysis.
- “Inventory” – number of business, information and data objects, systems, personal-data objects, objects with a high protection requirement and objects kept in several places.
- “Gaps” – objects held in no system; objects without a leading system or with an unclear one (several); objects kept in several places without a decision; personal data without a retention period or without business responsibility; service providers with no data processing agreement noted. If everything is in place: “No open points found.”
- “Kept in several places – where is a single source missing?” – for each object kept in several places, the systems (★ = leading) and the decision.
- “Where is the most held?” – the systems with the most objects and how many of them they lead; a click selects the system.
- Business object additionally “In which processes?”, data object additionally “Technical form”. All three kinds of object: “Name”, description, “Personal data?” (no, yes or “yes – including special categories (Art. 9 GDPR)”), the two protection requirements (“not assessed”, normal, high, “very high”), “Functionally responsible”, “Retention”, “Basis of the processing”, “Scope”, “Goes to third parties”, when kept in several places “Kept in several places – decision” (“not yet decided”, “intended – deliberately kept in several places”, “grown – merge”) with “Reason for the decision”. Below that “Where is it held? – Systems” (the role per system, “ + Assign system”, the leading system), “Object hierarchy” (both directions, “ + add”, × detaches), “Where does it flow?” and notices – for example about a missing deletion period or personal data outside the EU.
- System / store: “Name”, “Remark”, “Where does it run?” (“in-house operation”, “Service provider in the EU”, “Service provider outside the EU”, “Paper / cabinet”), “Operator / provider”, “Technically responsible”, “Data processing agreement in place”, “Identifier in the CMDB”; below that “Objects in this system” (the role per object, “ + Assign object”, “Leading for: …”) and the flows.
- “→ connect …” – starts a connection from the selected entry; “Delete” removes it.
- Connection: “Type of connection” (“arises in – leading system”, “is used in (reads)”, “flows to”, “is also maintained in”, “is represented by”, “is stored in”), “Label”, for flows “By which route?” and “How often?”; “Reverse direction”, “／ Straight” (once the line has handles) and “Delete”. A flow always connects two systems.

In the picture

- Bands “BUSINESS OBJECTS – what the company knows in everyday work” (only if there are any), “INFORMATION OBJECTS – what we know about the business”, “DATA OBJECTS – how it is stored technically” (only if there are any) and “SYSTEMS AND STORES – where it is held”. The colour of an object shows its protection requirement for confidentiality; “⚠ kept in several places” or “✓ several places (intended)”, personal-data marking, retention and responsibility (for business objects the processes) appear on the card.
- The line to the leading system is labelled “leading”, a duplicate “also maintains”; “only reads it” is dashed. The object hierarchy is drawn as a double arrow.
- For service providers with no agreement noted, “⚠ data processing agreement open” is shown.
- Boxes can be dragged freely. A click selects, a double-click jumps into the name field, dragging the background moves the view.
- Right-click on a box: “✎ Edit”, “→ Connect from here …”, “🗑 Delete”; on a connection: “⇄ Reverse direction”, “／ Straight” (with handles), “🗑 Delete connection”.

Keys

- `Del` deletes (several selected elements after one confirmation), `F2` jumps into the name field, `Ctrl` + `A` selects all, arrow keys move (10 px, `Shift` 1 px), `Esc` cancels connecting, closes menus and clears the selection; the other shortcuts are listed with the header.
- A selected line shows handles: dragging “ + ” inserts one, dragging “◆” shapes the line, double-clicking “◆” removes it. The line stays right-angled and runs through the points; they snap horizontally and vertically to their neighbour (`Alt` = free).

- “Rearrange” in the toolbar at the top puts all elements back into the bands of their type, just as when they were created – one undo step, `Ctrl` + `Z` brings your arrangement back.

Data map: saving, export and handovers

“Save” creates a file `.datenlandkarte.json`; from the first change on the tool also keeps a draft in the browser. “Export ▾” offers “PDF (A4 landscape)”, “PDF (A3 landscape)”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image”. “Print report” contains the picture, information objects, systems and stores, data flows and the personal data; “Entries as a table (CSV)” outputs all entries for Excel.

Under “🔗 Connection ▾”:

- “📐 From the 8EM Modeller (model file)” – takes over business, information and data objects (each as its own kind) with protection requirement and personal-data flag, the IT systems, the relations “is represented by” and “is stored in”, the leading system and the accesses (C = leading, “unclear” if there are several without a leading system; U = also maintains; otherwise only reads); linked processes become “In which processes?”. Items with the same name are not duplicated; one undo step.
- “🗺 Systems from the IT map (file)” – takes over the systems recorded there. For cloud and service-provider systems, check afterwards whether they are in the EU.
- “📐 Objects for the 8EM Modeller” – one table (CSV) per object kind to download (with several kinds you choose in the window), which you read into the matching sub-level of “Data and information” in the 8EM Modeller via “Import › ⬆ Bulk import (Excel/CSV)” (business objects, information objects or data objects). A window describes the steps; identical names count as an update there. You connect the object hierarchy in the Modeller's data model.
- “📋 Preparatory work for the record of processing activities” – downloads a table with the personal-data objects. Two columns are deliberately left empty because the map does not collect them: the categories of data subjects and the purpose of the processing. Both belong in a record under Art. 30 GDPR and have to be added there.
- “🗄 From the CMDB of the MC4Y Suite”, “🔄 Reconcile with the CMDB”, “⇄ Dependencies from the CMDB” and “🗄 Write to the CMDB” – in the suite, with rights to the module. The CMDB relationship that supplies data becomes “flows to”; flows go back as relationships, without duplicates. Linked systems carry 🗄, ⚠ means: no longer present in the CMDB or switched off. Without the suite: “🗄 Read CMDB export (file)”.
- “👥 Open master data” – the people functionally and technically responsible can be linked to the master data. Under “Functionally responsible”, enter a role or post, not IT.

In the suite you open and save via the shared storage, as described in the chapter ‘Tools in the suite: working together’.

Data map: phone, systems and browsers

On narrow screens the phone operation of the board tools applies: a button in the header expands it, “+ Elements” and “✎ Properties” open the panels. After you create an entry, the right-hand panel opens with the name field. You draw connections with “→ connect …” and a tap on the target.

The tool needs no folder function and runs in all current browsers; in Safari and Firefox it saves – the two tables too – via the downloads folder. Taking data over from the 8EM Modeller and the IT map works via files and therefore in every browser. What has not been checked is set out in the chapter ‘Which operating system and which browser?’.

- For multiple selection, the “Multiple selection” button at the bottom left of the drawing area switches the mode: tapping adds an element or removes it, dragging on an empty area draws a selection frame. The handles of a selected line are finger-sized; tapping a “◆” twice removes it.

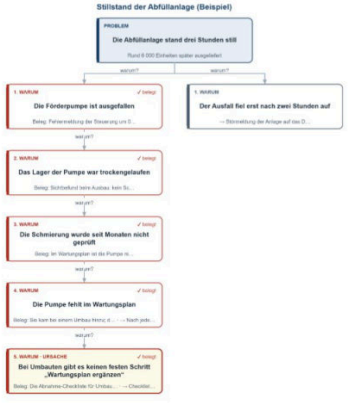
Data map: tips

- The most important field is “Functionally responsible”: a role in the business, not IT. Otherwise operations ends up deciding what happens to the data.
- For the first stocktake, go through the systems one by one and mark the leading objects under “Objects in this system”. Decide objects kept in several places deliberately – sometimes keeping them twice is intended, often it

has grown.

- Older files open as usual. If an older version of the tool opens a new file, it shows business and data objects as information objects; the new details come back the next time it is opened in the new version.
- Do not leave out paper and spreadsheets. A tidy map without them misleads you at the next system replacement.
- Assess confidentiality and availability separately; personnel data, for example, is very confidential, but a day without access rarely hurts.
- Personal data outside the EU is permissible but needs a basis – check this with expert help.

Five whys



Five whys: purpose and use

Five whys is one of the simplest and most effective questioning techniques: you keep asking “Why?” until the answer no longer points at a symptom but at a process or a rule. Five steps are a guide – sometimes three are enough, sometimes it takes seven. The tool builds the chain from top to bottom and asks for evidence at every step: how do we know that? Without evidence it remains a guess.

I use it after faults, complaints and recurring problems. If a step has several causes, several strands appear side by side; at every step you record a measure, those responsible and a deadline. If a wording points at a person, the tool says so and names the question to ask instead: what made the mistake possible – and what would have caught it?

The method works along a chain and suits manageable problems with one or a few causes. For intertwined causes the cause-and-effect diagram is the better starting point, for interactions the impact network.

The tool is still in beta. You will find it on the website on the Experimental page, as a single file to download and in the suite in the categories Business Support Tools and Productivity tools. It saves to files with the extension `.warum.json`. More in the article Five whys – and what to do when the answer points at a person.

Five whys: step by step

1. Open the tool. It starts with an empty problem; “Example” shows a finished chain with entirely fictitious details.
2. Click on an empty spot and enter “Title of this work” and “Company / area” on the right.
3. Choose the entry under “Problem” on the left and describe the observation factually and without blame; add “Background”, “Noticed when?” and “What effect did it have?”.
4. Click “ ❓ Why? – next step” and enter the answer. The cursor then sits straight in the “Name” field.
5. Fill in “How do we know that?” and set the “Status” to suspected, proven or refuted.
6. Keep asking with “ ❓ Why? – next step” – on the right for the selected entry, on the left below the last step, or in the picture via the button below the bottom step.
7. If a step has a second cause, create another branch at the same level with “⑂ Strand alongside”.
8. Once the answer points at a process or a rule, tick “The actual cause is reached here”.
9. Enter the “Measure at this step”, together with “Responsible” and “By when?”.

10. Check under “State of the chain” on the right how deep the chain goes, how much is proven and which causes have been reached.
11. Save with “Save” and output the chain with “Print report” under “Export ▾”; if you wish, hand the measures over as tasks.

Five whys: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); “ ▾ ” between them shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …” – as described in the chapter ‘How do I use a tool?’.
- “−”, “+” and “Fit to view” – change the scale and show the whole chain; “⛶ Large picture” hides the side panels and shows them again.
- “ 🔗 Connection ▾ ” and “Export ▾ ” – see below; “Example” and “Help”.

Left panel

- “ ❓ Why? – next step” – adds a new step below the last step of the last strand.
- “Problem” – the starting point; “Chain” – all steps numbered and indented, causes reached marked Cause. A click selects the entry.

Properties on the right

- With nothing selected: “Title of this work”, “Company / area”, for an adopted ticket the “ITSM” section with “ 🛟 Result to the ITSM …” and “Remove ticket link”, a note for the report and the analysis.
- Problem: “Name”, “Background”, “Noticed when?”, “What effect did it have?”.
- Why step: “Name”, “Explanation”, “Status”, “How do we know that?”, “Measure at this step”, “Responsible” (role or person), “By when?” and “The actual cause is reached here”.
- “ ❓ Why? – next step” and “⑂ Strand alongside” – a new step below or beside the selected one; “Delete” removes the entry.
- Notes: when evidence is missing, from five steps without a marked cause, and for wordings that point at a person.
- “State of the chain” – steps deep, proven, causes, measures; below it “Causes reached” and the “Measures” table with who and by when. A click on a row selects the step.

In the picture

- The problem at the top, below it the steps with number, status (“✓ proven”, “✗ disproven”), evidence and measure. Causes reached have a light yellow background and a stronger border; strands run side by side.
- Below the bottom step of each strand there is the “ ❓ Why?” button – it only appears on screen, not in the export.
- A click selects, a double-click or `F2` jumps to the name field, dragging the background moves the view, the mouse wheel zooms.
- Right mouse button: “✎ Edit”, “ ❓ Why? (next step)”, for steps “⑂ Another strand alongside”, plus “🗑 Delete” (`Del`); `Esc` closes open menus.

Five whys: saving, export and handovers

“Save” creates a `.warum.json` file. From the first change the tool also keeps a draft in the browser and restores it the next time you open it; “New” deletes it.

“Export ▾ ” offers “PDF (A4 landscape)”, “PDF (A3 landscape)”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image”. “Print report” shows the problem, the chain as a table and the result; “Entries as a table (CSV)” outputs all steps with status, evidence, measure, those responsible and deadline.

Under “ 🔗 Connection ▾ ” – taking data over:

- “ 🐟 Cause from the cause-and-effect diagram” – a cause handed over there in the same browser becomes the starting point. If something is waiting, a band above the drawing area shows a notice.

- "🐟 From an Ishikawa file" – reads a `.ursache-wirkung.json` file and takes over proven or strongly acting causes as the first why step.
- "⏱️ From an incident timeline (file)" – the incident from a `.vorfall.json` file becomes the problem with its background.
- "🛟 Fetch ticket from the ITSM" (in the suite) or "📥 Ticket from the ITSM (handover)" – the ticket title becomes the problem, a cause already entered there becomes the first, still suspected step.

Passing the result on:

- "🛟 Measures into the ITSM file" – you choose a file of the ITSM tool; the tool downloads a supplemented copy with the chain as an entry of the solution database (as a draft). Your original file stays unchanged.
- "🛟 Into the solution database of the suite" – creates the entry directly in the suite as a draft, only with rights to the module.
- "🛟 Result to the ITSM (problem)" – cause, workaround, solution and measures back into the ticket. The cause consists of the marked steps together with the chain; this needs such a step or a measure.
- "☑ Hand over measures as tasks" – every step with a measure becomes a task in the suite, without the suite a card on the Kanban board. Handing over again updates them; the status is shown on the right with the step.

"👥 Open master data" brings in the master data; the "Responsible" field then offers your people and roles. "❔ How does this fit together?" explains all the routes. In the suite the chapter 'Tools in the suite: working together' also applies.

Five whys: phone, systems and browsers

On narrow screens the phone operation of the board tools applies: "☰" expands the header, "+ Elements" opens the left panel, "✎ Properties" the right one. If you tap "❓ Why? – next step", the left panel closes and the right one opens with the name field of the new step. Swiping on the drawing area moves the view.

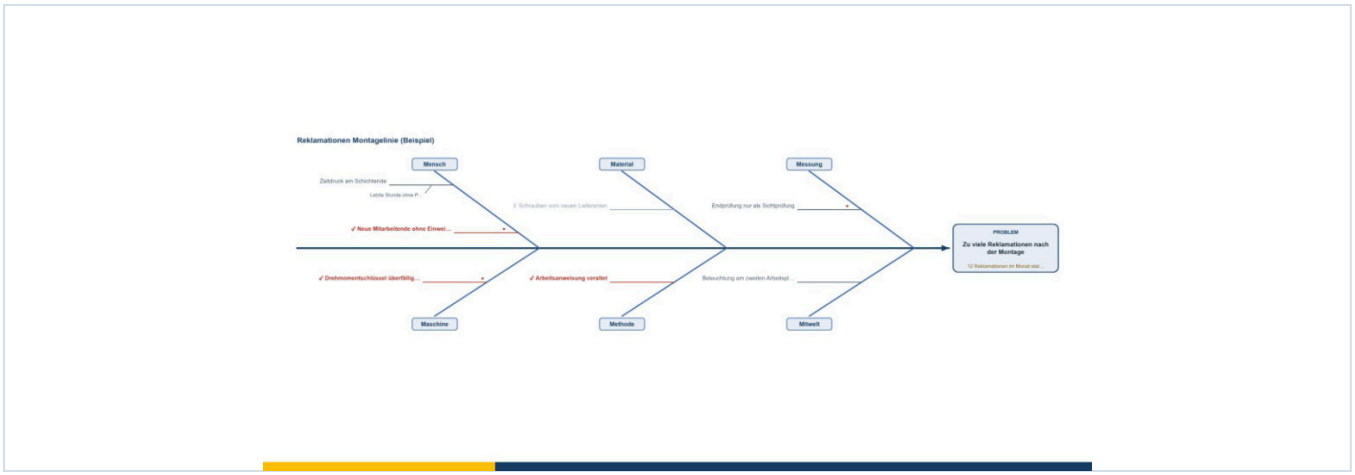
The tool needs no folder functions and runs in all current browsers. In Safari and Firefox it saves via the download folder, as described in the chapter 'How do I use a tool?'. Handovers from the cause-and-effect diagram only work within the same browser; the file route always works. What has not been checked on real devices is listed in the chapter 'Which operating system and which browser?'.

- For multiple selection, the "Multiple selection" button at the bottom left of the drawing area switches the mode: tapping adds an element or removes it, dragging on an empty area draws a selection frame.

Five whys: tips

- Do not stop after the second step: only three to five steps usually lead away from the surface.
- If an answer in effect says that someone forgot, the chain has not ended – it is at its most dangerous point. Ask what made the forgetting possible.
- Use strands: a single chain tempts you to settle on the first explanation that comes along.
- Enter evidence for every step – a record, a measurement, an observation or a statement. Only then can you see later where the chain bends.

Cause-and-effect diagram



Cause-and-effect diagram: purpose and use

The cause-and-effect diagram goes back to Kaoru Ishikawa and is also called a fishbone because of its shape. The problem stands on the right, the spine runs to the left with the main bones, and the causes hang from the bones – sorted by area, so that people do not only name the obvious. The six Ms are preset: people, machine, material, method, measurement and environment. In services and administration other areas often fit better; the names can be changed.

The core of my tool is one question about every cause: how do we know that? Every cause is suspected, proven or ruled out and has an evidence field; without evidence the diagram is a collection of opinions. Ruled-out causes stay on the diagram in pale type and show what has already been checked.

I use it in quality workshops and in IT operations when a problem keeps recurring and several causes are possible. The diagram sorts and makes things visible; it does not weight or calculate anything. Individual branches go on to the five whys for a deeper look.

The tool is still in beta. You will find it on the website on the Experimental page, as a single file to download and in the suite in the categories Business Support Tools and Productivity tools. It saves to files with the extension `.ursache-wirkung.json`. More in the article The cause-and-effect diagram – why the evidence matters most.

Cause-and-effect diagram: step by step

1. Open the tool. It starts with an empty problem and the six main bones; “Example” shows a finished diagram with entirely fictitious details.
2. Click on an empty spot and enter “Title of this work” and “Company / area” on the right.
3. Choose the entry under “Problem” on the left and name the problem in measurable terms if possible. Add “Metric / extent” and “Since when?”.
4. Adapt the main bones: select a bone and rename it under “Name” on the right, add more with “Create main bone”, delete the ones you do not need.
5. Collect causes – for each bone with “ + Cause” in the left panel or with the golden + at the end of the bone in the picture. Do not assess anything while collecting.
6. For a cause, ask why it is so and attach a sub-cause with “ + Sub-cause (“Why?”)”.
7. Then assess every cause: set “State of the check” to suspected, proven or ruled out, and add “Evidence / test result” and the “Contribution to the problem”.
8. For open causes enter under “Who checks this?” who will obtain the evidence, and for proven causes the “Measure”.
9. Check under “State of the search for causes” how much is proven; pass a cause that needs a deeper look on with “→ to the five whys”.
10. Save with “Save”, print the report via “Export ▾” and, if you wish, hand over measures and checks as tasks.

Cause-and-effect diagram: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); "▾" between them shows the history.
- "New", "Open …" (`Ctrl` + `O`), "Save" (`Ctrl` + `S`), "Save as …" – as described in the chapter 'How do I use a tool?'.
- "−", "+" and "Fit to view" – change the scale and show everything; "⛶ Large picture" hides the side panels and shows them again.
- "🔗 Connection ▾" and "Export ▾" – see below; "Example" and "Help".

Left panel

- "Layout": "Create main bone" and, as long as there are fewer than six bones, "Add the six Ms" – creates the missing ones of the six Ms.
- "Problem" – the problem head; below it a list for each main bone with the number of causes, the causes and sub-causes indented in their colour, and the "+ Cause" button.

Properties on the right

- With nothing selected: "Title of this work", "Company / area", for an adopted ticket the "ITSM" section with "🛟 Result to the ITSM …" and "Remove ticket link", a note for the report and the analysis.
- Problem: "Name", "How do we notice it? Since when? How often?", "Metric / extent", "Since when?". If the metric is missing, a note reminds you.
- Main bone: "Name", "What does this bone stand for?", "+ Cause" and "▲" and "▼" for the order.
- Cause: "Name", "Explanation", "State of the check", "Evidence / test result", "Contribution to the problem" (not assessed, large, medium, small), "Who checks this?" (role or person) and "Measure"; plus "+ Sub-cause ("Why?")", "▲", "▼" and "→ to the five whys". Without evidence a note asks what you would have to measure or look at.
- "Delete" – removes the selected entry.
- "State of the search for causes" – causes, proven, still suspected, ruled out; notes on bones without causes and on proven causes without a measure; the "Proven causes" table with their contribution.

In the picture

- Proven causes appear in red and bold with ✓, ruled-out ones pale with ✗; a red dot ● marks a large contribution. The metric is shown in the problem head.
- The golden + at the end of each bone creates a cause there; it only appears on screen, not in the export.
- A click selects, a double-click or `F2` jumps to the name field, dragging the background moves the view, the mouse wheel zooms.
- Right mouse button: "✎ Edit", on a bone "+ Cause on this bone", on a cause "+ Sub-cause ("Why?")" and "→ hand over to the five whys", plus "🗑 Delete" (`Del`); `Esc` closes open menus.

Cause-and-effect diagram: saving, export and handovers

"Save" creates a `.ursache-wirkung.json` file. From the first change the tool also keeps a draft in the browser and restores it the next time you open it; "New" deletes it.

"Export ▾" offers "PDF (A4 landscape)", "PDF (A3 landscape)", "PowerPoint (.pptx)", "LibreOffice Impress (.odp)", "Visio (.vsdx)", "SVG" and "PNG image". "Print report" shows the problem, a table for each main bone with cause, status, contribution, evidence, measure and checker, and the "Next steps" with the causes still to be checked. "Entries as a table (CSV)" outputs all causes for Excel.

Under "🔗 Connection ▾" – taking data over:

- "⏱ From an incident timeline (file)" – takes the learning points of the kind "not like that again" from a `.vorfall.json` file as suspected causes on the method bone (otherwise the first bone); you then assign them.
- "🛟 Fetch ticket from the ITSM" (in the suite) or "📥 Ticket from the ITSM (handover)" – the ticket title becomes the problem head, the main bones stay.

Passing the result on:

- "❓ One branch to the five whys" – hands the selected cause over within the same browser; in the five whys you adopt it via "🔗 Connection ▾".
- "🛟 As a solution into the ITSM file" – you choose a file of the ITSM tool; every proven cause with a measure becomes an entry of the solution database. The tool downloads a supplemented copy in which the entries are drafts; your original file stays unchanged.
- "🛟 Into the solution database of the suite" – the same entries directly in the suite as drafts, only with rights to the module.
- "🛟 Result to the ITSM (problem)" – proven causes with their evidence and the measures go back into the ticket.
- "☑ Hand over measures as tasks" – measures and, for suspected causes with "Who checks this?", checks become tasks in the suite, without the suite cards on the Kanban board; their status is shown with the cause.

"👥 Open master data" brings in the master data for the "Who checks this?" field; "❔ How does this fit together?" explains all the routes. In the suite the chapter 'Tools in the suite: working together' also applies.

Cause-and-effect diagram: phone, systems and browsers

On narrow screens the phone operation of the board tools applies: "☰" expands the header, "+ Elements" opens the left panel, "✎ Properties" the right one. If you tap "+ Cause", the left panel closes and the right one opens with the name field of the new cause. Swiping on the drawing area moves the view.

The tool needs no folder functions and runs in all current browsers; Safari and Firefox save via the download folder, as described in the chapter 'How do I use a tool?'. The handover to the five whys only works within the same browser. What is not checked on real devices is listed in the chapter 'Which operating system and which browser?'.

- For multiple selection, the "Multiple selection" button at the bottom left of the drawing area switches the mode: tapping adds an element or removes it, dragging on an empty area draws a selection frame.

Cause-and-effect diagram: tips

- Collect first, assess later: while collecting, everything goes on the wall without anyone objecting. Only afterwards do you ask of each entry whether it is proven.
- Evidence is something you can show – a figure, a measurement, an observation. A guess about the state of a device is not evidence.
- Leave ruled-out causes in place. Otherwise someone will ask about them again at the next meeting.
- A main bone without causes is rarely empty because there is nothing there. Often that is exactly where the unspoken lies.

SIPOC



SIPOC: purpose and use

SIPOC stands for supplier, input, process, output, customer. In plain words: who supplies what, what happens with it, what comes out, who receives it? The tool shows these five questions as five coloured columns; in the middle are four to seven rough process steps, plus the start and the end stated explicitly and one requirement per input and output.

The value lies not in the table but in the conversation about it. A SIPOC clarifies the boundaries of a process before anyone starts to model it – and that is exactly where process projects most often fail: everybody uses the same name and means a different stretch of work. I use it at the start of a process project or workshop; half an hour is often enough.

A SIPOC shows neither branches nor exceptions, neither times nor volumes. It is the common understanding before the work – not its result. For the detailed sequence there are process models, in the 8EM Modeller for example BPMN, event-driven process chains and SeeMe; the process frame goes there as a table.

The tool is still in beta. You will find it on the website on the Experimental page, as a single file to download and in the suite in the categories Business Support Tools and Productivity tools. It saves to files with the extension `.sipoc.json`; a file can hold several processes. More in the article SIPOC – the half hour that saves process projects.

SIPOC: step by step

1. Open the tool. “Example” shows two finished processes with entirely fictitious details.
2. Click on an empty spot and enter “Name of the process” and “Company / area” on the right.
3. Settle the start and the end under “Settings”: “The process begins with …” (the triggering event) and “The process ends with …” (the result that concludes it).
4. Work from the inside out: first create four to seven rough steps in the Process column – on the left with the + button below the column, or in the picture with the dashed field at the end of the column.
5. For each step enter “Who does it?”, “Duration / effort” and “Which IT is used?”; change the order with “▲” and “▼”.
6. Add output and customer: what comes out, who receives it? For each output the form, “To which customer?” and “Requirement / criterion”.
7. Add input and supplier last, each input with “From which supplier?” and the requirement.
8. For suppliers and customers record “Type”, “Contact / role” and the expectation.
9. Work through the “Check points” on the right until it says “All check points are met.”.
10. Save with “Save” and hand the process frame to the 8EM Modeller via “🔗 Connection ▾” or output the report via “Export ▾”.
11. For the next process, choose “+ New process” at the top left; the selection above it switches between the processes.

SIPOC: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); “▾” between them shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …” – as described in the chapter ‘How do I use a tool?’.
- “–”, “+” and “Fit to view” – change the scale and show everything; “⛶ Large picture” hides the side panels and shows them again.
- “🔗 Connection ▾” and “Export ▾” – see below; “Example” and “Help”.

Left panel

- At the top the selection of the process (“Process 1 of 3 in this file”, each entry with its number of steps), “+ New process” and “⋯ Manage processes” – select, ✎ rename, ▲ ▼ move, 🗑 delete; undo remains possible.
- For each column a heading with letter, name and count, below it the guiding question – such as “Who supplies what the process needs?” or “Four to seven rough steps – no more.” –, the entries of the column and a +

button with the column name that creates a new entry.

Properties on the right

- With nothing selected: “Name of the process”, “Company / area”, “Settings” with “The process begins with …” and “The process ends with …”, a note for the report and the analysis.
- Every entry: “Name” and “Explanation”, “▲” and “▼” for the order, “Delete”.
- Process step: “Who does it?” (role or post), “Duration / effort”, “Which IT is used?”.
- Supplier and customer: “Type” (open, internal, external, customers, authority), “Contact / role”, “What do we expect from the supplier?” or “What do customers expect?”. Once linked to the master data, the name comes from there: “The name comes from the master data.” with the button “open in the master data”.
- Input and output: the form (document, “Data / record”, “Material / goods”, “Service / information”, payment), “From which supplier?” or “To which customer?”, “Requirement / criterion”. If the supplier or customer named is not in the outer column, a note points this out.
- “Check points” – the number of entries per column and notes: missing start or end, more than seven or fewer than three steps, no customer, no output, outputs without a requirement. Below it the “Steps” table with number and who; a click selects the step. With several processes, “All processes in this file” follows, with steps and “Start and end”; a click selects the process.

In the picture

- Five columns with letter, name and guiding question; the process steps are numbered and joined by arrows, and every entry has an extra line (such as who, duration, IT). The start and the end appear above the picture.
- The dashed golden field at the end of each column creates an entry there; it only appears on screen, not in the export.
- A click selects, a double-click or `F2` jumps to the name field, dragging the background moves the view, the mouse wheel zooms.
- Right mouse button: “✎ Edit”, “▲ up”, “▼ down” and “🗑 Delete” (`Del`); `Esc` closes open menus.

SIPOC: saving, export and handovers

“Save” creates a `.sipoc.json` file. From the first change the tool also keeps a draft in the browser and restores it the next time you open it; “New” deletes it.

“Export ▾” offers “PDF (A4 landscape)”, “PDF (A3 landscape)”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image”. “Print report” shows the “Process frame” with start and end, the SIPOC as a table and, for each column, the entries in detail with explanation and requirement or expectation. “Entries as a table (CSV)” outputs all entries for Excel.

Several processes are kept in the same file; older versions of the tool open it and show the selected process. Picture, “Print report” and “Entries as a table (CSV)” apply to the selected process; from two processes on there are also “Print report – all processes” and “Entries of all processes as a table (CSV)” with a column for the process.

Under “🔗 Connection ▾”:

- “📐 Process from the 8EM Modeller (model file)” – reads a model file and takes over a process with its sub-steps; empty details for title, start and end are filled in. You then add suppliers and customers here.
- “📐 Process frame for the 8EM Modeller” – downloads a table with the process and its steps for level 6 (processes).
- “📐 Suppliers and customers for the 8EM Modeller” – downloads a table with suppliers and customers as organisations for level 7a.
- “📐 All processes for the 8EM Modeller” – from two processes on, every process with its steps in one table (level 6).
- “📐 Suppliers and customers of all processes” – each organisation once; “Link with” names every process it appears in.
- After the download the “Table for the 8EM Modeller” window explains the way: load the model in the modeller, specify the file via “Import › ⬆ Bulk import (Excel/CSV)”, choose the target level. Identical names count as an

update there; no duplicates arise.

- "👥 Open master data" – suppliers and customers can be linked to the organisations of the master data; after that the master data lead. " ❔ How does this fit together?" explains all the routes.

The SIPOC deliberately has no connection to the CMDB, the ITSM or tasks. In the suite the chapter 'Tools in the suite: working together' applies.

SIPOC: phone, systems and browsers

On narrow screens the phone operation of the board tools applies: "☰" expands the header, " + Elements" opens the left panel, "✎ Properties" the right one. If you tap the + button of a column in the left panel, the panel closes and the right one opens with the name field of the new entry. Swiping on the drawing area moves the view. The selection of the process, " + New process" and "⋯ Manage processes" are at the top of the " + Elements" window.

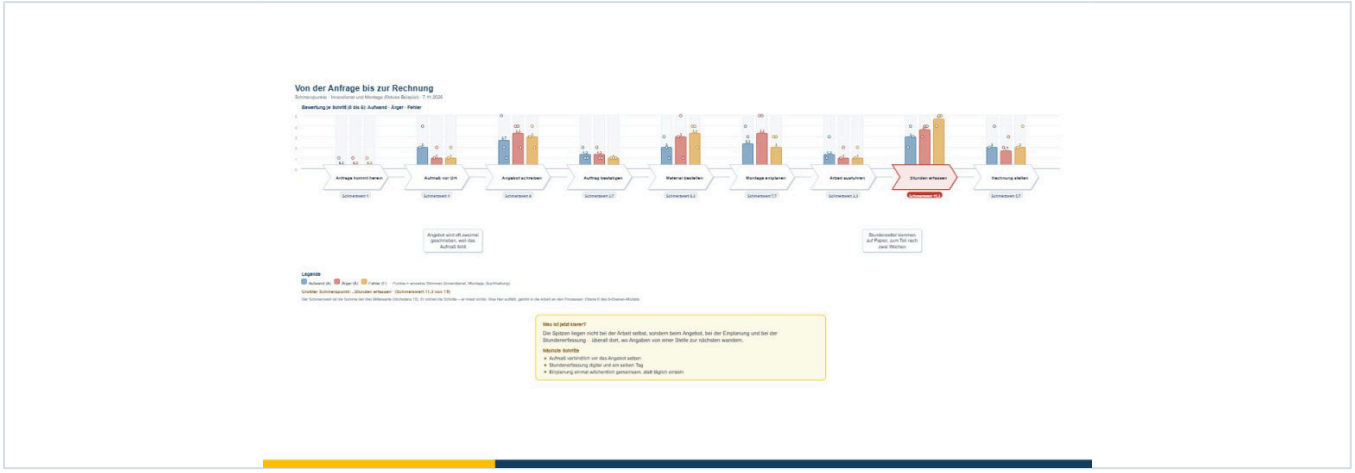
The tool needs no folder functions and runs in all current browsers; Safari and Firefox save via the download folder, as described in the chapter 'How do I use a tool?', and the tables for the 8EM Modeller end up there too. What is not checked on real devices is listed in the chapter 'Which operating system and which browser?'.

- For multiple selection, the "Multiple selection" button at the bottom left of the drawing area switches the mode: tapping adds an element or removes it, dragging on an empty area draws a selection frame.

SIPOC: tips

- Do not start on the left: who supplies something is hard to say without the process. First the steps, then output and customer, last input and supplier.
- Take time over the start and the end. Two sentences often take a long discussion – rightly so, because afterwards everybody is talking about the same thing.
- Stay rough: anyone writing down ten steps has already started modelling and loses the overview.
- A name is not a requirement. For every output, write down how you can tell that it is in order.
- An empty customer column is a finding: often the real customer of an internal process has never been asked what it needs.

Pain points in the process



Pain points in the process: purpose and use

The remark that things don't run smoothly here is almost always true – and useless. The tool "Pain points in the process" turns it into something you can work on: the process appears as a **chain of steps**, and above each step there are three bars for **effort**, **trouble** and **error-proneness**, each from 0 to 5. Those involved set their own points, several voices one above the other. Where the peaks cluster is the pain point.

I use it to start a team conversation: within an hour you have a solid list of the steps that hurt. What stands out belongs in the work on the processes – level 6 of the 8-Level Model – and often leads on to the organisation (level 7) and to the tools and IT systems (level 8).

The ratings are assessments by those involved, not measurements; the pain score ranks, it does not measure. The tool is a reflection and conversation model, not a diagnostic instrument: what is rated are steps, not people.

The tool is still in beta. You will find it on the website on the Experimental page, as a single file to download and in the suite in the categories Business Support Tools and People and coaching. It saves files with the extension `.schmerzpunkte.json`. More in the article Pain points in the process; the route into the 8EM Modeller is described in Goal system and pain points into the 8EM Modeller at one click.

Pain points in the process: step by step

1. Open the tool. “Example” shows a fictitious business with nine steps and three people giving ratings.
2. Click on an empty spot and enter “Title”, “Area or team” and “Date” on the right.
3. On the left under “Who is rating?”, enter everyone who rates in the field “+ Person, Enter” – names or, better, roles.
4. Under “Process steps”, enter the steps in the field “+ Step, Enter”; `Enter` appends each one at the end.
5. Change the order by dragging a step to the left or right in the picture.
6. Choose at the top left who is rating now, click a step and set the three sliders on the right. Go round the group – each person on their own, ideally without seeing the others' figures.
7. Read the picture: the bar shows the mean value, the small dots the individual voices, and below each step stands the pain score.
8. Under “Analysis” on the right, see which step is the largest pain point and where the assessments differ by three points or more.
9. Record the result under “What is clearer now?” and one measure per line under “Next steps”.
10. Save with “Save”, print with “Print record” and, if you wish, use “📤 Hand over to the 8EM Modeller”.
11. After a change to the process, create a copy with “+ Picture” and rate again – the comparison shows whether it helped.

Pain points in the process: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); the small arrow between them shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …” – as described in the chapter ‘How do I use a tool?’.
- Minus, plus and “Fit to view” change the scale; “⛶ Large picture” hides and shows the side panels.
- “Export ▾” (see below), “Example” and “Help”.

Left-hand panel

- “Who is rating?” – the people giving ratings with the number of steps each has rated; a click chooses who is rating now. “+ Person, Enter” adds someone; a button below removes the selected person with their ratings (after a confirmation).
- “Selected person in the master data” and “👥 Choose from the master data …” – with the master data, the selected person is kept as a person, organisation, role or organisational unit.
- “Process steps” – “+ Step, Enter” appends a step.
- “Elements” – drag “Process step” or “Note” onto the picture or click them; notes hold quotations, observations and ideas.

Properties on the right

- Step selected: “What happens here?”, the three sliders of the selected person, “All voices” as a table and the pain score of the step (15 at most); then “Note (appears only in the record)”, “Colour”, “★ highlight”, “✎ Edit in picture (F2)”, “⧉ Duplicate” and “Delete”.
- Nothing selected: “Title”, “Area or team”, “Date”; the picture section with “Name of this picture”, “+ Copy as new picture”, “+ Empty picture”, arrows to reorder and “Delete picture”.
- “What is clearer now?” and “Next steps” – result and measures, one line per step.
- “Measures → Tasks” – pass the next steps on with “📋 Hand over as tasks …”.
- “📤 To the 8EM Modeller” – handover with status and feedback (see below).

- “Analysis” – all steps with mean values and sum, sorted by pain score (a click selects the step); the largest pain point, the places where the assessments differ widely, and who has not yet rated every step.
- “Appearance” – “Show bars above the steps”, “Show individual voices as dots”, “Show the pain score beneath the steps”, “Highlight the largest pain point”, plus “Coloured”, “Small cards”, “Title above the picture” and “PDF format”.

In the picture and below it

- A click selects a step, `F2` renames it, dragging left or right changes the order, `Del` deletes it.
- Right-click on a step: “✎ Edit text”, “★ Highlight on / off”, “⧉ Duplicate” (`Ctrl` + `D`), “🗑 Delete”. On the empty area: “＋ Append a process step”, “＋ Create picture as a copy” and “Fit everything to view”.
- Below the picture the pictures appear as tabs, for instance “Today” and “After the improvement”: a click shows one, a double-click renames it, “＋ Picture” creates a copy.

Pain points in the process: saving, export and handovers

“Save” creates a file `.schmerzpunkte.json`. From the first change onwards the tool also keeps an automatic draft in the browser and restores it the next time you open it; then secure it with “Save as …”.

“Export ▾” offers “PDF” (A4 or A3, set under “Appearance”), “PowerPoint (.pptx)” with editable shapes, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image” – each the picture shown. “Print record” shows all pictures with steps, mean values and individual voices; print it or save it as a PDF. “Entries as a table (CSV)” outputs mean values and pain score per step and the individual ratings for Excel.

To the 8EM Modeller: under “📤 To the 8EM Modeller” (nothing selected in the picture), “📤 Hand over to the 8EM Modeller” passes the picture shown as a status to one process element on level 6: per step the mean values, the pain score and the range of the assessments, plus result and next steps. Who rated how is not passed on – only the number of raters. In the Modeller choose “Import ▾” and “🩹 Pain points from the coaching tool”, then the process or a new one; if you wish, the steps become sub-processes.

Handing over again replaces the previous status; nothing is created twice. Here you see when and to which process it was taken over and whether it was renamed or removed in the model. “Changed since then” reminds you to hand over again; “Withdraw” takes back a handover not yet taken over. The route runs via this browser's shared storage, in the suite via its server; otherwise choose the saved file in the Modeller.

Tasks: “📋 Hand over as tasks …” passes the next steps to the suite's tasks, without the suite to the Kanban board in this browser. The status comes back. Nothing is handed over unless you click.

In the suite you open and save via the shared storage, as described in the chapter ‘Tools in the suite: working together’.

Pain points in the process: phone, systems and browsers

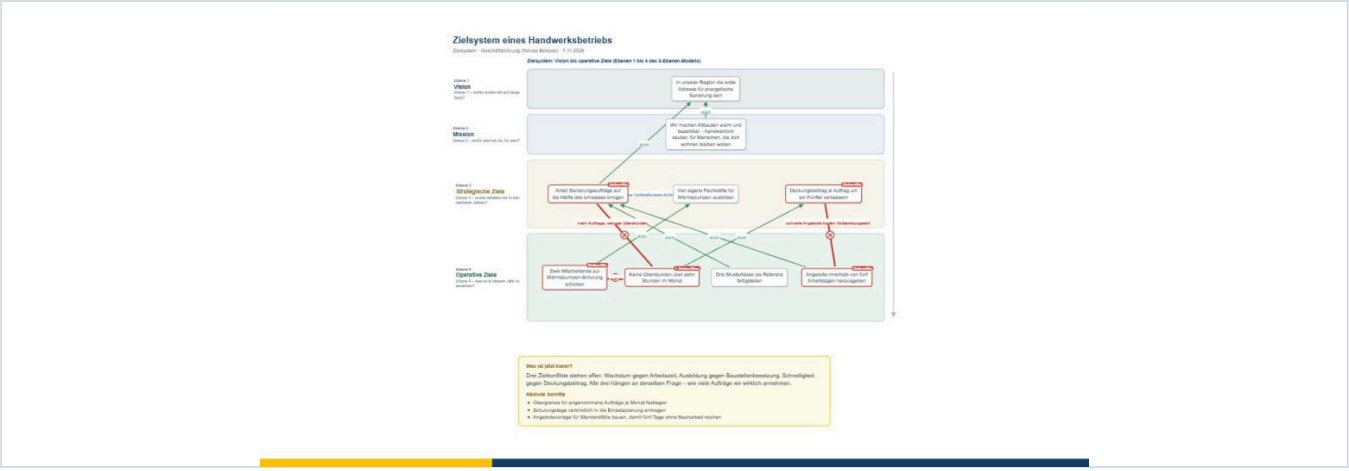
On narrow screens the phone layout of the board tools applies: the menu button folds out the header, “＋ Inputs” opens the left-hand panel with people, steps and elements, “✎ Properties” the right-hand panel with the sliders. Swiping on the drawing area moves the picture. Select several elements with the “Multiple selection” button at the bottom left of the picture.

The tool works with single files and runs in all current browsers; Safari and Firefox save via the downloads folder (chapter ‘How do I use a tool?’). Without the suite, the handovers only work within the same browser. What has not been tested on real Macs and phones is set out in the chapter ‘Which operating system and which browser?’.

Pain points in the process: tips

- Keep the three measures apart: a lot of effort calls for automation, a lot of trouble for an agreement, a lot of mistakes for a better template or a check in the right place.
- The places where the assessments differ widely are often more revealing than those everyone agrees on.
- With names it is possible to trace who rated what. Agree beforehand who sees the file, or work with roles instead of names.

Goal System



Goal System: purpose and use

Almost every goal system lists only what is to be achieved; the contradictions are fought out somewhere else. The "Goal System" tool arranges goals on four levels, one above the other: **vision**, **mission**, **strategic goals** and **operational goals**. These are levels 1 to 4 of my 8-Level Model, and they have the same names here as in the 8EM Modeller.

Between the goals you draw three kinds of relationship: **supports** (green), **requires** (blue, dashed) and **conflicts with** (red, thick, with a cross) – more of one means less of the other. The conflict lines are the real yield: a goal conflict spoken out is not a flaw but a decision that is due – priority, balance or a changed goal.

I use the tool in goal workshops, for a whole company or one area. It arranges and shows connections; which goals are right and how a conflict is decided remains your decision. It is a reflection and conversation model, not a diagnostic instrument.

The tool is still in beta. You will find it on the website on the Experimental page, as a single file to download and in the suite in the categories Business Support Tools and People and coaching. It saves files with the extension `.zielsystem.json`. More in the article Making goal conflicts visible; the handover into the 8EM Modeller is described in Goal system and pain points into the 8EM Modeller at one click.

Goal System: step by step

1. Open the tool. "Example" shows the fictitious goal system of a craft business with nine goals and three goal conflicts.
2. Click on an empty spot and enter "Title", "Company or area" and "Date" on the right; under "Template" choose "Company" or "Area or team".
3. On the left under "Goals by level", enter the goals for each level, each in one sentence; `Enter` creates a card. The fold-out "Guiding questions" help with the wording.
4. Arrange the cards in the picture by dragging them.
5. Draw relationships: click a goal and drag from the golden handle beside it to the other goal – or click the handle and then the goal.
6. Set the "Type" of the relationship on the right: supports, requires or conflicts with.
7. Make every goal verifiable: "How will we notice that it has been reached?", "Who is responsible for it?" and, if needed, "By when? (date – it can then also be handed over as a task)".
8. On the right, see all red lines together under "Goal conflicts" and what is still missing under "Analysis".
9. Record the result under "What is clearer now?" and one measure per line under "Next steps".
10. Use " + Picture" to show in a copy what the goal system looks like after the clarification.
11. Save with "Save", print with "Print record" and, if you wish, hand the goals over with " 📤 Hand over to the 8EM Modeller".

Goal System: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); the small arrow between them shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …” – as described in the chapter ‘How do I use a tool?’.
- Minus, plus and “Fit to view” change the scale; “⛶ Large picture” hides and shows the side panels.
- “Export ▾”, “Example” and “Help”.

Left-hand panel

- “Goals by level” – one field “+ Entry, Enter” per level with a counter; a click on the level's name opens it on the right. Under “Guiding questions” a click puts a question into the field as a prompt.
- “Elements” – drag a card onto the picture or click it.

Properties on the right

- Goal selected: “Goal”, “Level”, the three fields from step 6, “Colour”, “★ highlight”, the list “Relationships” (a click selects the line), “Note (appears only in the record)”, “✎ Edit in picture (F2)”, “⧉ Duplicate”, “Delete”.
- Relationship selected: “Type” with a short explanation, “Label (optional)”, “⇄ Reverse direction”, “／ Straight” (for a shaped line) and “Delete”.
- Level selected: “Name”, “Guiding questions (one per line)”, “Follow-up question”, “+ Card here”, “Arrange” and “Restore template”.
- Nothing selected: “Title”, “Company or area”, “Date”, “Template”; the picture section with “Name of this picture”, “+ Copy as new picture”, “+ Empty picture”, arrows to reorder and “Delete picture”.
- “Goal conflicts” – the number of goals, relationships and goal conflicts, then every conflict as a pair; a click selects the line.
- “What is clearer now?” and “Next steps”, “Measures → Tasks” and “📮 To the 8EM Modeller” (see below).
- “Analysis” – names the goal conflicts and asks about gaps: goals without any relationship, operational goals with no link upwards, strategic goals with no operational implementation, goals without an indicator. Plus “Arrange all cards”.
- “Appearance” – “Show the type of relationship on the lines”, “Show goal conflicts only (hide supports and requires)”, “Coloured”, “Small cards”, “Title above the picture”, “Move cards fully into the area when dropped” and “PDF format”.

In the picture and below it

- Drag goals freely; a double-click in a level creates a new goal; `F2` edits, `Del` deletes.
- Right-click on a goal: “✎ Edit text”, “Place in area”, “Relationship to …” with the three types (then click the goal), “★ Highlight on / off”, “⧉ Duplicate” (`Ctrl` + `D`), “🗑 Delete”. On a line: the type, “⇄ Reverse direction”, “🗑 Delete relationship”. On the area: “+ Card here”, “Arrange all cards”, “+ Create picture as a copy”, “Fit everything to view”.
- Shaping lines: dragging a selected line inserts a handle, dragging ◆ shapes it (snaps horizontally/vertically to the neighbouring point, `Alt` = free), double-clicking ◆ removes it, “／ Straight” (on the right or via the right mouse button) removes all of them. A double-click on a line jumps to its type.
- Below the picture the pictures appear as tabs, for instance “Today” and “After the clarification”: a click shows one, a double-click renames it, “+ Picture” creates a copy.
- Keys: `N` new goal; while typing `Enter` finishes, `Tab` moves to the next card, `Esc` cancels – also when connecting; arrow keys move the selection.

Goal System: saving, export and handovers

“Save” creates a file `.zielsystem.json` . From the first change onwards the tool also keeps an automatic draft in the browser and restores it the next time you open it; then secure it with “Save as …”.

“Export ▾” offers “PDF” (A4 or A3, see “Appearance”), “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image” – each the picture shown. “Print record” shows all goals and relationships per picture; print it or save it as a PDF. “Entries as a table (CSV)” outputs goals and relationships for Excel.

To the 8EM Modeller: under " 📤 To the 8EM Modeller" (nothing selected in the picture), " 📤 Hand over to the 8EM Modeller" passes the picture shown. In the Modeller the goals become elements of levels 1 to 4, "supports", "is a prerequisite for" and "conflicts with" become influence relationships of the same name ("supports" and "is a prerequisite for" also links), and every goal conflict also becomes a note on both goals with a hint in the model check. Responsibility is assigned to a role or person on level 7a – never as free text. In the Modeller take the status over via "Import ▾" and " 🎯 Goal system from the coaching tool".

Handing over again replaces the previous status; the Modeller recognises the goals and creates nothing twice. Here you see when and into which model it was taken over, and for every goal its name in the model or that it was removed – updated whenever the model is saved. "Changed since then" reminds you to hand over again; "Withdraw" takes back a handover not yet taken over. The route runs via this browser's shared storage, in the suite via its server; otherwise the Modeller reads the saved file.

Tasks and master data: " 📋 Hand over as tasks …" passes goals with a date and the next steps to the suite's tasks, without the suite to the Kanban board in this browser; the status – open, in progress, done – comes back. With the master data, "Who is responsible for it?" refers to a person or role; 👥 opens the selection, where you can also create one.

In the suite you open and save via the shared storage, as described in the chapter 'Tools in the suite: working together'.

Goal System: phone, systems and browsers

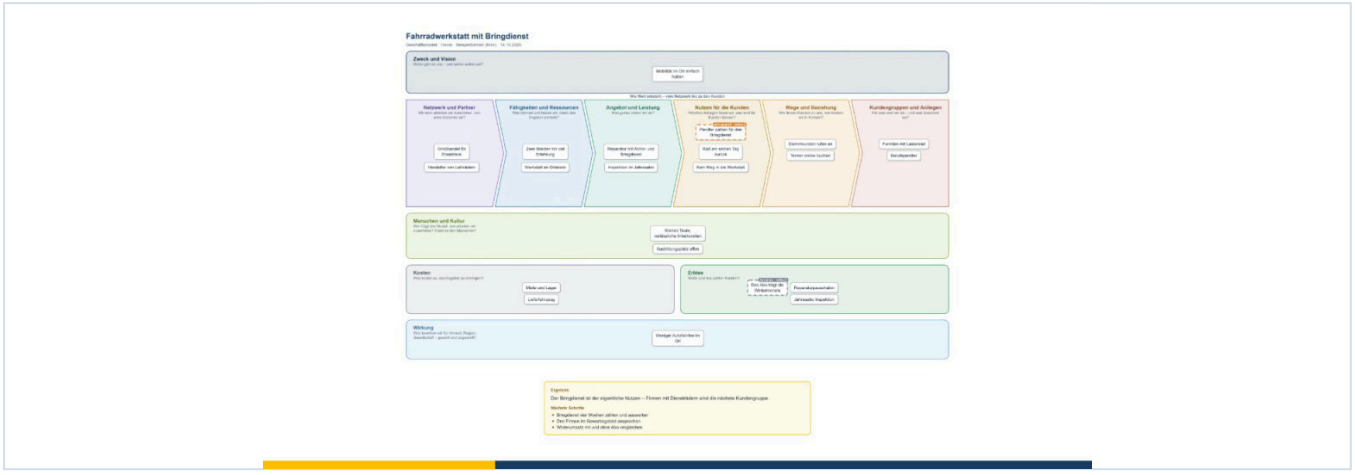
On narrow screens the phone layout of the board tools applies: the menu button folds out the header, " + Elements" opens the left-hand panel, "✎ Properties" the right-hand one. A tapped element appears in the middle of the picture. For relationships, tap the golden handle, then the goal. Select several elements with the "Multiple selection" button at the bottom left of the picture.

The tool works with single files and runs in all current browsers; Safari and Firefox save via the downloads folder (chapter 'How do I use a tool?'). Without the suite, the handovers only work within the same browser. What has not been tested on real Macs and phones is set out in the chapter 'Which operating system and which browser?'.

Goal System: tips

- Check pairs that compete for the same time, the same money or the same people – that is where the goal conflicts sit.
- "Show goal conflicts only (hide supports and requires)" makes the picture clear for the decision round.
- A goal without an observable indicator can neither be reached nor missed – write something observable, not a vague wish to get better.
- The guiding question above everything: "Does it serve people?"

Business Model Board



Business Model Board: purpose and use

The Business Model Board describes a business model on a single page as a **flow of value**. The purpose stands at the top. In the middle, a chain of arrows leads from the network via capabilities, offering and benefit and the ways to the customers. Below are the people and the culture that carry the model – with the guiding question of my 8-Level Model, “Does it serve people?” –, costs and revenue, and the impact on the environment, the region and society.

A business model matters to every trade business, every practice and every self-employed person. In a workshop the board shows where the model holds up, where it wobbles and where change should start. The **assumptions** are particularly valuable: you mark what is uncertain and test it in a targeted way. A second picture shows what the business model should look like tomorrow. In the 8-Level Model, purpose and vision correspond to vision and mission, capabilities to capabilities, people and culture to the organisation.

The board is an original design by MY COACHING FOR YOU: it arranges the usual business model questions differently and adds purpose, people and culture, and impact. It is not a copy of the Business Model Canvas and is not affiliated with its creators. It is a reflection and conversation model and does not replace legal, tax or financial advice.

The tool is still in beta. You will find it on the website on the Experimental page, as a single file to download, and in the suite in the Business Support Tools category. It saves files with the extension `.geschaeftsmodell.json`. More in the article Describing your business model as a flow of value.

Business Model Board: step by step

1. Open the tool. “Example” shows a fictitious bicycle workshop with the pictures “Today” and “Target picture”.
2. On the right, under “Template”, choose “Company or area” or – for self-employment, with blocks such as “My why” – “Self-employment or professional profile”, and fill in “Title” and “For whom / company”.
3. On the left, under “Collect”, enter items for each building block; `Enter` creates a card. A proven approach: first “Purpose and vision” and “Customer groups and concerns”.
4. Add the way there – network, capabilities, offering, benefit and ways – then people, costs, revenue and impact. “Guiding questions” offers prompts.
5. Whatever is uncertain becomes an “Assumption”: drag the element from “Elements” onto a building block, or change the “Type” of a card on the right.
6. For every assumption set the “Status” and, if needed, tick “critical – the model depends on it”; note how you will test it.
7. Read the “Analysis” on the right: it counts the assumptions, names open critical ones and asks “Questions on consistency:”, such as a benefit without a customer group.
8. Create a copy with “ + Picture”, name it “Target picture”, for example, and change it independently of today’s picture.
9. Record the “Result” and the “Next steps” on the right (one line per step).
10. Save, and print all pictures with the assumptions using “Print record”.

Business Model Board: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); “ ▾ ” shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …” – as described in the chapter ‘How do I use a tool?’.
- “–” and “+” zoom out and in, “Fit to view” shows everything, “⛶ Large picture” hides and shows the side panels.
- “Export ▾” – pictures, record and table (see below); “Example” and “Help” with the quick guide.

Left panel

- “Collect” – for each building block a header with the number of cards (a click opens the block on the right) and a field “+ Entry, Enter”.
- “Guiding questions” – expands the questions of the block; a click puts the question into the input field as a prompt.

- “Elements” – “Cards” and “Assumption”: drag onto the picture or click.

Picture bar above the picture

- One tab per picture with the number of cards; a click shows the picture, a double-click renames it. “ + Picture” creates a copy of the picture shown.

Properties on the right

- With nothing selected: “Title”, “For whom / company”, “Date”, “Template”; plus the sections for the picture shown with “Name of this picture”, “ + Copy as new picture”, “ + Empty picture”, ◀ and ▶ to reorder, “Delete picture” and the changes since the previous picture, “Result” and “Next steps”, “Analysis” with “Arrange all cards”, “Appearance” and “How it works”.
- “Appearance” – “Coloured”, “Small cards”, the result in the picture, “Title above the picture”, “Move cards fully into the area when dropped”, “PDF format” (A4 or A3), “Guiding question under the name of the building block” and the note on the flow of value above the chain of arrows.
- Card: “Text”, “Area”, “Type”, “Colour”, “★ highlight”; for an assumption “Status” (not yet checked, being checked, confirmed, refuted) and “critical – the model depends on it”; “Note (appears only in the record)”, “Follow-up questions” and the buttons “✎ Edit in picture (F2)”, “⧉ Duplicate”, “Delete”.
- Several cards: “All into the area”, “⧉ Duplicate”, “Delete all”.
- Building block: “ + Card here”, “Arrange”, “Name”, “Guiding questions (one per line)”, “Follow-up question”, “Restore template” and the list “Cards in this area”.

In the picture

- Assumptions have a dashed frame with their status – solid once confirmed, stronger if critical.
- A click selects, `Shift` + click or `Ctrl` + click selects several, `Shift` + dragging on an empty area draws a frame.
- Drag a card into another building block – it moves fully inside; with `Alt` it stays exactly where you drop it.
- Double-clicking a card edits its text, double-clicking inside a block creates a card. Dragging the background moves the view, the mouse wheel zooms; a file dropped onto the picture is opened.
- Right-click on a card: “✎ Edit text”, “Place in area”, “Type”, for assumptions “Status of the assumption”, “★ Highlight on / off”, “⧉ Duplicate”, “🗑 Delete”.
- Right-click on the area: “ + Card here”, edit the building block, “Arrange cards here”, “Arrange all cards”, “ + Create picture as a copy”, “Fit everything to view”.

Keys

- `N` creates a new card, `F2` or `Enter` edits the text; while typing `Enter` finishes, `Tab` finishes and moves to the next card, `Shift` + `Enter` adds a new line, `Esc` cancels.
- `Del` deletes – after one confirmation if several are selected, `Ctrl` + `D` duplicates, `Ctrl` + `A` selects all, arrow keys move (with `Shift` further), `Esc` clears the selection.

Business Model Board: saving, export and handovers

“Save” creates a file `.geschaeftsmodell.json`. After every change the tool also keeps an automatic draft in the browser, restores it the next time you open it and asks you to save it with “Save as …”. “New” deletes the draft.

Under “Export ▾” you find “PDF” (the picture shown, in A4 or A3), “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image”. “Print record” brings together all pictures with the entries for each building block, the changes since the previous picture, the table “Assumptions and their test status”, and the result and next steps; in the print window you can save it as a PDF. “Entries as a table (CSV)” outputs all cards of all pictures for Excel, with the columns “Assumption: status” and “critical”.

The board offers no handovers to other tools; you pass the result on as a file, record or table. In the suite you open and save via the shared storage, as described in the chapter ‘Tools in the suite: working together’.

Business Model Board: phone, systems and browsers

On narrow screens the phone controls of the board tools apply: "☰" expands the header, " + Elements" opens the left panel, "✎ Properties" the right panel. If you tap an element in the panel, the tool places it in the middle or in the matching building block. Swiping on the drawing area moves the picture; you zoom with two fingers. Select several elements with the "Multiple selection" button at the bottom left of the picture. I have tested this in simulated screen sizes with touch, not on real devices.

The board works with single files and needs no folder function, so it runs in all current browsers. In Safari and Firefox it saves via the downloads folder, as described in the chapter 'How do I use a tool?'. The tool loads nothing from the internet and sends nothing.

Business Model Board: tips

- Start with purpose and customers – only then comes the way there.
- Test critical assumptions first – with a small trial, a conversation or a figure – and write down in the note how.
- Take the "Questions on consistency:" seriously: a benefit without a customer group or revenue without costs shows a gap in the model.
- Create the target picture as a copy. The record then shows exactly what is new, what is dropped and which assumption has been confirmed.

Stakeholder map



Stakeholder map: purpose and use

Every initiative – new software, a move, a restructuring – affects people who are not on the project team. The stakeholder map shows how much **influence** someone has on the initiative (vertical, top = a lot) and how great their **interest or degree of being affected** is (horizontal, right = great). The **colour** shows the attitude towards the initiative: supporting, neutral, critical, opposed or still unclear. Groups such as a works council appear as squares, individuals as circles.

The position results in four fields, each with a strategy: "Involve closely" (a lot of influence, strongly affected – involve early, shape together, coordinate regularly), "Keep satisfied" (a lot of influence, little affected), "Keep informed" (little influence, strongly affected) and "Monitor". Project leads and management can see where attention is needed and decide deliberately whom to involve and how. A second picture shows where attitudes and involvement should develop.

The grid is based on the widely used influence-interest grid after Mendelow; the names, strategies and notes are my own wording. The map reflects assessments, not judgements of people – it is a reflection and conversation model. Assessments of individual people are personal data: name individuals only where necessary, and treat the file confidentially.

The tool is still in beta. You will find it on the website on the Experimental page, as a single file to download, and in the suite in the Business Support Tools and People and coaching categories. It saves files with the extension `.stakeholder.json`. More in the article Stakeholder map: who is affected, who has influence?.

Stakeholder map: step by step

1. Open the tool. “Example” shows the fictitious introduction of a ticket system with the pictures “Today” and “Target”.
2. On the right, under “Template”, choose “Project or initiative” or “Change in the organisation”, and fill in “Title” and “Project or team”.
3. Collect everyone involved – individuals and groups, internal and external. To do so, drag an attitude from “Elements” onto the map and type the name.
4. For groups, tick “Group or organisation (not an individual person)” on the right.
5. Move each stakeholder until influence and interest are right. On the right, “Position” shows it in words and per cent, together with the strategy of the field.
6. Fill in “Role or organisation”, “Interests and expectations”, “Fears and objections”, “How to involve them? (measure, communication)” and “Who takes care of it?”.
7. On the left, under “Notes per field”, record what applies to a whole field; `Enter` creates a card.
8. Read the “Analysis” on the right: who is in which field, how the attitudes are distributed and where attention is needed.
9. Create a copy with “ + Picture”, name it “Target” and show in it where the stakeholders should end up. Arrows show the change.
10. Record the “Result” and “Next steps”, save, and print with “Print record”.
11. Review the map regularly as the initiative progresses.

Stakeholder map: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); “ ▾ ” shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …” – as described in the chapter ‘How do I use a tool?’.
- “−” and “+”, “Fit to view”, “⛶ Large picture” – view and side panels.
- “Export ▾ ” (see below), “Example” and “Help” with the quick guide.

Left panel

- “Notes per field” – for each field an input “+ Entry, Enter” and the “Guiding questions” of the field; a click on the header opens the field on the right.
- “Elements” – “supporting”, “neutral”, “critical”, “opposed”, “Attitude unclear” and “Cards”: drag onto the map or click.

Picture bar above the picture

- One tab per picture; a click shows it, a double-click renames it. “ + Picture” creates a copy of the picture shown.

Properties on the right

- With nothing selected: “Title”, “Project or team”, “Date”, “Template”, the sections for the picture shown (with “ + Copy as new picture”, “ + Empty picture”, “Delete picture” and the changes since the previous picture), “Result” and “Next steps”, “Analysis”, “Appearance” and “How it works”.
- “Appearance” – among other things “Label axes”, “Role instead of attitude as second line under the name”, “Show change compared with the previous picture (arrow from the earlier position)”, “Coloured”, “Title above the picture” and “PDF format”.
- Stakeholder: “Name”, “Group or organisation (not an individual person)”, “Attitude towards the project”, “Position” (with the position in the previous picture), the five description fields, “★ highlight”, “Note (appears only in the record)” and the buttons “✎ Rename in picture (F2)”, “⧉ Duplicate”, “Delete”.
- If the tool is linked to the master data, choose for each stakeholder under “In the master data”: “as a person”, “as a role” or “do not take over”.
- Field: “ + Card here”, “Arrange”, “Name”, “Guiding questions (one per line)”, “Follow-up question”, “Restore template”.

- “Analysis” – a table of fields and stakeholders, the distribution of attitudes and pointers: high influence combined with a critical or opposed attitude, a still unclear attitude among influential stakeholders, and stakeholders in the field “Involve closely” without a measure.

In the picture

- You drag stakeholders freely; while dragging, the position and the target field appear next to the pointer. A star marks highlighted stakeholders.
- A click selects, `Ctrl` + click or `Shift` + click adds or removes, `Shift` + dragging on an empty area draws a frame; dragging the background moves the view, the mouse wheel zooms.
- The arrows of change (from the second picture on) can be clicked and shaped with handles.
- Right-click on a stakeholder: “✎ Edit text”, choose the attitude directly, “★ Highlight on / off”, “⧉ Duplicate”, “🗑 Delete”.
- Right-click on a field: “ + Card here”, edit the field, “Arrange cards here”, “Arrange all cards”, “ + Create picture as a copy”, “Fit everything to view”.

Keys

- `F2` renames, `Del` deletes, `Ctrl` + `D` duplicates, the arrow keys move, `N` creates a note card, `Esc` clears the selection.

Stakeholder map: saving, export and handovers

“Save” creates a file `.stakeholder.json`. After every change the tool also keeps an automatic draft in the browser and restores it the next time you open it; “New” deletes it.

Under “Export ▾” you find “PDF”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image” – each the picture shown. “Print record” shows for each picture the map and a table of all stakeholders, sorted by influence, with attitude, field, influence and interest in per cent, concerns, fears, measure and who takes care of it; plus the notes per field, the changes since the previous picture, the result and next steps. “Entries as a table (CSV)” outputs the same details for Excel.

The names of the stakeholders can be taken over into the master data – individuals as persons, groups as organisations; role, concerns and measures stay in the map. Only link them if these people really belong in your master data; how this works is described in the chapter ‘How do I use a tool?’. In the suite you open and save via the shared storage, as described in the chapter ‘Tools in the suite: working together’.

Stakeholder map: phone, systems and browsers

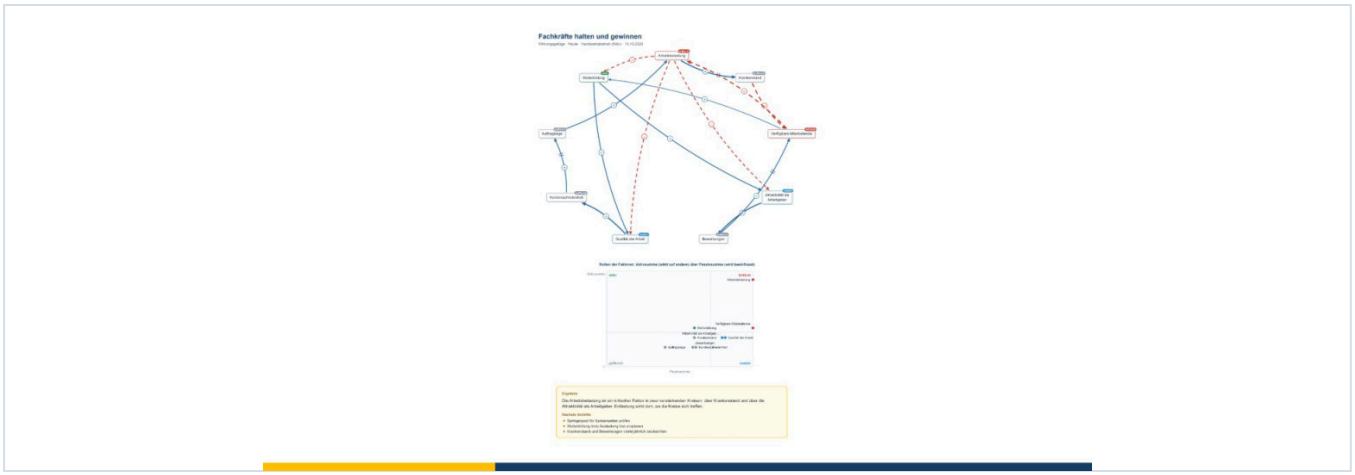
On narrow screens the phone controls of the board tools apply: “☰” expands the header, “ + Elements” opens the left panel, “✎ Properties” the right panel. If you tap an attitude in the panel, the new stakeholder appears in the middle of the map and can be dragged into place with your finger. Swiping on the empty area moves the picture; you zoom with two fingers. Select several elements with the “Multiple selection” button at the bottom left of the picture. I have tested this in simulated screen sizes with touch, not on real devices.

The tool works with single files and needs no folder function, so it runs in all current browsers. In Safari and Firefox it saves via the downloads folder, as described in the chapter ‘How do I use a tool?’. The tool loads nothing from the internet and sends nothing.

Stakeholder map: tips

- If the attitude of an influential stakeholder is unclear, a conversation clarifies more than any guess.
- With high influence and a critical attitude: understand concerns and fears before decisions are taken.
- Those strongly affected but with little influence need particularly reliable information.
- The “Target” picture with its arrows shows whom you want to move where – a good occasion to check the measures.
- Treat the file confidentially and name individuals only where necessary.

Impact Network



Impact Network: purpose and use

Many issues in companies are connected in loops: more staff reduces the workload, a lower workload reduces sickness absence, lower sickness absence increases the available working time. If you only look at one cause and one effect, you overlook such **feedback loops** and are surprised when well-intentioned measures fizzle out. The tool draws the factors of an issue and their reinforcing or dampening effects as a network – based on Frederic Vester's interconnected thinking.

This includes the **influence matrix**, which Vester called the "paper computer": for each factor it shows how strongly it acts on others (active sum) and how strongly it is influenced (passive sum). This gives its role: **active** (a possible lever), **critical** (accelerates, interventions with caution), **reactive** (rather an indicator) or **buffering** (stabilises, hardly a starting point). A reinforcing loop builds up, for better or for worse; a balancing loop stabilises.

The tool helps management and teams to understand an issue as a system: where is the best place to start? Which variables do we observe? Where could an intervention have unexpected consequences? It is a reflection and conversation model; the roles result solely from your assessments, and it is neither a simulation nor a forecast.

The tool is still in beta. You will find it on the website on the Experimental page, as a single file to download, and in the suite in the Business Support Tools category. It saves files with the extension `.wirkungsgefuege.json`. More in the article Interconnected thinking: impact network and influence matrix.

Impact Network: step by step

1. Open the tool. "Example" shows a fictitious craft business with nine factors, 14 effects and the pictures "Today" and "With measures".
2. Fill in "Title" and "For whom / system" on the right.
3. On the left, under "Factors", enter the variables that influence the issue; `Enter` creates a factor. Good factors are variable quantities such as "workload", not states; around 7 to 20 have proved their worth.
4. Arrange the factors clearly with "◯ Arrange in a circle", or drag them freely.
5. Select a factor and drag from the golden handle to the factor it acts on – or click the handle and then the target.
6. For many effects "▦ Influence matrix" is quicker: each row acts on the columns; a click on a cell steps through 0, +1, +2, +3, –1, –2, –3, a right-click steps back.
7. Click an effect and set its "Direction", "Strength" and, if needed, "delayed (takes effect only after a while)" on the right.
8. Read the "Analysis" on the right: active and passive sum, the role of each factor and all feedback loops. Below the network the role chart shows the position of all factors.
9. Create a variant with " + Picture", for example with a measure as a new factor, and compare the roles.
10. Record the "Result" and "Next steps", save, and print with "Print record".
11. Test the hypotheses in other tools: on the right (nothing selected) under " 📤 Use further: Outage simulation and 8EM Modeller", click " 📤 Hand over to Outage simulation and 8EM Modeller", then choose " 🔗

Connection ▾ › 🕸 From the Impact Network" in the outage simulation or "Import ▾ › 🕸 Impact Network" in the 8EM Modeller (see below).

Impact Network: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); " ▾ " shows the history.
- "New", "Open …" (`Ctrl` + `O`), "Save" (`Ctrl` + `S`), "Save as …" – as described in the chapter 'How do I use a tool?'.
- "−" and "+", "Fit to view", "⛶ Large picture" – view and side panels.
- "Export ▾ " (see below), "Example" and "Help" with the quick guide.

Left panel and picture bar

- "Factors" – input field "+ Factor, Enter", plus "▦ Influence matrix" and "◯ Arrange in a circle".
- "Elements" – "Factor": drag onto the picture or click.
- Above the picture one tab per picture (a click shows it, a double-click renames it), " + Picture" and "▦ Influence matrix".

Influence matrix

- A table of all factors: row acts on column, with "AS" (active sum), "PS (passive sum)" and the role; * stands for delayed, which you set in the picture.
- At the bottom "+ new factor, Enter" and " + Factor"; "Done" closes the matrix.

Properties on the right

- With nothing selected: "Title", "For whom / system", "Date"; the impact network section with the number of factors and effects; " 📤 Use further: Outage simulation and 8EM Modeller" with the status of the handover, " 📤 Hand over to Outage simulation and 8EM Modeller" and "Withdraw"; the sections for the picture shown (with " + Copy as new picture", " + Empty picture", "Delete picture"), "Result" and "Next steps", "Analysis", "Appearance" and "How it works".
- "Appearance" – "+ and – on the arrows", "Strength (1–3) on the arrows", "Role at each factor (active, critical, reactive, buffering)", "Role chart below the network", plus "Coloured", "Title above the picture" and "PDF format".
- Factor: "Name", "Colour", "★ highlight (e.g. target variable)", "Role in the network" with active sum, passive sum and Q, the lists "Acts on" and "Is influenced by" (a click selects the effect), "↗ Acts on …", "▦ Influence matrix", "Note (appears only in the record)", "✎ Edit in picture (F2)", "⧉ Duplicate", "Delete".
- Effect: "Direction" ("+ same direction": more leads to more; "– opposite direction": more leads to less), "Strength" ("1 – weak", "2 – medium", "3 – strong"), "delayed (takes effect only after a while)", "Label (optional)", "⇄ Reverse direction", "／ Straight", "Delete".
- "Analysis" – a table with "AS", "PS", Q and role for each factor, the meaning of the roles and the "Feedback loops", each marked as reinforcing or balancing; a click highlights a loop in the picture.

In the picture

- Effects in the same direction are solid, opposite ones dashed; the stronger, the thicker the arrow. A double stroke across the line means delayed. Each factor shows its role.
- A selected effect can be shaped: dragging the line inserts a handle, dragging ◆ shapes it, double-clicking ◆ removes it, "／ Straight" removes all of them; ◆ snaps to the neighbouring point (`Alt` = free); "⇄ Reverse direction" keeps the shape. Double-clicking the line jumps to its label.
- In the role chart below the network the active sum runs upwards and the passive sum to the right; a click on a dot selects the factor.
- Right-click on a factor: "✎ Edit text", "↗ Acts on … (then click the target)", "▦ Edit in the influence matrix", "★ Highlight on / off", "⧉ Duplicate", "🗑 Delete".
- Right-click on an effect: "+ same direction", "– opposite direction", strength 1 to 3, delayed on or off, "⇄ Reverse direction", "🗑 Delete effect".

- Right-click on the area: "＋ Factor here", "▦ Influence matrix …", "◯ Arrange factors in a circle", "＋ Create picture as a copy", "Fit everything to view".

Keys

- `F2` renames, `Del` deletes a factor or effect, `Esc` cancels connecting, `Ctrl` + `D` duplicates, the arrow keys move.

Impact Network: saving, export and handovers

"Save" creates a file `.wirkungsgefuege.json`. After every change the tool also keeps an automatic draft in the browser and restores it the next time you open it; "New" deletes it.

Under "Export ▾" you find "PDF", "PowerPoint (.pptx)", "LibreOffice Impress (.odp)", "Visio (.vsdx)", "SVG" and "PNG image" – each the network and role chart of the picture shown. "Print record" contains for each picture the influence matrix with active and passive sums, Q and roles, all feedback loops and the effects that are new, changed or dropped compared with the previous picture; plus the result and next steps. "Entries as a table (CSV)" outputs the factors with active sum, passive sum and role, and below them all effects with direction, strength, delay and label.

Using it further in the outage simulation or the 8EM Modeller. The impact network supplies the hypotheses, the other tools do the testing. "📤 Hand over to Outage simulation and 8EM Modeller" places the factors and effects of the picture shown, with active sum, passive sum and role, in the browser's shared storage (in the suite on its server). Below it you see when it was handed over and whether the outage simulation and the 8EM Modeller have taken it over; after a change, "Changed since then" appears. "Withdraw" removes the handover – whatever the other tools have already taken over stays there.

- **Outage simulation:** every factor becomes an element; you choose its type in the preview (suggestion: reactive factors and those highlighted with ★ as a business process, the others as a service / platform). A same-direction effect "A acts on B" becomes the dependency "B needs A" – if A fails, B decreases too. Opposite-direction effects say nothing about what fails along with it and are not taken over.
- **8EM Modeller:** every factor becomes an element of the chosen level (strategic or operational goals, capabilities, processes); same-direction effects become the influence relationship "supports", opposite-direction ones "conflicts with".

Identical names count as the same element; handing over again creates nothing twice in either tool. In another browser or on another computer, pick the saved `.wirkungsgefuege.json` file there instead of the handover. In the suite you open and save via the shared storage, as described in the chapter 'Tools in the suite: working together'.

Impact Network: phone, systems and browsers

On narrow screens the phone controls of the board tools apply: "☰" expands the header, "＋ Elements" opens the left panel, "✎ Properties" the right panel. A tapped factor appears in the middle. Swiping on the empty area moves the picture; you zoom with two fingers. Select several elements with the "Multiple selection" button at the bottom left of the picture. I have tested this in simulated screen sizes with touch, not on real devices. For many effects the influence matrix is more convenient on small screens than dragging the handle.

The tool works with single files and needs no folder function, so it runs in all current browsers. In Safari and Firefox it saves via the downloads folder, as described in the chapter 'How do I use a tool?'. The tool loads nothing from the internet and sends nothing; the handover stays in the browser (in the suite on its server). If you open the tools in Safari as single files from the disk, the notice "An Impact Network is ready" may appear in an outage simulation that is already open only later (when you switch back to the window or reload it) – "🔗 Connection ▾ › 🕸 From the Impact Network" finds the handover at once.

Impact Network: tips

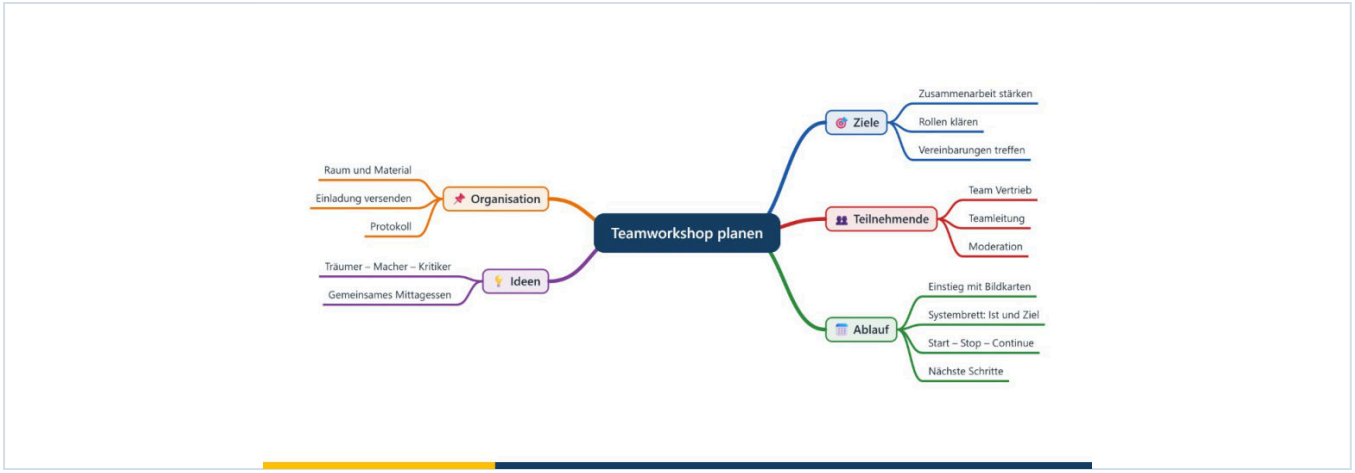
- Name factors as variable quantities: "workload" rather than "too much work". Only then can you say whether more leads to more or to less.
- Active factors are possible levers; reactive ones are better suited as indicators. Critical factors call for caution.
- Go through the reinforcing loops one by one – that is where a development builds up.
- Create measures as a separate picture; the record then shows which effects change.

- Mark target variables with ★ so that they stand out in the network.

Productivity tools

Tools for planning, organising and working together – from the mind map to the calculator.

Mind map



Mind map: purpose and use

With the mind map you organise thoughts around a central topic: main branches and sub-branches to any depth, with colours and symbols. Each branch has a notes field with headings, lists, tables, images and drawings – turning the mind map into a complete document. Branches can have a period and resources, links connect any branches, and free annotations and images can sit anywhere on the canvas.

I use mind maps in coaching and consulting to sort out concerns, collect options or break a project down into work packages; they also suit collecting ideas, planning projects and texts, minutes and learning. At the click of a button, the mind map becomes a document for Word, LibreOffice Writer or PDF, a presentation for PowerPoint or LibreOffice Impress, or a MindManager file. Conversely, it reads Word, OpenDocument, PDF and MindManager files and turns their headings into branches.

The mind map is **released**. You find it on the website's Resources page, as a single file to download and in the MC4Y Suite under the productivity tools. It runs in the browser without sign-up or installation; your entries stay on your device, nothing is transmitted. It saves to `.mindmap.json` files and also opens MindManager files (`.mmap`). I describe the method and its origins in the article Mind mapping: organising thoughts, developing ideas.

Mind map: step by step

1. Open the mind map. To try it out first, "View example" or "Example" loads the fictitious mind map "Plan a team workshop".
2. Double-click "Central topic" (or press `F2`) and type your topic.
3. Create main branches: select the central topic, press `Tab` or `Ins` , or click "+ Sub-branch". `Enter` or "+ Branch" adds a branch on the same level.
4. Branch out further with `Tab` . The arrow keys move between branches, `Alt+↑` and `Alt+↓` change the order.
5. Give branches a colour from the colour bar and symbols via "Symbols ▾"; sub-branches inherit the colour.
6. Write notes: select a branch and click into the notes field on the right.
7. If needed, enter dates under "Period" and people or means under "Resources".
8. Arrange the mind map: drag branches, re-attach them at the connecting line, place them freely or connect them with " 🔗 Set link …".
9. Under "Word format", choose how each branch should appear in the document, or leave "Automatic (by level)".
10. Save with "Save" or `Ctrl+S` .
11. Output the result with "Export" or "As image".

Mind map: functions and buttons

Top bar: file

- "New" – starts a new mind map; if the current one is not saved, the tool asks first.
- "Example" – loads "Plan a team workshop" with colours, symbols, notes, a table, period, resources, links and an annotation; ↶ brings back the previous mind map.
- "Open" (`Ctrl+O`) – opens a mind map, including MindManager files. With a project folder, "Open mind map" first lists the mind maps there (newest at the top); "Other location …" leads to the usual file selection.
- "Import" – reads a Word, LibreOffice, PDF or MindManager file as a mind map.
- "Save" (`Ctrl+S`) and "Save as" – save as `.mindmap.json` .

Top bar: branches and view

- "+ Sub-branch" (`Ins` or `Tab`), "+ Branch" (`Enter`), "Delete" (`Del` ; with sub-branches after confirmation), the arrows ↑ and ↓ (`Alt+↑` , `Alt+↓`) and ± to collapse and expand (`Space`).
- Colour bar – ten branch colours, a custom colour and "inherit" (the colour of the parent branch).
- "Symbols ▾" – 38 symbols, such as ticks, target, date, person, coloured dots and ① to ⑥; a branch can carry several, "Remove all" takes them off.
- "+ Annotation" and "+ Picture" – place a free annotation or image in the mind map: move it, resize it at the corner, double-click to edit. Both also appear in the image export.
- ↶ and ↷ – undo (`Ctrl+Z`) and redo (`Ctrl+Y`).
- "Notes" (`Ctrl+M`) – shows or hides the sidebar; drag the divider to resize it, double-click for the default size.
- "Export", "As image", "⚙ Settings" – see 'Mind map: saving, export and handovers'.
- The question mark opens the help with all keys; the build-version button shows licence and disclaimer.
- View: drag the background to pan, the mouse wheel zooms; − and + zoom out and in, the percentage resets to 100%, "Fit to view" shows everything.

Dragging and re-attaching

- Dragged onto the middle of another branch (green frame), a branch becomes its sub-branch; onto the upper or lower edge (green line), it is placed before or after it; onto the central topic, it becomes a main branch.
- Released on the empty canvas, the branch stays attached but sits exactly there. "Reset freely moved position" or, on the canvas, "Arrange all branches automatically again" restores the automatic layout.
- **Re-attaching at the connecting line:** point at a branch's line (it lights up yellow), press the mouse button and drag to the new parent branch. `Esc` or releasing in an empty spot changes nothing.
- `Ctrl` on release copies instead of moving. A branch always moves with all its sub-branches and notes.

Several branches, cut, paste

- `Ctrl` - or `Shift` +click selects further branches, `Ctrl+A` all; selected branches can be dragged, deleted, cut, copied and pasted together.
- Holding `Shift` and dragging a frame on the free area selects all branches inside it; `Shift+arrow keys` move the selected branches freely; `Del` deletes several selected branches without sub-branches after one confirmation; on phones and tablets with the "Multiple selection" button.
- `Ctrl+X` cuts, `Ctrl+C` copies, `Ctrl+V` pastes as a sub-branch, `Ctrl+Shift+V` after it on the same level; text from Word or lists is pasted as an outline. `Ctrl+D` duplicates, `Alt+Shift+→` and `Alt+Shift+←` move one level deeper or higher.

Right mouse button

- On a branch: the branch commands with their keys, plus "Period and resources …", "Place annotation next to it", "Set link … (click the target)" and "Links to the other selected branches".
- On the empty canvas: "Insert annotation here", "Insert image here …", "Paste as main branch", "Select all branches", "Arrange all branches automatically again" and "Fit everything to view".
- On an annotation or a free image: "Edit text" or "Replace image …", colour, "Bring to front", "Send to back", "Duplicate" and "Delete".

Links (cross-connections)

- Select a branch, click "🔗 Set link …", then click one or several target branches. In the notice bar, choose "one-way →" or "two-way ↔"; `Esc` or "Done" ends it.
- Links appear as dashed brown arcs. A click selects (`Del` deletes), a double-click labels, a right-click changes the direction and offers "Label …", "Reset shape (automatic arc)" and "Delete link".
- **Adjusting the shape:** a selected link shows two circles (control points that shape the arc) and two squares (docking points on the branch edge). Dragging the line bends the whole arc; double-clicking an anchor point restores the automatic arc.
- The sidebar lists the links of the selected branch: click a name to jump there, ⇄ changes the direction, ↺ resets the shape, ✎ labels, × deletes.

Sidebar "Branch"

- "Word format" – per branch "Heading 1" to 3, "Bullet 1" to 3, "Numbering 1" to 3, "Normal paragraph" or "Do not export (with sub-branches)". "Automatic (by level)" makes the first three levels Heading 1 to 3 and deeper ones bullets. "→ Sub-branches" passes the format on to all sub-branches, one step deeper each; "Show Word format on all branches" displays it.
- "Period" – start and end date; ✕ removes both.
- "Resources" – any number via "Assign resource …"; "▾ Selection" lists all existing ones for ticking, renaming or deleting. With several branches selected, the entry applies to all.

Notes

- Paragraph format, font, "Font size (pt)", "Text colour", bold, italic and underline (`Ctrl+B`, `Ctrl+I`, `Ctrl+U`), "• List", "1. List", indents, alignment and ⌫ Format to clear formatting. Pasting from Word keeps basic formatting.
- "▦ Table ▾" – via a grid or "Insert table …" with rows, columns, border and "First row as header row". Inside a table, the table bar inserts and deletes rows and columns and offers "✕ Table", "Merge cells", "Split cell", "Header" (repeated on every page in Word), border, shading, "Alignment", "⇿ equal", "Fit to content" and "Full width". Drag widths and heights at the borders.
- "🖼 Image" – dialogue "Insert image": "Choose file …", drag it in or "From clipboard" (PNG, JPEG, GIF, WebP, BMP, SVG, ICO, AVIF), with "Width", "Alignment", "Caption" and "Alternative text"; large images can be reduced to 1600 pixels. Double-clicking an image edits it, the corner handles resize it.
- "✏ Drawing" – opens a drawing canvas like "Insert › Shapes" in PowerPoint.

Drawing

- Tools: select (`Esc`), line, arrow, angled and curved connection, rectangle, ellipse, text box, freehand, "Shapes ▾" with about 90 shapes (block arrows, flowchart, stars, callouts and more), "Symbols ▾" with a free symbol library of its own, and "🖼 Image".
- "Fill", "Line" (colour, weight, style, routing, arrowheads) and "Text". Connections dock onto the green docking points and move with the objects; "⛓ detach" uncouples them.
- "⇧ front", "⇩ back", duplicate (`Ctrl+D`), delete (`Del`), undo, redo. Drag a shape open (`Shift` = even proportions); double-click to write text into it.
- At the bottom: size of the "Drawing canvas" and "snap to grid". "Add own symbols …" adds GIF, PNG or SVG files, stored in this browser.
- Edit again by double-click or right-click › "Edit drawing"; an ordinary image in the note opens with "Edit in the drawing (label, add shapes)".

Mind map: saving, export and handovers

File: the mind map saves everything – branches, notes with images and drawings, links, annotations, period and resources – in one `.mindmap.json` file. Saving and opening in the various browsers is described in the chapter 'How do I use a tool?'. The browser also keeps a backup copy in case of a crash, on this device only; if an unsaved mind map is found at the next start, the tool offers to restore or discard it.

Export: "Export" opens a window with three groups; "Create file" creates the file.

- "Document": Word (.docx), "LibreOffice Writer (.odt)" or "PDF". Each branch appears according to its Word format, with its notes below. Options include "Central topic as document title", "Place the mind map as an

image at the beginning", "Include notes", "Include period and resources of the branches", "Also export collapsed branches" and links as hyperlinks. For PDF, the browser's print dialogue opens; choose "Save as PDF" or "Microsoft Print to PDF" there.

- "Presentation": "PowerPoint (.pptx)" or "LibreOffice Impress (.odp)" in 16:9 with real placeholders, so you can apply any design. Options: "Title slide with the central topic", "Overview slide with the mind map as an image", "Contents slide with all main branches", "Own slide for each branch down to level" 1 to 4 and notes "as speaker notes (notes page)", "on separate slides" or "do not take over"; links lead to the slide of the target branch. Images and tables from notes appear as text or not at all.
- "Mind Map": "MindManager (.mmap)" with branches, notes including tables and images, colours, period and resources as task info, links as relationship lines and annotations as floating topics. Freely placed images and Word formats are not carried over.

Every export leaves out branches with the Word format "Do not export". "As image" saves the mind map as "PNG (for Office, email)" or "SVG (infinitely scalable)".

Import: "Import" reads `.docx`, `.odt`, `.pdf` and `.mmap`. The window "Import document" states the headings and words found. Under "Headings as branches down to level" choose 1, 2, 3, 4, 6 or "all"; deeper headings go into the notes. Then "Open as new mind map" or "Insert below the selected branch". Texts, lists, tables and images move into the notes as far as they are readable. An encrypted PDF cannot be read; a PDF with only scanned pages comes in as page images – there is no text recognition.

MindManager: open `.mmap` files via "Open" or "Import": branches, notes with images, colours, symbols, task info with priority, progress, dates and resources; hyperlinks become a note, relationship lines between two topics become links. Anything it cannot take over, such as boundaries, the window lists as not imported. Save older `.mmp` files as `.mmap` in MindManager first.

Project folder (⚙ Settings): under "Project folder", pick a folder once with "Choose folder …", or create one under "Create new project folder" with a name and "Create in …". After that, Open, "Save as", "Import" and all exports start there. Options: "When opening, show the mind maps in the project folder first" and suggesting exports in the subfolder "Exports"; "Stop using" releases the folder. The browser remembers it and asks for permission once after a restart.

In the suite: there you open and save via the suite's storage, as described in the chapter 'Tools in the suite: working together'. The "👥 Master data" button is explained in 'Master data in every tool'.

Mind map: phone, systems and browsers

Phone and tablet: on narrow screens the page scrolls vertically. The toolbar is one row you swipe sideways; the mind map has a fixed height, with properties and notes below. To create a branch: tap the central topic, tap "+ Sub-branch", type the name. Tap a link to select it – swiping moves the map instead of bending the link; then drag anchor points or line with enlarged touch areas. As double-tap and right-click are unreliable there, ↺ in the list of links resets the shape. In the drawing window the canvas stays at the top while you scroll; drag shapes open with a finger, double-tap to write text.

I tested this in simulated phone sizes with touch input in the browser engines of Edge, Safari (WebKit) and Firefox, not on real devices.

Project folder only in Chrome and Edge: in Safari and Firefox, the settings show "This browser does not support folder selection. Please use Microsoft Edge or Google Chrome." Opening, saving, importing and exporting still work there, with single files and the browser's download.

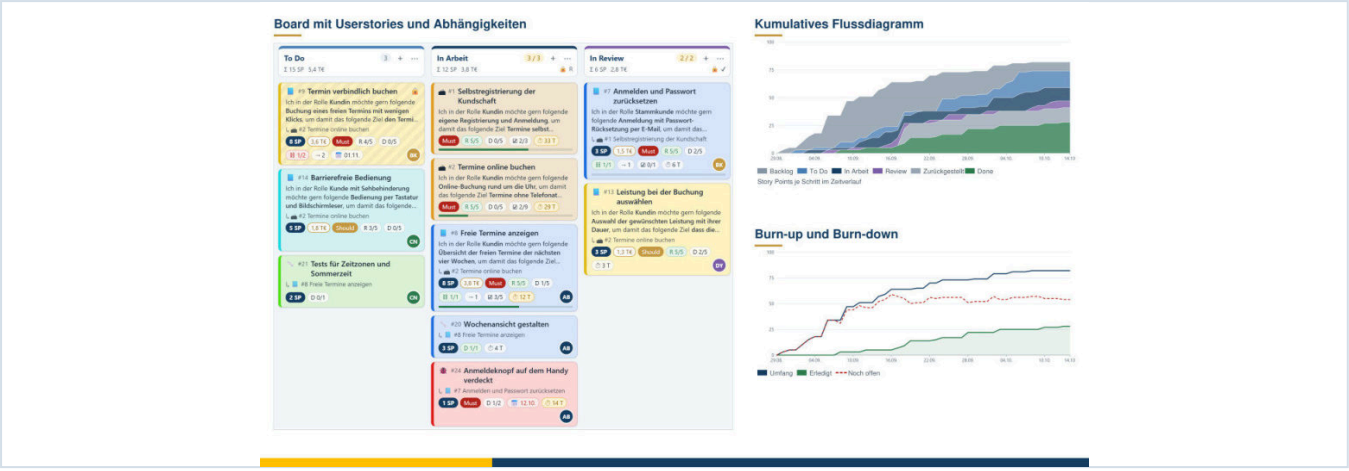
Clipboard over http: over an unencrypted connection, such as a suite opened via `http://` and its IP address, the browser withholds the clipboard. Copying with `Ctrl+C` still works; if necessary, the tool shows the text for copying. Pasting text from outside into the map with `Ctrl+V` and "From clipboard" in the image dialogue need `https://`; the tool then advises pasting into a notes field or a branch name.

Not tested: real Safari on macOS, real phones and tablets (double-tap, long press) and LibreOffice itself – I opened the OpenDocument files in Word and PowerPoint.

Mind map: tips

- Work with the keyboard: `Tab` for a sub-branch, `Enter` for the next branch, `F2` to rename – almost as fast as a list of keywords.
- If you will need a document later, set the Word format early; branches that only serve your thinking get “Do not export (with sub-branches)”.
- The quickest way to take over an existing outline is “Import”, or pasting a list from Word onto a branch with `Ctrl+V`.
- In Chrome or Edge, create a project folder per undertaking and have exports suggested in the subfolder “Exports” – then mind map, document and presentation sit together.
- The backup copy in the browser only protects against a crash. Save regularly with `Ctrl+S`.

Kanban board



Kanban board: purpose and use

The Kanban board makes work visible: every card is a task, every column a work step, and the cards move from left to right – from the first idea to “Done”. I built it for teams, projects and your own work. Cards for epics, user stories, tasks, bugs and ideas move through steps you design freely – with dependencies, WIP limits, ready and done criteria and an estimate in story points or euros.

Typical uses: a software project with user stories and tasks, a team making its ongoing work visible, or implementing measures from an analysis that the board takes over from other tools. The reports show where work stalls. A board becomes effective through clear agreements: what do *ready* and *done* mean, how much may run at once, and what comes first?

The Kanban board is **Experimental** (beta). It saves to a file with the extension `.kanban.json`. It is on the website’s Experimental page, available as a single file to download, and in the MC4Y Suite toolbox under the productivity and business support tools. I present it in detail in the post Kanban board: make work visible, measure flow.

Kanban board: step by step

1. Open the board in the browser; a new board comes with the steps Idea log, Backlog, To Do, In progress, In review, On hold and Done.
2. To get to know it, load a completely fictitious example with a history over several weeks via “⋯” › “ Load example board (fictional)”.
3. Enter the name of your project at the top in the “Name of the board” field.
4. Adapt the steps: the “ + ” between two column headers inserts a step, and the ⋯ menu in the column header changes name, WIP limit, colour, type and rules.
5. Add the people under “ Team”; you can also type names directly on a card.
6. Create cards: “ + Card” in the toolbar, “ + ” in the column header, a double-click on an empty spot in a column, or the `N` key.
7. In the properties on the right, choose the type; for a user story fill in role, function and goal, and the card shows the sentence. Add acceptance criteria, estimate, priority, due date and developer.

8. Assign tasks and bugs to a user story via “Belongs to”, user stories to an epic. In an open user story, type a task title into the field below the list and press Enter.
9. Enter dependencies: “ + Predecessor …” chooses from a list with search, “ choose on the board” lets you click the predecessor card on the board.
10. Drag the cards with the mouse to the next step. The target column turns green (allowed), yellow (with a note) or red (locked); with a note, you choose “Move anyway” or cancel.
11. Tick off the ready criteria before a card goes to “In progress”, and the done criteria before it goes to “Done”.
12. Check under “ Reports” how the work is flowing, and output the result with “ Print / PDF” or “ CSV”.
13. Save with “Save” or `Ctrl` + `S`, as described in the chapter ‘How do I use a tool?’.

Kanban board: functions and buttons

Header

- “Name of the board” field – name of the board or project.
- Large arrows – undo (`Ctrl` + `Z`) or redo (`Ctrl` + `Y`). The small “ ▾ ” between them lists recent changes; an entry undoes back to and including that step.
- “New” – starts an empty board; the undo arrow brings the previous one back.
- “Open” – opens a board file (`Ctrl` + `O`).
- “Save” – saves to the file (`Ctrl` + `S`).
- “⋯” – menu with “ Save as …”, “ Cards as CSV (Excel)”, “ Print report / as PDF”, “ Show archive” (with the number of archived cards) and “ Load example board (fictional)”.
- “Help” – opens the help (`F1`).

Toolbar: views, search and filters

- “▦ Board” – the steps as columns with the cards.
- “☰ List” – all cards for sorting; “including archived” adds the archive, “ CSV” exports them.
- “ Team” – developers with abbreviation, role, organisation, colour, capacity and utilisation.
- “ Reports” – key figures and charts.
- “⚙ Settings” – estimation, rules, templates, colour legend and steps.
- “ + Card” – creates a new card (`N`); if a card is selected, the new one goes into the same step.
- “Search (Ctrl+F) …” field – searches number, title, user story and description.
- Filters “All developers”, “All types”, “All priorities” and “All colours” – show only matching cards; “✕ Filter” resets all filters.
- Swimlanes: “Without swimlanes”, “Swimlanes: developer”, “Swimlanes: user story / epic”, “Swimlanes: priority” or “Swimlanes: type”. Dragging a card into another lane changes its assignment.
- Dependencies as lines: “Lines: off”, “Lines: for selection” or “Lines: all”. Red and dashed means the predecessor is not yet far enough.
- “Tasks” tick box – shows tasks and bugs as cards of their own on the board.

Columns (steps)

- “ + ” between two column headers (appears on hover) – inserts a new step for you to name.
- “ + ” in the column header – new card at the top of this step; the header also shows the estimate totals.
- Dragging a column header – changes the order.
- ⋯ menu in the column header or right mouse button: “ Rename”, “ + New card in this step”, “⇤ Insert new step before”, “⇥ Insert new step after”, “◀ Move left”, “▶ Move right”, “ WIP limit …”, “ Colour …”, the type of the step, “↤ Collapse” or “↔ Expand”, and “ Delete step …”. Deleting moves its cards to a step of your choice.
- Rules in the same menu: “Only if all predecessors are far enough along” (the step waits for the predecessors), “Counts as far enough for successors”, “Check Ready criteria” and “Check Done criteria”.
- Type of a step: Ideas, Backlog, “To do (ready)”, “In progress”, “In review”, “On hold”, “Done (completed)” or “Other step”; it controls the reports and the rule defaults.

- WIP limit – maximum number of simultaneous cards in a step; epics do not count.

Card: right-click menu

- A click opens the properties on the right, a double-click jumps into the title.
- "✒️ Edit", "🎨 Colour …" and "👤 Developer …".
- "➜ Move to …" – lists all steps; 🔒 means locked, ⚠ means with a note.
- "◀ One step back" and "▶ One step forward".
- "⛓ Add predecessor …", "👆 Click predecessors on the board" and "→ Add successor …".
- For an epic the menu creates a user story for it directly, for a user story a task.
- "⧉ Duplicate", "🗄 Archive" or "↩ Restore from archive", and "🗑 Delete".

Properties on the right

- "Title", "Type" (epic, user story, task, "Bug", idea), "Step" (moves the card without dragging; 🔒 = locked) and "Colour" (twelve colours, meaning from the legend).
- "📘 User story" – the fields "In the role of …", "… I want … (function)" and "… so that I can … (goal)"; the whole sentence appears above them.
- "Acceptance criteria (how can you tell it has been implemented?)" – one condition per line.
- "⚖ Estimation and responsibility" – "Story points", "Amount (€)", "Priority (MoSCoW)" with "Must have", "Should have", "Could have" and "Won't have (not this time)", "Due on", the developer (choose from the team or type a new name), "For (client)" and "Belongs to".
- Costs – the card's cost entries (see below).
- "⛓ Dependencies" – predecessors and successors with their step; "+ Predecessor …", "👆 choose on the board", "+ Successor …"; "×" removes one. Circular dependencies are not allowed.
- For user stories and epics: their cards with progress, a field for a new one and "Existing …" for an existing card.
- Ready and done criteria – two checklists; new cards get the templates from the settings, and each card can add, change or delete items. Counters such as R 4/5 and D 2/5 show the status on the card.
- "Description" and "Note".
- "🕓 History" – when the card entered which step and how long it stayed there.
- "📥 Origin" – for accepted measures, the tool and the document they came from.
- "⧉ Duplicate", "🗄 Archive" and "🗑 Delete" at the end.

Team

- "+ Add" – adds a person to the team; "👥 from the master data …" takes people over from the master data tool (only with the master data connection on).
- "Capacity SP/week" column – story points the person usually completes per week, used for the utilisation report.
- "▦ Cards" – shows the board with this person's cards only; the "×" removes the person.

Reports

- At the top: the measure ("Number of cards", "Story points" or "Amount (€)"), the period from "since the start" to "last year" and, optionally, a single person.
- "Key figures" – open and completed work, average lead and cycle time, throughput, blocked and overdue cards.
- "Cumulative flow diagram (CFD)" – per day, how many cards are in which step; bands that widen in the middle point to a bottleneck.
- "Burn-up and burn-down" – scope, completed and open work, plus a simple extrapolation, not a commitment.
- "Throughput per calendar week" and "Velocity per calendar week" – completed cards or story points per week.
- "Lead and cycle times" – for each completed card, with the line below which 85% of the cards fell.
- "Cards per step", "Dwell time per step" with the flow efficiency, "Utilisation per developer", "Age of cards in progress" and "Progress of user stories and epics".

- “Dependencies” with the “Bottleneck cards (holding others up)”.
- “By colour”, “By type” and “Open cards by priority”; once entered, also “By client” and “By the team’s organisation”.
- “💶 Costs by cost centre × cost type”, “🖶 Print / PDF” (A4 landscape) and “⭳ CSV” (cards with times and weekly figures).

Settings

- “Estimation of cards” – “Estimate with”: “Story points and amount (€)”, “story points only” or “amount (€) only”; plus “Suggestions for story points (separated by ;)”.
- “Rules when moving” – for “WIP limit exceeded”, “Ready criteria open” and “Done criteria open” each a note with “Move anyway”, “Block” or “Do not check” (WIP limit: note or block only). Dependencies always block.
- “Archive completed cards after … days (0 = never)”.
- Templates “Ready criteria (Definition of Ready)” and “Done criteria (Definition of Done)”; “Apply to open cards” adds missing criteria to all cards not yet completed.
- “Meaning of the colours (legend)” – what each of the twelve card colours stands for.
- “Steps (columns)” – order, name, type, colour, WIP limit and the rules for each step in a table.

Measures from other tools

- Bar below the toolbar – appears when measures from other tools are waiting.
- “View and accept …” – shows source, deadline and people responsible; choose step and card type and confirm with “Add to board” (with a WIP or criteria note: “Add to board anyway”).
- Each measure becomes a card with title, description, source, deadline and priority; the person responsible joins the team. The undo arrow reverses this.

Costs

- Every card can have cost entries: amount, frequency (one-off, monthly, yearly), status (plan, forecast, actual), cost type and cost centre – from the master data if connected, otherwise typed in.
- The amount of the estimate stays as it is; without cost entries it counts as “no cost type” in the cost report, and “turn into a cost entry” assigns it.

Keys

- `N` new card, `Del` delete card, `F2` edit title, `Alt` + `←` / `→` one column along, `Alt` + `↑` / `↓` within the column.
- `Ctrl` + `Z` / `Y` undo/redo, `Ctrl` + `S` save, `Ctrl` + `F` search, `Esc` clear selection, `F1` help.

Kanban board: saving, export and handovers

The board saves to a `*.kanban.json` file (“Save”, `Ctrl` + `S`); for Chrome, Edge, Safari and Firefox see the chapter ‘How do I use a tool?’. The browser also keeps the latest state as a draft and restores it next time. Nothing is transmitted. Back up your board files regularly all the same.

You can export the cards as CSV for Excel, the report as CSV with the cards’ times and weekly figures, and all reports for printing or as PDF in landscape. The cost report shows recurring costs as an annual figure, one-off costs separately; per card and cost type, actual beats forecast beats plan.

Handovers: analysis tools such as Five whys, Pre-mortem, Incident timeline and Cause-and-effect diagram pass agreed measures on – without the suite via this computer’s browser storage to the board, in the MC4Y Suite to the tasks. The step, “done” and the deletion of an accepted card (🪆) go back to the tool the measure came from. Team members, roles, organisations, clients, cost types and cost centres can come from the master data (chapter ‘Master data in every tool’).

In the suite the board file is held on the server and locked while someone edits it (chapter ‘Tools in the suite: working together’). Your cards also appear in the Tasks module, their deadlines in the calendar. Without the suite the file can sit in a shared folder, but the board does not support simultaneous editing.

Kanban board: phone, systems and browsers

The board runs entirely in the browser, without installation, and works with single files, not a folder. Chrome or Edge are recommended; in Safari and Firefox you save via the browser's download.

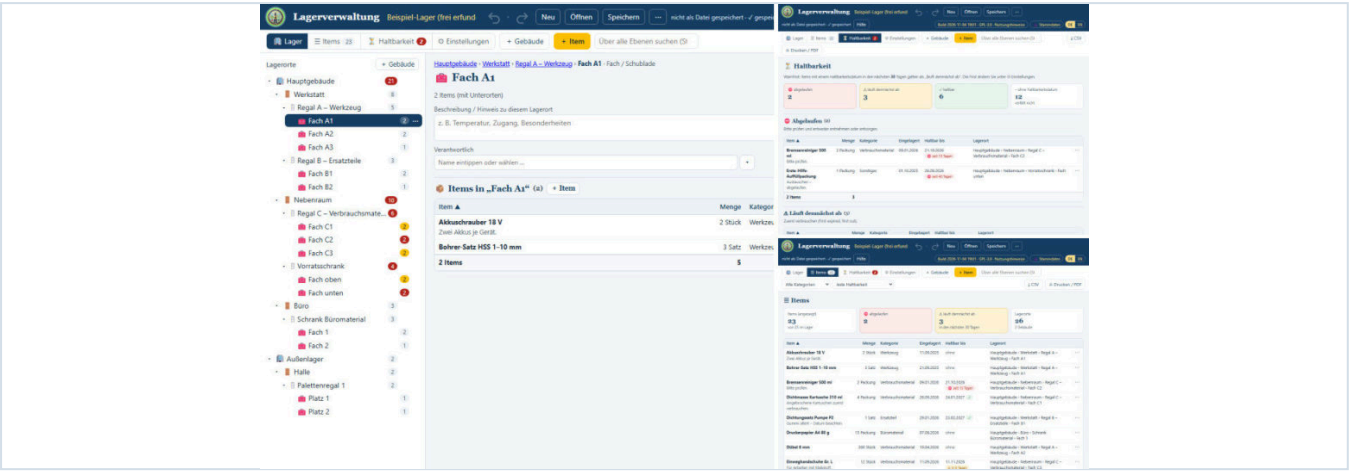
On narrow screens the toolbar swipes sideways, with "+ Card" at the front and in view. The properties panel lies over the board; all buttons and fields are at least 40 pixels. The invisible "+" between column headers is absent with touch; insert steps via the ⋯ menu in the column header or in the settings. On a phone, move cards via the "Step" field or "➜ Move to …".

I tested this in simulated screen sizes with touch, not on real devices. Not tested: dragging cards with a finger, real Safari on iPhone, iPad and Mac, and large tablets.

Kanban board: tips

- Load the example board first: it shows dependencies, criteria and all reports with several weeks of history.
- Keep the WIP limit for "In progress" small: the more is started at once, the longer each task takes.
- Agree in the team what the colours mean and enter it under "Meaning of the colours (legend)" – it then appears on the cards, in the filters and in the reports.
- Insert a step of your own, for testing for instance, and use the rules to decide whether it waits for predecessors and whether it releases successors.
- Have completed cards archived automatically after a few days; "🗄 Show archive" and "including archived" bring them back into view.

Warehouse management



Warehouse management: purpose and use

Warehouse management arranges your stock the way it actually stands: buildings › rooms › shelves and cupboards › compartments and drawers › containers › items. Every level may occur more than once and every level may stay empty; a freezer is simply a cupboard with drawers whose items carry a date stored and a best-before date.

It is meant for small businesses, workshops and store rooms for which a large inventory system would be overkill. Each item carries quantity, unit, dates, category, supplier, batch, purchase price and a responsible person and can belong to an article. Add to that a warning list for expiring stock, search across all levels, relocation by dragging, withdrawals and additions with history, batch tracking per article with batch tracing, stock value by cost centre and cost type, and CSV output. If two people have changed the same warehouse, the tool overwrites nothing but shows both versions side by side.

Warehouse management is **Experimental** (beta) and saves to a file with the extension `.lager.json`. It is on the website's Experimental page, available as a single file to download, and in the MC4Y Suite toolbox. Without the suite it runs as a single-user edition in the browser alone; in the suite several people work with the same warehouse, and stocktaking without a network on a phone becomes possible. More in the post Knowing what is where – the new warehouse management.

Warehouse management: step by step

1. Open the tool. An empty warehouse offers "+ Create the first building"; later you add more with "+ Building" (`G` key).
2. To get to know it, load an example via "⋯" › "💉 Load example warehouse (entirely fictitious)".
3. Enter a name at the top in the "Name of the warehouse" field.
4. Select the building in the tree on the left and create rooms in it: with the "+" in the tree row or with "+ Room" in the content area. In the same way you create "+ Shelf / cupboard" in a room and "+ Compartment / drawer" in a shelf.
5. If you need several locations of the same kind, enter a number under "Number (several at once)" in the creation window; the names are numbered consecutively, for example Compartment 1 to Compartment 6.
6. Create crates, boxes or pallets with "+ Container" – in a compartment or directly in a shelf, room or building.
7. Select a storage location and create an item with "+ Item" (`N` key). The properties open on the right: name, quantity, unit, date stored and, if the goods expire, the best-before date.
8. Simply type unit, category, supplier and responsible person: a matching entry is used, otherwise a new one is created; the ▾ button opens the list.
9. Assign the item to an article in the "Article" field – typing picks an existing one or creates a new one, and "▾" suggests the article with the same name. Where origin matters (electronics, spare parts, food), tick "Batch-tracked" and enter the batch / number the tool asks for.
10. Record movements with "− Withdrawal" and "+ Addition"; date, quantity and reason then appear in the item's history. For a batch-tracked article the addition requires the batch of the delivery; a different batch becomes an item of its own in the same place.
11. Relocate by dragging an item's row onto a storage location in the tree, or choose "⇄ Relocate".
12. Check in the "⏳ Expiry" view what has expired or is expiring soon.
13. For everything that must not run out, enter a "Minimum stock" in the properties panel. Whatever is below it appears in the "🛒 Reorder" view – sorted by supplier, as an order sheet.
14. Check in the "🧾 Articles & batches" view which items lack a batch, and trace a batch there under "🔎 Trace a batch" to its storage location, supplier and every movement.
15. Output lists with "↓ CSV" or "🖶 Print / PDF" and save with "Save" or `Ctrl` + `S`.

Warehouse management: functions and buttons

Header

- "Name of the warehouse" field; large arrows for undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`), with "▾" for the recent changes.
- "New" – new, empty warehouse; "Open" – open a warehouse file (`Ctrl` + `O`); "Save" (`Ctrl` + `S`); "Help" (`F1`).
- "⋯" – "💾 Save as …", "↓ Items as CSV (Excel)", "↓ Expiry warning list as CSV", "↓ List "Reorder" as CSV", "📊 Stock value by cost centre × cost type …", "🖶 Print / as PDF", "▸ Collapse all storage locations", "▾ Expand all storage locations" and "💉 Load example warehouse (entirely fictitious)". In the suite also "📄 Transfer pending CMDB changes" when needed.
- In the same menu under "Stocktaking without a network": "📴 Make data available offline on the device …", "🔄 Sync data with the server now …" and "🗑 Remove offline data from the device …" (see below).

Toolbar

- Views "Warehouse" (tree left, selected location right), "Items" (sortable table of all items), "Expiry" (warning list; red number = expired, yellow = soon), "🛒 Reorder" (yellow number = items below their minimum stock), "🧾 Articles & batches" (red number = items without batch) and "Settings".
- "+ Building" (`G`) and "+ Item" (`N`) – a new item goes into the storage location currently selected.
- "Search across all levels (Ctrl+F) …" field – searches locations, item names, article (number and name), category, supplier, batch, description and path; "✕" resets it.

- “Warehouse” view: “empty locations” tick box. “Items” view: filters “All categories” and “Any expiry”, plus “⭳ CSV”, “📊 Stock value” (for the items shown) and “🖶 Print / PDF”. “Expiry” view: “⭳ CSV” and “🖶 Print / PDF”. “Reorder” view: “⭳ CSV” and “🖶 Print / PDF” for the reorder list.

Tree on the left

- Each row shows symbol, name and number of items – red if something has expired, yellow if something is expiring soon; ▸ and ▾ collapse and expand.
- The “ + ” in the row creates the next level, “⋯” opens the location’s menu, a double-click on the name or `F2` renames.
- Drag containers and items onto another location with the mouse; a container’s contents travel with it.
- “ ❓ Not assigned” collects items whose storage location no longer exists; reassign them with “⇄ Relocate”.

Storage location menu (⋯)

- Add the next level, “ + Add container” and “ + Add item”.
- “✎ Rename (F2)” and “⇄ Move to …” – moves a location to another place on the same level (a shelf into another room); containers fit anywhere, buildings stay at the top.
- “🎨 Appearance …” – colours and type for this storage location only.
- “⎘ Copy (with sub-locations, without items)” and “☰ Show items here and below”.
- Deleting – an empty storage location is deleted at once. If something is still inside, you choose “Move the contents” (another location “Takes over the contents”) or *delete everything*. The undo arrow takes back either one.

Content area of a storage location

- Buttons for the next level (“ + Room”, “ + Shelf / cupboard”, “ + Compartment / drawer”), “ + Container” and “ + Item”.
- Fields “Description / note on this storage location”, “Category”, “Responsible”, the cost centre for everything inside and, for buildings and rooms, “Location (master data)”.
- Sub-locations as tiles, the items as a table sorted by clicking a column header.

Item: row menu (⋯) and properties on the right

- Row menu: “✎ Show properties”, “⇄ Relocate …”, “− Record withdrawal …”, “ + Record addition …”, “🎨 Appearance …”, “⎘ Duplicate” and “🗑 Delete item …”.
- Properties: the path with “⇄ Relocate”, a warning near or past the date and when a batch is missing (“⚠ Batch tracking: the batch / number is missing …” with “Enter …”), then “Name”, “Article” (below it “Batch-tracked – applies to the article in every storage location” and “✎ Article …”), “Quantity”, “Unit”, “Minimum stock” (empty = none), “Date stored”, “Best-before date” (may stay empty), “Category”, “Supplier / origin”, “Batch / number”, purchase price per unit, cost type, cost centre, “Responsible” and “Description”.
- “Record stock movement” with “− Withdrawal” and “ + Addition”; below it the latest entries with date, quantity and reason.
- “🎨 Appearance”, “⎘ Duplicate” and “🗑 Delete …”.

Expiry (warning list)

- Tiles “⛔ expired”, “⚠ expiring soon”, “✓ in date” and “– without a best-before date”, below them the groups “Expired”, “Expiring soon”, “In date” and “Without a best-before date”. A click takes you to the item.
- The warning period is in the settings, 30 days by default. Items in containers count like items lying openly in a compartment.

Minimum stock and reorder

- If an item’s quantity is below its “Minimum stock”, 🛒 appears in the tables, the properties panel names the shortfall (“Below the minimum stock (8 Pack): 2 Pack missing.”), and a withdrawal that takes it below reports it at once. Empty means “none”, 0 never warns; without a quantity there is nothing to compare. It counts per item at its storage location.

- The "🛒 Reorder" view shows the tiles "🛒 below minimum stock" and "with minimum stock", below them the affected items by supplier ("– no supplier –" last) with "Stock", "Minimum stock", "Shortfall" and "Storage location"; a click takes you to the item. In the "Items" view the tile "🛒 below minimum stock" is added as soon as an item has a minimum stock.

Articles and batch tracking

- An article is what you carry (article number and name); an item is its stock in one storage location. If the same article is kept in three places, three items belong to it. Assign it in the item's "Article" field: typing picks an existing article (by number or name) or creates a new one, "▾" opens the list and suggests the article with the same name; empty = no article.
- "Batch-tracked" applies to the article in every storage location. When you assign a batch-tracked article, the tool asks for the "Batch / number" ("Apply" or "Enter later"). If it is missing, the item shows "⚠ Batch missing" in the tables.
- For a batch-tracked article, "+ Addition" requires the batch of the delivery (nothing is recorded without it). The same batch goes onto this item; a different batch becomes an item of its own in the same storage location with the same article – if that batch is already there as an item, the addition is recorded on it. The dialogue tells you beforehand what will happen.
- "🗃️ Articles & batches" view: tiles "Number of articles", "🧨 batch-tracked", "⚠ Items without batch" and "In several locations" (exceptions to "one location per article"); below them "⚠ Items without batch" (with "↓ CSV"), "🔎 Trace a batch" (type a batch or part of it: storage location, supplier, date stored and best-before date and every movement, "↓ Batch trace as CSV") and the list of articles with article number, batch tracking, items, stock and storage locations. "+ Article" creates one; a row's "⋯" menu offers "✎ Edit article …", "☰ Show items of this article" and "🗑 Remove article …" (the items stay, only their link is removed). Article numbers are free but unique.

Both versions: nothing is overwritten silently

- If two people have changed the same warehouse, "⇄ Both versions" opens: for each item, storage location, article and entry, "Your version" and "Other version" stand side by side, for quantities also "Both changes" (starting state plus both changes). "Your version everywhere" and "The other version everywhere" choose everything at once. Whatever only one side changed is listed under "Applied without asking"; entries from both sides are kept, and your previous version stays in the undo history.
- Single-user edition in Chrome and Edge: "Save" checks whether the file has been changed since you opened or last saved it (a second window, someone else on a network drive), then offers "Merge and save". The same happens when you open the same file again with unsaved changes ("Merge" or "Load only the other version"). "Decide later" keeps the comparison open – "Save" shows it again.
- In the suite: whoever edits locks the warehouse for others. If you have unsaved changes and choose "Edit now" after editing was taken over or your lock expired, the tool shows both versions instead of replacing your changes with the server's version.
- Stocktaking without a network: see below ("⇄ Compare both versions").

Settings

- "Name of the warehouse" and the warning period in days.
- Lists "Units", "Categories", "Suppliers / origin" and "👤 Responsible people" (rename, remove, "+ Add"). A new storage comes with the common units (piece, pack, box, bottle, tin, bag, kg, g, l, ml, m, cm, m^2, m^3, t, pair, roll, set, pallet, sack, bucket, canister, tube); "+ Add common units" adds the missing ones to an older storage.
- "📏 Unit per category" – a default unit per category (type it or use ▾). When an item gets this category, it takes over the unit as long as it still carries the automatic one (empty, the first in the list or the default of its previous category); a unit chosen deliberately stays.
- "💶 Costs and stock value" – cost type per category and the warehouse's cost centre; "📍 Locations (master data)" – link buildings and rooms to the locations all at once.
- "🎨 Appearance" – defaults per level and exceptions per category; "This warehouse" shows the counts of buildings, locations and items.

Appearance

- Four values: “Background colour”, “Text colour”, “Font” and “Font size” (9 to 28 pixels). They take effect in the tree, on the tiles, in tables and in headings.
- The object’s own value applies, else its category, then the default of the level “Category”, then that of its own level – each value separately. In the dialogue only what is ticked applies; “Reset” removes your own values.
- You can choose the system fonts or type a name of your own; no font is loaded from the internet.

Master data, costs and CMDB

- “👥 Master data” › “🔗 Link” – responsible people become persons, suppliers become organisations of the type “supplier”. From then on the master data lead: names are changed there and carry a 🔗 here; the properties panel shows a supplier’s address and contact details.
- Stock value = quantity × purchase price, per location (with sub-locations) and in the “Items” view; cost type and cost centre come from the master data or are typed in.
- In the suite only: “🔗 Link to CMDB component …” or “+ Create as new component …”. An addition and relocating set the component to “in stock” with the storage location as its location, a withdrawal by default to “in operation”. If the CMDB cannot be reached, the change stays pending on the item (“Transfer now” or “⋯” › “📋 Transfer pending CMDB changes”). If someone has changed the component in the meantime, the warehouse overwrites nothing: “⚠ Conflict in the CMDB” shows “Warehouse (pending)” and “CMDB now” side by side for each entry, with who and when; “Apply selection” sets only what you chose, “Later” leaves everything as it is.

Keys

- `N` new item, `G` new building, `F2` rename, `Del` delete, `Esc` clear selection, `F1` help.
- `Ctrl` + `Z` / `Y` undo/redo, `Ctrl` + `S` save, `Ctrl` + `O` open, `Ctrl` + `F` search.

Warehouse management: saving, export and handovers

The warehouse saves to a `*.lager.json` file (“Save”, `Ctrl` + `S`); for Chrome, Edge, Safari and Firefox see the chapter ‘How do I use a tool?’. Once you change something, the browser also keeps the latest state as a draft and restores it next time; merely opening the tool stores nothing. Nothing is transmitted. The appearance is stored in the file too, so it looks the same on every device.

Outputs: items (with the columns “Minimum stock”, “Article number”, “Article” and “Batch tracking” at the very end), the warning list, the reorder list, the items without batch and the trace of a batch as CSV, the stock value by cost centre × cost type as a table with totals and as CSV, and lists for printing or as PDF; valuation uses today’s purchase price. Handovers go to the master data (people, suppliers, locations, cost type, cost centre) and, in the suite, to the CMDB; anything not transferred stays pending on the item.

In the suite the file is held on the server and several people work with the same warehouse: whoever opens it for editing gets it for themselves, the others see and read the same state (chapter ‘Tools in the suite: working together’). The suite brings its own web server.

Stocktaking without a network (only with the suite): “📴 Make data available offline on the device …” takes the selected rooms with everything inside onto the device. On the server they are then locked for others – readable, not changeable, showing name, device and time; the lock expires after a time limit (72 hours by default). A bar above the toolbar shows which rooms are out; only they can be changed, everything else carries a lock. “🔄 Sync data with the server now …” writes the rooms back and stores the whole device state as a backup in the folder Inventur-Sicherungen next to the warehouse file. Only when the server’s checksum matches does the tool ask whether to delete the data from the device.

If the lock period has run out and someone has changed those rooms at a PC in the meantime, the synchronisation overwrites nothing and offers “⇄ Compare both versions …”: your count and the server's version side by side; after “Merge and synchronise” the rooms are reserved again and synchronised. For this, the device keeps the starting state of the rooms from the moment they were taken along. New articles cannot be created during stocktaking (the article list belongs to the whole warehouse); existing ones can be assigned. “🗑 Remove offline data from the device …” deletes everything and releases the rooms.

Warehouse management: phone, systems and browsers

On a phone you use warehouse management through a server installation of the suite; the single-user installation listens on its own computer only. The phone must be on the same network, not a guest Wi-Fi. The QR code under *Other devices* at the bottom of the portal brings the address onto the phone; signing in and opening are described in the chapter 'The suite portal'.

Stocktaking without a network needs `https://` with a certificate the device trusts, or `localhost`: only then does the browser store the page itself for offline use. Over `http://` the tool explains the cause and the way to the certificate; rooms can still be taken along, but the window must then stay open. If the connection breaks, everything stays on the device.

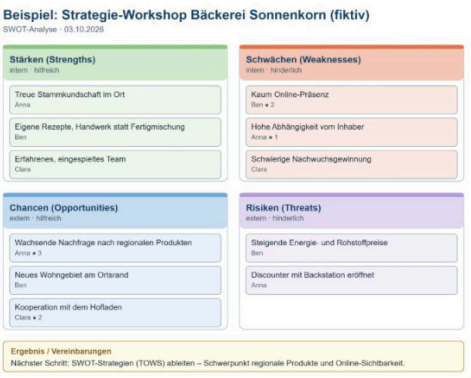
On narrow screens the views and the toolbar buttons swipe sideways. The tree sits above the content; after a tap in the tree the content moves into view. In portrait the properties panel lies over the list, its header with the cross stays in place. All targets are at least 40 pixels, and tables scroll inside their own frame. In Safari and Firefox you save via the download.

I tested this in simulated screen sizes with touch. Not tested: real phones, Safari on iPhone and iPad, large tablets, Firefox and dragging with a finger.

Warehouse management: tips

- Load the example warehouse first; its units, categories and suppliers are entirely fictitious and can be replaced by your own lists.
- Leave the best-before date empty for screws, tools or spare parts – they then appear under "Without a best-before date", not as a warning.
- Make only those articles batch-tracked where origin matters in a dispute; the rest stays without obligation and without warnings.
- Use up first what expires first: the "Expiring soon" group shows exactly these items.
- When deleting a location that still holds something, prefer "Move the contents" – and if something does go, the undo arrow brings it back.
- Remove the offline data from the device after stocktaking; then no stock data remain there.

Analysis and conversation



Analysis and conversation: purpose and use

The "Analysis and conversation" tool brings tried-and-tested analysis and conversation formats onto one board: SWOT, SWOT strategies (TOWS), SOAR, GROW, Start – Stop – Continue, PMI, retrospective, Johari window, values and development square, Eisenhower matrix and energy balance, plus a custom template. Each format consists of a few fields with guiding questions. You collect contributions as cards, weight them with dots and finally record who does what by when. All fields, notes and guiding questions can be adapted.

It is intended for anyone who structures meetings – strategy retreats, team meetings, retrospectives and workshops – and for one-to-one coaching conversations or your own time and self-management. You work on your own, show the board on the projector with the presentation view, or open a team session in which several

people work on the same board at the same time, including from different places.

Without a team session, everything you enter stays on your device. In the MC4Y Suite, the team session runs via the server of your own suite. Outside the suite there is no preset address: a team session runs only via a server whose address you enter yourself – the file `team-sitzung.php` from the package "team-sitzung.zip" on your own web space. I do not run a server for this and do not offer one; whoever operates the server is responsible for the data. The server deletes a session 7 days after the last activity at the latest; the person leading it can end it at any time and thereby delete it immediately. "The templates serve as reflection and conversation structures, not as diagnostic instruments. Coaching is not psychotherapy."

The tool is still in beta and not fully tested. You will find it on the website on the Experimental page, as a single HTML file to download, and in the MC4Y Suite in the categories Productivity tools and People and coaching. It saves files with the extension `.analyse.json`. I describe the aim, origin and use of the individual methods in the post SWOT, SOAR, GROW and more – an overview of methods.

Analysis and conversation: step by step

1. Open the tool. To get to know it, "Example" loads a SWOT analysis of a fictitious bakery with cards and dots already given.
2. Choose the format in the template selection at the top left, for example "SWOT analysis", "Retrospective" or "GROW conversation (phases)". "New" starts an empty board with the selected template.
3. On the right, enter the "Title / occasion" and the "Date". The title appears above the board and later becomes the file name.
4. If needed, adapt the names, notes, colours and guiding questions of the fields under "Fields and layout", or add another field with "+ Field".
5. Under "Facilitation", set how many dots each person may give ("Dots per person"), whether cards appear without names ("Cards anonymous (without names)") and whether the guiding questions are visible ("Show guiding questions").
6. If the team works at different computers, start a shared session with "Team session" and pass the code and PIN on to the participants. Outside the suite, first enter the address of your own server in the "Server address" field (see "The 'Team session' dialogue" below).
7. Choose a "Time box" and click "▶ Start". You collect in the input field "+ Card (Enter)" at the bottom of each field: type the text and press `Enter`.
8. Sort the cards: edit them directly in the text, drag them by the ⁝⁝ handle into another field, delete them with ×.
9. Assess: a click on ● gives a dot. Afterwards "Sort cards by dots" brings the most important cards to the top.
10. In a GROW conversation you go phase by phase – with ‹ and › above the board or on the right with "Current phase".
11. Record the result in the field "Result / agreements" below the board: who does what by when?
12. Save with "Save" (`Ctrl` + `S`) and output the board via "Export ▾" as a PDF, PowerPoint file or table. Finally, end a team session via "Team session".

Analysis and conversation: functions and buttons

Header

- Template selection (to the left of "New") – switches the format; after a confirmation question, existing cards are kept: fields with the same name stay together, the other cards go in order into the remaining fields – from SWOT to SOAR, strengths and opportunities stay in their fields, weaknesses and threats end up under aspirations and results. Back in the old template, every card is in its field again.
- "New" – empty board with the selected template. During a team session only after you have left the session.
- "Open …" (`Ctrl` + `O`) – opens an `.analyse.json` file.
- "Save" (`Ctrl` + `S`) and "Save as …" (`Ctrl` + `Shift` + `S`).
- The arrow buttons ↶ and ↷ – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y` or `Ctrl` + `Shift` + `Z`).
- "Team session" – opens the dialogue for starting or joining. During a session the button shows the code and the number of people, and "⚠ Connection interrupted" if there are connection problems.

- "Presentation" – hides the right-hand column for the projector and switches to full screen; click again or press `Esc` to end the view.
- "Export ▾" – output as a file or printout (see below).
- "Example" – loads the fictitious example; only possible outside a team session.
- "Help" – opens the "Quick guide" with the licence and disclaimer.

The templates

- "SWOT analysis" – strengths and weaknesses (internal), opportunities and threats (external).
- "SWOT strategies (TOWS)" – SO, WO, ST and WT.
- "SOAR analysis" – strengths, opportunities, aspirations and results.
- "GROW conversation (phases)" – goal, reality, options and will as four phases in sequence.
- "Start – Stop – Continue" – start, stop, continue.
- "PMI – Plus, Minus, Interesting" – an idea from all sides.
- "Retrospective" – what went well, what did not, what we learn, what we resolve to do.
- "Johari window" – open, blind spot, hidden and unknown.
- "Values and development square" – value, sister value and the exaggeration of both.
- "Eisenhower matrix" – tasks by importance and urgency.
- "Energy balance" – energy givers, energy drainers and what I change.
- "Custom template" – four free fields that you name on the right.

The board

- Input field "+ Card (Enter)" – `Enter` creates the card, `Shift` + `Enter` starts a new line.
- Card text – edit directly; `Esc` ends editing; a card emptied completely disappears when you leave it.
- Handle ⁝⁝ – drags the card into another field or to another position.
- ● with a number – gives a dot; `Shift` + click or the right mouse button takes it back. Above the board, "Your dots:" shows what is left of your budget.
- ✕ – deletes the card.
- ‹ and › – previous and next phase (phase templates only).
- Time box – runs as a countdown above the board; once it has run out, "Time up +" counts the overrun.
- "Result / agreements" – text field for the result below the board.

Right-hand column

- "Title / occasion" and "Date" – the heading of the board.
- "Focus on field" (for phases "Current phase") – highlights one field; "– no focus –" removes the highlight.
- "Time box" – 1 to 60 minutes; "▶ Start" and "■ Stop".
- "Dots per person" – "no rating" or 1 to 10 dots; "Reset dots" deletes the dots of all people after a confirmation question.
- "Cards anonymous (without names)" – hides the names on the cards, in the table too.
- "Show guiding questions" – shows the guiding questions in each field.
- "Sort cards by dots" – appears as soon as a rating is set.
- "Start or join a team session" – opens the session dialogue; during a session the code, the participants and "Session …" appear here.
- "Appearance" – "Fields (grid)" or "Phases (in sequence)"; for fields additionally "Columns" (1 to 5).
- For each field (click on its name to expand it): "Name", "Notice", "Colour", "Guiding questions (one per line)", the arrows ↑ and ↓ to reorder, "Delete field" – its cards then move into the first remaining field.
- "+ Field" – adds a field.
- "Colour (off = black and white)" and "PDF format" (A4 or A3) under "View and export".

The "Team session" dialogue

- “Start new session” – enter “Your name (visible to the others)”. The tool suggests a random PIN, which you can change (at least 6 characters). The current board becomes the session’s starting point. Then “Start session”.
- “Join session” – enter your name, the “Code” (eight characters in the form ABCD-EFGH) and the “PIN (if set)”, then “Join”. Your previous board is replaced by the session’s board; undo remains possible.
- “Server address (team-sitzung.php on your own web space)” – outside the suite only; the field is empty until you enter an address, for example `https://www.your-domain.com/team-sitzung.php` (an address without a file name is completed with `team-sitzung.php`). Without an address the tool connects to no server. The address is remembered only once a session has been started or joined. “How do I get a server?” expands a short version of the set-up. In the suite, “Server: the server of this MC4Y Suite” appears instead.
- Consent – before starting or joining, tick the box under the consent text. It names the server entered above (in the suite: the server of this suite) and states that whoever operates it is responsible; without the tick you cannot continue.
- During the session: the code, outside the suite the server address to pass on, an invitation link as well if the tool was opened via a web address (it contains the code and the server address, not the PIN), “Currently present:” with the names, “Leave session”, for the person leading “End and delete session for everyone”, and “Close”.

Setting up your own server

The package “team-sitzung.zip” (Experimental page, software section) contains the file `team-sitzung.php`, instructions (README.txt, German LIESMICH.txt) and the licence text. It needs web space with PHP 7.1 or later and https.

1. Upload `team-sitzung.php` to your web space via FTP or SFTP.
2. Open the address in the browser: the reply `{"ok":false,"error":"methode"}` shows that PHP is running.
3. In the tool, enter the address under “Team session” in the “Server address” field and start the session. On the first start the file creates the folder `team-sitzungen/` next to it and locks it via `.htaccess`; under nginx, IIS or Caddy enter a data folder outside the web root at the top of the file, otherwise it refuses every request.

The tool connects when you open it as a file or call it from your own web space. In the online version on my website, the website’s security rules do not allow connections to other servers; the tool says so when you try and names both ways. Whoever runs `team-sitzung.php` is responsible for the data and needs their own privacy notice for the participants.

Analysis and conversation: saving, export and handovers

“Save” creates an `.analyse.json` file named after the title; saving in the different browsers is described in the chapter ‘How do I use a tool?’. In addition, the tool keeps the working state in the browser with every change and restores it on the next opening; “New” deletes this interim state, which does not replace saving to a file.

“Export ▾” offers:

- “PDF” – vector graphic in A4 or A3, depending on “PDF format”.
- “PowerPoint (.pptx)” and “LibreOffice Impress (.odp)” – individual, editable shapes, grouped.
- “Visio (.vsdx)” – individual, editable shapes.
- “SVG” – for browsers and graphics software.
- “PNG image” – in high resolution.
- “Table (.csv)” – all cards with field, author and dots, plus title, date, template and result, for Excel; with anonymous cards the author stays empty.
- “Print” – the board as it appears, without header, right-hand column and input fields.

“Colour (off = black and white)” applies to the output too. The tool passes on its results via the file and the exports, not via handovers to other tools.

In the MC4Y Suite you open and save via the suite’s storage, as described in the chapter ‘Tools in the suite: working together’. There, the team session runs via the server of your suite and is open only to people who are signed in.

Analysis and conversation: phone, systems and browsers

On screens up to 900 pixels wide, the fields are shown one below the other and the right-hand column follows below the board. The header can be swiped horizontally, and the "Export ▾" menu opens as a window from below. Buttons, fields, ●, ✕ and the ⁝⁝ handle are at least 40 pixels in size for fingers. To create a card, tap "+ Card (Enter)", type and press Enter.

I have tested the operation in simulated screen sizes with touch, not on real devices; moving cards with a finger by the ⁝⁝ handle has not been tested. The team session is tested in the suite and with `team-sitzung.php` from the package on a local PHP server, each time between two browsers (Edge and the Safari engine WebKit), not on a hosting provider's web space. The tool has no folder functions, so it does not depend on Chrome and Edge; in Safari and Firefox you save via the download.

Analysis and conversation: tips

- Collect first, without discussing; in groups, silent writing on cards has proved its worth. Then sort, summarise and weight with dots.
- A finished SWOT analysis turns into strategy work by switching to "SWOT strategies (TOWS)": the cards are kept and can be dragged into the new fields.
- In team sessions, use pseudonyms or roles instead of third parties' real names, enter no especially sensitive data such as health information, and end the session when finished.
- Pass on the code and PIN only to the participants; reloading the page in the same tab rejoins the session automatically.
- Save the result as a file before ending a team session; your state remains on your computer after ending, while on the server it is deleted immediately.

Pre-mortem



Pre-mortem: purpose and use

The question of a pre-mortem is not "What could go wrong?", but: we are a year on, the undertaking has failed – why? This reversal brings up the risks nobody else names: the talk is about a fact to be explained, not a possibility. The method goes back to Gary Klein.

The tool accompanies such a session: collecting reasons for failure, anonymously if wanted, assessing them together by probability and impact in a matrix, recording early warning signs and measures, and passing the result into the risk register of project management. It is intended for project leads, facilitators and teams before an undertaking starts. A pre-mortem does not replace risk management; the assessment is the group's estimate, not a measurement.

Everything you enter stays on your device; the tool transmits nothing. It is still in beta and not fully tested. You will find it on the website on the Experimental page, as a single HTML file to download, and in the MC4Y Suite in the categories Productivity tools and Business Support Tools. It saves files with the extension `.pre-mortem.json`; a file can hold several sessions. More on the method in the post Pre-mortem – finding the risks nobody says out loud.

Pre-mortem: step by step

1. Open the tool. “Example” shows two fictitious sessions on introducing a new merchandise management system – the second six months after the first.
2. As long as no entry is selected, the right-hand panel shows the session details. Under “Settings”, enter “Which undertaking is this about?”, the “Viewing direction” (default: “a year after the start”) and the “Date of the session”.
3. Switch on “Collect anonymously – new reasons without a name” if names are not to be given, and ask the question.
4. Collect without assessing: every click on “Reason for failure” creates a reason; type the sentence on the right under “Name” (“Because …”).
5. End anonymous collecting with “Finish collecting” and assess together: select a reason and, under “Rating”, set probability and impact from 1 to 5 each. The reason moves into the matching cell of the matrix.
6. Assign each reason an “Area” and enter “Early warning signs”.
7. For serious reasons, create measures with “+ Measure against it” (with “Responsible” and “By when?”) or deliberately set the “Status” to “accepted – we live with it”. For each reason, enter under “Responsible for the risk” who keeps an eye on it – that becomes the responsible person of the risk in project management.
8. Check in the “Result of the session” which serious reasons still have no measure.
9. Save (`Ctrl` + `S`) and print the report via “Export ▾” › “Print report”.
10. Pass the result on to project management and the measures on as tasks via “🔗 Connection ▾”.
11. Six months later, choose “+ New session” at the top left – “+ Start empty” or “+ Take over the reasons” (to rate them again) – and then “Compare sessions …” on the right.

Pre-mortem: functions and buttons

Header

- Undo and redo (`Ctrl` + `Z`, `Ctrl` + `Y`); the arrow ▾ between them lists recent changes for going back several steps.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …”.
- The buttons − and + – zoom out and in (also with the mouse wheel); “Fit to view” shows everything.
- “⛶ Large picture” – hides and shows the side panels.
- “🔗 Connection ▾”, “Export ▾”, “Example” and “Help”.

Left-hand panel

- At the top the selection of the session (“Session 2 of 2 in this file”, each entry with its date and number of reasons), “+ New session” and “⋯ Manage sessions” (select, rename, move, delete, “Compare sessions …”).
- “Reason for failure” and “Measure” – create a new entry.
- “Finish collecting” – appears while anonymous collecting is switched on.
- “Reasons” – all reasons by weight with their measures (→) below; a click selects.

Drawing area

- Five-by-five matrix: probability horizontally, impact vertically; the reasons sit as numbered dots in the cells. A click in a cell creates a reason with that rating. With several sessions, the name of the session comes first in the line above the matrix.
- Next to it, the reason cards by weight with rating, area, “anonymous” or name, early warning signs and measures; from weight 12 without a measure they show “⚠ no measure yet”.
- Colours: red from weight 15, orange from 8, yellow from 4, green below; completed and discarded reasons grey.
- Right mouse button on an entry: “✎ Edit” (`F2`) and “🗑 Delete” (`Del`).

Right-hand panel: a reason

- “Name” and “How would that show itself?”.
- “Probability” and “Impact” (1 to 5 each, also as buttons under “Rating”); the weight is their product (at most 25).

- “Area” – “People and collaboration”, “Subject matter and requirements”, “Technology”, “Organisation and decisions”, “Outside (market, suppliers, law)” or “Money and time”.
- “Collected anonymously (no name)”; without the tick, “Contributed by” appears.
- “Early warning signs”, “Responsible for the risk” (who keeps an eye on the risk – not who raised it; from weight 8 without a name, a notice) and “Status” – “open”, “accepted – we live with it”, “Measure under way”, “completed” or “discarded”.
- “ + Measure against it” and “Delete”.

Right-hand panel: a measure

- “Name”, “Explanation”, “Against which reason?”, “Acts on” (“the probability”, “the impact” or “both”), “Responsible”, “By when?” and “Status”.

Right-hand panel: session and analysis

- With nothing selected: “Title of this work”, “Company / area”, the “Settings” (with “Name of the session” – if empty, it is called “Session 1”, “Session 2” …) and, under “Note”, the “Free note (goes into the report)”.
- “Result of the session” – counts of reasons, reasons with weight 12 or more, measures and anonymous reasons; plus “Where do the reasons come from?”, “The most serious” and “Open measures”.
- If none of at least four reasons comes from the area “People and collaboration”, the tool points this out.
- With several sessions, “Sessions in this file” (date, reasons, weight ≥ 12; a click selects) and “Compare sessions …”: earlier and later session selectable, tiles “in both sessions”, “newly named”, “no longer named”, “Weight decreased”, “Weight increased” and a table per reason; reasons are matched by their wording.

Pre-mortem: saving, export and handovers

“Save” creates a `.pre-mortem.json` file (see the chapter ‘How do I use a tool?’). Once you change something, the tool also keeps an interim state in the browser and restores it the next time you open it; “New” deletes it.

“Export ▾” offers “PDF (A4 landscape)”, “PDF (A3 landscape)”, “PowerPoint (.pptx)” with editable shapes, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image”. “Print report” opens a new window with picture, entries and analysis for printing or saving as a PDF; allow pop-ups if the browser blocks it. “Entries as a table (CSV)” outputs reasons and measures for Excel.

Several sessions are kept in the same file; older versions open it and show the selected session. Picture, report, table and the handovers to project management and tasks apply to the selected session; from two sessions on there are also “Print report – all sessions” (with “Comparison of the sessions” at the end) and “Reasons and measures of all sessions (CSV)”.

“🔗 Connection ▾” offers:

- “📋 Project from project management (file)” – adopts name, goal and known risks from a `*.projekt.json`.
- “📋 Write into a project file (risk register)” – adds the reasons to the risk register of a saved `*.projekt.json` and downloads the extended file; your original stays unchanged, and risks with the same name are not duplicated.
- “📋 Hand over as a project mandate” – in the same browser, inside the suite via the server; project management shows a banner “Create as project”, the dialog lists the risks with “Responsible”, and on creation they end up in its risk register.
- “☑ Hand over measures as tasks” – to the suite’s tasks, or without the suite as cards to the Kanban board in the same browser, prioritised by weight; handing over again updates them.
- “👥 Open master data” and “❔ How does this fit together?”.

During the handover the scale changes from 1–5 to 1–4: 1 and 2 become 1, 3 becomes 2, 4 becomes 3, 5 becomes 4; the original value is in the risk’s description. Anonymous reasons are passed on without a name, discarded ones not at all. The responsible person goes into the “Responsible” field of the risk register: “Responsible for the risk”, otherwise the first measure with a responsible person. As only people of the project may stand there, a person

with the same name (name or initials) is chosen or added to the team; without a name, the file route enters the project manager. Older versions of project management leave the field empty for a project mandate – the name then appears as “Verantwortlich laut Pre-Mortem: …” in the description.

In the MC4Y Suite you open and save via the suite’s storage, as described in the chapter ‘Tools in the suite: working together’.

Pre-mortem: phone, systems and browsers

On narrow screens you operate it like the board tools: ☰ expands the header, “ + Elements” opens the left-hand panel, “✎ Properties” the right-hand one. Tapping “Reason for failure” closes the window, creates the reason and opens the right-hand panel for typing. See the chapter ‘How do I use a tool?’ under ‘On phone and tablet’.

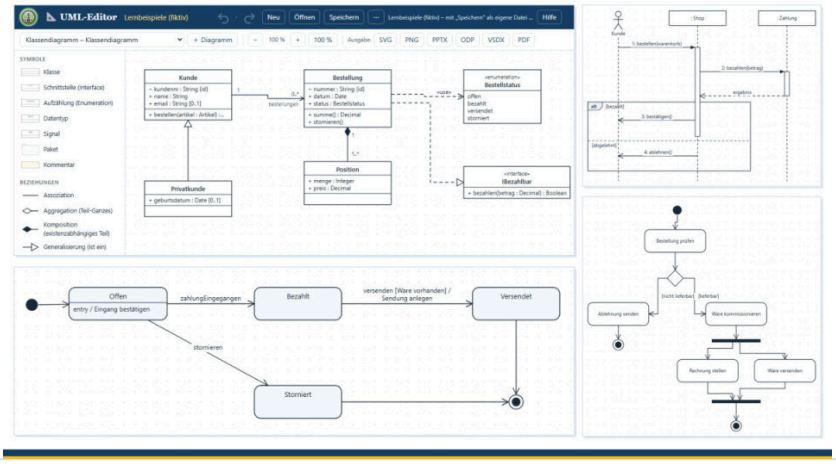
The tool has no folder functions; in Safari and Firefox you save via the download. Without the suite, the handovers to project management and the Kanban board only work within the same browser. I have tested it automatically under Windows (Edge, Firefox, WebKit as the Safari engine) and Linux (Ubuntu in WSL), and the phone operation in simulated screen sizes; not on a real Mac, iPhone or other touch device.

- For multiple selection, the “Multiple selection” button at the bottom left of the drawing area switches the mode: tapping adds an element or removes it, dragging on an empty area draws a selection frame.

Pre-mortem: tips

- Collect first, assess afterwards. Let people write silently first – otherwise the first person speaks and everyone else varies what they said.
- Reasons collected anonymously stay anonymous, in the report and when passed on too. Do not add names afterwards, or next time you will only hear the harmless ones.
- An early warning sign is often worth more than the measure, because it buys reaction time.
- If no reason comes from “People and collaboration”, hold a second, anonymous session – in the tool with “ + New session” in the same file. For a running project, start with the project from project management and ask about what is not in the register.
- Six months later, take over the reasons and rate them again: “Compare sessions …” shows what has been added, what has dropped out and where the weight has decreased – decreased does not by itself mean that the measure has worked.

UML diagrams



UML diagrams: purpose and use

With the UML diagrams tool you draw diagrams in the Unified Modeling Language, version 2.5.1 – all 14 diagram types of the specification. UML gives business departments, IT and service providers a common visual language. It is the same tool as in my 8EM Modeller, here on its own and without an enterprise model.

Small and medium-sized enterprises usually need four types: use case, activity, class and sequence diagrams; for each type, the palette offers only the matching symbols.

The tool is experimental (beta) and saves to files with the extension `.uml.json`. You will find it on the website on the Experimental page, as a single file to download and in the suite under the productivity tools. More in the article All 14 UML diagrams in your browser. The tool follows the notation of the specification, but it is not certified and does not replace an expert review.

Structure diagrams – what a system consists of

- Class diagram – classes with attributes and operations, interfaces, enumerations and their relationships.
- Object diagram – a snapshot of objects (instances) with their values and links.
- Package diagram – packages, their contents, imports and dependencies.
- Component diagram – components with provided and required interfaces, ports and connectors.
- Composite structure diagram – the inner structure of a classifier: parts, ports, connectors, collaborations.
- Deployment diagram – nodes, devices and execution environments with artefacts and communication paths.
- Profile diagram – stereotypes that extend metaclasses.

Behaviour diagrams – what a system does

- Use case diagram – actors, use cases and the system boundary.
- Activity diagram – processes with actions, decisions, parallelism and object flows.
- State machine diagram – states and transitions with trigger [guard] / effect.

Interaction diagrams – how the participants work together

- Sequence diagram – messages between lifelines in time order, with combined fragments such as alt or loop.
- Communication diagram – numbered messages on the connections.
- Timing diagram – states of lifelines over time.
- Interaction overview diagram – a flow of interactions and interaction references in activity notation.

UML diagrams: step by step

1. Open the tool. The start page offers "+ New diagram", "📂 Open file", "✦ View learning examples" and "⇣ Import from an 8EM model".
2. Enter a name in the "Project name" field at the top.
3. Click "+ New diagram". In the "New UML diagram" window, choose the type, enter a "Name of the diagram" and choose "start empty" or "with a small example (fictitious) to get to know it". "Create diagram" creates it.
4. Place a symbol: click it on the left, click on the canvas, type the name and press `Enter`. Holding `Shift` keeps the tool active.
5. Connect: drag from the yellow handle of the selected symbol to the target – a suitable relationship is suggested. Or choose a relationship on the left and click the source, then the target.
6. Double-click to label; for classes, enter the name, attributes and operations one per line, `Ctrl` + `Enter` applies.
7. Set the properties on the right, for lines for example multiplicities, roles and line routing.
8. Click an empty spot: the check appears on the right; clicking a note selects the symbols concerned.
9. Add diagrams with "+ Diagram" and switch with the drop-down list in the bar.
10. Save with "Save" (`Ctrl` + `S`); the first time, the browser asks for the location.
11. Export the diagram shown with the buttons after "Output:", for example as PPTX.

UML diagrams: functions and buttons

Header

- "Project name" field – the name for all diagrams in the file.
- Large arrows "Undo" and "Redo" – `Ctrl` + `Z` / `Ctrl` + `Y`; ▾ shows the history of recent changes.
- "New" – a new, empty project.
- "Open" – open a UML file (`Ctrl` + `O`).
- "Save" – write the project file (`Ctrl` + `S`).

- The ⋯ button – menu with “Save as …” (`Ctrl` + `Shift` + `S`), “✦ Open learning examples (all 14 diagram types)” and “⇣ Import from an 8EM model …”.
- “Help” – the quick guide (`F1`); the build version button shows licence and terms of use, next to it DE and EN switch the language.

Bar below the header

- Drop-down list – every diagram with name and type; “ + New UML diagram …” creates one.
- “ + Diagram” – a new diagram in this project.
- Zoom out, zoom in and 100 % – zoom the view.
- “Output:” with SVG, PNG, PPTX, ODP, VSDX and PDF – save the diagram shown.

Left-hand bar

- “Symbols” – the symbols of the type, in the class diagram for example class, interface, enumeration, data type, signal, package and comment.
- “Relationships” – for example association and generalisation.

Properties on the right

- Nothing selected – “Name of the diagram”, “Description”, line routing, the list of all diagrams (open, move, copy, delete) and the “Check” against rules of the specification, for example circular generalisation, states never reached or use cases without an actor. The notes are suggestions, not error messages.
- One symbol selected – name, “Stereotype / keyword (without « »)”, for classes “abstract (name in italics; cannot be instantiated directly)”, “Attributes (one per line)” and “Operations (one per line)”, for a combined fragment the “Operator”; under “Actions” “⤒ to front”, “⤓ to back”, “⧉ Copy”, “Default size” and “Delete”.
- One line selected – “Type”, “Label”, stereotype, under “Ends” a “Multiplicity” and “Role” per end, “Navigability” and “Line routing” (“as in the diagram”, “straight”, “right-angled”, “Arc”); plus “⇄ Reverse direction”, “Reset shape” and “Delete”.
- Several symbols selected – “⇤ Align left”, “⤒ Align top”, “⧉ Copy” and “Delete”.

Mouse and keys

- Dragging symbols – containers such as packages and states take their contents along; the bottom right corner resizes.
- Dragging a selected line – inserts a handle ◆, which you can move; double-clicking ◆ removes it.
- Sequence diagram – a message appears where you release the mouse and can then be moved vertically.
- `Ctrl` + mouse wheel zooms, dragging an empty area moves the view.
- `Del` deletes, `Esc` ends a tool or clears the selection, `Ctrl` + `D` copies, `F2` labels, arrow keys nudge, `Shift` + click selects several.

UML diagrams: saving, export and handovers

A `*.uml.json` file is a project with any number of diagrams. In browsers without file access it is downloaded, as described in the chapter ‘How do I use a tool?’. The browser also keeps an interim copy in case of a crash – only on your device.

Output applies to the diagram shown: SVG, PNG, PowerPoint (PPTX), LibreOffice Impress (ODP), Visio (VSDX) and PDF. Except for PNG, you get editable shapes rather than images.

“⇣ Import from an 8EM model …” reads a model file (`modell.8em.json`) of the 8EM Modeller and takes over the UML diagrams you select. References to elements of the enterprise model become plain names. The model itself remains unchanged.

In the suite, the tool opens and saves via the shared storage on the server, as described in the chapter ‘Tools in the suite: working together’.

UML diagrams: phone, systems and browsers

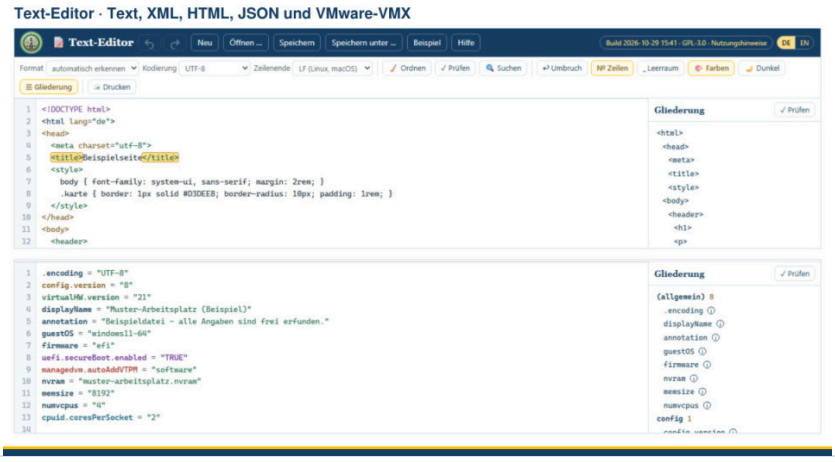
In Chrome and Edge the tool saves directly to the chosen file, in Safari and Firefox via the browser’s download; the first “Save” asks for the name, “Save as …” always does. No folder functions are needed.

Below 760 pixels wide, symbol bar, canvas and properties are stacked. There is no dedicated phone operation with pop-up bars as in the board tools; to zoom without a keyboard, use the buttons in the bar. I have not tested the tool on real phones and tablets.

UML diagrams: tips

- New to UML? Start with "✦ Open learning examples (all 14 diagram types)": an entirely fictitious example for each type.
- Create a diagram with a small example and rework it – you see the correct notation straight away.
- Treat the check as a list of questions: not every deviation is wrong, but each is worth asking about.
- PPTX, ODP and VSDX suit presentations because the shapes stay editable; PNG is only an image.

Text editor



Text editor: purpose and use

The text editor is meant for text and source code files where the task is often a small one: one value in an XML file, one bracket in a JSON file, one line in the VMX file of a virtual machine. It shows the parts in colour. In XML and HTML every pair of tags gets the same colour, in JSON every pair of brackets; the pair under the cursor is highlighted as well, and a missing counterpart stands out at once.

It knows five formats: plain text (ASCII/UTF-8, including logs, notes and Markdown), XML, HTML, JSON and VMware VMX. It recognises the format from the file extension and the content when you open a file; you can change it at any time. On top of that come tidying, checking with a jump to the place found, find and replace, an outline and the choice of encoding and line ending.

The text editor is released. It has no file extension of its own but opens and saves files in their own format. You will find it on the website on the Resources page, as a single file to download and in the suite under the productivity tools. More in the article A text editor that makes tags and brackets visible.

Text editor: step by step

1. Open the editor. Load a file with "Open …" (`Ctrl` + `O`) or drag it onto the window – "Drop a file here to open it" appears.
2. Check under "Format" in the bar whether the format has been recognised correctly; change it if not.
3. Check "Encoding" and "Line ending"; the editor recognises both itself and keeps them when saving.
4. Place the cursor in a tag: the tag and its counterpart are highlighted in yellow, and the status bar names the lines. `Ctrl` + `M` jumps to the counterpart.
5. Edit the text. `Ctrl` + `G` jumps to a line; `Tab` and `Shift` + `Tab` indent and outdent, several lines at once too.
6. Click "✓ Check". The notes appear on the right; clicking a note jumps to the spot.
7. Click " 🧹 Tidy" if the indentation is wrong.
8. Find and replace with " 🔍 Find" (`Ctrl` + `F`).
9. Save with "Save" (`Ctrl` + `S`) or under a new name with "Save as …".

Text editor: functions and buttons

Header

- Large arrows “Undo” (`Ctrl` + `Z`) and “Redo” (`Ctrl` + `Y`).
- “New” – a new, empty document; if there are unsaved changes, the editor asks first.
- “Open …” – open a file (`Ctrl` + `O`).
- “Save” – back into the same file (`Ctrl` + `S`).
- “Save as …” – save under a new name.
- “Example” – loads an entirely fictitious example file for the selected format.
- “Help” – the quick guide (`F1`); the button with the build version shows the licence and terms of use.

Format bar

- “Format” – “recognise automatically”, “Text (ASCII/UTF-8)”, “XML”, “HTML”, “JSON” or “VMware VMX”.
- “Encoding” – “UTF-8”, “UTF-8 with BOM”, “Windows-1252”, “ISO-8859-1”, “UTF-16 (LE)” or “UTF-16 (BE)”.
- “Line ending” – “LF (Linux, macOS)”, “CRLF (Windows)” or “CR (classic Mac)”.
- “🧹 Tidy” – indents XML and HTML according to their nesting, reformats JSON and aligns VMX lines uniformly; in plain text it only removes trailing spaces. Content such as multi-line text inside an element, `CDATA` , comments and `script` and `style` stays exactly as it was. Messages: “Tidied.” or “Already tidy – nothing to change.”
- “✓ Check” – reports tags without a counterpart, JSON errors with their position, duplicate VMX keys, mixed line endings, control characters, lines ending in spaces and characters outside ASCII; without findings “Checked – no errors.”
- “🔍 Find” – shows and hides the search bar (`Ctrl` + `F`).
- “↩ Wrap” – wrap long lines.
- “№ Lines” – show line numbers.
- “␣ Whitespace” – make tabs and trailing spaces visible.
- “🎨 Colours” – switch the colour display on and off.
- “🌙 Dark” or “☀ Light” – dark or light text area.
- “☰ Outline” – show the outline and check result on the right.
- “🖨 Print” – print or save as PDF.

Search bar

- Fields “Search” and “Replace”, plus the tick boxes “Match case”, “Whole word” and “Regular expression”; an invalid expression is reported.
- “▼ Next” (`F3`) and “▲ Back” (`Shift` + `F3`) – next or previous match.
- “Replace” and “Replace all” – with “Replace all”, a message counts the changes.
- The ✕ button – closes the search (`Esc`).

Outline on the right

- Depending on the format, it shows the element tree, the JSON keys, the VMX groups or the headings of a Markdown text (lines starting with `#`); a click jumps to the spot. Above it is the check result with its own “✓ Check”.

Status bar and keys

- At the bottom: file name (“Untitled” without a file), format, line and column, size, and the lines of the tag pair under the cursor.
- `Ctrl` + `G` opens “Go to line”: enter the “Line number”, then “Go”.
- `Ctrl` + `M` – to the counterpart of the tag or bracket; `Tab` / `Shift` + `Tab` – indent and outdent.

Specialities of VMware VMX

- Entries of the form `key = "value"` are coloured by group (`scsi0` , `ethernet0` , `sata0` …).

- Duplicate keys are underlined with dots and named in the check with both line numbers.
- For many well-known keys, the outline shows an explanation, for example for `virtualHW.version` or `uuid.bios`.
- The check also reports when `.encoding` is not on the first line or `displayName` is missing.

Text editor: saving, export and handovers

The editor writes the file back in its format, with the recognised or chosen encoding and the same line ending. In Chrome and Edge, "Save" writes directly into the same file; in other browsers the file is downloaded, as described in the chapter 'How do I use a tool?'. Output is available via "🖨 Print", also as PDF.

The editor never changes anything by itself and only writes when you save. As soon as you make a change, the browser keeps an interim copy so that nothing is lost after a crash; the next time you open the editor it reports "Draft restored from this browser." "New" discards it after asking. Simply opening the tool stores nothing.

In the suite, the text editor saves files of any type in the shared storage on the server, as described in the chapter 'Tools in the suite: working together'.

Text editor: phone, systems and browsers

The editor runs without installation on phones and tablets too. Below a width of 700 pixels, the outline moves below the text area, and the text area keeps enough height for writing. I have not checked this on real devices; for longer work a computer with a keyboard is more comfortable, as many functions have shortcuts.

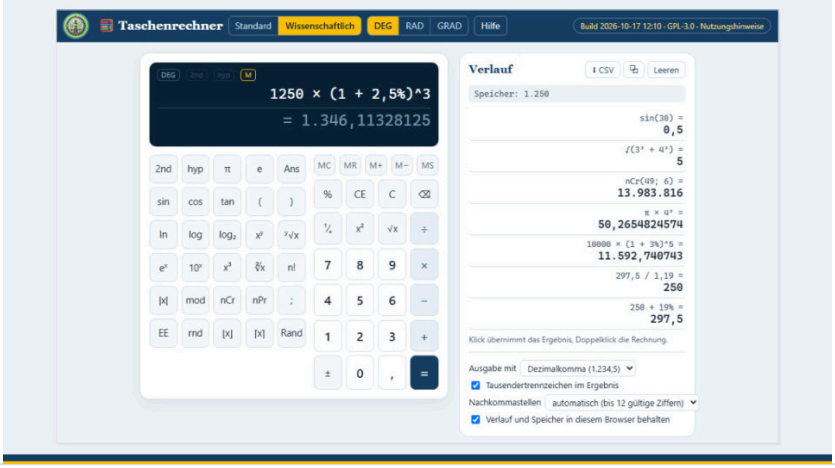
In Safari and Firefox the editor saves via the browser's download; "Save as …" always asks for the name. It does not need any folder functions.

From about 300,000 characters, the colour display switches itself off so that typing stays smooth; "🎨 Colours" switches it back on. With wrapped lines, line numbers appear only up to 5,000 lines.

Text editor: tips

- For files of running systems, the old rule applies: make a copy first, then edit.
- If a bracket is missing in JSON, the colours show from where nothing matches any more; the check gives line and column.
- The editor displays comments in JSON, but they are not part of the JSON standard – the check points this out.
- VMware writes VMX files on Windows with CRLF; leave the line ending unchanged.
- "Example" shows for every format straight away how the colours and pair highlighting work.

Calculator



Calculator: purpose and use

The calculator is meant for everyday and scientific tasks: quickly adding VAT, projecting an interest rate over several years, working out an area or checking how many combinations there are. You type the calculation as on paper – with operator precedence, brackets and functions – or use the keys. The preview calculates as you type, and the history keeps recent calculations.

There are two views: “Standard” for everyday use and “Scientific” with trigonometric functions, logarithms, powers, roots, factorial, combinatorics and rounding.

The calculator is experimental (beta). It does not create a file of its own; if you need to, you export the history as a table (CSV). You will find it on the website on the Experimental page, as a single file to download and in the suite under the productivity tools. More in the article A calculator with scientific functions. It is an aid for everyday and technical calculations and does not replace verified software for accounting, tax or safety-related calculations.

Calculator: step by step

1. Open the calculator and choose “Standard” or “Scientific” at the top.
2. For trigonometric functions, set the angle unit: “DEG” (degrees), “RAD” (radians) or “GRAD” (gradians/gon).
3. Type the calculation into the input field, for example `(12.5 + 7.5) × 3^2`, or enter it with the keys.
4. Read the provisional result while you type. If a bracket is missing, the calculator tells you in words what is wrong.
5. Press `Enter` or `=`; the calculation and result move into the history.
6. Carry on: after `=`, an operator continues with the result, a digit starts a new calculation. `Ans` stands for the last result.
7. Bring back earlier values: a click in the history inserts the result at the cursor, a double-click the whole calculation; `↑` and `↓` browse.
8. If needed, save the history as a table with “⬇ CSV”.

Calculator: functions and buttons

Header

- “Standard” and “Scientific” – the two views.
- “DEG”, “RAD”, “GRAD” – angle unit for `sin`, `cos`, `tan` and their inverse functions.
- The curved arrows ↶ ↷ (or Ctrl+Z / Ctrl+Y, also in the input field) undo and redo every input and every calculation one at a time; ▾ shows the latest steps.
- “Help” – help and examples (`F1`); the button with the build version shows the licence and terms of use.

Display

- Indicators for the angle unit, `2nd`, `hyp` and memory `M` (inactive ones dimmed), below them the input field and the result.

Basic keys (both views)

- `MC` clears the memory, `MR` inserts it, `M+` adds the result, `M−` subtracts it, `MS` stores the result.
- `%` – percent: `250 + 19%` = 297.5 (adds 19 % of 250), `250 − 19%` = 202.5, `250 × 19%` = 47.5, `19%` alone = 0.19.
- `CE` clears the input (`Del`), `C` clears everything (`Esc`), ⌫ deletes a character (Backspace).
- `¹/ₓ` reciprocal, `x²` square, `√x` square root.
- `÷`, `×`, `−`, `+` – operators (typed also as `/`, `*`, `-`); `±` changes the sign; the decimal separator key; `=` calculates.

Scientific keys

- `2nd` – inverse functions (asin, acos, atan); `hyp` – hyperbolic functions (sinh, cosh, tanh, with `2nd` asinh, acosh, atanh).
- `π`, `e` – pi and Euler’s number; `Ans` – last result.
- `sin`, `cos`, `tan`; `ln` (natural), `log` (base 10), `log₂` (base 2); `log(8; 2)` works for any base.
- Power x to the y, y-th root `sqrt(x; y)`, e to the x, 10 to the x, `x³`, cube root `∛x`.
- `n!` – factorial, for decimals via the gamma function; `|x|` – absolute value; `mod` – remainder of integer division.
- `nCr` – combinations without repetition, for example `nCr(49; 6)`; `nPr` – permutations without repetition; `;` separates two arguments.

- `EE` – enter a power of ten: `2E3` = 2000.
- `rnd` – round to n places: `round(x; n)`; `⌊x⌋` rounds down, `⌈x⌉` rounds up.
- `Rand` – random number between 0 and 1.

Typing on the keyboard

- Numbers with a decimal point or comma (`2,5` = `2.5`), powers of ten with `E` or `e` directly after the number: `6.02E23`, `1e3` = 1000, `2.5e-3` = 0.0025.
- The number e on its own or with a multiplication sign: `e`, `2e` = 2·e, `e^2`; with spaces it stays the number e (`2e - 3` = 2·e − 3). The calculator rejects `e3` without a number before it as ambiguous.
- Powers first, then multiplication and division, then addition and subtraction: `2^3^2` = 2^{9}, `-2^2` = −4; a multiplication sign may be omitted: `2π`, `3(4+5)`, `(1+2)(3+4)`.
- Function keys act on the number or bracket before the cursor: `9` followed by `√x` gives `√9`; without a number before it, they open a bracket.
- All functions: sin cos tan asin acos atan sinh cosh tanh asinh acosh atanh ln log log2 exp zehn (10^x) sqrt wurzel cbrt abs nCr nPr round floor ceil min max mittel (mean) sum random(), the constants π (pi) and e, postfix ², ³, ! and %.
- `Enter` calculates, `Esc` clears everything, `Del` clears the input (at the end of the field), `↑` / `↓` browse the history, `F1` shows the help.

History and settings on the right

- "History" – the most recent calculations: a click inserts the result, a double-click the calculation.
- "⬇ CSV" – save the history as a table (CSV); the ⧉ button – copy the history as text to the clipboard; "Clear" – clear the history.
- Memory display – shows what is in the memory, at first "Memory: empty".
- "Output with" – "Decimal comma (1.234,5)" or "Decimal point (1,234.5)"; until you choose, the separator follows the language of the interface.
- "Thousands separator in the result" – thousands separators on or off.
- "Decimal places" – "automatic (up to 12 significant digits)" or a fixed 0, 2, 4, 6, 8 or 10.
- "Keep history and memory in this browser" – see below.

Examples in the help

- Under "Examples (click to insert the calculation)" you will find ready-made calculations, for example "Add 19 % VAT to €250" (`250 + 19%`), "Net amount from €297.50 gross", "Compound interest: €10,000 at 3 % over 5 years", "Lottery 6 out of 49: number of combinations" (`nCr(49; 6)`), "Mean" and "Round to two decimal places".

Calculator: saving, export and handovers

There is no document file. "⬇ CSV" saves the history as a table, for example to continue a calculation in Excel; the ⧉ button copies it as text. If copying does not work, for example because the browser refuses access to the clipboard, a selectable text field with a copy button appears and names the reason and the way out.

History and memory are kept in your browser on your device as long as the "Keep history and memory in this browser" box is ticked; that is the default. If you untick it, the calculator deletes the stored history from the browser. "Clear" clears the history at any time. Nothing is transmitted.

Calculations use 64-bit floating-point numbers (about 15–16 significant digits); up to 12 significant digits are displayed so that rounding residues such as with `0.1 + 0.2` do not get in the way. Whole numbers with up to 15 digits are shown in full. Accounting and tax have their own rounding rules – that is what the accounting tool is for.

Calculator: phone, systems and browsers

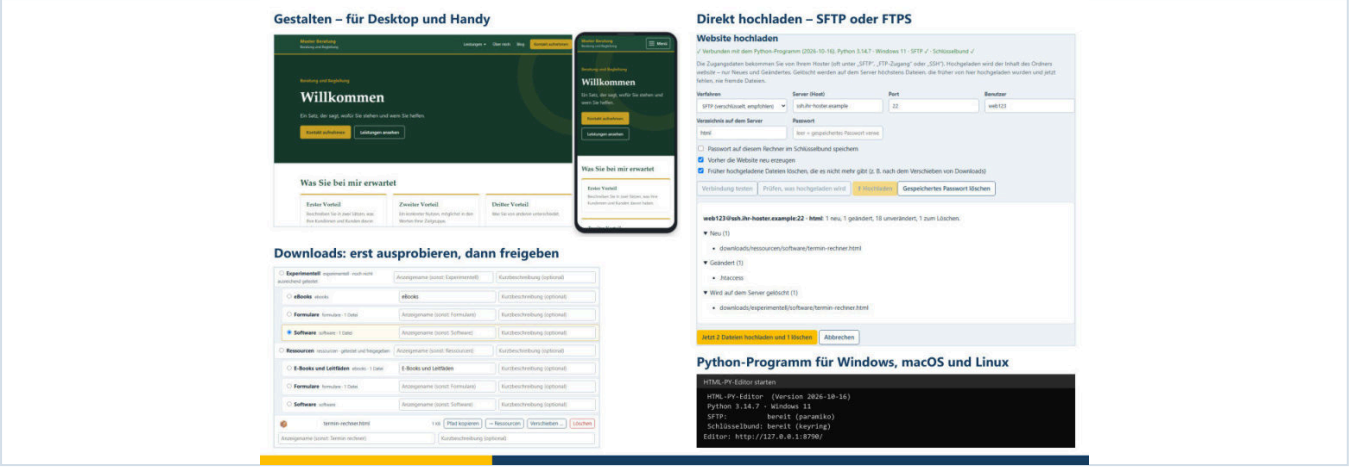
The calculator runs without installation on phones and tablets too. Below a width of 980 pixels, the history moves below the calculator; below 640 pixels the key blocks are stacked, and every key is at least 42 pixels high. I tested this at a simulated width of 375 pixels, not on real devices.

As the calculator neither opens nor saves files, the difference between Chrome, Edge, Safari and Firefox hardly matters; only the CSV file is saved via the browser's download in Safari and Firefox, as described in the chapter 'How do I use a tool?'.

Calculator: tips

- Percent works as on a desktop calculator: `250 + 19%` adds 19 % – handy for gross and net amounts.
- Percent also works in brackets, for example for compound interest over three years: `1250 × (1 + 2.5%)^3`.
- A double-click in the history brings a calculation back so that you only change one number.
- Separate the two arguments of a function with a semicolon: `nCr(49; 6)`, `sqrt(27; 3)`.

FreeHTML Editor



FreeHTML Editor: purpose and use

With the FreeHTML editor you design your own website without programming knowledge: pages, menu, colours, fonts, logo, blog and downloads – directly in the browser. It is meant for self-employed people and small businesses who want a lean website without a builder subscription or database. It produces a finished website of simple HTML files, with sitemap, blog feed and server settings. The website sets no cookies and loads nothing from third-party servers.

The editor is a single file; you install nothing. It is in the "Experimental" area of my website and among the productivity tools in the suite. It has no file extension of its own: it works with a project folder (Chrome, Edge) or a ZIP file (Safari, Firefox).

The **HTML-PY editor** is the same editor plus an "Upload" tab that takes the website to your host via SFTP or FTPS; it needs Python. Both open the same projects. Installation, uploading and languages are covered in the post Website builder with upload: the HTML-PY editor.

FreeHTML Editor: step by step

1. Right-click `freehtml-editor.html` › "Open with" › "Google Chrome" or "Microsoft Edge". You see "Welcome to the FreeHTML-Editor".
2. Click "Create new website…", enter the name and choose "Structure modelled on MY COACHING FOR YOU" (about 35 empty pages), "Small website" or "Website in the MC4Y style with start assistant".
3. Click "Create", choose an empty folder and allow the editor to save in it (not needed in Safari and Firefox).
4. The project overview suggests the next steps, each with a button such as "Open design".
5. In the "Design" tab set logo, colours and fonts; the preview on the right shows every change. Then "Save design".
6. In the "Menu" tab arrange the menu items and click "Save menu".
7. In the "Pages" tab fill in the page details and write the text in an area that looks like the finished website. "Save" or `Ctrl+S`.
8. In the "Blog" tab create a post with "+ New post"; it only appears once its status is "published".
9. Under "⚙ Settings" enter website address, contact-form recipient and footer, then "Save settings".

10. In the legal notice and privacy policy, replace every entry in [square brackets].
11. "⚙ Generate website" – the report lists empty pages, missing details and legal texts with placeholders, and checks all internal links.
12. Upload the contents of `website`, including the hidden `.htaccess`, to your host by FTP or SFTP – or use the HTML-PY editor's "Upload" tab.

FreeHTML Editor: functions and buttons

Header

- "Open…" – open a project folder or project ZIP (on the start page "Open existing project…").
- "⚙ Settings" – website, languages, contact form, contact band, footer, blog, search engines.
- "👁 Preview" – the whole website, also as a phone.
- "⚙ Generate website" – writes the finished website to the `website` folder and shows the report.
- "💾 Save project (ZIP)" – only without folder access; while something is unsaved, the yellow button adds "– not backed up".
- "Help" – quick guide, licence and disclaimer; "DE | EN" switches the editor's language, not your website's.

Left-hand bar

- Tabs "Pages", "Blog", "Menu", "Design" and "Files"; above them the working language and the "Overview" of translations; plus "+ New page" and a search field.

Design

- "Logo and name" – name, subtitle, header with "name only", "logo image only" or both, logo height, "crop to round", favicon.
- "Colours" – six colour schemes or each colour individually; a contrast check shows what is hard to read.
- "Fonts and sizes" – font, desktop and phone size and weight for H1 to H4, text, menu and name.
- "Custom font files" – `.woff2`, `.woff`, `.ttf` or `.otf` via "Upload font file…"; they are stored on your website.
- "Page width and shape" – content width, corner rounding, reading width, "Keep header fixed at the top when scrolling".
- Preview: "Desktop", Tablet, "Phone" and "Small" show 1280, 800, 390 and 320 pixels width.

Menu

- Rename, reorder with ↑ ↓, remove with ✕ – the pages are kept. "+ Menu item", "+ Sub-item" (drop-down menu), "+ Column heading" (columns; intermediate headings on the phone), "+ new empty page here…" and "as a button" for highlighting.

Pages and blog

- Page details: "Page heading (H1)", short name, introduction, search-engine description (at most 155 characters), "not in search engines", "Contact band at the end"; the pencil ✎ changes the address (menu and links follow).
- Toolbar: paragraph, H2 to H4, bold (`Ctrl+B`), italic (`Ctrl+I`), "🎨 Colour", "• List", "1. List", "❝ Quote", the link button 🔗 (`Ctrl+K`; to a page, file, web address, email or phone number), "🖼 Image", "▦ Table", ⬆ ⬇, ✕ Block, ⌫ Format, undo (`Ctrl+Z`), redo (`Ctrl+Y`) and "Source code".
- "+ Building block" – for example "Cards (three side by side)", "Link tiles", "Questions and answers", "Automatic: latest blog posts", "Automatic: download list" and the blocks of the design package. "+ Another element like this" copies a card, question or table row.
- Double-clicking an image or link opens its dialog. "👁 Preview of this page" saves and shows the page; "Delete page…" warns if other pages link to it.
- Posts also have "Category", the status "Draft" or "published", and "Post image".

Files

- Pictures and documents by dragging or "Choose files…"; "Delete" first shows where the file is used.
- Downloads in the areas Experimental and Resources, with any subfolders; "Display name" only changes the heading. "→ Resources" and "Move …" move a file; references are adjusted, the old address redirects.

Settings, languages, project mode

- "Block search engines (test mode)" for a test domain – switch it off before going live; "Always redirect visitors to https://" only with an active SSL certificate. Without a recipient email the contact page shows no form.
- New pages are created in all languages with "Translation pending"; if the source changes later, "Review translation" appears.
- The start assistant fetches the operator details with "👥 Take over from master data". If the folder holds a project profile (`projekt.json`), the editor works in project mode with Test and Live and "🔨 Build website"; "⇦ Back to the FreeHTML-Editor" returns.

FreeHTML Editor: saving, export and handovers

In Chrome and Edge the editor saves directly in the project folder: `freehtml.json` and the folders `inhalte` , `blog` , `bilder` , `dateien` , `schriften` , `downloads` and `website` . Before overwriting, it makes a backup in the `sicherungen` folder. It rewrites `website` on every generation – change nothing there by hand.

In Safari and Firefox, "💾 Save project (ZIP)" puts the project in the download folder and "Open existing project…" loads it again; "⬇ Download website as ZIP" delivers only the finished pages. Saving by download is described in the chapter *How do I use a tool?*.

The contact form needs PHP and the host's mail function; it stores nothing and sends the message by email. In the suite you choose a folder in the shared library instead of one on your computer (chapter *Tools in the suite: working together*); I have tested creating a new website there.

FreeHTML Editor: phone, systems and browsers

Folder work needs Google Chrome or Microsoft Edge (also Chromium, Brave); in Safari and Firefox you use the ZIP file. Project mode needs folder access. On a Mac, a double-click usually opens Safari.

The phone controls of the board tools do not apply here; I have not tested the editor itself on a phone. The preview shows your website at phone width.

I tested the ZIP mode by clicking through it in Edge, WebKit (the engine behind Safari) and Firefox on Windows. Not tested: real Safari on macOS, Firefox on Linux, real hosts, unpacking the project ZIP with the macOS archive utility. The HTML-PY editor runs on Windows 10 and 11, macOS 13 or later (Intel too) and Linux with a graphical desktop.

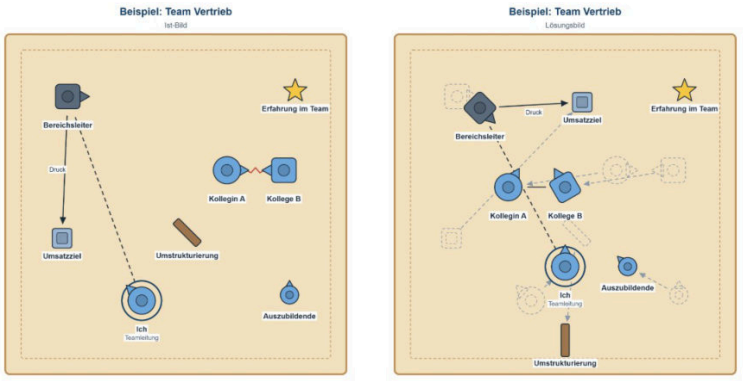
FreeHTML Editor: tips

- Back up the project folder or project ZIP regularly.
- Reduce photos to at most about 2000 pixels wide – it saves loading time.
- After moving downloads, delete the old file on the server by hand; the HTML-PY editor only removes files it uploaded itself.
- The legal notice and privacy policy are only frameworks: complete them and have them checked legally.

People and coaching

These tools accompany coaching, constellations and reflection. I use the models in them – such as Theory U, the logical levels after Robert Dilts (Dilts pyramid) or the values model of Clare W. Graves, known as Spiral Dynamics – as reflection and conversation models, not as diagnostic instruments. Coaching is not psychotherapy. Many tools are available as a 2D board and as a walkable 3D scene; files can be carried over between the two versions.

Systemic Board



Systemic Board: purpose and use

With the systemic board you set up systems: a team, a family, an organisation or a topic with everyone involved. Figures stand for people, groups or topics; distance, direction of gaze and size show how relationships are experienced. Setting it up already brings clarity: Who belongs, who is missing, who is at the centre, who on the edge? You then try out changes until a coherent solution picture emerges – without the real people having to be present. The method goes back to the family board of the early 1980s.

Typical occasions in coaching are team conflicts, new leadership roles, restructuring and decisions that affect several people. The tool recreates the board digitally, also for coaching by video. Besides the classic wooden figures there are people in various postures, animals, plants, objects, places from leisure and travel, feelings as faces and values as medals – well over a hundred figures and symbols, with a search field. You take a figure's perspective, create and compare several pictures in one file and export the result as PDF, PowerPoint or image.

The systemic board is released. It saves files with the extension `.systembrett.json`. It is on the website on the Resources page, you can download the file and open it locally, and in the suite it is in the category People and coaching. I describe the spatial version in the chapter '3D systemic board'. More on the method and its origins in the post The systemic board: setting up systems in 2D and 3D.

In coaching, the systemic board serves as a reflection and conversation model, not a diagnostic instrument. Coaching is not psychotherapy.

Systemic Board: step by step

1. Open the systemic board and enter on the right under "Title / concern" which system and which question it is about. To see a finished constellation first, click "Example".
2. Choose a figure on the left – man, woman, boy, girl or a classic wooden figure (angular, round, neutral) – and click on the board. For people, first choose the "Posture" above the "People" group.
3. Type a name or role straight away. Further lines appear smaller, for example for a sentence or a feeling of the figure.
4. Set the direction of gaze: the "nose" shows where the figure is looking. Rotate using the blue handle, with `Q` / `E` or on the right via "◎ Direct gaze at …" and a click on another figure.
5. Add symbols for topics, goals, resources or obstacles, plus animals, objects, emotions or values if needed – via the groups on the left or the search field.

6. Connect elements if it helps: choose a line type on the left under “Connections”, then click two elements one after the other.
7. Look at the picture from other directions: at the bottom left under “View” with “Front”, “Left”, “Right” or “Back”.
8. Take the perspective of a figure: choose “👁 From the view of …” or select the figure and press `P`. On the right you can see whom the figure has in view and who is looking at it.
9. Use “+ Picture” to create a copy and rearrange it there – from the current-state picture via intermediate steps to the solution picture. Name each picture on the right under “Name of the picture”.
10. Switch on “Show change from the previous picture (traces)” or place two pictures side by side with “⇆ Compare”.
11. Record observations and sentences of the figures on the right under “Notes on this picture”.
12. Save with “Save” (`Ctrl` + `S`) and export the result via “Export ▾”.

Systemic Board: functions and buttons

Header

- “New” – starts a new, empty systemic board.
- “Open …” – opens a saved file (`Ctrl` + `O`).
- “Save” and “Save as …” – save all pictures in one file.
- The arrows ↶ and ↷ – undo and redo (`Ctrl` + `Z` or `Ctrl` + `Y`).
- The minus and plus buttons with the percentage display – zoom the view out and in; “Fit to view” (key `F`) shows everything.
- “⛶ Large board” – hides both side panels; more space for the board.
- “Export ▾” – PDF, PowerPoint, LibreOffice Impress, Visio, SVG and PNG (see ‘saving, export and handovers’).
- “Example” – loads a fictitious constellation of a sales team; “Help” – opens the quick guide.
- The build-version button at the top right shows licence and terms of use.

Left panel: figures and symbols

- Search field “Search symbol (e.g. dog, anger, loyalty) …” – finds symbols in all groups.
- Groups “People”, “Figures”, “Symbols”, “Animals”, “Plants”, “Objects”, “Leisure / travel”, “Emotions”, “Values”, “Connections” and “Other” – click the heading to expand or collapse, drag it to move the group. This browser keeps the order; “Reset the order of the groups” restores it.
- “Posture” above the “People” group – standing, bent, kneeling, sitting, arms spread, clenched fist, waving and more; applies to the next people placed.
- Basic symbols: “Topic / concern”, “Goal”, “Resource”, “Obstacle / boundary”, “Cone / direction”, “Cylinder / context”, “Feeling / affection”, “Conflict / tension”, “Unknown / question” and “Arrow / movement”.
- Animals have a direction of gaze; wall, partition and fence rotate.
- Values appear as a medal with an emblem (e.g. loyalty = rings, reliability = anchor, justice = scales); “Custom value (name it as you like)” is meant for values that are not in the list.
- “Connections” – relationship, close, loose (dashed), distant (dotted), conflict (zigzag), disturbed, broken off (line with a gap and two cross strokes) and effect (arrow).
- “Other” – “Text box”, “Area / zone” (for example for a subsystem, a department or a place) and “Legend on/off”.

Properties on the right when nothing is selected

- “Title / concern”, “Name of the picture” and “Notes on this picture”.
- “+ Copy as new picture”, “+ Empty picture” and “Delete picture”; with several pictures also “◂ earlier”, “later ▸” and “⇆ Compare with another picture”.
- “Show change from the previous picture (traces)” – shows each figure’s earlier position dashed with an arrow.
- “Board and display” – “Board size” (small to very large), “Board” (light wood, dark wood, white as paper, green felt), “Edge line (inside = system, outside = environment)”, “Title and picture name above the board”, “Show viewing directions as lines”, “Colour (off = black and white)”, “Show names (key N)”, “Relationship lines” (in front

of or behind the figures), “Line weight” (hairline-thin to very strong, default fine), “Show legend” and “PDF format” (A4 or A3).

- “Perspective” – “Show field of view” (off, selected figure, all figures and animals) and “Viewing angle” from 60° to 180°, usually 120°.
- “Meaning of the colours” and “Meaning of the lines” – every colour and line type you use gets a meaning of your own; it appears in the legend.

Properties of a selected figure or symbol

- “Name / role” (for animals “Name”, for symbols “Label”) – several lines possible.
- “In the master data” – appears when the master data are connected: take the figure over “as a person” or “as a role”, or “do not take over”.
- “Show names on the board” and “deceased (cross † before the name)” – a small grey cross then appears on the symbol.
- “Posture” (people only), “Shape” (change the kind of element) and “Size” with a slider and the buttons “Child” and “Adults” or “small”, “normal” and “large”.
- “Clothing” or “Colour”, “Label” (below, above, right, left), for people “Skin tone” and “Hair”; a tick box highlights the focus person, e.g. “Me”.
- “Viewing direction” (for wall, partition, fence “Alignment”) with “Direction”, buttons to turn by 45° or 15°, “↻ turn around” and “◎ Direct gaze at …”.
- “Perspective” – the eye button 👁 switches to this figure’s or animal’s view (key `P`); below it you see whom the figure has in view, who is outside it and who is looking at it.
- “Connect to …” – choose a line type, then click the other element; “Connections” lists the existing ones.
- “Take down” – puts an element standing on a chair, table or bed back beside it.
- “Delete figure” or “Delete symbol”.

Several elements, connections, text boxes and areas

- Several elements: “− smaller”, “+ larger”, a shared “Colour”, “Align at same height”, “Distribute evenly horizontally” and “Delete all”.
- Connection: “Line type”, “Label”, “Show label on the board”, “Colour”, “dashed”, “Line weight” and “Appearance” (in front of or behind the figures). Dragging the “+” sets a handle ◆ that bends the line; double-clicking ◆ removes it, “Straighten” removes all. A dragged handle snaps horizontally or vertically to its neighbouring point, with `Alt` freely; with a finger, double-tapping removes it. For an effect, “⇄ Reverse direction” turns the arrow; “Delete connection”.
- Text box: “Text”, “Style” (normal or heading), “with frame”, “Delete text box”.
- Area: “Label”, “Fill”, “Border colour”, “solid border”, “Delete area”; resize it at the blue square bottom right.

Below the board and in the picture bar

- “View” – “Front” (the client’s side), “Left”, “Right”, “Back”; names and symbols stay upright and readable.
- “👁 From the view of …” – the board rotates so that the chosen figure or animal stands at the bottom, looking up. Whatever lies outside its field of view fades; the yellow fan shows the field of view. The bar above has ◂ and ▸ for the previous and next figure, two turning buttons and “✕ Back”.
- “Relationships” (key `B`, temporarily) and “Names” (key `N`) hide and show lines or names.
- Picture bar at the top: a click switches pictures, dragging re-sorts, “+ Picture” copies the current one. In comparison mode you choose the left and right picture, “⇆” swaps sides, “✕ End comparison” closes it; you edit the board with the gold frame.
- The tabs ◂ ▸ at the edge hide single panels; drag the dividing line to change the width.

Mouse and keys

- Drag an element to move it; select several with `Ctrl` + click or `Shift` + click or `Shift` + frame, everything with `Ctrl` + `A`. Dragging a selected element moves all of them (relationships and their handles move along),

and so do the arrow keys; `Del` deletes all selected elements after one confirmation. On phones and tablets tap "Multiple selection" at the bottom.

- Rotate: blue handle in 15° steps (continuously with `Shift`); `Q` / `E`, with `Shift` in 45° steps.
- Size: white corner handle of the selection frame (with `Shift` in 10 % steps), `Alt` + mouse wheel, slider or `+` / `−`.
- Stacking: drag an element onto a chair, bed, sofa or table – it stands on it and moves with it; `Alt` while dragging prevents stacking.
- Drag an empty area to move the view; the mouse wheel zooms.
- `Del` deletes, arrow keys move, `Esc` cancels a tool or leaves a figure's view.
- `P` view of the selected figure, `Tab` / `Shift` + `Tab` next / previous figure, `F` fit, `B` relationships, `N` names.

Systemic Board: saving, export and handovers

"Save" creates a file `.systembrett.json` with all pictures; opening and saving work as in the chapter 'How do I use a tool?'. The exports under "Export ▾" show the current picture (in comparison mode both) as individual, editable shapes:

- "PDF" – vector graphics, A4 or A3, landscape or portrait.
- "PowerPoint (.pptx)" – individual, editable shapes (grouped).
- "LibreOffice Impress (.odp)" – open format, editable shapes.
- "Visio (.vsdx)" – individual, editable shapes.
- "SVG" – for Word, browsers and graphics programs.
- "PNG image" – high resolution.

Exports and printouts always show the view from the front, without the field-of-view fan.

Exchange with the 3D systemic board: both boards use the same figures and symbols. The 3D systemic board opens your `.systembrett.json`; a file that was exported there with "Save as 2D systemic board" opens here with all symbols, postures, curves and line weights.

Master data: if the tool is linked to the master data, the first line of a figure taken over comes from there; you add further lines freely.

In the suite you open and save via the suite's storage (chapter 'Tools in the suite: working together').

Data protection: all data stays on this computer; the file loads nothing from the internet and sends nothing. Merely opening it creates nothing in the browser; while you work, the browser keeps an automatic interim copy.

Systemic Board: phone, systems and browsers

On phones and tablets (up to 900 pixels wide or 500 pixels high) the controls from the chapter 'How do I use a tool?' apply:

- The header is collapsed to one line; "☰" expands it, for example for "Export ▾".
- Below the board, **+ Figures** opens the figure panel as a window, "✎ Properties" the right-hand panel – on the phone from the bottom, on the tablet from the side; "✕" or tapping the darkened board closes it.
- Tap a figure, then tap the board – it is in place. The tabs ◂ ▸ and dividing lines are hidden here.
- Swiping on the board moves the view instead of scrolling the page; you zoom with two fingers.

The systemic board needs no folder features and works the same in Chrome, Edge, Firefox and Safari; in Safari and Firefox you save via the browser's download (chapter 'How do I use a tool?').

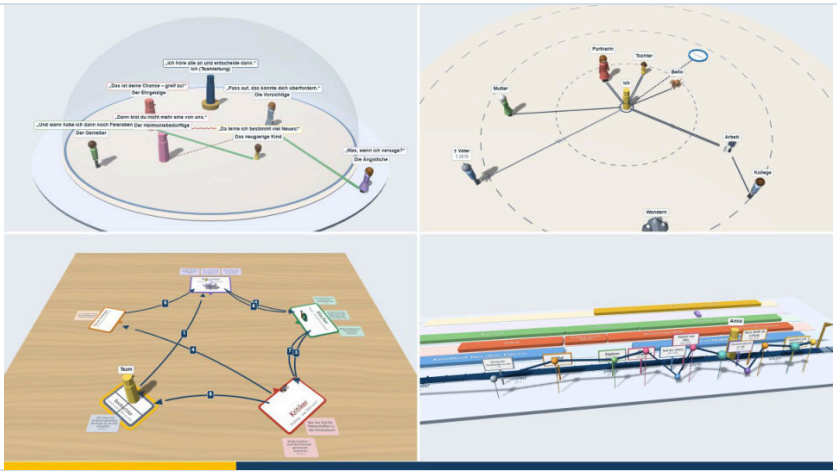
Not tested: real phones and tablets (I tested in simulated screen sizes with touch), two-finger zooming on a real touch device and Safari on a real Mac.

Systemic Board: tips

- Start with a few figures and first ask who belongs to the system – and who does not. Guiding questions from the help: Who stands where, how close, where is each figure looking? What would change if a figure took a step or turned around?

- Copy the picture with "+ Picture" instead of setting it up again: only then do the traces show what has moved. They always refer to the picture before.
- Give colours and lines a meaning and show the legend – this makes printouts readable for others.
- For coaching by video, "⛶ Large board" hides both panels; the tabs at the edge bring back a single panel.

3D systemic board



3D systemic board: purpose and use

The 3D systemic board shows a constellation in space: figures, people, animals and objects stand as models with shadows on a board that you walk around and view from any angle. On a real systemic board, clients lean over the board, walk around the table or look at the others from the height of a figure. The 3D board makes exactly this possible digitally, also over video. The most powerful moment is often the switch to a figure's point of view: the camera moves to the figure's eye level, and you see what it has in view – and what it does not.

Method, figures, symbols and line types are the same as in the systemic board. I describe origins, approach and the shared properties in the chapter 'Systemic Board'; here you will find what is different in space.

The 3D systemic board is released. It is on the website on the Resources page, can be downloaded as a file and is in the suite in the category People and coaching. It saves files with the extension `.systembrett3d.json`. More in the posts Coaching tools in 3D: set up and walk through and The systemic board: setting up systems in 2D and 3D.

In coaching, the systemic board serves as a reflection and conversation model, not a diagnostic instrument. Coaching is not psychotherapy.

3D systemic board: step by step

1. Open the 3D systemic board; "Example" shows a finished constellation. You open a file from the systemic board with "Open …".
2. Choose a figure on the left and click on the board – with `Shift` several in a row. Type the name or role on the right straight away.
3. Place people outside the system next to the board on the table.
4. Rotate the selected figure with the blue handle ↻ or with `Q` / `E`; change the size with the golden handle ⇳ next to the name.
5. Walk around the board: drag an empty area. Choose fixed views at the bottom left or with the keys `1` to `6`.
6. Switch to a figure's view: "👁 View" on the selected figure, "👁 From the view of …" at the bottom or key `P`. You see the board at the figure's eye level; `Tab` moves to the next figure, `Esc` leads back. To keep a view you will need again, use "📷 Views …" › "+ Remember this view" at the bottom; it is saved with the file.
7. Create a solution picture with "+ Picture" and rearrange. When you switch between pictures, the figures visibly walk to their new places.
8. Place the current-state and solution pictures side by side with "⇆ Compare"; rotating and zooming then apply to both halves.
9. Finally, create the "Print picture sheet / as PDF" via "Export ▾".

10. Save with “Save” (`Ctrl` + `S`).

3D systemic board: functions and buttons

Header – “New”, “Open …” (also files of the 2D systemic board), “Save”, “Save as …”, the undo and redo arrows, “Export ▾”, “⛶ Large board”, “Example” and “Help”. The left panel with figures and symbols matches that of the systemic board, including search field, postures, values and connections.

Handles on the selected figure

- The blue handle ↻ – rotates in 15° steps, continuously with `Shift`. The “nose”, for people the face, shows the direction of gaze.
- The golden handle ⇳ – drag up or down to make the figure larger or smaller.
- “👁 View” – look at the board from this figure’s point of view.

Bottom left: view

- “Free”, “Top”, “Front”, “Left”, “Right”, “Back” – fixed viewing angles; “Front” is the side where the client sits.
- “⤢ Fit to view” (key `F`) – enlarges the board so that it fills the free space.
- “👁 From the view of …”, “📷 Views …” (show saved views or remember the view shown with “+ Remember this view”), “Relationships” (key `B`) and “Names” (key `N`).

In a figure’s view – ◂ and ▸ switch the figure, two buttons turn it by 15°, “Figure turns with it” decides whether dragging turns the figure or you only look around, “Straight ahead” looks in the direction of gaze again, “✕ Back” returns to the overall view.

Properties when nothing is selected

- “Title”, “Name of the picture”, “Notes on the picture”, “+ Picture (copy)”, “Delete picture”, “◂ earlier”, “later ▸” and “⇆ Compare with another picture”.
- “Board” – “Shape” (square, rectangular (landscape), round), “Size” (40 to 120 cm), “Surface” (light wood, dark wood, white, green felt, grey), “Inner edge (dashed)” and “Grid (5 cm)”.
- “Display” – “Show names”, “Coloured (otherwise all figures in wood)”, “Shadows”, “Relationship lines”, “Line weight of the relationships”, “Traces of the previous picture (translucent)”, “Show legend”, “Show field of view” and “Viewing angle”.
- “Meaning of the colours” and “Meaning of the lines”.
- “Saved views” – for each view its name (editable), “👁 Show”, “⟳” (overwrite with the view shown) and “✕”; “+ Remember the view shown”. The views apply to all pictures; if the figure of a “view of …” is not in the picture shown, the overall view is kept.

Properties of a figure – as in the systemic board, plus colour swatches for “Clothing colour”, “Skin tone” and “Hair colour”, size buttons “Child”, “Teenagers”, “Adults” and “large”, a “Viewing direction” slider with “turn around” and “Direct gaze at …”, and “+ Connection”, “Duplicate” and “Delete”. Under the field of view you see whom the figure has in view, with direction and distance in centimetres. The tool itself adds: “Describes only the position on the board – you clarify the meaning in conversation.”

Picture sheet – the “Print picture sheet / as PDF” window offers “Current view”, “From above”, “From the front (side of the client)”, “From the view of each figure”, “Saved views (if any)”, “Overview: Who has whom in view?” and “All pictures (not just the current one)”; “Create picture sheet” opens the print dialog.

Mouse and keys – dragging an empty area walks around the board, the right mouse button or `Shift` + dragging moves it, the mouse wheel goes nearer or further away. In a figure’s view, `←` / `→` turn in 15° steps. Also: `Del` delete, `Ctrl` + `D` duplicate, arrow keys move (further with `Shift`), `Q` / `E` rotate (45° with `Shift`), `+` / `−` and `Alt` + mouse wheel for the size, `1` – `6` views, `P` view, `Esc` back, `F` fit, `B` relationships, `N` names, `Alt` while dragging prevents stacking, `Ctrl` + `Z` / `Y` / `S` / `O`. `Ctrl` + click or `Shift` + click selects several (gold ring), `Ctrl` + `A` all; dragging a selected element, the arrow keys and `Del` (one confirmation) act on all of them; on phones and tablets “Multiple selection” and “Select all”. Handles snap along the board directions to the neighbouring point (`Alt` freely).

3D systemic board: saving, export and handovers

- “Save” creates a file `.systembrett3d.json` with all pictures and the saved views. In addition, the file remembers the view last shown – including “From the view of …” – and opens exactly there again. Older versions open such files without errors but do not know the views.
- “PNG image of the current view” – high resolution, with names; in comparison mode with both pictures.
- “Print picture sheet / as PDF” – views from above, from the front and from the figures’ points of view. To save as PDF, choose “Save as PDF” or “Microsoft Print to PDF” in the print dialog.
- “Save as 2D systemic board” – writes a file `.systembrett.json` for the systemic board; there you have PDF, PowerPoint, LibreOffice Impress and Visio. The 2D board knows all symbol groups, postures, stacking, curves and line weights – the round trip works without loss.

In the suite you open and save via the storage, as described in the chapter ‘Tools in the suite: working together’. All data stays on the computer; the tool loads nothing from the internet.

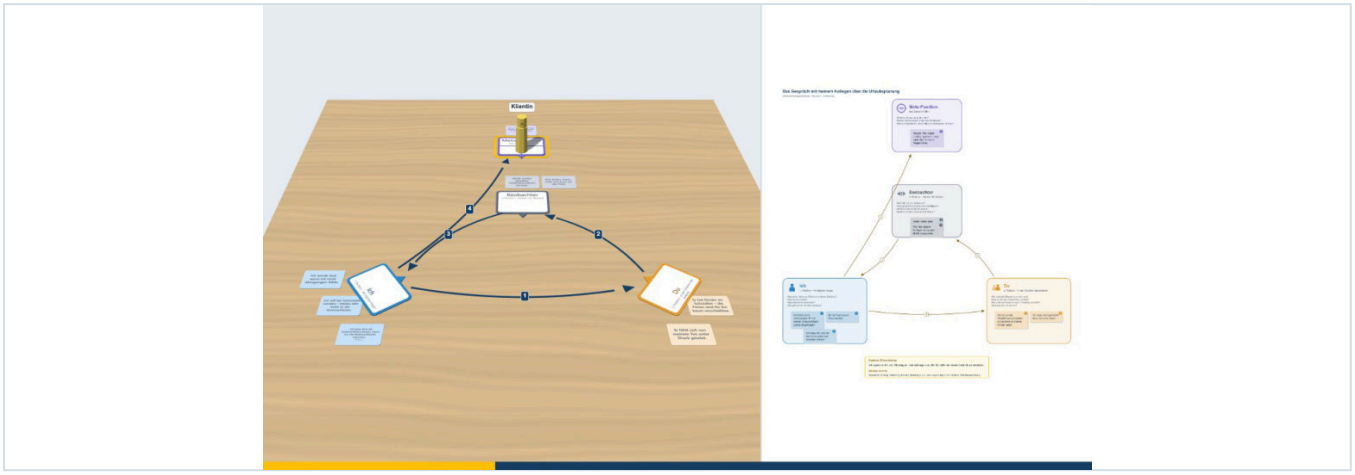
3D systemic board: phone, systems and browsers

- On phones and tablets, **+ Figures** below the board opens the figure panel. Tap a figure and then tap the board; shortly afterwards “✎ Properties” opens so that you can type the name straight away. The header is folded into a single row; “☰” shows all buttons. Swiping rotates the board, you zoom with two fingers.
- The 3D display needs WebGL 2. Without it, “3D view not available” appears: then use an up-to-date version of Chrome, Edge, Firefox or Safari, or switch on hardware acceleration in the browser settings.
- In Safari and Firefox you save via the download, as described in the chapter ‘How do I use a tool?’.
- I have also tested the phone operation on a real phone. Not tested: real tablets, two-finger zooming on a real touch device and Safari on a real Mac.

3D systemic board: tips

- In a figure’s view, switch off “Figure turns with it” if you only want to look around without changing the saved direction of gaze.
- Let the client switch between the current-state and the solution picture: the figures walk to their new places and the change becomes visible.
- Place whatever is left out next to the board on the table.
- The picture sheet with the overview “Who has whom in view?” works well as a result to take away.
- Remember the view that made the difference (e.g. “View of Mother” in the solution picture) – at the next session the file opens exactly there again.
- If you need PowerPoint, Visio or SVG, save as a 2D systemic board and export there.

Floor anchors



Floor anchors: purpose and use

Floor anchors are places in the room that stand for a point of view, a role or a time. Whoever steps onto one speaks only from that stance. The change of place creates distance from your own standpoint, and because each position has a fixed place, the viewpoints do not get mixed up. In the tool, every floor anchor is an area on a board; notes record what was said in the position, and the path through the positions appears as numbered arrows.

Typical occasions are conflicts and difficult conversations, deadlocked decisions, recurring patterns in relationships and planning goals along a timeline. Five formats are available: perceptual positions (after John Grinder and Judith DeLozier, from NLP), the drama triangle (after Stephen Karpman, 1968, transactional analysis), the tetralemma in the room (after Matthias Varga von Kibéd and Insa Sparrer), the timeline on the floor and positions of your own. Guiding questions and implementation are my own wording.

The floor anchor tool is still beta and not fully tested. It saves files with the extension `.bodenanker.json`, is on the website on the Experimental page, can be downloaded as a file and is in the suite in the category People and coaching. I describe the walkable version in the chapter '3D floor anchors'. More on the method in the post Floor anchors: changing perspective in the room.

The tool serves as a reflection and conversation model, not a diagnostic instrument; coaching is not psychotherapy.

Floor anchors: step by step

1. Open the floor anchor tool and choose the suitable format on the right under "Format". The positions of the format are ready straight away in the basic constellation.
2. Enter the "Concern / situation" on the right.
3. If needed, add positions from other formats on the left under "More positions", or create a "Custom position".
4. Step into a position: click the position in the bar at the top, double-click the area or use "▶ Switch to this position" on the right. The guiding questions appear on the right.
5. Start a timer if you wish: on the right under "Time per position", 3, 5, 10 or 15 minutes.
6. Collect contributions: "+ Note" or the key `N` puts a note into the current position.
7. Change position. Every change is shown as a numbered arrow; when you return to the format's starting position, a new round begins.
8. Finally, record the "Result / insight" and the "Next steps" on the right under "Result".
9. Use "Export ▾" for "Print session record" or export the board as an image.
10. Save with "Save" (`Ctrl` + `S`).

Floor anchors: functions and buttons

Header – "New" (new session in the chosen format), "Open …", "Save", "Save as …", the undo and redo arrows, the minus and plus buttons with the percentage display, "Fit to view", "Export ▾", "Example" and "Help".

The formats and their positions

- "Perceptual positions" – "Me" (1st position, through your own eyes), "You" (2nd position, in the other person's shoes), "Observer" (3rd position, neutral, at a distance) and, if you wish, the "Meta position" (the whole in view).
- "Drama triangle" – "Persecutor", "Victim" and "Rescuer", plus "Observer" and "Exit" (clear, responsible, on an equal footing) to leave the pattern.
- "Tetralemma in the room" – "The one", "The other", "Both", "Neither of the two" and the "Fifth position" (none of this – and not even that).
- "Timeline on the floor" – "Past", "Present", "Future" and, if you wish, an observer.
- "Custom positions" – freely named, for example for roles, values, parts or options.

Left panel

- At the top the chosen format with a short description.
- "Positions of this format" and "More positions" (from the other formats, freely combinable) – drag onto the board or click. Positions already present are marked.

- “Contributions” – “Note” (drag into the position or key `N`) and “Text box” (for example for a heading).

On the board

- Bar at the top: one button per position to step in, next to it the current “Round”.
- Timer with the name of the position; “Stop” ends it. When the time is up, the tool reports “Time for this position is up – time for a change.”

Properties when nothing is selected

- “Format” and “Concern / situation”.
- “Sequence” – current position and round, a “+ Note” button for the current position, below it the path with “Remove last step” and “Reset path and rounds”; you can also choose the “Round” by hand.
- “Time per position” – 3, 5, 10 or 15 minutes, “restart at every change”.
- “Arrangement of the positions” – “Basic constellation of the format”, “Row (path through the room)” or “Circle”; the notes move along.
- “Result” – “Result / insight” and “Next steps”.
- “Appearance” – “Show guiding questions in the positions”, “Show path as numbered arrows”, “Round number on the notes”, “Result below the board”, “Concern above the board” and “PDF format”.
- “How it works” – the steps for the chosen format.

Properties of a position

- “▶ Switch to this position” or, if you are already in it, “+ Note here (N)”.
- The position’s “Guiding questions” and “Time in this position”.
- “Edit” – “Name”, “Subtitle”, “Guiding questions (one per line)”, “Reset guiding questions”, “Colour”, “Width” and “Height”.
- “Delete position” – the notes stay on the board.

Notes, result and multiple selection

- Note: “Text”, “Round”, “Colour”, below that the guiding questions of the position; “+ Another note” and “Delete note”.
- Result box below the board: “Outcome / decision”, “Next steps” and “Hide below the board”.
- Several elements: “Round for all notes” and “Delete all”.

Mouse and keys – drag an area or a note; an area takes its notes with it. Select several with `Ctrl` + click or `Shift` + click (again = remove) or `Shift` + frame on an empty area, all with `Ctrl` + `A`; dragging a selected element or the arrow keys move all of them, `Del` deletes all after one confirmation, `Esc` clears the selection. On a phone or tablet the “Multiple selection” button at the bottom left switches on adding by tapping and the frame by swiping. Path arrows can be clicked and shaped like a line; “／ Straight” curves them automatically again. Resize an area with the blue square at the bottom right. Dragging an empty area moves the view, the mouse wheel zooms. `N` new note in the current position, `Del` delete, `Esc` clear the selection, `Ctrl` + `Z` / `Y` / `S` / `O`.

Floor anchors: saving, export and handovers

“Save” creates a file `.bodenanker.json`; opening and saving work as described in the chapter ‘How do I use a tool?’. Under “Export ▾”:

- “PDF” (the board, A4 or A3), “PowerPoint (.pptx)” with individual, editable shapes, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image”.
- “Print session record” – concern, picture, contributions per position and round, path and result, also as PDF.
- “Contributions as table (CSV)” – round, position, contribution, for Excel.

The 3D floor anchor tool opens your `.bodenanker.json` and, if you wish, exports a picture back for this tool (chapter ‘3D floor anchors’). In the suite you open and save via the storage, as described in the chapter ‘Tools in the suite: working together’. All data stays on this computer: in your files and, once you are working, in this browser’s automatic interim copy. The tool loads nothing from the internet and sends nothing.

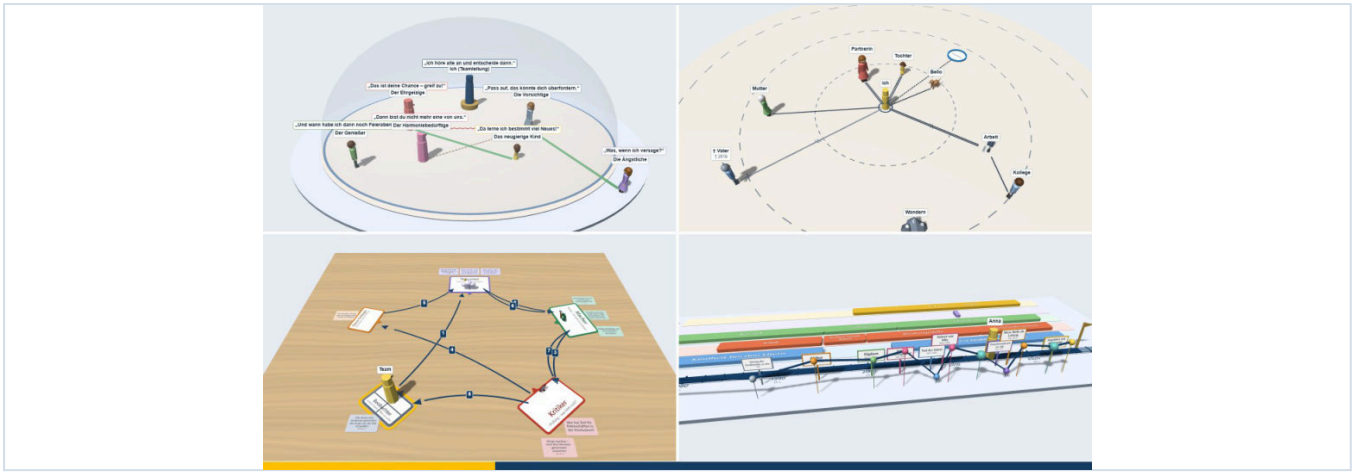
Floor anchors: phone, systems and browsers

- On phones and tablets, "+ Elements" below the board opens the left panel and "✎ Properties" the right one. Tapping a position or note in the panel puts it straight onto the board. "☰" expands the header, for example for "Export ▾".
- On the phone, too, you step into positions via the bar at the top of the board.
- There are no folder features; in Safari and Firefox you save via the download, as described in the chapter 'How do I use a tool?'.
- Not tested: real phones and tablets (tested in simulated screen sizes with touch) and Safari on a real Mac.

Floor anchors: tips

- Before each change, step briefly into the observer position: What has emerged so far?
- For the tetralemma, rename the two options "The one" and "The other" on the right under "Name".
- Adapt the guiding questions of a position to your concern; "Reset guiding questions" brings back the template.
- Changing the format sets up the positions of the new format, and your notes are kept; undo with `Ctrl` + `Z`.
- With "restart at every change", the timer starts again in every new position.

3D floor anchors



3D floor anchors: purpose and use

In a face-to-face session, clients walk from sheet to sheet; over video, this movement is missing. In the 3D floor anchors, the positions lie as sheets in the room, and a walking figure goes through them on the client's behalf. From each position you can look into the room as if standing there, towards the other positions. Notes lie as cards next to their position.

Formats, positions and guiding questions are as in the chapter 'Floor anchors'; here I describe what is specific to 3D. The tool is still beta, saves `.bodenanker3d.json`, is on the website on the Experimental page and in the suite in the category People and coaching. More in the posts Coaching tools in 3D: set up and walk through and Floor anchors: changing perspective in the room. A reflection and conversation model, not a diagnostic instrument. Coaching is not psychotherapy.

3D floor anchors: step by step

1. With nothing selected, choose the "Format" on the right; the basic constellation is ready straight away.
2. Enter the "Concern" on the right.
3. Click a position in the "Position" bar at the bottom, or "→ Go to this position" on the right: the figure walks there, and the path appears as numbered arrows.
4. Look into the room with "👁 Look from this position" or the key `P`. The tip of the floor anchor shows the direction of gaze; rotate it with the blue handle or with `Q` / `E`.
5. Create a card with `N` or "+ Note", or type under "New note (Enter)" with a position selected.
6. When the figure steps into the starting position again, a new round begins.

7. With nothing selected, record the outcome and next steps on the right and create the “Print picture sheet / as PDF”.

3D floor anchors: functions and buttons

- **Header:** “New”, “Open …” (also files of the 2D floor anchor board), “Save”, “Save as …”, the large undo and redo arrows, “Export ▾”, “⛶ Large”, “Example”, “Help”.
- **Bar at the bottom:** “Position” with one button per floor anchor, “Round” with a plus button, the time in the current position (not saved) and “+ Note”.
- **Camera:** “View” with “Free”, “Top”, “Front”, “Left”, “Right”, “Back” (keys `1` – `6`), “⤢ Fit to view” (key `F`), “👁 From the view of …” and “Names”. Drag an empty area to walk around, right mouse button or `Shift` + drag to move, mouse wheel for nearer or further.
- **View from a position:** ◂ and ▸ move on, `←` / `→` turn in 15° steps, “turns with it” decides whether dragging turns the direction of gaze, “Straight ahead” and “✕ Back”.
- **Position selected:** “→ Go to this position”, “Subtitle”, “Guiding questions” (editable; “Template text” restores them), “Notes in this position” and “New note (Enter)”.
- **Note card:** “Belongs to position”, “Round” and “Use the position’s colour”; cards can be dragged to another position.
- **Figure:** “walks through the positions (client)” and “Step out of the position”. People and figures placed on a floor anchor move with it.
- **Nothing selected:** “Constellation” with “Basic constellation”, “Row”, “Circle”; “Floor” (parquet, light floor, carpet (blue-grey), grey); “Path and rounds” with “Reset path”, “New round”, “Show path as arrows” and “Show round on the notes”; “Outcome / decision” and “Next steps”.
- **Pictures:** “+ Picture” copies the current picture (e.g. round 1 and 2); on switching, elements visibly move to their new places. “⇆ Compare” shows two pictures side by side.
- **Several elements:** `Ctrl` + click or `Shift` + click selects several (gold ring), `Ctrl` + `A` all; dragging a selected element, the arrow keys and `Del` (one confirmation) act on all of them; on phones and tablets “Multiple selection” and “Select all”. Handles snap along the board directions to the neighbouring point (`Alt` freely).

3D floor anchors: saving, export and handovers

“Save” creates `.bodenanker3d.json` with all pictures. Files of the 2D tool (`.bodenanker.json`) open here; “Save as 2D floor anchor board” exports the current picture for the 2D tool, where you have PDF, PowerPoint, LibreOffice and Visio. Handles of the path from the 2D tool are kept on the way there and back. Also “PNG image of the current view” and the picture sheet with “Current view”, “From above”, “From the front”, “From the view of each position and figure”, “Session record (positions, notes, path, outcome)” and “All pictures (not just the current one)”. Suite as in the chapter ‘Tools in the suite: working together’.

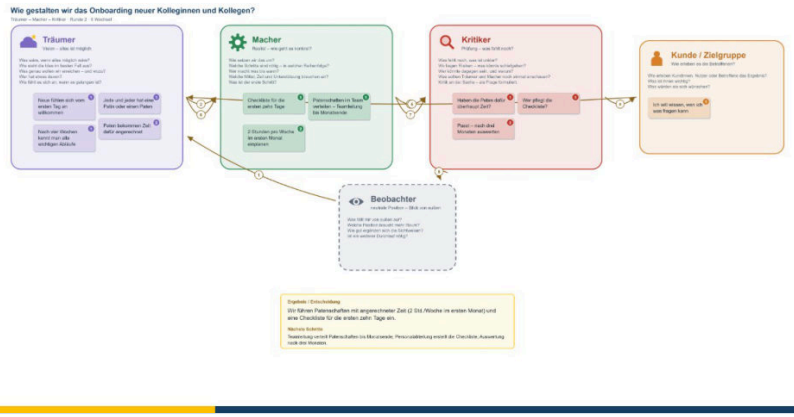
3D floor anchors: phone, systems and browsers

On phones and tablets, “+ Elements” opens the palette: tap an element, then tap the floor. “✎ Properties” and “☰” work as in the chapter ‘How do I use a tool?’. The 3D display needs WebGL 2; Chrome or Edge are recommended. Not tested: real phones and tablets and Safari on a real Mac.

3D floor anchors: tips

- The outcome and next steps appear on the picture sheet – this makes it the record of the session.
- Switch off “turns with it” if you only want to look around in a position.
- For PowerPoint or Visio, save as a 2D floor anchor board and export there.

Dreamer–Realist–Critic



Dreamer–Realist–Critic: purpose and use

No sooner has an idea been voiced than the first objection follows. Many good ideas fail because dreaming, planning and checking happen at the same time and hold each other back. The creativity strategy after Robert Dilts separates these three ways of thinking: the Dreamer, who develops visions, the Realist, who plans the implementation, and the Critic, who checks what is still missing. Each viewpoint gets its own place in the room – in the tool its own area on the board. The switching is steered from a neutral observer position. By deliberately switching between the positions, an idea gets better over several rounds instead of being dropped early on.

The method suits individuals and teams: for new products and services, project ideas, career plans or changes in the organisation. Robert Dilts described it in 1994; the guiding questions and implementation in the tool are my own wording.

The tool is still beta and not fully tested. It saves files with the extension `.tmk.json`, is on the website on the Experimental page, can be downloaded as a file and is in the suite in the category People and coaching. I describe the walkable version in the chapter '3D Dreamer–Realist–Critic'. More on the method in the post Dreamer, Realist, Critic.

The tool serves as a reflection and conversation model, not a diagnostic instrument; coaching is not psychotherapy.

Dreamer–Realist–Critic: step by step

1. Open the tool and enter the "Question / undertaking" on the right.
2. Choose an arrangement on the right under "Arrangement of the positions": "Triangle (classic)", "Row (path through the room)" or "Circle (with many positions)".
3. First go into the "Observer": click the position in the bar at the top or double-click the area. If you want to work covered, click "Cover areas" on the right under "Sequence" instead: the exercise starts in the Dreamer, Realist and Critic lie covered next to it, and the Observer stays open.
4. Switch to the "Dreamer": What if anything were possible? "+ Note" or the key `N` puts a note into the current position. There is no judging in the Dreamer. If an area is covered, switching into the position uncovers it.
5. Switch to the "Realist": How do we put this into practice, which steps, who does what by when?
6. Switch to the "Critic": What is still missing, where are the risks? Criticism of the matter, phrased as a question.
7. Go back to the Dreamer. Every new entry into the Dreamer starts a new round; the path appears as numbered arrows.
8. If needed, add more positions, such as "Customer / target group" or "Future self".
9. If you wish, let a timer run for each position (3, 5, 10 or 15 minutes).
10. When the Critic finds nothing essential any more, record the "Outcome / decision" and the "Next steps" on the right.
11. Print the record via "Export ▾" and save with "Save".

Dreamer–Realist–Critic: functions and buttons

Header – “New” (new session), “Open …”, “Save”, “Save as …”, the undo and redo arrows, the minus and plus buttons with the percentage display, “Fit to view”, “Export ▾”, “Example” and “Help”.

Left panel

- “Basic positions” – “Dreamer” (vision – everything is possible), “Realist” (how does it work in practice?), “Critic” (review – what is still missing?) and “Observer” (neutral position – view from outside).
- “More positions (suggestions)” – “Customer / target group” (how do those affected experience it?), “Mentor / adviser” (benevolent advice with experience), “Preserver” (what should stay?), “Sponsor / supporter” (who or what helps?), “Future self” (looking back from the future), “Decision-maker / integrator” (what do we take with us?) and “Custom position”.
- “Contributions” – “Note” (drag into the position or key `N`) and “Text box” (for example for a heading).
- All elements can be dragged onto the board or clicked; positions already present are marked.

On the board – at the top one button per position for switching (covered positions dashed with “covered”) and the current “Round”; the timer with “Stop”; the result box below the board. A covered area shows only its symbol and name with “– covered”; its guiding questions and notes are hidden until it is the position’s turn.

Properties when nothing is selected

- “Question / undertaking”.
- “Sequence” – current position and round with a “+ Note” button, the path so far with “Remove last step” and “Reset path and rounds”, choice of the “Round”; “Cover areas” (all positions except the current one and the Observer; without a current position the exercise starts in the Dreamer) and “Uncover all”. For the variant with the Critic first, switch into the Critic first and then click “Cover areas”.
- “Time per position” – 3, 5, 10 or 15 minutes, “restart at every change”.
- “Arrangement of the positions” – “Triangle (classic)”, “Row (path through the room)”, “Circle (with many positions)”.
- “Result” – “Outcome / decision” and “Next steps”.
- “Appearance” – “Show guiding questions in the positions”, “Show path as numbered arrows”, “Round number on the notes”, “Result below the board”, “Question above the board” and “PDF format”.
- “How it works” – the quick guide.

Properties of a position – “▶ Switch to this position” with “Cover” or “+ Note here (N)” (the current position cannot be covered); for a covered area “▶ Switch into this position (uncover)” and “Uncover without switching”; the “Guiding questions”, “Time in this position”, under “Edit” “Name”, “Subtitle”, “Guiding questions (one per line)”, “Reset guiding questions”, “Colour”, “Width” and “Height”; “Delete position” leaves the notes on the board.

Notes and multiple selection – note: “Text”, “Round”, “Colour”, the guiding questions of its position, “+ Another note” and “Delete note”. Several elements: “Round for all notes” and “Delete all”. Result box: “Hide below the board”.

Mouse and keys – drag an area or a note (an area takes its notes with it), several with `Ctrl` + click or `Shift` + click (again = remove) or `Shift` + frame on an empty area, all with `Ctrl` + `A`; dragging a selected element or the arrow keys move all of them, `Del` deletes all after one confirmation, `Esc` clears the selection. On a phone or tablet the “Multiple selection” button at the bottom left switches on adding by tapping and the frame by swiping. Path arrows can be clicked and shaped like a line; “／ Straight” curves them automatically again. Resize with the blue square at the bottom right; dragging an empty area moves the view, the mouse wheel zooms. `N` new note in the current position, `Del` delete, `Esc` clear the selection, `Ctrl` + `Z` / `Y` / `S` / `O`.

Dreamer–Realist–Critic: saving, export and handovers

“Save” creates a file `.tmk.json`; opening and saving work as described in the chapter ‘How do I use a tool?’. Under “Export ▾”:

- “PDF” (the board, A4 or A3), “PowerPoint (.pptx)” with individual, editable shapes, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image”.

- “Print session record” – question, picture, contributions per position and round, path and result, also as PDF.
- “Contributions as table (CSV)” – round, position, contribution, for Excel.

The 3D version opens your `.tmk.json` and, if you wish, exports a picture back for this tool. In the suite you open and save via the storage (chapter ‘Tools in the suite: working together’). All data stays on this computer, in your files and in the browser’s automatic interim copy; the tool loads nothing from the internet and sends nothing.

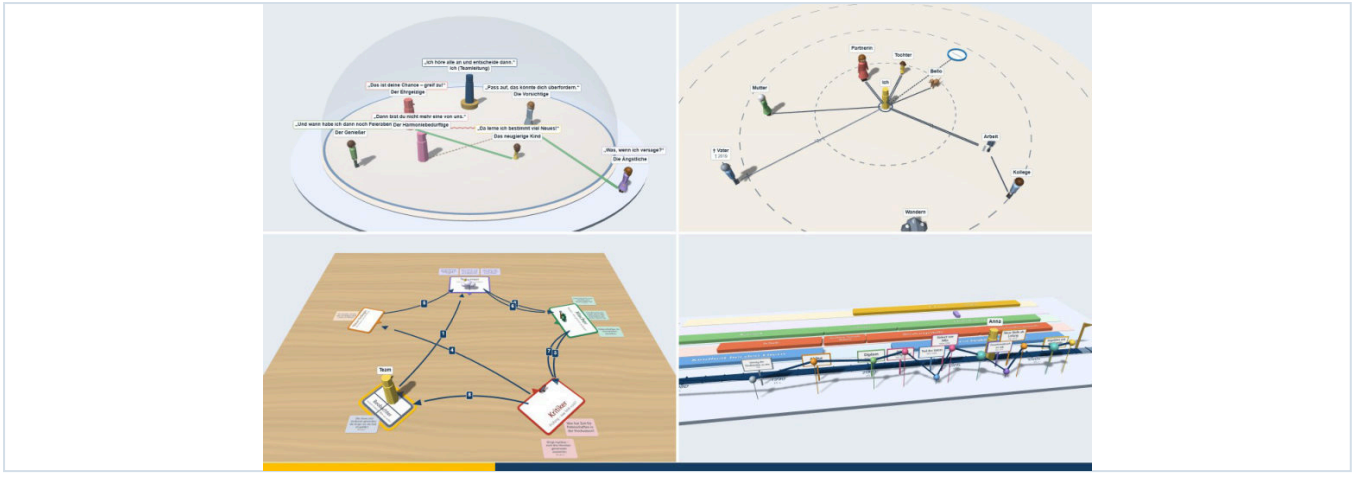
Dreamer–Realist–Critic: phone, systems and browsers

- On phones and tablets, “ + Elements” below the board opens the positions and contributions, “✎ Properties” the right-hand panel; tapping an element puts it straight onto the board. “☰” expands the header.
- There are no folder features; in Safari and Firefox you save via the download (chapter ‘How do I use a tool?’).
- Not tested: real phones and tablets (tested in simulated screen sizes with touch) and Safari on a real Mac.

Dreamer–Realist–Critic: tips

- The usual order is Observer, Dreamer, Realist, Critic and back to the Dreamer – until the Critic finds nothing essential any more.
- Before each switch, pause briefly in the observer position: What has emerged so far, which position needs more space?
- In each position, speak only from that stance; criticism belongs in the Critic.
- If you add many more positions, choose the arrangement “Circle (with many positions)”.
- With “restart at every change”, every position gets the same time.

3D Dreamer–Realist–Critic



3D Dreamer–Realist–Critic: purpose and use

The method thrives on changing places. In the 3D version, the Dreamer, Realist, Critic and Observer lie in the room as floor anchors, each with its own symbol. A figure, such as “Team”, walks the positions in rounds; the path appears as numbered arrows, and each new entry into the Dreamer moves the count on by one round. Notes lie as cards next to their position and show their round. From each position you can look into the room – this helps above all over video, when nobody can actually walk through the room.

The sequence, positions and guiding questions of the creativity strategy after Robert Dilts are in the chapter ‘Dreamer–Realist–Critic’; here it is about what is specific to 3D. The tool is still beta, saves `.tmk3d.json`, is on the website on the Experimental page and in the suite in the category People and coaching. More in the posts Coaching tools in 3D: set up and walk through and Dreamer, Realist, Critic. A reflection and conversation model, not a diagnostic instrument. Coaching is not psychotherapy.

3D Dreamer–Realist–Critic: step by step

1. Enter the question on the right as the concern.
2. Click “Dreamer” in the “Position” bar at the bottom – the figure walks there. Collect ideas without restriction; the key `N` creates a card.

3. Go into the “Realist” (steps, responsibilities, resources) and the “Critic” (criticism of the matter, phrased as a question).
4. Go back into the Dreamer: the round counts on automatically, and the cards show their round.
5. Look from a position into the room with “👁 Look from this position” or the key `P`.
6. If needed, add more positions from the palette (customer, mentor, preserver, sponsor, future self, decision-maker).
7. With nothing selected, record the outcome and next steps on the right and create the “Print picture sheet / as PDF”.

3D Dreamer–Realist–Critic: functions and buttons

- **Header:** “New”, “Open …” (also files of the 2D tool), “Save”, “Save as …”, the large undo and redo arrows, “Export ▾”, “⛶ Large”, “Example”, “Help”.
- **Bar at the bottom:** “Position” with one button per floor anchor, “Round” with a plus button, the time in the current position (not saved) and “ + Note”.
- **Camera:** “View” with “Free”, “Top”, “Front”, “Left”, “Right”, “Back” (keys `1` – `6`), “⤢ Fit to view” (key `F`), “👁 From the view of …”. Drag an empty area to walk around, right mouse button or `Shift` + drag to move, mouse wheel for nearer or further.
- **View from a position:** ◂ and ▸ move on, `←` / `→` turn in 15° steps, “turns with it”, “Straight ahead”, “✕ Back”.
- **Position selected:** “→ Go to this position”, “Subtitle”, “Guiding questions” (“Template text” restores them), “Notes in this position” and “New note (Enter)”.
- **Card and figure:** “Belongs to position”, “Round”, “Use the position’s colour”; for the figure “walks through the positions (client)” and “Step out of the position”.
- **Nothing selected:** “Constellation” with “Basic constellation”, “Row”, “Circle”; “Floor”; “Path and rounds” with “Reset path”, “New round”, “Show path as arrows”, “Show round on the notes”; “Outcome / decision” and “Next steps”.
- **Pictures:** “+ Picture” copies the current picture (e.g. round 1 and 2), on switching the elements move visibly; “⇆ Compare” shows two pictures side by side.
- **Placing and editing:** choose an element on the left and click in the area (several with `Shift`); rotate with the blue handle ↻ or `Q` / `E`, size with the golden handle ⇳, `Alt` + mouse wheel or `+` / `−`; `Del`, `Ctrl` + `D`, `B` connections on and off.
- **Several elements:** `Ctrl` + click or `Shift` + click selects several (gold ring), `Ctrl` + `A` all; dragging a selected element, the arrow keys and `Del` (one confirmation) act on all of them; on phones and tablets “Multiple selection” and “Select all”. Handles snap along the board directions to the neighbouring point (`Alt` freely).

3D Dreamer–Realist–Critic: saving, export and handovers

“Save” creates `.tmk3d.json` with all pictures. Files of the 2D tool (`.tmk.json`) open here; “Save as 2D board” exports the current picture for the 2D tool (PDF, PowerPoint, LibreOffice, Visio there). Handles of the path from the 2D tool are kept on the way there and back. Also “PNG image of the current view” and the picture sheet with several views, “From the view of each position and figure” and “Session record (positions, notes, path, outcome)”.

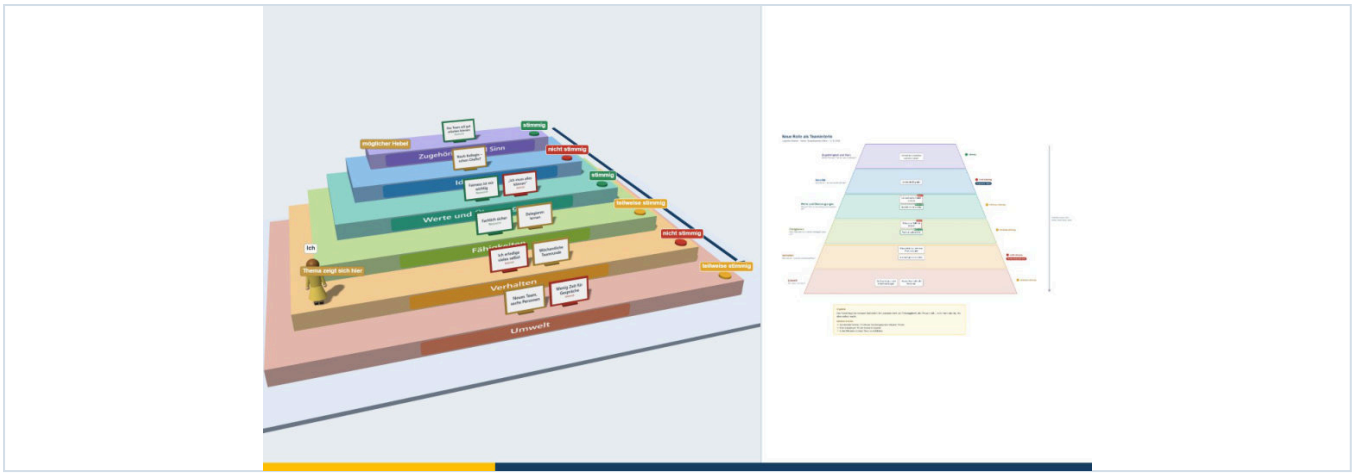
3D Dreamer–Realist–Critic: phone, systems and browsers

On the phone, “ + Elements” opens the palette: tap an element, then tap the floor; “✎ Properties” and “☰” work as in the chapter ‘How do I use a tool?’. The 3D display needs WebGL 2; Chrome or Edge are recommended. Not tested: real phones and tablets and Safari on a real Mac.

3D Dreamer–Realist–Critic: tips

- Name the figure after what it stands for, such as “Team”.
- Before each switch, go briefly into the Observer and look at the other positions from there.
- For PowerPoint or Visio, save as a 2D board and export there.

Logical levels



Logical levels: purpose and use

Some problems can be solved with a new tool or better planning, others cannot – because they lie on a different level: in a belief, in your own role or in the question of what it is all for. The logical levels model (Robert Dilts, drawing on Gregory Bateson) sorts a concern on six levels: environment (where, when, with whom), behaviour (what I do), capabilities (how, what I am able to do), values and beliefs (why), identity (who I am) and belonging and purpose (where do I belong, what for, for whom). Changes on a higher level usually affect the levels below; a solution therefore often lies one level higher than the problem.

The tool shows the levels as a pyramid, for a person or for a team or organisation. You mark entries as a resource or a brake, record the alignment of each level, and a target picture shows how things should be. If you like, it guides you level by level through your initiative with one single guiding question – "When I think of my initiative – what is true on this level?" – and the pyramid then shows on which level the real issue lies. For companies, the template "Team or organisation" serves as a bridge to the 8-Level Model.

I use Robert Dilts's logical levels as a reflection and conversation model, not a diagnostic instrument. Coaching is not psychotherapy.

The tool is still beta and not fully tested. It saves files with the extension `.ebenen.json`, is on the website on the Experimental page, can be downloaded as a file and is in the suite in the category People and coaching. I describe the walkable staircase in the chapter '3D logical levels'. More on the method in the post Dilts's logical levels – from behaviour to purpose.

Logical levels: step by step

1. Open the tool and choose the "Template" on the right: "Person" or "Team or organisation". Enter "Title", "For whom / team" and "Date".
2. On the left under "Collecting (from bottom to top)", collect your entries for each level – `Enter` creates a card. The usual route is from the environment upwards.
3. Expand the "Guiding questions" of a level; a click on a question puts it into the input field as a prompt.
4. Alternatively, double-click in a level or drag an element from "Elements" onto a level.
5. Mark what supports you as "Resource" and what holds you back as "Obstacle / brake" – on the right under "Type" or by right-clicking.
6. Under the classification on the right, record the "Coherence" of each level: aligned, partly aligned or not aligned. Choose on which level the topic shows up and where a lever might lie.
7. Look at the "Analysis": it counts the cards per level, names empty levels and gives a descriptive note.
8. Use "+ Picture" to create a copy as a "Target picture" and change it there.
9. Enter the "Result" and the "Next steps".
10. Print the record via "Export ▾" – it shows Today and the target picture with all differences – and save with "Save".

With one guiding question through all levels (instead of steps 2 to 6):

1. On the right (nothing selected), under “Guiding question through all levels”, enter the “Initiative”, e.g. “New role as team leader”. The “Guiding question” is suggested – “When I think of my initiative – what is true on this level?”, in the template “Team or organisation” “When we think of our initiative – …” – and can be changed.
2. Click “▶ Level by level” at the top of the picture (or “▶ Start level by level” on the right). This ticks “One guiding question for all levels”; the question and the initiative now appear on the left and in the picture above the pyramid.
3. The tool starts at the bottom with the environment: on the right you see the question and a field “Enter an answer, Enter”. Every answer – with `Enter` or “ + ” – becomes a card on this level. Under “Supporting questions for this level” you find the level’s own guiding questions.
4. For each level, record the “Coherence” and tick whether the topic shows up here or a lever might lie here.
5. “Next level ▶” (or `Enter` in the empty field, or “▶” at the top of the picture) goes one level up, “◀ Level below” back. Clicking a level in the picture continues the walk-through there.
6. On the top level the button reads “✓ Done – where is the topic?”: it takes you to the classification, where “Topic shows up on” and “Possible lever on” are summarised. “■ End” stops the walk-through; the answers stay as cards.

Logical levels: functions and buttons

Header

- Large arrows for “Undo” and “Redo”; the small arrow between them shows the history of recent changes and goes back several steps.
- “New”, “Open …”, “Save”, “Save as …”.
- Minus and plus with the percentage display, “Fit to view” and “⛶ Large picture” (hide and show the side panels).
- “Export ▾”, “Example” (a fictitious new team leader with “Today” and “Target picture”) and “Help”.

Left panel

- “Collecting (from bottom to top)” – for each level a block with name and number of cards, an input field and the “Guiding questions”. A click on the name opens the level on the right for editing.
- “Elements” – “Cards”, “Resource” and “Obstacle / brake”: drag onto the picture or click.

Picture bar at the top – one button per picture with the number of cards; a click shows the picture, a double-click renames it; “ + Picture” creates a copy of the picture shown. Next to it “▶ Level by level”; during the walk-through “◀”, the current level (e.g. “1 · Environment”), “▶” and “■” (end).

In the picture – the pyramid with six coloured levels, with “One guiding question for all levels” the question and the initiative above it, the guiding question below each name, a dot and word for the alignment, the markers “Topic shows itself here” and “possible lever”, and on the right an arrow: changes at the top usually work downwards. Resources have a green border, brakes a red dashed border with “holds back”.

Properties when nothing is selected (expandable sections)

- “Title”, “For whom / team”, “Date” and “Template”.
- Picture – “Name of this picture”, “ + Copy as new picture”, “ + Empty picture”, arrows for re-sorting, “Delete picture” and the list of differences from the previous picture (new, moved, changed, dropped).
- “Guiding question through all levels” – “One guiding question for all levels”, “Initiative”, “Guiding question” and “▶ Start level by level” (during the walk-through “▶ To the current level” and “■ End the walk-through”).
- Classification – the alignment of each level, plus “Topic shows up on” and “Possible lever on”.
- “Result” and “Next steps” (one line per step).
- “Analysis” – table of the cards per area, “Still empty:”, a note such as “Descriptive – not an evaluation.” and “Arrange all cards”.
- “Appearance” – “Guiding question below the name of the level”, a tick box for the arrow, “Coloured”, “Small cards”, result in the picture, “Title above the picture”, “Move cards fully into the area when dropped” and “PDF format”.

- “How it works” – the quick guide.

Properties of a level during the walk-through – level and number of cards, the guiding question, the initiative, the field “Enter an answer, Enter” with “ + ”, the cards of the level, “Supporting questions for this level”, “Coherence”, “The topic shows up on this level”, “A lever might lie here”, “◀ Level below”, “Next level ▶” or “✓ Done – where is the topic?” and “■ End”.

Properties of a level – “ + Card here”, “Arrange”, “Name”, “Guiding questions (one per line)”, “Follow-up question”, under “Classification in this picture” the “Coherence”, “The topic shows up on this level” and “A lever might lie here”; “Restore template” and “Cards in this area”.

Properties of a card – “Text”, “Area”, “Type”, “Colour”, “★ highlight”, “Note (appears only in the record)”, the level’s “Follow-up questions”, “✎ Edit in picture (F2)”, “⧉ Duplicate” and “Delete”. With several: “All into the area”, “⧉ Duplicate”, “Delete all”.

Right-click – on a card: “✎ Edit text”, “Place in area”, “Type”, “★ Highlight on / off”, “⧉ Duplicate”, “🗑 Delete”. On the area: “ + Card here”, “Arrange cards here”, “Arrange all cards”, “ + Create picture as a copy”, “Fit everything to view”.

Keys – change text with a double-click or `F2`: `Enter` done, `Tab` done and next card, `Shift` + `Enter` new line, `Esc` cancel. Drag a card onto another level – it moves fully into the level; with `Alt` it stays exactly where it is; several with `Ctrl` + click or `Shift` + click. `N` new card, `Del` delete, `Ctrl` + `D` duplicate, arrow keys move, `Ctrl` + `Z` / `Y`.

Logical levels: saving, export and handovers

“Save” creates a file `.ebenen.json`; opening and saving work as described in the chapter ‘How do I use a tool?’. Under “Export ▾”:

- “PDF” (the picture shown, A4 or A3), “PowerPoint (.pptx)” with individual, editable shapes, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image” – each of the picture shown.
- “Print record” – all pictures, classification, entries per area, analysis, changes and result, also as PDF.
- “Entries as a table (CSV)” – for Excel, with the alignment of the level for each entry; with “One guiding question for all levels” also the guiding question and the initiative (in the record as well).

The file also contains the switch “One guiding question for all levels”, the initiative and a changed guiding question; older versions of the tool open such files but forget these three items when saving (cards and classification stay). The 3D version opens your `.ebenen.json` and exports all pictures back in this format; the walk-through with one guiding question exists only in the 2D tool. In the suite you open and save via the storage (chapter ‘Tools in the suite: working together’). All data stays on this computer, in your files and in the browser’s automatic interim copy; the tool loads nothing from the internet and sends nothing.

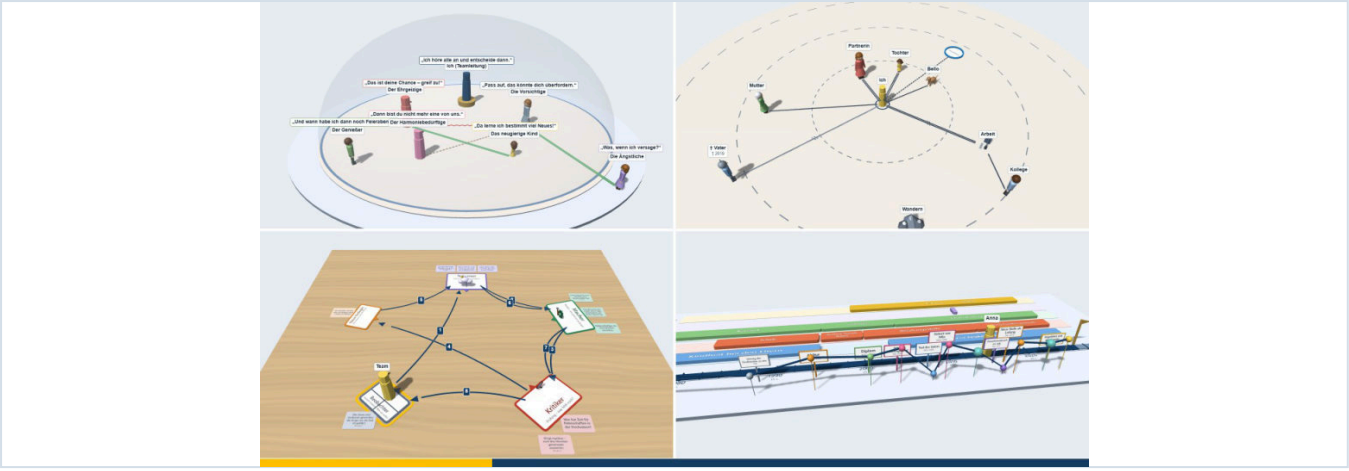
Logical levels: phone, systems and browsers

- On phones and tablets, “ + Elements” below the picture opens the left panel with the input fields for each level, “✎ Properties” the right one. Tapping an element puts a card straight into the picture. “☰” expands the header. You operate the walk-through with one guiding question entirely in “✎ Properties”: “▶ Start level by level”, type the answer, “ + ”, “Next level ▶”.
- Select several elements with the “Multiple selection” button at the bottom left of the picture.
- There are no folder features; in Safari and Firefox you save via the download (chapter ‘How do I use a tool?’).
- Not tested: real phones and tablets (tested in simulated screen sizes with touch) and Safari on a real Mac.

Logical levels: tips

- Collect from the bottom up and work back down from the top for the first steps.
- If the topic shows up on one level, the level above is worth a look – the analysis points this out too.
- Write thoughts that do not belong in the picture into a card’s note; it appears only in the record.
- With the small arrow next to the undo arrows you go back several steps at once.
- For companies, the template “Team or organisation” offers its own names such as “Setting”, “Behaviour and workflows” and “Contribution and purpose”.

3D logical levels



3D logical levels: purpose and use

In the 3D version, the six logical levels become the walkable steps of a staircase: the environment at the bottom (front), belonging and purpose at the top (back). The cards stand on the steps like small display boards, and markers show the alignment of each level. A figure – by default "Me" – climbs up the levels, and from its point of view you look at the higher levels. How does my behaviour look from the step of my values?

Model, templates, guiding questions and classification are in the chapter 'Logical levels'; here it is about what is specific to 3D. I use Robert Dilts's logical levels as a reflection and conversation model, not a diagnostic instrument; coaching is not psychotherapy. The tool is still beta, saves `.ebenen3d.json`, is on the website on the Experimental page and in the suite in the category People and coaching. More in the posts Coaching tools in 3D: set up and walk through and Dilts's logical levels – from behaviour to purpose.

3D logical levels: step by step

1. With nothing selected, choose the "Template" on the right: "Person" or "Team or organisation"; also "For whom / team" and "Date".
2. Click a step. On the right are "Name", "Guiding question (short)" and the guiding questions, all editable.
3. Type under "New card (Enter)" and press `Enter` – several in a row. Choose the type (card, resource, obstacle / brake) above it under "Type of new cards".
4. Record the "Alignment in this picture" and tick whether the topic shows itself here or a lever might lie here; the markers appear on the steps.
5. Click a level in the "Level" bar at the bottom – the figure goes there. "👁 From this view" or the key `P` shows the view upwards from there.
6. Copy the "Today" picture with "+ Picture" to the "Target picture" and compare both with "⇆ Compare".
7. Enter the outcome and next steps and create the "Print picture sheet / as PDF".

3D logical levels: functions and buttons

- **Header:** "New", "Open …" (also files of the 2D logical levels), "Save", "Save as …", the large undo and redo arrows, "Export ▾", "⛶ Large", "Example", "Help".
- **Bar at the bottom:** "Level" with one button per step; a click sends the figure there.
- **Step selected:** "→ Figure here" (or "The figure is standing here."), "Overview", "Name", "Guiding question (short)", the guiding questions, "Template texts", "Alignment in this picture", "The topic shows itself here", "A lever might lie here", the list of cards on the step, "Type of new cards" and "New card (Enter)".
- **Card selected:** the "Level", "highlight (★)", a note for the record only and the colour of the card background. Cards can be dragged to another step; the key `N` creates one on the figure's step.
- **Figure:** "walks from station to station (bar at the bottom)".
- **Nothing selected:** "Template", "For whom / team", "Date", the list of "Levels" with the number of cards, "Result" and "Next steps".

- **Camera:** “View” with “Free”, “Top”, “Front”, “Left”, “Right”, “Back” (keys `1` – `6`), “⤢ Fit to view” (key `F`) and “👁 From the view of …”. Drag an empty area to walk around, right mouse button or `Shift` + drag to move, mouse wheel for nearer or further. In a view, `←` / `→` turn in 15° steps, “turns with it” decides whether dragging turns the direction of gaze, `Tab` moves on, `Esc` leads back.
- **Pictures:** “+ Picture” copies the current picture; on switching, elements visibly move.
- **Several elements:** `Ctrl` + click or `Shift` + click selects several (gold ring), `Ctrl` + `A` all; dragging a selected element, the arrow keys and `Del` (one confirmation) act on all of them; on phones and tablets “Multiple selection” and “Select all”. Handles snap along the board directions to the neighbouring point (`Alt` freely).

3D logical levels: saving, export and handovers

“Save” creates `.ebenen3d.json` with all pictures. Files of the 2D tool (`.ebenen.json`) open here; “Save as 2D logical levels” exports all pictures for the 2D tool (PDF, PowerPoint, LibreOffice, Visio there). Also “PNG image of the current view” and the picture sheet with “Current view”, “From above”, “From the front”, “From the figures’ view”, “Session record (levels, cards, alignment, outcome)” and “All pictures (not just the current one)”.

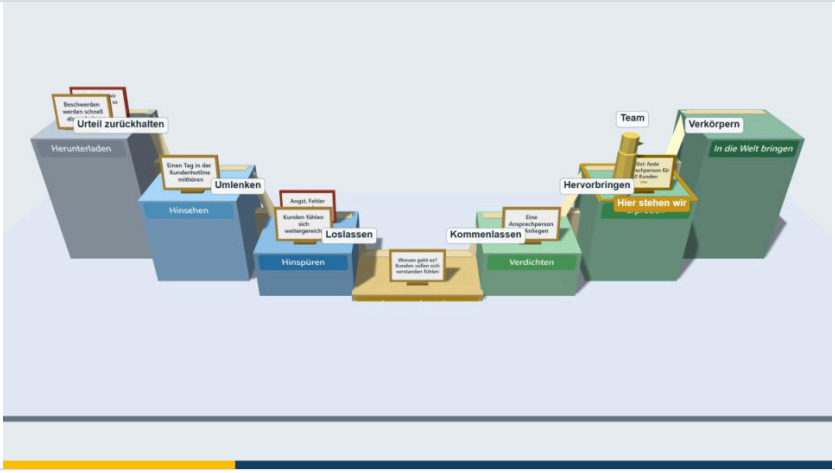
3D logical levels: phone, systems and browsers

On the phone, “ + Elements” opens the palette: tap an element, then tap the area; “✎ Properties” and “☰” work as in the chapter ‘How do I use a tool?’. The 3D display needs WebGL 2; Chrome or Edge are recommended. Not tested: real phones and tablets and Safari on a real Mac.

3D logical levels: tips

- Place the figure on a step and look at the levels above with “👁 From this view”.
- Compare Today and the target picture side by side; the alignment of each level becomes visible at a glance.
- Because the export contains all pictures, you can pass on the target picture from the 2D tool as PowerPoint or Visio.

U process board



U process board: purpose and use

The U process board accompanies the path through the U of Theory U after C. Otto Scharmer. On the left of the U the path goes down: from habitual downloading through seeing and sensing to presencing – the moment when what really matters becomes apparent. On the right it goes back up: crystallising, prototyping and bringing into the world. In the tool, the seven stations are called “Downloading”, “Seeing”, “Sensing”, “Presencing”, “Crystallizing”, “Prototyping” and “Performing”. The board records what has been gathered at each station, what holds you back, which ideas are tried out and where the group stands.

I use it above all with teams that want to develop something genuinely new – in change initiatives, in team development or whenever the familiar solution arrives too quickly. I use Theory U as a reflection and conversation model, not a diagnostic instrument. Coaching is not psychotherapy.

The tool is still beta. You will find it on the website under Experimental, as a file to download and in the MC4Y Suite. It saves to files with the extension `.u-prozess.json`. I describe the background and the approach in the post Theory U in coaching: shaping the path through the U. The walkable version is described in the chapter '3D U process'; my Theory U questionnaires use the same terms as the board.

U process board: step by step

1. Open the tool. "Example" loads a fictitious service team with the pictures "Today" and "After the pilot".
2. On the right (with nothing selected), enter "Title", "For whom / team" and "Date", and under "Template" choose "Seven stations" or "Five movements".
3. On the left, under "Collecting along the U", every station has an input field: type a thought, and `Enter` creates a card. The expandable "Guiding questions" help; one click puts a question into the field as a prompt.
4. Do not take shortcuts on the left-hand side of the U: gather there before moving on to ideas.
5. Whatever holds you back becomes an "Inner voice / brake"; on the right, under "Which voice?", choose "Voice of judgment", "Voice of cynicism", "Voice of fear" or "other brake".
6. Create ideas for a small-scale trial as "Idea / prototype".
7. Use ◀ ▶ at the top of the picture to show where the group stands. When you move on, the previous station counts as completed and turns green; the active one carries "We are here".
8. Record a later state with "+ Picture". The new picture is a copy and can then be changed independently.
9. On the right, enter the "Result" and the "Next steps", and check under "Analysis" which stations are still empty.
10. Save and output the result via "Export ▾", for example with "Print record".

U process board: functions and buttons

Header

- Large arrows "Undo" and "Redo" (`Ctrl` + `Z` / `Ctrl` + `Y`); the small arrow ▾ shows the history, and one click takes you back several steps (up to 300 while the file is open).
- "New", "Open …" (`Ctrl` + `O`), "Save" (`Ctrl` + `S`) and "Save as …" – as described in the chapter 'How do I use a tool?'.
- − and + zoom, "Fit to view" shows the whole picture, "⛶ Large picture" hides and shows both side panels.
- "Export ▾", "Example" and "Help"; the button with the build version shows the licence and terms of use.

Left bar

- "Collecting along the U" – one field per station with the number of its cards; clicking the station name opens the station on the right.
- "Elements" – "Cards", "Inner voice / brake" and "Idea / prototype": drag onto a station or click.

Bar above the picture

- One button per picture with its number of cards – click to show, double-click to rename; "+ Picture" creates a copy.
- ◀ and ▶ move the active station back or on; the button between them shows it (or "Choose station") and opens it on the right.

In the picture

- Numbered stations along the U; the active one with a gold frame and "We are here", finished ones with the badge "completed".
- With "Seven stations", the gestures "Hold back judgment", "Redirecting", "Letting go", "Letting come", "Bringing forth" and "Embodying", and in the middle "Open mind", "Open heart" and "Open will".
- Inner voices have a red dashed border and a tag with their voice; ideas are yellow and carry "Idea".

Right bar with nothing selected

- "Title", "For whom / team", "Date", "Template".
- For the picture shown: "Name of this picture", "+ Copy as new picture", "+ Empty picture", ◀ ▶ to reorder and "Delete picture"; from the second picture on, the differences from the previous one (new, moved, changed,

removed).
- Path through the U: “We are at” and a tick box per station for completed.
- “Result” and “Next steps” (one line per step).
- “Analysis” – cards per station, “Still empty:” with follow-up questions, the number of inner voices and ideas, a note on empty stations before the active one; “Arrange all cards”.
- “Appearance” – “Guiding question under the name of the station”, “U band behind the stations”, with seven stations “Gestures between the stations (suspending judgment, redirecting …)” and “Open mind, heart and will in the middle”, plus “Coloured”, “Small cards”, the result in the picture, “Title above the picture”, “Move cards fully into the area when dropped” and “PDF format” (A4 or A3).

Station selected

- “ + Card here” and “Arrange”.
- “Name”, “Guiding questions (one per line)” and “Follow-up question” for your own texts; “Restore template” brings back the default.
- “Status in this picture” with “This is where we stand” and “Station completed”; “What this is about” explains the station; then “Cards in this area”.

Card selected

- “Text”, “Area”, “Type”, “Colour” and “★ highlight”; for inner voices “Which voice?”.
- “Note (appears only in the record)” and the station’s “Follow-up questions”.
- “✎ Edit in picture (F2)”, “⧉ Duplicate” and “Delete”.

Right mouse button

- On a card: “✎ Edit text”, “Place in area”, the type, “★ Highlight on / off”, “⧉ Duplicate”, “🗑 Delete”.
- On a station or empty space: “ + Card here”, “Arrange cards here”, “Arrange all cards”, “ + Create picture as a copy”, “Fit everything to view”.

Mouse and keys

- Double-click in a station or key `N` – new card; double-click a card or `F2` – edit the text (`Enter` done, `Tab` done and next, `Esc` cancel).
- Drag onto another station – the card moves fully inside; with `Alt` it stays exactly there.
- `Ctrl` + click or `Shift` + click adds or removes, `Ctrl` + `A` all; `Del` deletes – after one confirmation if several are selected, `Ctrl` + `D` duplicates, the arrow keys move.

U process board: saving, export and handovers

- “Save” creates `*.u-prozess.json` with all pictures. Chrome and Edge save directly to the file, Safari and Firefox via the downloads folder (chapter ‘Opening and saving in Safari and Firefox’).
- “PDF” (the picture shown, A4 or A3), “PowerPoint (.pptx)” with individual, editable shapes, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” for Word and graphics programs, “PNG image” in high resolution.
- “Print record” – all pictures, entries per area, analysis, changes and result, also as PDF.
- “Entries as a table (CSV)” – for Excel, with the inner voice and the status of the station.
- After a change the browser keeps an interim state, which the tool restores next time – then save it with “Save as …”.
- The 3D U process opens these files and outputs its pictures again in this format (chapter ‘3D U process’).
- “👥 Master data” and working in the suite as described in the chapters ‘Master data in every tool’ and ‘Tools in the suite: working together’.

U process board: phone, systems and browsers

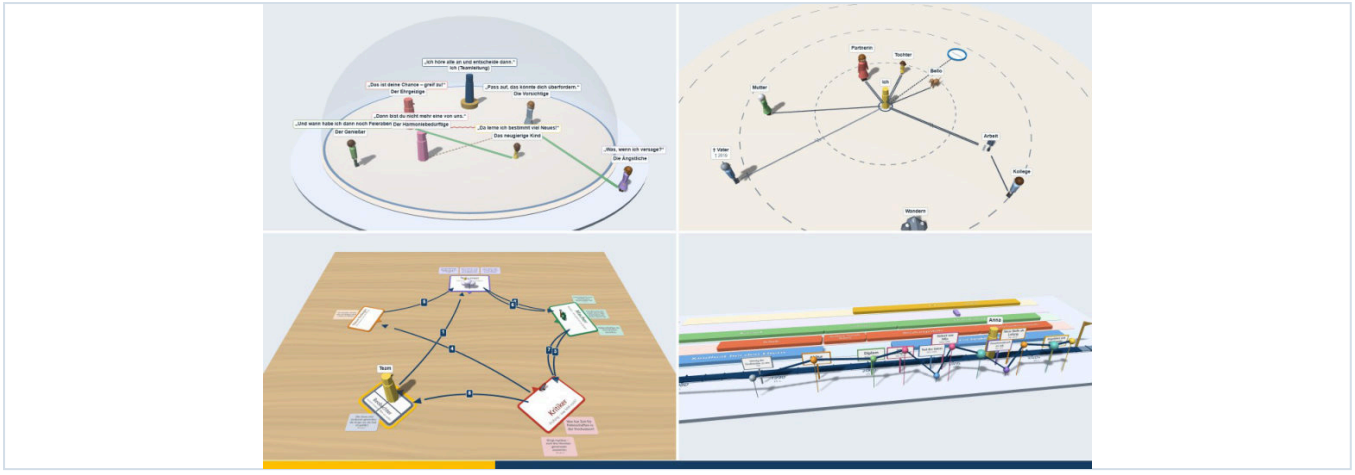
- On narrow screens the phone controls of the board tools apply (chapter ‘On phone and tablet’): the ☰ button expands the header, for example for “Export ▾”; “ + Elements” and “✎ Properties” open the bars as windows.
- In the “ + Elements” window you type per station or tap an element, which then appears in the picture. Swipe to move, two fingers to zoom.

- Select several elements with the “Multiple selection” button at the bottom left of the picture.
- The tool needs no folder features and runs in any current browser.
- Not tested: real phones and tablets, and Safari on a real Mac.

U process board: tips

- Take your time on the left side of the U; the “Analysis” reports empty stations before the active one.
- Name the voices that hold you back instead of letting them guide you.
- For change initiatives in a team, “Five movements” often fits; when you switch templates, cards and stations move along.
- Create a picture for every important interim state; the record shows all pictures with their changes.
- The Theory U questionnaires help to locate an organisation or person in the U; they are not yet scientifically validated.

3D U process



3D U process: purpose and use

The 3D U process turns the path through the U into a landscape you can walk through: the stations are platforms leading down on the left and back up on the right, connected by a band with ramps. The cards stand on the stations, and a figure shows where the team currently stands. From its point of view you look back and ahead along the U.

Method, templates, inner voices and guiding questions are the same as in the chapter ‘U process board’; here you will only find what is different in 3D. I use Theory U as a reflection and conversation model, not a diagnostic instrument. The tool is beta, is available on the website under Experimental, as a file and in the suite, and saves to `.u-prozess3d.json`. More in the posts Coaching tools in 3D and Theory U in coaching.

3D U process: step by step

1. With nothing selected, choose the “Template” on the right and enter “For whom / team” and “Date”.
2. Click a station. On the right you see the explanation and guiding questions; choose the type under “Type of new cards” and type into “New card (Enter)”.
3. Or choose an element on the left under “Cards” and click a station; key `N` creates a card at the team’s station.
4. In the “Station” bar at the bottom, click the station where the group stands: the “Team” figure visibly walks there, and the station is marked “We are here”.
5. Tick finished stations on the right with “completed ✓”.
6. Use “👁 View” or key `P` to look along the U from the team’s position.
7. Create a later state with “+ Picture”, for example “After the pilot”, and show both side by side with “⇆ Compare”.
8. Save; for presentations, export a file for the 2D board.

3D U process: functions and buttons

Camera and viewing angle

- Drag empty space – walk around; right mouse button or `Shift` + drag – move; mouse wheel – closer or further.
- "View" bar at the bottom left: "Free", "top", "front", "left", "right", "back" (keys `1` to `6`), "⤢ Fit to view" (`F`), "👁 From the view of …", "Names" and "Connections" (`B`).
- In a view: ◂ ▸ to another figure (`Tab`), turning in 15° steps (`←` / `→`), "turns with it", "Straight ahead", "✕ Back" (`Esc`); on the right under "Display", "Show field of view" and "Viewing angle".

Walking figure, stations and cards

- "Station" bar – one button per station, finished ones with ✓; a click sends the figure there and makes the station active.
- Station selected: "→ Figure here", "Overview", "Name", "Guiding question (short)", the guiding questions, "Template texts", "We are here (in this picture)", "completed ✓" and the station's cards.
- Another figure becomes the walking figure with "walks from station to station (bar at the bottom)".
- Card selected: "Station", "Which voice?", "highlight (★)", a note for the record and the card's background colour.
- On the left, also figures from the 3D systemic board such as "People" or "Symbols", with search. Handles: ↻ rotate (`Q` / `E`), ⇳ size (`+` / `–`), "👁 View".

Pictures and display

- "+ Picture" copies the current picture; when you switch, figure and cards visibly move to their new place. Drag pictures in the bar to reorder them.
- "⇆ Compare" shows two pictures side by side, "✕ End comparison" returns; "Traces of the previous picture (translucent)" shows the earlier position.
- With nothing selected: "U band with ramps", with seven stations "Gestures between the stations" and "Open mind, heart and will at the bottom", plus "Show names", "Coloured (otherwise all figures in wood)", "Shadows", "Show legend", "Result" and "Next steps".
- "⛶ Large" hides both bars.

Several elements

- `Ctrl` + click or `Shift` + click selects several (gold ring), `Ctrl` + `A` all; dragging a selected element, the arrow keys and `Del` (one confirmation) act on all of them; on phones and tablets "Multiple selection" and "Select all". Handles snap along the board directions to the neighbouring point (`Alt` freely).

3D U process: saving, export and handovers

- "Save" creates `*.u-prozess3d.json` with all pictures; the browser also keeps an interim state.
- "Open …" also opens 2D board files (`*.u-prozess.json`); then save under a new name – the 2D file stays unchanged.
- "Save as 2D U process board" outputs all pictures as `*.u-prozess.json` for PDF, PowerPoint, Impress, Visio and SVG in the 2D board; picture names, notes and the walking figure's look come back intact.
- "PNG image of the current view" and "Print picture sheet / as PDF" with "Current view", "From above", "From the front", "From the figures' view", "Session record (stations, cards, status, outcome)" and "All pictures (not just the current one)".

3D U process: phone, systems and browsers

- The 3D view needs WebGL 2, otherwise "3D view not available" appears; Chrome or Edge are recommended.
- On the phone, "+ Elements" opens the bar: tap a card, then the station. Swiping rotates or moves, two fingers zoom (chapter 'On phone and tablet').
- Not tested: real phones, tablets and Safari on a real Mac.

3D U process: tips

- Move the station on via the bar at the bottom – the team visibly walks on.
- Unlike the other 3D tools, the key `N` creates a card here; hide names with the “Names” button.

Social atom



Social atom: purpose and use

The social atom shows a person’s network of relationships as they experience it themselves: family, friends, colleagues, but also pets, places, hobbies or work. “Me” stands in the centre; whoever feels close stands close, whoever is distant stands further away. Lines show which relationships carry you and which weigh on you. The method goes back to Jacob Levy Moreno, the founder of psychodrama and sociometry.

The aim is not an objectively correct picture but to make your own experience visible. Drawing it already raises questions: whom do I place close to me? Who is missing? Where would I like more closeness, where more distance? In coaching, the social atom helps with career changes, in conflicts or with the question of who can support a project. In coaching, the social atom serves as a reflection and conversation model, not a diagnostic instrument. Coaching is not psychotherapy.

The tool is still beta. You will find it on the website under Experimental, as a file to download and in the MC4Y Suite. It saves to files with the extension `.sozialatom.json`. More on working with the tool is in the post Creating the social atom digitally; a spatial version is described in the chapter ‘3D social atom’.

Social atom: step by step

1. Open the tool. “Example” shows a fictitious social atom with closeness circles, a legend and all four line types.
2. On the right (with nothing selected), enter a “Title”. Under “Show man/woman as”, choose “Pictogram” or “Moreno symbol (man triangle, woman circle)”, and below it the closeness circles around “Me”: none, close, medium or wide.
3. Choose “Me” on the left and click in the middle of the drawing area.
4. Choose people, animals, places and things one after another, for example “Woman”, “Child” or “Dog”, and place them closer to “Me” or further away – however it feels right.
5. Click a symbol and enter the “Label” on the right. The first line appears in bold, further lines smaller, for example a year of death. Choose the “Size”, the position of the label and the “Background”.
6. Connect: choose a line type on the left and click two symbols one after the other. The tool stays active until you press `Esc` – so you can draw several connections in a row.
7. Or click a symbol, choose the line type on the right under “Connect to …”, then the second symbol.
8. With nothing selected, set on the right under “Meaning of the lines” what each line type stands for, and switch on “Show legend”.
9. If needed, group areas of life with “Frame / area” and add a heading with “Text box”.
10. Look at the picture together: what stands out? In what order did the symbols appear? What would change if something moved?
11. Save with “Save” and output the picture via “Export ▾”.

Social atom: functions and buttons

Header

- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`) and “Save as …” – as described in the chapter ‘How do I use a tool?’.
- ↶ and ↷ – “Undo” and “Redo” (`Ctrl` + `Z` / `Ctrl` + `Y`).
- − and + zoom out and in; “Fit to view” shows everything.
- “Export ▾”, “Example” and “Help”; the button with the build version shows the licence and terms of use.

Left bar: 20 symbols

- “People”: “Me”, “Man”, “Woman”, “Child” and “Circle” (for example for a group).
- “Animals”: “Dog”, “Cat”, “Horse”.
- “Places”: “House”, “Office”, “Kitchen”, “Garden”.
- “Nature”: “Mountains”, “Sun”, “Sea”, “Tree”, “Plant”.
- “Vehicles”: “Car”, “Ship”, “Boat”.

Left bar: connections and other

- “Connections”: “Single line”, “Double line”, “Line 2× crossed out” and “Double line 2× crossed out” – choose a line type, then click two symbols one after the other.
- “Other”: “Text box”, “Frame / area” and “Legend on/off”.

Right bar with nothing selected

- “Title”, “Show man/woman as”, the closeness circles around “Me”, “Show legend” and “PDF format” (A4 or A3).
- “Meaning of the lines” – one field per line type, for example relationship, close relationship, break or loss of contact, close but strained relationship; the legend shows only the line types that occur.
- “How it works” – a short guide.

Symbol selected

- “Label” – several lines are possible.
- “Symbol” – swaps the symbol for another one from the bar.
- “Size” (small, medium, large, very large) and the position of the label – below, above, right, left, and for “Me” and “Circle” also “inside the circle”.
- “Background” – white, grey, gold, green, red or blue.
- “Connect to …” – four buttons for the line types; below them the list of this symbol’s connections.
- “Delete symbol”.

Connection, text box, frame and legend selected

- Connection: “Line type”, “Label” (optional), “Colour” (black, navy, green, red, grey, bronze), “dashed” and “Delete connection”.
- Text box: “Text”, “Style” (“normal” or “Heading”), “with frame” and “Delete text box”.
- Frame: “Label” and “Colour”; you change the size at the blue square at the bottom right; “Delete frame”.
- Legend: drag to move it; “Hide legend”.

Several elements selected

- “Change together” – “Size” and “Background” for all.
- “Align” – “Align at same height” and, from three symbols, “Distribute evenly horizontally”.
- “Delete all”.

Mouse and keys

- Drag an element – move it; several with `Ctrl` + click or `Shift` + click (again = remove) or `Shift` + frame on an empty area, all with `Ctrl` + `A` ; dragging a selected element or the arrow keys move all of them, `Del`

deletes all after one confirmation, `Esc` clears the selection. On a phone or tablet the “Multiple selection” button at the bottom left switches on adding by tapping and the frame by swiping.

- Connections: Shaping lines: click a line, drag + to add a handle, drag ◆ to shape it (snaps horizontally and vertically, `Alt` = free), double-click ◆ to remove it, “／ Straight” removes all of them.
- Drag empty space – move the view; mouse wheel – zoom.
- `Del` deletes, the arrow keys move, `Esc` cancels a tool, `Ctrl` + `A` selects everything.

Social atom: saving, export and handovers

- “Save” creates a file `*.sozialatom.json` that you can open again later. In Chrome and Edge the tool saves directly to the same file; in Safari and Firefox via the downloads folder, as described in the chapter ‘Opening and saving in Safari and Firefox’.
- “PDF” – vector graphic, A4 or A3, landscape or portrait.
- “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)” and “Visio (.vsdx)” – individual, editable shapes.
- “SVG” for Word, browsers and graphics programs; “PNG image” in high resolution.
- In addition, the browser keeps an automatic interim state so that nothing is lost in a crash.
- Handover to the 3D version: the 3D social atom opens these files and outputs a picture again as `*.sozialatom.json`. Symbols without a 2D counterpart appear here as a circle with a name and come back unchanged when you return to 3D.
- “👥 Master data” (chapter ‘Master data in every tool’): the names of the people symbols are taken over, each the first line of the label. Under “In the master data” you set “as a person”, “as a role” or “do not take over” for each symbol. A social atom shows the personal environment of a client – only link it if these people really belong in your master data.
- In the suite you open and save via the shared library, as described in the chapter ‘Tools in the suite: working together’.

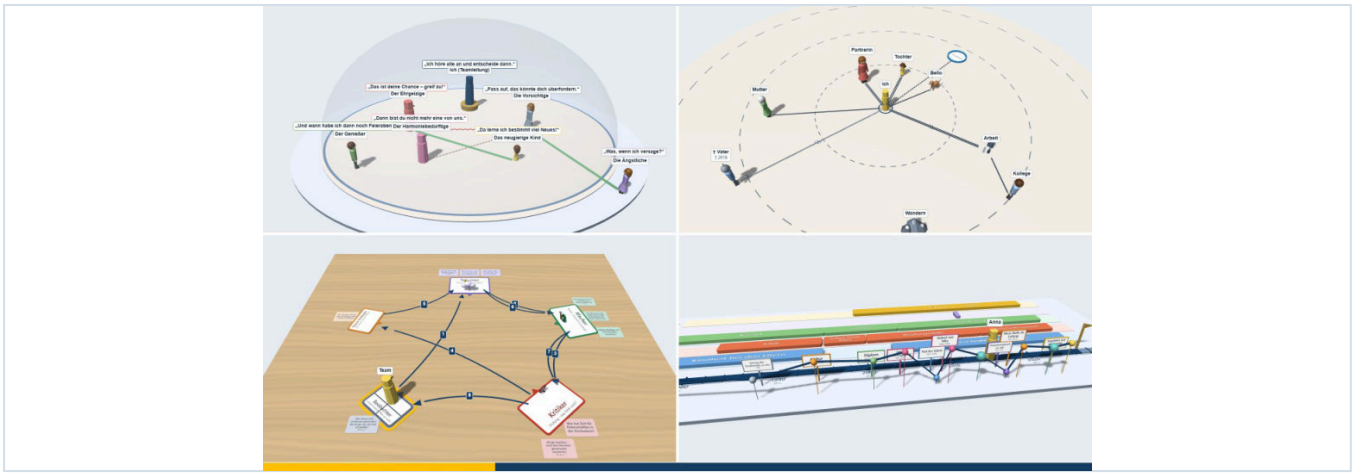
Social atom: phone, systems and browsers

- On narrow screens the phone controls of the board tools apply (chapter ‘On phone and tablet’): the ☰ button expands the header, “ + Elements” opens the symbols, “✎ Properties” the right bar.
- Tapping a symbol closes the window; then tap the spot on the drawing area where it should stand – as in the quick guide, only with your finger. Swiping moves the picture, two fingers zoom.
- The tool needs no folder features and runs in any current browser; Safari and Firefox save via the download.
- Not tested: real phones and tablets, and Safari on a real Mac.

Social atom: tips

- Always start with “Me” in the centre; the closeness circles help to judge closeness and distance.
- In the conversation, pay attention to the order in which the symbols appear and to who is missing.
- Agree on the meaning of the lines before you connect – the legend makes it readable in every output.
- Group areas of life such as family, work or leisure with a frame.
- If you want to compare today, the past and the desired state, use the 3D social atom with several pictures in one file.

3D social atom



3D social atom: purpose and use

The 3D social atom sets up a person's network of relationships in space: "Me" stands as a yellow figure in the centre, people, animals, places and things stand closer or further away, and dashed closeness circles help. You can walk around the atom and – special to 3D – look at it from the point of view of "Me".

The method, symbols and line types are described in the chapter 'Social atom'; here you will only find what 3D adds. In coaching, the social atom serves as a reflection and conversation model, not a diagnostic instrument. The tool is beta, is available on the website under Experimental, as a file and in the suite, and saves to `.sozialatom3d.json`. More in the posts Coaching tools in 3D and Creating the social atom digitally.

3D social atom: step by step

1. "Me" already stands in the centre. With nothing selected, choose the "Closeness circles around Me" and the "Floor" on the right.
2. Choose people, animals, objects or other figures on the left and click in the area – the closer to "Me", the closer the relationship. New elements face "Me".
3. Type the name on the right; further lines appear smaller. For a group, set "Circle / group" under "Type".
4. Connect: choose a line type on the left, then click two elements. Set their meaning under "Meaning of the line types" on the right.
5. Click "Me" and look from its point of view with "From this view" (key `P`).
6. Create further pictures with "+ Picture" – for example today, five years ago, desired – and show two side by side with "⇆ Compare".
7. Save and output an image, a picture sheet or a 2D file.

3D social atom: functions and buttons

Camera and viewing angle

- Drag empty space – walk around; right mouse button or `Shift` + drag – move; mouse wheel – closer or further.
- "View" bar at the bottom left: "Free", "top", "front", "left", "right", "back" (`1` to `6`), "⤢ Fit to view" (`F`), "👁 From the view of …", "Names" (`N`) and "Connections" (`B`).
- In a view: ◂ ▸ to another figure (`Tab`), turning in 15° steps (`←` / `→`), "turns with it", "Straight ahead", "✕ Back" (`Esc`).
- Under "Display": "Show field of view" and "Viewing angle". A selected figure lists who is in view, "Not in view" and "Looks here" – only the position; you clarify the meaning in conversation.

Closeness and distance

- Every element shows the "Distance to Me" and its circle: "inner circle", "middle circle", "outer circle" or "outside the circles".
- For "Me", "Who is how close?" lists all elements by distance, in units of the 2D tool.

- “Closeness circles around Me”: “no circles”, “close”, “medium”, “wide”; “Floor”: “Light”, “White”, “Green felt”, “Wood”.

Figures, pictures and display

- On the left, figures from the 3D systemic board in groups such as “People”, “Animals”, “Objects”, “Plants”, “Symbols” and “Emotions”, with search, plus the four line types under “Connections”. Under “Type” on the right you will also find “Me”, “Circle / group” and “Sun”.
- For people: “Posture”, “Clothing colour”, “Skin tone”, “deceased (cross †)”. Handles: ↻ rotate (`Q` / `E`), ⇳ size; also “Direct gaze at …” and “turn around”.
- “+ Picture” copies the atom; when you switch, the figures visibly move. “⇆ Compare”, “Traces of the previous picture (translucent)”, “Show legend”, “Shadows”; “⛶ Large” hides both bars.

Several elements

- `Ctrl` + click or `Shift` + click selects several (gold ring), `Ctrl` + `A` all; dragging a selected element, the arrow keys and `Del` (one confirmation) act on all of them; on phones and tablets “Multiple selection” and “Select all”. Handles snap along the board directions to the neighbouring point (`Alt` freely).

3D social atom: saving, export and handovers

- “Save” creates `*.sozialatom3d.json` with all pictures; the browser also keeps an interim state.
- “Open …” also opens 2D files (`*.sozialatom.json`); then save under a new name – the 2D file stays unchanged.
- “Save as 2D social atom” outputs the current picture as `*.sozialatom.json` for PDF, PowerPoint, LibreOffice Impress and Visio in the 2D tool. Symbols without a 2D counterpart appear there as a circle with a name and come back unchanged. Handles of the lines from the 2D tool are kept on the way there and back; lines shaped in the 3D tool are converted back.
- “PNG image of the current view” and “Print picture sheet / as PDF” with “From the view of Me and the figures” and “Session record (distances to Me and connections)”.
- “👥 Master data”: names of people, figures and circles are taken over; “Me” and other elements only if set under “In the master data”. Only link if these people really belong in your master data.

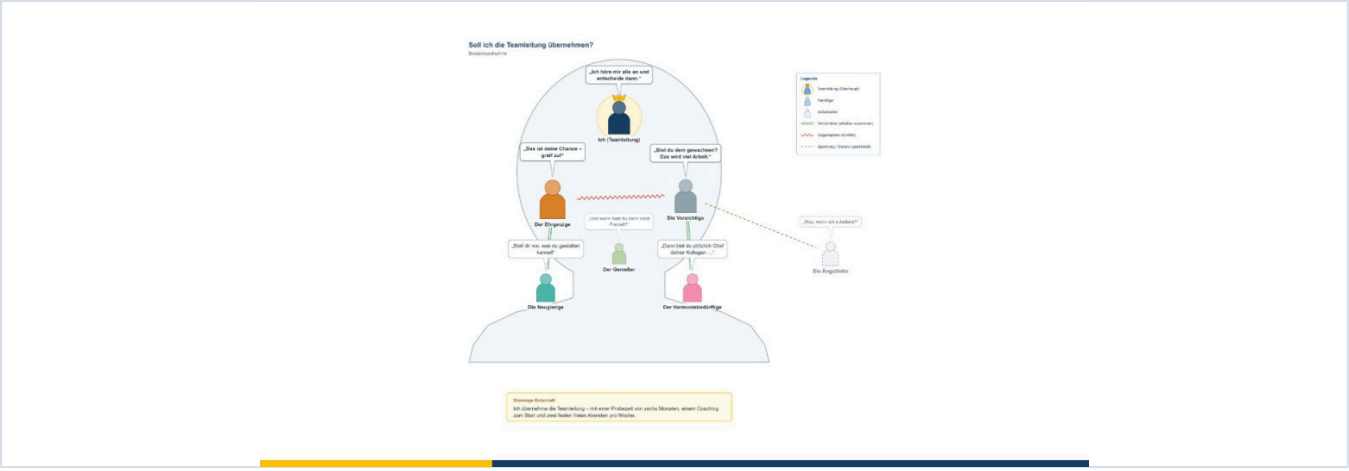
3D social atom: phone, systems and browsers

- WebGL 2 is required, otherwise “3D view not available” appears; Chrome or Edge are recommended.
- On the phone: open “ + Elements”, tap a figure, then tap the board; swiping rotates, two fingers zoom (chapter ‘On phone and tablet’).
- Not tested: real phones, tablets and Safari on a real Mac.

3D social atom: tips

- Let the client look from the point of view of “Me”: who is in view and who is behind becomes visible.
- Create one picture each for today and the desired state; switching shows who moves.
- For presentations, use “Save as 2D social atom” – one file per picture.

Inner team



Inner team: purpose and use

On the one hand I'd like to say yes, on the other … – anyone facing a decision often hears several inner voices at once. The inner team model after Friedemann Schulz von Thun gives these voices names and a place. Each voice represents a legitimate concern; the team leader – the head of the team – facilitates the inner team conference, listens and leads to a coherent message you can stand behind wholeheartedly.

In coaching, the inner team is particularly suitable for decisions, difficult conversations, new leadership roles and situations in which you feel not quite yourself. The tool shows the voices as figures with speech bubbles, with role, influence and relationships, and records several phases up to the result. In coaching, the inner team serves as a reflection and conversation model, not a diagnostic instrument. Coaching is not psychotherapy – in case of strong inner conflict or distress, professional help is the right way.

The tool is still beta. You will find it on the website under Experimental, as a file to download and in the MC4Y Suite. It saves to files with the extension `.inneres-team.json`. More on the method is in the post Arranging your inner team – with the tool; a spatial version is described in the chapter '3D Inner Team'.

Inner team: step by step

1. Open the tool. "Example" shows a fictitious decision about a new team leadership role in two phases, with legend and result.
2. Clarify the issue: on the right (with nothing selected), enter the question or situation under "Concern / question".
3. Gather the voices: on the left under "Team members", drag a "Member" or one of the "Suggestions (typical voices)" into the outline – or click it.
4. On the right, give each member a "Name (concise)" and its core message as an I-statement; it appears in the speech bubble.
5. Arrange: set "Influence / volume" from 1 to 5 and choose the "Role in the team". A voice that is not heard stands outside the outline as an "Outsider".
6. Connect: choose a type on the left under "Relationships" and click two members one after the other.
7. Acknowledge the concerns: record under "Concern / need – what good does this voice want?" what each voice cares about.
8. Team conference: at the top, "+ Phase" copies the picture. The team leader lets every member have their say, opponents listen to each other, outsiders are invited – change the arrangement in the new phase accordingly.
9. Integration: formulate the result on the right under "The team leader's coherent message", tick "show below the picture" and enter the "Next steps".
10. Save and print the record via "Export ▾".

Inner team: functions and buttons

Header

- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`) and “Save as …” – as described in the chapter ‘How do I use a tool?’.
- ↶ and ↷ – “Undo” and “Redo” (`Ctrl` + `Z` / `Ctrl` + `Y`).
- − and + to zoom, “Fit to view” shows everything.
- “Export ▾”, “Example” and “Help”; the button with the build version shows the licence and terms of use.

Left bar (expandable sections)

- “Team members” – “Member”, “Team leader”, “Peripheral figure” and “Outsider”.
- “Suggestions (typical voices)” – 16 suggestions with a message: “The Driver”, “The Critic”, “The Cautious One”, “The Harmony Seeker”, “The Adventurer”, “The Dutiful One”, “The Pleasure Seeker”, “The Helper”, “The Rebel”, “The Curious Child”, “The Realist”, “The Brave One”, “The Doubter”, “The Caring One”, “The Ambitious One” and “The Anxious One”. You can change names and messages freely on the right.
- “Relationships” – “allied”, “Opponents”, “Tension” and “Influence” (arrow).
- “More elements” – “Text box”, “Area / field” and “Legend on/off”.

Bar above the picture

- One button per phase; “+ Phase” copies the current phase. The first phases are called “Stocktaking”, “Team conference” and “Solution”.

Right bar with nothing selected

- “Concern / question”.
- Phase: “Name of the phase”, “Notes on this phase”, “+ Copy as new phase”, “+ Empty phase” and “Delete phase”.
- Result: “The team leader's coherent message”, “show below the picture” and “Next steps”.
- “Appearance”: “Outline” (“Head and shoulders”, “Oval” or “without outline”), “PDF format”, “Show speech bubbles”, “Concern and phase above the picture” and “Show legend”.
- “Approach” – the seven steps of the method for reference.

Member selected

- “Name (concise)”, the core message (an I-statement that appears in the speech bubble) and “Concern / need – what good does this voice want?”.
- “Influence / volume” – five levels from “very quiet” to “very loud”; the figure grows, loud voices get a bold speech bubble, quiet ones a dashed one.
- “Role in the team” – “Team lead (head)”, “Team member”, “Peripheral figure (more in the background)” or “Outsider (is not heard)”. If you place a second team leader, the tool points this out.
- “Colour” – eleven colours.
- “Show speech bubble” and “Reset speech bubble” (puts the bubble back above the figure).
- “Note (record only)”.
- “Relationship to …” – four buttons; then click the other member. Below them the list of “Relationships”.
- “Duplicate” and “Delete member”.

Other elements selected

- Relationship: “Type”, “Label”, for influence “⇄ Reverse direction”, “Delete relationship”.
- Result below the picture (“Coherent message”): “Result of the team conference” – applies to all phases, drag to move; “Hide below the picture”.
- Text box: “Text”, “Style”, “Background”. Area / field, for example for front and background: “Label”, “Fill”, “Border colour”, “solid border”; size at the blue square at the bottom right.
- Several members: “Role for all”, “Influence for all”, “Duplicate” and “Delete all”.

Mouse and keys

- Drag a figure or speech bubble – move it; several with `Ctrl` + click or `Shift` + click (again = remove) or `Shift` + frame on an empty area, all with `Ctrl` + `A`; dragging a selected element or the arrow keys move all of them, `Del` deletes all after one confirmation, `Esc` clears the selection. On a phone or tablet the "Multiple selection" button at the bottom left switches on adding by tapping and the frame by swiping.
- Relationships: Shaping lines: click a line, drag + to add a handle, drag ◆ to shape it (snaps horizontally and vertically, `Alt` = free), double-click ◆ to remove it, "／ Straight" removes all of them.
- Drag empty space – move the view; mouse wheel – zoom.
- `Del` deletes, `Ctrl` + `D` duplicates, the arrow keys move, `Esc` clears the selection.

Inner team: saving, export and handovers

- "Save" creates a file `*.inneres-team.json` with all phases. Chrome and Edge save directly to the file, Safari and Firefox via the downloads folder (chapter 'Opening and saving in Safari and Firefox').
- "PDF" (current phase, A4 or A3), "PowerPoint (.pptx)" with individual, editable shapes, "LibreOffice Impress (.odp)", "Visio (.vsdx)", "SVG" and "PNG image" – each showing the current phase.
- "Print record" – the concern, all phases with picture, the team members with message and concern, and the result and next steps, also as PDF.
- "Team members as a table (CSV)" – for Excel: phase, team member, role, influence, core message, concern, note and relationships.
- After changes, the browser keeps an automatic interim state.
- Handover to the 3D version: the 3D Inner Team opens these files and outputs all phases again as `*.inneres-team.json`; notes and areas are kept.
- "👥 Master data" and working in the suite as described in the chapters 'Master data in every tool' and 'Tools in the suite: working together'.

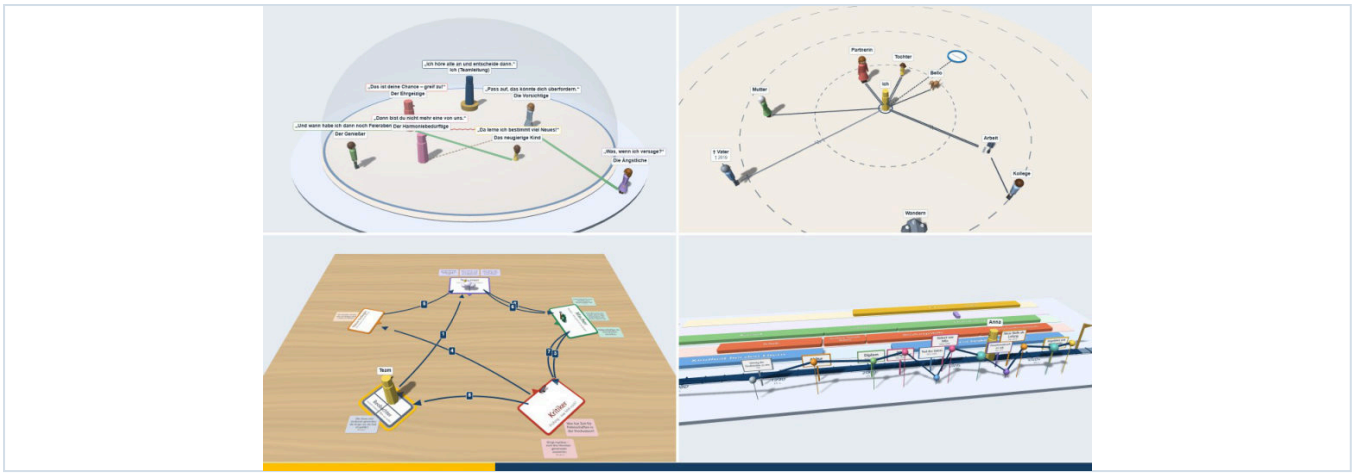
Inner team: phone, systems and browsers

- On narrow screens the phone controls of the board tools apply (chapter 'On phone and tablet'): the ☰ button expands the header, "+ Elements" opens the left bar, "✎ Properties" the right one.
- Tapping a member or a suggestion places it in the picture; then type the name and message on the right. For relationships, tap the type and then two members. Swiping moves the picture, two fingers zoom.
- The tool runs in any current browser without folder features; Safari and Firefox save via the download.
- Not tested: real phones and tablets, and Safari on a real Mac.

Inner team: tips

- Phrase every core message as a short I-statement and give every voice a concise name.
- Ask of each voice: what good does it want? Each voice represents a legitimate concern.
- Pay attention to quiet voices and outsiders – in the team conference they are invited in.
- Use phases for the course of the work: stocktaking, team conference, solution. The record shows all phases with picture.
- The suggestions are only prompts; your client's voices carry their own names.

3D Inner Team



3D Inner Team: purpose and use

The 3D Inner Team places the inner voices as figures under a translucent dome – *in the head*. Whoever has more influence is larger and speaks louder; the team leader stands on a podium. The core messages float above the figures as speech bubbles. The special feature in 3D: you can look at the team from the point of view of each member – for example the way the anxious voice experiences it.

Method, roles, relationships and suggestions are described in the chapter 'Inner team'; here you will only find what 3D adds. In coaching, the inner team serves as a reflection and conversation model, not a diagnostic instrument; coaching is not psychotherapy. In case of strong inner conflict or distress, professional help is the right way. The tool is beta, is available on the website under Experimental, as a file and in the suite, and saves to `.inneres-team3d.json`. More in the posts Coaching tools in 3D and Arranging your inner team.

3D Inner Team: step by step

1. On the left under "Team members", choose a "Team member" or the "Team lead (head)", one of the "Suggestions" or people and emotions, and click under the dome.
2. Enter the name, core message and concern on the right.
3. Set the "Role in the team" and "Influence / volume" (1 to 5). Outsiders are best placed outside the dome.
4. Connect: on the left under "Connections", choose allies, opponents, tension or influence and click two members.
5. Click a member and look from its point of view with "From this view" (key `P`).
6. Create the next phase with "+ Picture" – stocktaking, team conference, solution – and change the arrangement; "⇆ Compare" shows two phases side by side.
7. With nothing selected, record the coherent message and the next steps on the right, and save.

3D Inner Team: functions and buttons

Camera and viewing angle

- Drag empty space – walk around; right mouse button or `Shift` + drag – move; mouse wheel – closer or further.
- "View" bar at the bottom left: "Free", "top", "front", "left", "right", "back" (`1` to `6`), "⤢ Fit to view" (`F`), "👁 From the view of …", "Names" (`N`) and "Connections" (`B`).
- In a view: ◂ ▸ to another member (`Tab`), turning in 15° steps (`←` / `→`), "turns with it", "Straight ahead", "✕ Back" (`Esc`); "Show field of view" and "Viewing angle" under "Display".

Members and dome

- On the left: "Team members" (with the note that size shows influence), "Suggestions" with 16 typical voices and the figures from the 3D systemic board, with search.
- Member selected: core message (speech bubble), concern, "Show speech bubble", "Role in the team", "Influence / volume" as a slider and a note that appears only in the record. Quiet voices have a dashed speech

bubble, loud ones a bold one. If you make a member the team leader, a previous team leader becomes a team member.
- On the right with nothing selected, under “Appearance”: “Outline” – “Head (translucent dome)”, “Oval on the floor” or “without outline” – and “Show speech bubbles”; below that the list of members in this phase with their influence.
- Handles: ↻ rotate (`Q` / `E`), ⇳ size, “👁 View”.

Phases

- “+ Picture” copies the current phase; the phases are named “Stocktaking”, “Team conference” and “Solution” in turn. When you switch, the figures visibly move to their new places.
- “⇆ Compare” and “✕ End comparison”; “Traces of the previous picture (translucent)” shows where the figures stood before.
- “Coherent message / outcome” and “Next steps” apply to all phases.
- “⛶ Large” hides both bars.

Several elements

- `Ctrl` + click or `Shift` + click selects several (gold ring), `Ctrl` + `A` all; dragging a selected element, the arrow keys and `Del` (one confirmation) act on all of them; on phones and tablets “Multiple selection” and “Select all”. Handles snap along the board directions to the neighbouring point (`Alt` freely).

3D Inner Team: saving, export and handovers

- “Save” creates `*.inneres-team3d.json` with all phases; the browser also keeps an interim state.
- “Open …” also opens files of the 2D tool (`*.inneres-team.json`); then save under a new name – the 2D file stays unchanged.
- “Save as 2D Inner Team” outputs all phases as `*.inneres-team.json` ; you then create PDF, PowerPoint, LibreOffice Impress and Visio in the 2D tool. Notes and areas are kept in the exchange. Handles of the lines from the 2D tool are kept on the way there and back; lines shaped in the 3D tool are converted back.
- “PNG image of the current view” and “Print picture sheet / as PDF” with “From the view of each member” and “Session record (members, messages, relationships, outcome)”.

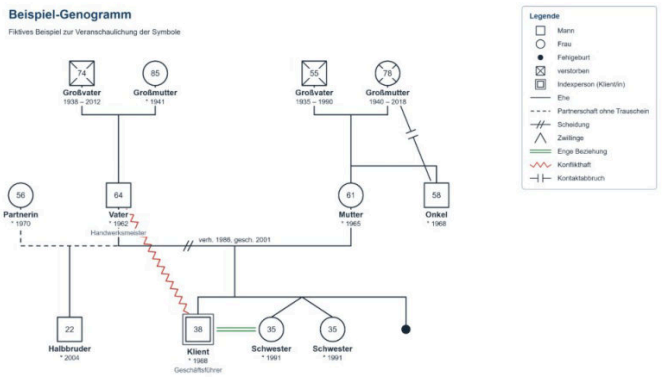
3D Inner Team: phone, systems and browsers

- WebGL 2 is required, otherwise “3D view not available” appears; Chrome or Edge are recommended.
- On the phone: open “ + Elements”, tap a member, then tap under the dome; swiping rotates, two fingers zoom (chapter ‘On phone and tablet’).
- Not tested: real phones, tablets and Safari on a real Mac.

3D Inner Team: tips

- Also look at the team from the point of view of a quiet voice or an outsider.
- Switch through the phases one after the other: you see which figure changes its place or size.
- For presentations and the detailed record, switch to the 2D tool with “Save as 2D Inner Team”.

Genogram



Genogram: purpose and use

With the genogram you depict family systems across several generations: people with life dates and details, marriages and partnerships, separations and divorces, children, twins and the quality of relationships – from close to cut-off. The tool draws with the usual symbols: a square for men, a circle for women, a horizontal line for the partnership and the children below it.

In coaching, I use the genogram to make roles, patterns and resources from the family of origin visible, for example in questions of career choice, one's own leadership role or succession in a family business. The conversation about the picture matters more than a complete picture. In coaching, the genogram serves as a reflection and conversation model, not a diagnostic instrument. Coaching is not psychotherapy.

The tool is still beta and is listed on the website under "Experimental". You can open it there in the browser, download it as a file or start it in the suite from the toolbox and the taskbar. It saves to files with the extension `.genogramm.json`. Background on the method and its origins is in the post Creating genograms with the genogram tool.

Genogram: step by step

1. Open the tool. If the drawing area is empty, "View example" shows a finished genogram across three generations that you can change freely.
2. Start an empty genogram with "New" and enter a name on the right under "Title", for example the family name. The tool suggests the file name from the title when you save and export.
3. On the left under "People", choose the symbol "Man" or "Woman" and click on the drawing area. The person is placed there, and the "Name" field on the right is ready for typing.
4. On the right, enter "Born", if applicable "Died", and under "More details" occupation, themes or events – one detail per line. For your client, tick "Index person (client)".
5. Add the family on the right under "Quick add": "+ Partner", "+ Son", "+ Daughter", "+ Parents", "+ Brother" or "+ Sister". The lines are drawn automatically.
6. Click a partnership line and set "Type" and "Status" on the right, for example divorced; under "Label" you can note the years of marriage and divorce.
7. Draw in relationships: on the left under "Relationships", choose a line type, for example "Distant", and click two people one after the other.
8. Arrange people by dragging. Select several people with `Ctrl` +click or `Shift` +click and line them up on the right with "Align at same height".
9. If needed, switch on "Legend on/off" on the left. The legend shows only the symbols and lines that occur in the genogram.
10. Save with "Save" and output the picture via "Export ▾", for example as PDF or PowerPoint.

Genogram: functions and buttons

Header

- “New” – starts an empty genogram; the tool asks first if there are unsaved changes.
- “Open …” – opens a saved `.genogramm.json` file (`Ctrl` + `O`).
- “Save” and “Save as …” – save the file (`Ctrl` + `S`, with `Shift` as a new file).
- ↶ and ↷ – undo and redo (`Ctrl` + `Z`, `Ctrl` + `Y`).
- − and + – “Zoom out” and “Zoom in”; the zoom in per cent is shown next to them.
- “Fit to view” – shows the whole genogram.
- “Export ▾” – menu with PDF, PowerPoint, LibreOffice Impress, Visio, SVG and PNG (see below).
- “Example” – loads the example genogram; after a confirmation it replaces the current one.
- “Help” – the quick guide with controls, keys and data protection.
- “👥 Master data” – shows the master data (see below).

Left bar: people

- “Man”, “Woman”, “diverse”, “unknown” – person symbols; you can change the gender at any time on the right under “Symbol”.
- “Pregnancy”, “Miscarriage” and the symbol for a termination of pregnancy – the special symbols of the genogram.

Left bar: connecting the family

- “Marriage” and “Partnership” – click two people one after the other; a partnership without marriage is shown dashed.
- “Assign child” – first click the child, then the parents’ partnership line or one parent.

Left bar: relationships

- “Close relationship”, “Very close / fused”, “Distant”, “Conflictual”, “Close and conflictual”, “Cut-off” and “Violence / abuse” – choose the line type, then click two people. For violence, the line shows a direction from the first to the second person.

Left bar: other

- “Text box” – a note on the drawing area, as normal text or “Heading”, “with frame” if you wish.
- “Frame / household” – a dashed frame, for example for a shared household; you change its size at the blue square at the bottom right.
- “Legend on/off” – shows or hides the legend; you can move it.

Properties on the right

- With nothing selected: “Title”, “Show age in symbol”, “Show legend” and “PDF format” (A4 or A3).
- Person: “Name”, “Symbol”, “Born”, “Died”, “deceased (date unknown)”, “Index person (client)”, “More details”, “Background” (colour behind the symbol) and “Label” (below or to the right).
- Person, section “Parentage”: “Child of” (a couple or only one parent), “Type” (biological, adopted or “Foster child”), “Twin of” and a tick box for identical twins.
- Person, section “Quick add”: the buttons from step 5; “+ Parents” only appears as long as the person has no parents yet.
- Person, section “Connections”: all partnerships and relationships of the person – one click selects them; “Delete person” removes the person with their lines.
- Partnership: “Type” (marriage or “Partnership (not married)”), “Status” (existing, separated, divorced), “Label”, the list of “Children” with “+ Son”, “+ Daughter” and “+ Pregnancy”, and “Delete partnership”.
- Relationship: “Type”, “Label”, “Reverse direction” and “Delete relationship”.
- Several elements: “Align at same height”, from three people “Distribute evenly horizontally”, plus “Delete all”.

Mouse and keys

- Dragging an element moves it; you select several with `Ctrl` + click or `Shift` + click (again = remove) or `Shift` + frame on an empty area, all with `Ctrl` + `A`; dragging a selected element or the arrow keys move all

of them, `Del` deletes all after one confirmation, `Esc` clears the selection. On a phone or tablet the “Multiple selection” button at the bottom left switches on adding by tapping and the frame by swiping.

- Shaping lines: click a line, drag + to add a handle, drag ◆ to shape it (snaps horizontally and vertically, `Alt` = free), double-click ◆ to remove it, “／ Straight” removes all of them. The partner, child and descent lines (right-angled) too: select the partnership or the child; the line to the children starts at the middle handle of the partner line.
- Dragging an empty area moves the view, the mouse wheel zooms.
- `Del` deletes, the arrow keys move, `Esc` cancels a chosen tool, `Ctrl` + `A` selects everything.

Genogram: saving, export and handovers

“Save” creates a `.genogramm.json` file that you can open again later. In addition, the browser keeps an automatic interim version so that nothing is lost if the browser crashes. When you open the tool again afterwards, the status line reports that the last working state has been restored and recommends “Save as …”.

The “Export ▾” menu offers:

- “PDF” – vector graphic in A4 or A3; whether landscape or portrait depends on the shape of the genogram. You set the size on the right under “PDF format”.
- “PowerPoint (.pptx)” and “LibreOffice Impress (.odp)” – individual, editable shapes, grouped.
- “Visio (.vsdx)” – individual, editable shapes.
- “SVG” – for Word, browsers and graphics programs.
- “PNG image” – in high resolution.

With the “👥 Master data” button you can link the genogram to the master data tool if you wish. Only the names of the people are taken over – no life dates, further details or relationships. For each person, you set on the right under “In the master data” whether they are taken over “as a person”, “as a role” or not at all (“do not take over”). After that, the name comes from the master data and can only be changed there. How this works in general is described in the chapter ‘How do I use a tool?’.

In the suite you open and save via the suite’s window instead of your computer’s file window, as described in the chapter ‘Tools in the suite: working together’.

Genogram: phone, systems and browsers

On phones and tablets the header is collapsed; “☰” expands it, for example for the “Export ▾” menu. At the bottom, “+ Elements” opens the left bar and “✎ Properties” the right one. To place a person, tap the symbol in the bar, for example “Woman”, and then the spot on the board. Because the tool immediately offers the “Name” field, the right bar opens by itself. I tested placing in simulated screen sizes with touch, not on real devices.

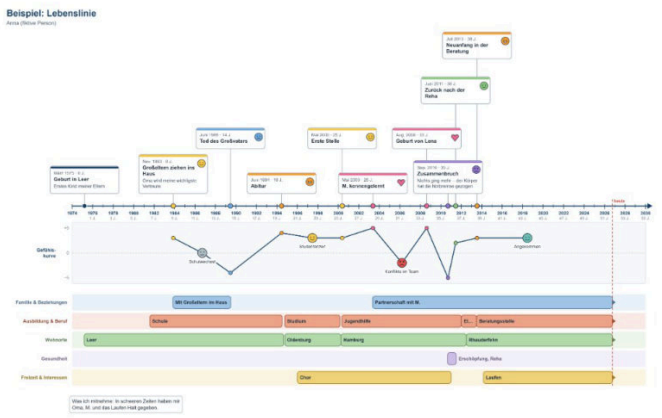
The genogram works with single files and needs no folder feature. In Chrome and Edge it saves directly to the same file. In Safari and Firefox it saves via the browser’s download; the exports then also end up in the downloads folder. The details are in the chapter ‘How do I use a tool?’.

I opened and checked the PowerPoint and Impress files in PowerPoint. I only checked the structure of the Visio files, because I do not have Visio.

Genogram: tips

- Start with the index person and build up the family via “Quick add” – this is quicker than drawing every line by hand.
- You assign a child that belongs to an existing couple with “Assign child”, or you choose the couple for the child on the right under “Child of”.
- You show twins by choosing “Twin of” for the child and, if needed, ticking the box for identical twins.
- A genogram shows the family of a client. Only link it to the master data if these people really belong there; otherwise set relatives to “do not take over” beforehand.
- All data stays on your computer; the tool loads nothing from the internet and sends nothing.

Lifeline



Lifeline: purpose and use

The lifeline shows your own path as a timeline: formative events, turning points, periods in the areas of life and a curve of highs and lows. At the top are the event cards, in the middle the timeline with years – and the age, if the year of birth is entered – and below them the feeling curve and the areas of life with their periods. Looking back often leads to surprising insights into your own strengths, recurring patterns and what helped in difficult times.

Looking back serves looking ahead. That is why the tool also plans the future: you enter a goal and calculate backwards from it when each step has to begin. In coaching, the lifeline is particularly helpful for career reorientation, before retirement, after crises or with the question of what really drives you. One root of biographical work is the *life review* that Robert N. Butler described in 1963.

In coaching, the lifeline serves as a reflection and conversation model, not a diagnostic instrument. Biographical work can touch on painful memories; in case of severe distress, therapeutic support is advisable. Coaching is not psychotherapy.

The tool is still beta. You will find it on the website under Experimental, as a file to download and in the MC4Y Suite. It saves to files with the extension `.lebenslinie.json`. More is in the post The lifeline: biographical work along a timeline; the walkable timeline is described in the chapter '3D lifeline'.

Lifeline: step by step

1. Open the tool. "Example" shows a fictitious lifeline to try out.
2. On the right (with nothing selected), set up the timeline: "Start (year)", "End (year)", "Year of birth" and "Scale". Enter the "Title" and "Name / for whom".
3. Check the areas of life: the defaults are "Family & relationships", "Education & career", "Places of residence", "Health" and "Leisure & interests". Clicking an area renames, colours or sorts it; "+ Life area" adds one.
4. Choose "Event card" on the left and click on the timeline – the spot determines the date. On the right, enter "Heading", "Month", "Description", "Feeling" and "Strength".
5. Choose "Period" and click in an area of life. Drag the bar to move it and the dark handles at the ends to change the duration; "continues until today" shows an open arrow.
6. Set emotion markers: choose a feeling and click in the feeling curve – horizontally is the point in time, the height is the strength from −5 to +5. Together with the feelings of the events, this forms the curve.
7. "Arrange cards" arranges all cards without overlap; "Fit to content" sets start and end to match.
8. Look at the line together, for example with the "Guiding questions" on the right.
9. Plan the future: under "Future and backward planning", enter the "Goal" and "Target year" and create the steps with their duration in months using "+ Step before" and "+ Step directly before the goal".
10. "Add to lifeline" creates the steps as dashed periods and the goal as a gold card, and colours the future.
11. Save with "Save" and output the lifeline via "Export ▾" – for long lifelines as a PDF in A3 format.

Lifeline: functions and buttons

Header

- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`) and “Save as …” – as described in the chapter ‘How do I use a tool?’.
- ↶ and ↷ – “Undo” and “Redo” (`Ctrl` + `Z` / `Ctrl` + `Y`).
- − and + to zoom, “Fit to view” shows everything.
- “Export ▾”, “Example” and “Help”; the button with the build version shows the licence and terms of use.

Left bar

- “Elements” – “Event card” (click on the timeline or above it), “Period” (click in an area of life) and “Text box”.
- “Emotion marker” – eleven feelings with a face: “Joy”, “Pride”, “Love / connectedness”, “Relief”, “Calm / contentment”, “Surprise”, “Mixed / neutral”, “Fear / worry”, “Shame / guilt”, “Anger / annoyance” and “Grief / loss”.
- “Arrange” – “Arrange cards”, “Adjust timeline” and “Legend on/off”.

Right bar with nothing selected

- “Title” and “Name / for whom”.
- “Timeline” – “Start (year)”, “End (year)”, “Year of birth” (for ages) and “Scale” from “very tight” to “to the month”; “Fit to content” and “Arrange cards”.
- “Appearance” – “Feeling curve”, “Age on the timeline and on the cards”, the today line, “Colour (off = black and white)”, “Legend of feelings” and “PDF format”.
- “Life areas” – list of all areas and “+ Life area”.
- “Future and backward planning” (see below), “How it works” and “Guiding questions”.

Event selected

- “Heading”, “Year”, “Month” (or “– year only –”) and “Description”.
- “Feeling” and “Strength” from +5 (very good) to −5 (very hard) – with both, the event appears in the feeling curve.
- “Place the card at the point in time” – brings a moved card back above its point; dragging the point on the timeline changes the date.
- “Delete event”.

Period, emotion marker and area of life selected

- Period: “Name”, “Life area”, “From (year)” and “Month”, “continues until today” or “To (year)”, “Colour” (also “like the life area”), “Note” and “Delete period”.
- Emotion marker: “Feeling”, “Strength”, “Year”, “Month”, “Label” and “Delete marker”. Dragging in the feeling curve: up or down changes the strength, sideways the point in time.
- Select several and move them together: With `Ctrl` + click or `Shift` + click (again = remove) or `Shift` + frame on an empty area, all with `Ctrl` + `A` ; dragging a selected element or the arrow keys move all of them, `Del` deletes all after one confirmation, `Esc` clears the selection. On a phone or tablet the “Multiple selection” button at the bottom left switches on adding by tapping and the frame by swiping. When dragged together, cards move freely, periods and emotion markers by whole months.
- Area of life: “Name”, “Colour”, “↑ up”, “↓ down” and “Delete life area” – after a confirmation, its periods disappear with it.

Future and backward planning

- “Goal”, “Target year” and “Month”.
- “Life area for the steps” – by default a separate area for the plan.
- “+ Step before” (a new, earlier first step) and “+ Step directly before the goal”; for each step a text and a duration in months, ↑ for earlier and ✕ to remove. Each step ends where the next one begins; the tool shows when each step begins.
- If the start of the first step lies in the past, a note appears below: set the goal later or shorten the steps.

- “Add to lifeline” – adding again replaces the earlier planning; afterwards “🔍 Planning view” (timeline from today to the goal) or “↔ Entire lifeline”, and “Remove plan”.
- “Highlight the future in colour”.

Mouse and keys

- Drag empty space – move the view; mouse wheel – zoom; drag cards freely.
- `←` / `→` – one month earlier or later, with `Shift` one year; `↑` / `↓` – card or strength.
- `Del` deletes, `Esc` cancels.

Lifeline: saving, export and handovers

- “Save” creates a file `*.lebenslinie.json`; Chrome and Edge save directly, Safari and Firefox via the downloads folder (chapter ‘Opening and saving in Safari and Firefox’). Biographical information is very personal – store the files with appropriate protection.
- “PDF” – vector graphic, A4 or A3, landscape or portrait; A3 is suitable for long lifelines.
- “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)” and “Visio (.vsdx)” – individual, editable shapes; “SVG” and “PNG image”.
- After changes, the browser remembers an interim state.
- Handover to the 3D version: the 3D lifeline opens these files and saves back in this format; planning, notes and legend are kept. The backward planning can be edited there with the same fields.
- “👥 Master data” and working in the suite as described in the chapters ‘Master data in every tool’ and ‘Tools in the suite: working together’.

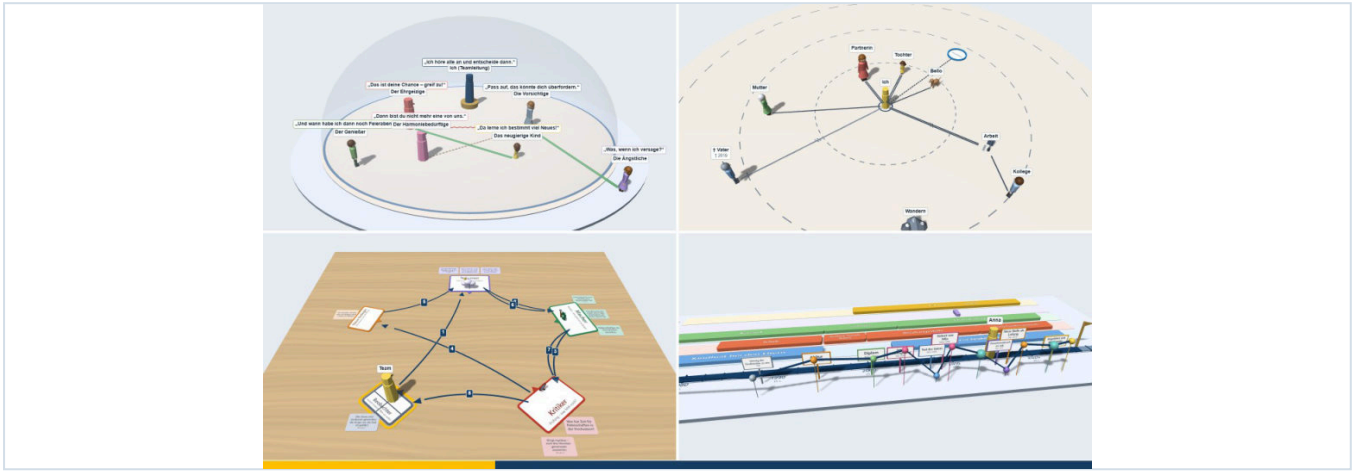
Lifeline: phone, systems and browsers

- On narrow screens the phone controls of the board tools apply (chapter ‘On phone and tablet’): the ☰ button expands the header, “+ Elements” opens the left bar, “✎ Properties” the right one.
- Tap an event card, a period or a feeling and then tap the matching spot – on the timeline, in an area of life or in the feeling curve. Swiping moves the picture, two fingers zoom.
- The tool runs in any current browser without folder features; Safari and Firefox save via the download.
- Not tested: real phones and tablets, and Safari on a real Mac.

Lifeline: tips

- Enter the year of birth – the timeline and cards then show the age, and events are easier to place.
- Ask not only about the lows but also about what helped in difficult times – people, abilities, places.
- Start the backward planning at the goal and ask: what has to happen immediately before – and what before that?
- Use the “🔍 Planning view” to see the steps up to the goal on a fine scale.
- Proceed carefully and only as far as feels right.

3D lifeline



3D lifeline: purpose and use

The 3D lifeline turns the lifeline into a timeline you can walk along: at the front the timeline with years and ages, behind it a band with the periods for each area of life, in front of it signs for the events, and above it the feeling curve – the higher, the more positive. A figure stands at a point in time, walks through the years and looks back or ahead. This change of viewing direction often has a strong effect in the conversation. Backward planning turns it into a path: from a desired point in the future you name, backwards to today, the stations that lead there – the figure moves to the goal and walks them back step by step.

Areas of life, events, feelings and the calculation of the backward planning are described in the chapter 'Lifeline' – the 3D version has the same fields and buttons; here you will only find what 3D adds. In coaching, the lifeline serves as a reflection and conversation model, not a diagnostic instrument. Biographical work can touch on painful memories; proceed carefully – in case of severe distress, therapeutic support is advisable. Coaching is not psychotherapy. The tool is beta, is available on the website under Experimental, as a file and in the suite, and saves to `.lebenslinie3d.json`. More in the posts Coaching tools in 3D and The lifeline: biographical work along a timeline.

3D lifeline: step by step

1. With nothing selected, set the frame on the right: "For whom", "Start", "End", "Year of birth" (for the age) and "Scale".
2. Create events with "+ Event" or by double-clicking at the front of the area. On the right, enter the title, description, date and feeling with strength from −5 to +5.
3. Periods are created with "+ Period" or a double-click in a band; set the area, start and end on the right (empty end = ongoing).
4. Set a feeling without an event with "+ Feeling" or a double-click right at the front – a sphere on the feeling curve.
5. Move the figure through time with the slider at the bottom, or jump from event to event with ◀ ▶.
6. Turn the figure with "◂ back" or "forward ▸" and show its view across the years with 👁 (key `P`).
7. Plan the future: with nothing selected, enter the "Goal", "Target year" and "Month" under "Future and backward planning" on the right. Working backwards from the goal, create the last step with "+ Step directly before the goal" and the earlier ones with "+ Step before", each with its duration in months. Each step shows its period below it, followed by the start of the first step.
8. "Add to lifeline" creates the steps as periods in the area "Projects (plan)" and as numbered station signs along the timeline, the goal as a golden sign, and colours in the future. The figure then stands at the goal and looks back.
9. Walk back step by step to today with ◀; the bar at the bottom shows "Step 2 of 3: …" or "Goal: …".
10. Save; for presentations, output a 2D file – the backward planning goes with it.

3D lifeline: functions and buttons

Walking figure and time

- "Figure in" bar at the bottom: ◀ to the previous event, slider for the time, ▶ to the next event, plus year and age. Once a backward plan has been added, ◀ ▶ also stop at the start of each step and at today; the bar then names the step ("Step 2 of 3: …") or "Goal: …".
- "Look": "◂ back" (into the past) and "forward ▸" (into the future); "+ Event" creates an event at the figure's position.
- The free view shows the area around the figure; "⤢ Fit to view" the whole lifeline.

Camera and viewing angle

- Drag empty space – walk around; right mouse button or `Shift` + drag – move; mouse wheel – closer or further.
- "View" bar at the bottom left: "Free", "top", "front", "left", "right", "back" (`1` to `6`), "⤢ Fit to view" (`F`), "👁 From the view of …" and "Names" (`N`).
- In a view: turning in 15° steps (`←` / `→`), "turns with it", "Straight ahead" and "✕ Back" (`Esc`).

Right bar with nothing selected

- “For whom”, “Start”, “End”, “Year of birth”, “Scale” and “Adjust period to the entries”.
- “Add” – “ + Event”, “ + Period”, “ + Feeling”. Double-click in the area: front = event, back = period in the area, right at the front = feeling.
- “Life areas” – colour button to switch, name, ▲ ▼ to reorder, × to delete and “ + Area”.
- Lists of events and periods – a click selects the entry.
- “Appearance” – “Feeling curve”, “Age on the time axis”, “Mark today” and “Colour the future”.

Future and backward planning (right bar with nothing selected, as in the 2D tool)

- “Goal”, “Target year”, “Month” and “Life area for the steps” (default: separate area “Projects (plan)”).
- “+ Step before” (new first step) and “+ Step directly before the goal”; per step “What is happening?”, the duration in months (“Mths”), “↑” earlier and “✕” remove. Each step shows its period below it; each step ends where the next one begins.
- “Start of the first step” – if it lies in the past, the note reads “lies in the past: set the goal later or shorten the steps”.
- “Add to lifeline” – adding again replaces the earlier plan. Then “🔍 Planning view” (timeline from today to the goal on a fine scale – down to “to the month”) or “↔ Entire lifeline”, “🚶 Figure to the goal” (the figure walks to the goal and looks back) and “Remove plan” (the steps on the right are kept).
- Clicking a station sign opens the period of that step.

Figures and pictures

- On the left, people, symbols, objects and other figures from the 3D systemic board to place.
- “+ Picture” copies the current picture; the elements visibly move when you switch; “⇆ Compare” shows two pictures side by side.
- “⛶ Large” hides both bars.

3D lifeline: saving, export and handovers

- “Save” creates `*.lebenslinie3d.json`; the browser also keeps an interim state.
- “Open …” also opens files of the 2D lifeline (`*.lebenslinie.json`); then save under a new name – the 2D file stays unchanged.
- “Save as 2D lifeline” outputs the lifeline for the 2D tool, which offers PDF, PowerPoint, Impress and Visio. The backward planning travels in both directions; notes and legend from the 2D tool are kept. Older files still open; older versions of the 3D lifeline leave a plan created here untouched and pass it on to the 2D tool.
- “PNG image of the current view” and “Print picture sheet / as PDF” with “From the figure’s view” and “Session record (events, feelings and periods)”.

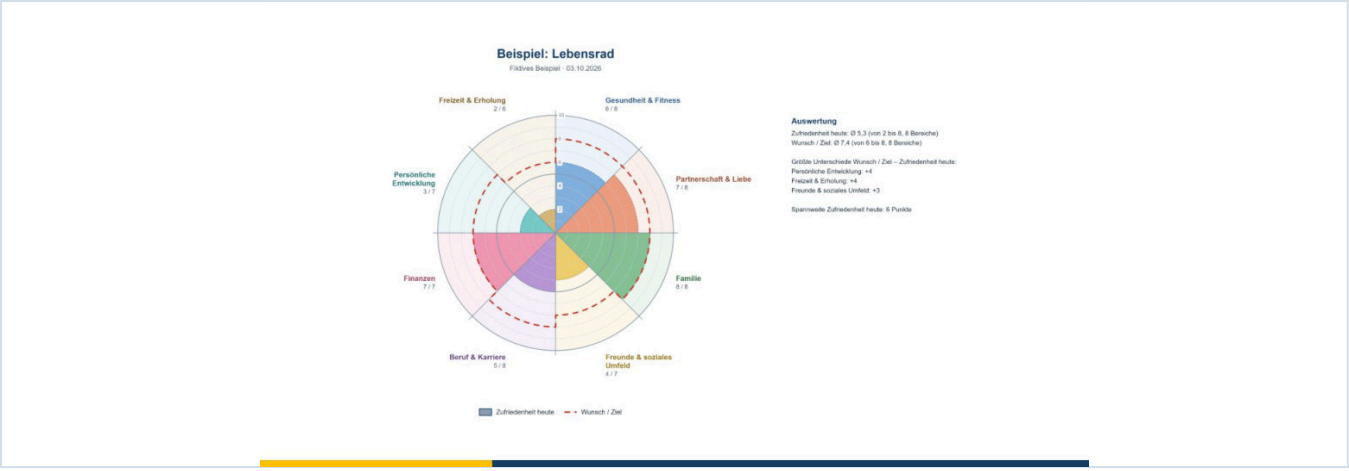
3D lifeline: phone, systems and browsers

- WebGL 2 is required, otherwise “3D view not available” appears; Chrome or Edge are recommended.
- On the phone, “✎ Properties” opens the right bar with “ + Event”, “ + Period”, “ + Feeling” and, further down, “Future and backward planning”; tap figures from “ + Elements”, then tap the board. After “Add to lifeline”, “✕” closes the bar and ◀ at the bottom walks back through the steps. Swiping rotates, two fingers zoom (chapter ‘On phone and tablet’).
- Not tested: real phones, tablets and Safari on a real Mac.

3D lifeline: tips

- In a new lifeline the figure stands at today. Let it look back first and then ahead.
- Jump through the events with ◀ ▶ to walk the lifeline together.
- For backward planning: put the figure at the point in the future with “🚶 Figure to the goal”, let it look back and walk station by station to today with ◀ – at each station ask: what must have happened here for the next step to succeed?
- “🔍 Planning view” stretches the time from today to the goal; “↔ Entire lifeline” restores the previous view.

Wheel of life



Wheel of life: purpose and use

The wheel of life shows satisfaction in several areas of life at a glance: the areas form the spokes, and the value in each area is the distance from the centre. Comparing two series is particularly revealing, for example satisfaction today and the desired state. The same tool draws three related forms: the role wheel with satisfaction, share of time and importance per role, the time pie, which places today's and the desired distribution of time side by side, and the team clock, on which each team member assesses which phase of team development according to Bruce Tuckman the team is in.

Unlike the board tools, the wheel of life is not a free drawing editor: you enter values, and the picture is created from them. I use it as a way into coaching, for setting priorities and in team development. In coaching, the wheel of life and the role wheel serve as reflection and conversation models, not as diagnostic instruments. The analysis only describes the values entered. Coaching is not psychotherapy.

The tool is still beta and is listed on the website under "Experimental"; you can also download it as a file or start it in the suite. It saves to files with the extension `.lebensrad.json`. Background on all four forms is in the post Wheel of life, role wheel, time pie and team clock.

Wheel of life: step by step

1. Open the tool and choose a template at the top under "New from template …", for example "Wheel of life (8 areas)".
2. On the right under "Wheel", enter a "Title", if needed a "Name / occasion", and the "Date".
3. Adjust the areas on the left: overwrite names, choose a colour, sort with ↑ and ↓, add with the plus button below the table or delete with ✕.
4. Check the series on the left under "Value series", for example "Satisfaction today" and "Wish / goal". The dot ● in front of a series shows which series you set with the mouse.
5. Set the values of the first series: click or drag in the wheel – the distance from the centre is the value, 0 in the centre, the maximum at the edge. Or type the values into the table on the left.
6. Select the second series with ● and set its values in the same way.
7. Write a note on individual areas via ✎, for example what one point more would mean.
8. Read the "Analysis" on the right and use the "Guiding questions" for the conversation; record insights under "Notes".
9. If needed, tick "Add the analysis to the diagram".
10. Save with "Save" and output the wheel via "Export ▾" – as a picture, a presentation or as a "Table (.csv)".

Wheel of life: functions and buttons

Header

- "New from template …" – starts a new wheel: "Wheel of life (8 areas)", "Wheel of life (10 areas)", "Role wheel (8 roles)", "Four areas of life (balance model after N. Peseschkian)", "Custom wheel (6 empty areas)", "Time pie

(distribution of time today and desired)" and "Team clock (phases of team development according to Tuckman)".
- "Open …", "Save", "Save as …" – open and save a file (`Ctrl` + `O` , `Ctrl` + `S`).
- ↶ and ↷ – undo and redo (`Ctrl` + `Z` , `Ctrl` + `Y`).
- "Export ▾" – PDF, PowerPoint, LibreOffice Impress, Visio, SVG, PNG and table.
- "Example" – a fictitious example matching the chosen form: wheel of life, time pie or team clock.
- "Help" – the quick guide; "👥 Master data" – see below.

Left bar: areas, roles or phases

- A table with colour, "Name" and one column per value series; you type the values in directly.
- ↑ and ↓ ("up", "down"), ✎ ("Note") and ✕ ("delete") per row. A wheel has 3 to 16 areas.
- A plus button for a new area (in the role wheel a new role, in the team clock "+ Phase") and "Clear values …" for the active series.

Left bar: value series

- Up to four series with name, colour and the display "Area", "Line" or "dashed".
- ● selects the series you set with the mouse in the wheel; ✕ ("Delete series") removes a series with all its values.
- "+ Value series" adds a series.

Left bar in the team clock: people

- "+ Person" adds a person; ● selects whose assessment you set with the mouse.
- For each person a name, a colour and the choice "today" and "desired" (phase); ✕ ("Remove person").
- A click in the clock sets the selected person to "today", `Shift` +click to "desired". Markers can be dragged, the right mouse button removes an assessment. The hand shows the centre of gravity of all assessments.

Properties on the right

- "Wheel": "Title", "Name / occasion", "Date", "Scale" (0 – 10 or 0 – 5) or, for the time pie, "Unit" ("Hours per week", "Percent", "no unit").
- "Appearance": "Pie slices", "Web (radar)", "Time pie (shares)" or "Clock (phases, people)".
- "Colours": "per area (colourful)" or "per value series".
- "Show values at the areas", "Show scale numbers", "Show legend", "Add the analysis to the diagram" and "PDF format".
- "Analysis": average and range for each series, plus the largest differences between the second and the first series; for the time pie the largest shifts in percentage points.
- "Guiding questions" matching the form, and "Notes" for insights, agreements and next steps.

Mouse and keys

- A click or drag in the wheel sets a value of the active series; dragging stays in the area where you started.
- A right-click on an area deletes the value of the active series.
- `Ctrl` + `S` saves, with `Shift` as a new file; `Esc` removes the highlight from an area.

Wheel of life: saving, export and handovers

"Save" creates a `.lebensrad.json` file. After a crash, the tool restores the last working state from the browser the next time you open it and reports this in the status line.

The "Export ▾" menu offers:

- "PDF" – vector graphic in A4 or A3 (on the right under "PDF format").
- "PowerPoint (.pptx)" and "LibreOffice Impress (.odp)" – individual, editable shapes, grouped.
- "Visio (.vsdx)", "SVG" and "PNG image".
- "Table (.csv)" – values and notes for Excel or LibreOffice Calc.

In the team clock you can link the people to the master data tool via "👥 Master data" if you wish. Only the names of the people who give their assessment are taken over – not the areas or roles of a wheel of life or role wheel. Placeholders such as Person 3 are left out. After that, the name comes from the master data and can only be changed there. In the suite you open and save via the suite's window, as described in the chapter 'Tools in the suite: working together'.

Wheel of life: phone, systems and browsers

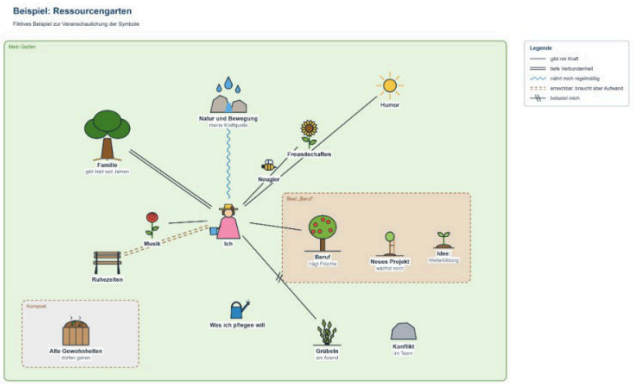
On phones and tablets, "+ Areas" opens the left bar with the table and value series, "✎ Properties" the right one with settings and analysis; "☰" expands the header. The easiest way is to enter the values in the table there. I tested input in the bar in simulated screen sizes with touch, not on real devices.

The wheel of life works with single files and needs no folder feature. In Safari and Firefox it saves via the browser's download, including the exports – details in the chapter 'How do I use a tool?'. I checked the PowerPoint and Impress files in PowerPoint, the Visio files only for their structure.

Wheel of life: tips

- Compare two series: the largest differences between today and the desired state are often a good starting point for the conversation.
- In the role wheel, the series "Satisfaction", "Share of time" and "Importance" are already set up. It gets interesting where share of time and importance diverge.
- In the time pie, the slices always add up to a whole pie: more time for one thing means less time for something else.
- In the team clock, each phase comes with a note on what helps in it; if the assessments are far apart, that in itself is a good starting point for conversation.
- Try "Example" after you have chosen the time pie or the team clock – the tool then shows an example of exactly this form.
- The analysis only describes the values entered – it is a starting point for conversation, not an evaluation.

Resource garden



Resource garden: purpose and use

The resource garden makes sources of strength and burdens visible as a garden. You place yourself in the centre as the gardener and plant around you what sustains you: trees for what has grown, flowers for joy, springs and sun for strength, fruit for successes, seeds and seedlings for possibilities. You also show what is a burden or needs care – weeds, stones, pests, drought – and what may go on the compost.

I use the garden in coaching on stress, change or new tasks when the focus should move from the problem to what already holds you up. There is no fixed source for the method; you decide for yourself what the symbols and lines mean. In coaching, the resource garden serves as a reflection and conversation model, not a diagnostic instrument. Coaching is not psychotherapy.

The tool is still beta and is listed on the website under “Experimental”; you can also download it as a file or start it in the suite. It saves to files with the extension `.ressourcengarten.json`. Background on the method is in the post Resource garden: discover and nurture your strengths. I describe the related resource tree in the next chapter.

Resource garden: step by step

1. Open the tool. “View example” shows a finished garden; “New” starts an empty one.
2. Enter a name on the right under “Title”. The tool suggests the file name from the title when you save.
3. On the left in the group “Me and people”, choose “Gardener (woman)”, “Gardener (man)” or “Me (circle)” and click on the drawing area.
4. On the right under “Label”, type a name or keywords. The first line appears in bold, further lines smaller.
5. Plant your resources: choose a symbol – the “Search symbols …” field helps –, click on the area, label it on the right. The tool does not stay active after a click; choose again for the next symbol.
6. Create areas of life as areas: place “Area / flower bed” on the left, choose for example meadow, flower bed or water on the right under “Fill”, and drag the size at the blue square at the bottom right.
7. Connect symbols: on the left under “Connections”, choose a line type, then click two symbols one after the other. The tool stays active until you press `Esc`.
8. With nothing selected, define on the right under “Meaning of the lines” what each line type stands for, and switch on “Show legend”.
9. Look at the garden together and record insights in a “Text box”.
10. Save with “Save” and output the picture via “Export ▾”.

Resource garden: functions and buttons

Header

- “New”, “Open …”, “Save”, “Save as …” – start, open and save a file (`Ctrl` + `O` , `Ctrl` + `S`).
- ↶ and ↷ – undo and redo (`Ctrl` + `Z` , `Ctrl` + `Y`).
- − and + – zoom out and zoom in; “Fit to view” shows everything.
- “Export ▾” – PDF, PowerPoint, LibreOffice Impress, Visio, SVG and PNG.
- “Example” loads an example garden; “Help” opens the quick guide with guiding questions.
- “👥 Master data” – opens the master data. The garden keeps no list of people of its own; you take over names in input fields with the field help (`Ctrl` + `Space`), which you switch on by right-clicking the button.

Left bar: symbols

- “Search symbols …” – filters the list by name and group.
- 94 coloured symbols in ten groups: “Me and people”, “Trees and shrubs”, “Flowers and plants”, “Fruit and harvest”, “Water and weather”, “Burdens”, “Design and protection”, “Tools and care”, “Animals” and “Treasures and signs” – among them “Watering can”, “Weeds”, “Compost”, “Fence” and “Treasure chest”.

Left bar: connections

- “Connection” – a simple line.
- “Strong” – “Strong connection” as a double line.
- “Supply” – “Supply (watercourse)” as a blue wave.
- “Path” – “Path / access”, a dashed double line.
- “Boundary” – “Boundary / fence” with posts.
- “troubled” – “Disrupted connection (struck through)”.

Left bar: other

- “Text box” – free text, normal or “Heading”, “with frame” if you wish.
- “Area / flower bed” – an area with a fill, for example for family, work or leisure.
- “Legend on/off” – shows the line types that occur, with your meaning.

Properties on the right

- With nothing selected: “Title”, “Colour symbols (off = black and white)”, the choice of circles around “Me (circle)” (none, close, medium, wide), “Show legend”, “PDF format” and, under “Meaning of the lines”, one field per line type, plus “How it works” and “Guiding questions”.
- Symbol: “Label” (text), “Symbol” (swaps a placed symbol), “Size” from “small” to the largest size, the position of the label (top, bottom, left, right, for the circle also “inside the circle”) and “Background”.
- Symbol, section “Connect to …”: choose a line type, then click the other symbol; below it the list “Connections” and “Delete symbol”.
- Connection: “Line type”, “Label”, “Colour”, “dashed” and “Delete connection”.
- Area: “Label”, “Fill” (for example “Meadow (light green)”, “Flower bed (soil)”, “Water (light blue)” or “Gravel / stone (grey)”), “Border colour”, “solid border” and “Delete area”.
- Several symbols: under “Change together” “Size” and “Background” for all, “Align at same height”, from three symbols “Distribute evenly horizontally”, and “Delete all”.

Mouse and keys

- Dragging an element moves it; select several with `Ctrl` + click or `Shift` + click (again = remove) or `Shift` + frame on an empty area, all with `Ctrl` + `A`; dragging a selected element or the arrow keys move all of them, `Del` deletes all after one confirmation, `Esc` clears the selection. On a phone or tablet the “Multiple selection” button at the bottom left switches on adding by tapping and the frame by swiping.
- Connections: Shaping lines: click a line, drag + to add a handle, drag ◆ to shape it (snaps horizontally and vertically, `Alt` = free), double-click ◆ to remove it, “／ Straight” removes all of them.
- Dragging an empty area moves the view, the mouse wheel zooms.
- `Del` deletes, the arrow keys move, `Esc` cancels a tool, `Ctrl` + `A` selects everything.

Resource garden: saving, export and handovers

“Save” creates a `.ressourcengarten.json` file. In addition, the browser keeps an automatic interim version; after a crash, the tool reports on the next opening that the last working state has been restored and recommends “Save as …”.

The “Export ▾” menu offers:

- “PDF” – vector graphic in A4 or A3, landscape or portrait; you set the size on the right under “PDF format”.
- “PowerPoint (.pptx)” and “LibreOffice Impress (.odp)” – individual, editable shapes, grouped.
- “Visio (.vsdx)” – individual, editable shapes.
- “SVG” and “PNG image” – for Word, e-mail and graphics programs.

If you switch off “Colour symbols (off = black and white)”, you get a black-and-white picture, for example for colouring in. There are no handovers to other tools here. In the suite you open and save via the suite’s window, as described in the chapter ‘Tools in the suite: working together’.

Resource garden: phone, systems and browsers

On phones and tablets, “+ Elements” opens the symbol bar and “✎ Properties” the right bar; “☰” expands the header. To place a symbol, tap it in the bar and then the spot in the garden. Swiping on the drawing area moves the garden, and you zoom with two fingers. I tested placing in simulated screen sizes with touch, not on real devices.

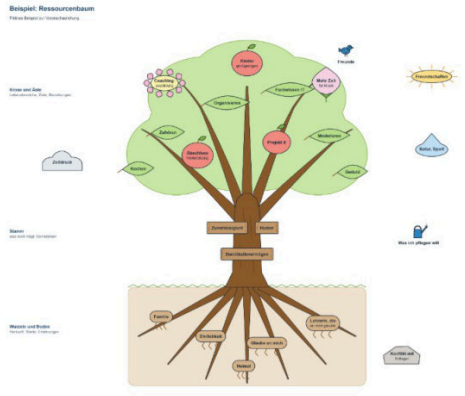
The garden works with single files; it needs no folder features. In Safari and Firefox it saves via the browser’s download, including the exports – details in the chapter ‘How do I use a tool?’. I checked the PowerPoint and Impress files in PowerPoint, the Visio files only for their structure.

Resource garden: tips

- Possible guiding questions from the help: What is already growing well? Where do you draw strength from? What needs care or water? What may go on the compost? Where would you like to sow something new? What protects your garden – and where is a fence missing?
- With “Symbol” on the right you swap a placed symbol without losing its label and connections – for example the bud for the flower once something has blossomed.

- If you click the same two symbols with a different line type, the tool changes the existing connection instead of creating a second one.
- With the circles around “Me (circle)” you show closeness and distance to yourself.
- Create a separate area for each area of life, for example family, work and leisure. An area as a pond, meadow or gravel path makes the garden more vivid.

Resource tree



Resource tree: purpose and use

The resource tree arranges strengths in one picture: the roots stand for origins, values, formative experiences and important people, the trunk for core strengths, the branches for areas of life, the leaves for abilities, the fruit for successes, buds and blossoms for wishes and possibilities. Sun, water and people show what nourishes the tree; a pest, an axe or stones what puts a strain on it. There is no fixed form; you interpret the areas according to the concern.

I use the tree for career reorientation, before job applications, after crises or when someone feels they are not good at anything special. The finished picture often shows how much is already there. In coaching, the resource tree serves as a reflection and conversation model, not a diagnostic instrument. Coaching is not psychotherapy.

The tool is still beta and is listed on the website under “Experimental”; you can also download it as a file or start it in the suite. It saves to files with the extension `.ressourcenbaum.json`. It builds on the resource garden: symbols, connections, areas and exports work there as they do here. Background on the method is in the post The resource tree: roots, trunk and crown.

Resource tree: step by step

1. Open the tool. “View example” shows a finished tree. If the area is empty, switch the tree on with “Show tree” on the right under “Tree template”.
2. With nothing selected, set the “Size” of the tree and the “Season” on the right, for example “Summer” or “Winter / without foliage”.
3. If needed, change the zone texts under “Crown and branches text”, “Trunk text” and “Roots and soil text”.
4. Tick “Fix tree (cannot be moved while you work)” so that the tree does not slip while you work.
5. On the left under “Elements with labels”, choose for example “Root” and click on the tree. Type the text straight away; the suggested text in the element is already selected, and the element grows with the text.
6. In this way, place roots, bark shields on the trunk, and leaves, fruit, blossoms and buds in the crown.
7. Add more symbols from groups such as “Water and weather”, “Me and people” or “Burdens”.
8. Connect elements: on the left under “Connections”, choose a line type and click two elements one after the other; `Esc` ends the tool.
9. With nothing selected, define on the right under “Meaning of the lines” what each line type stands for, and switch on “Show legend”.
10. Save with “Save” and output the tree via “Export ▾” – in black and white also as a worksheet.

Resource tree: functions and buttons

Header

- “New”, “Open …”, “Save”, “Save as …” – start, open and save a file (`Ctrl` + `O` , `Ctrl` + `S`).
- ↶ and ↷ – undo and redo (`Ctrl` + `Z` , `Ctrl` + `Y`).
- − and +, “Fit to view” – zoom and overall view.
- “Export ▾” – PDF, PowerPoint, LibreOffice Impress, Visio, SVG and PNG.
- “Example” and “Help” – example tree and quick guide with guiding questions.
- “👥 Master data” – opens the master data; the tree keeps no list of people of its own, you take over names with the field help (`Ctrl` + `Space`).

Left bar

- “Search symbols …” – filters the list.
- “Elements with labels”: “Leaf”, “Fruit”, “Blossom”, “Bud”, “Root”, “Bark shield”, “Water drop”, “Sunbeam”, “Cloud”, “Stone”, “Shield” and “Heart”. Each comes with a suggested text, for example ability for the leaf, success for the fruit, value for the root or worry for the cloud.
- Further groups: the same 94 symbols in the same ten groups as in the resource garden – “Me and people”, “Trees and shrubs”, “Flowers and plants”, “Fruit and harvest” (with “Cherries”), “Water and weather”, “Burdens” (with “Axe”), “Design and protection”, “Tools and care”, “Animals” (with “Nest”) and “Treasures and signs”. In addition there are the three tree symbols cherries, axe and nest and the twelve elements with labels.
- “Connections”: “Connection”, “Strong”, “Supply”, “Path”, “Boundary” and “troubled” – as in the resource garden.
- “Text box”, “Area / flower bed” and “Legend on/off”.

Properties on the right with nothing selected

- “Title” and “Colour symbols (off = black and white, e.g. as a worksheet)”.
- “Tree template”: “Show tree”, “Size” (small to very large), “Season” (“Spring”, “Summer”, “Autumn”, “Winter / without foliage”), “Show soil with roots”, “Label zones”, “Fix tree (cannot be moved while you work)” and the three zone texts.
- “Appearance”: circles around “Me (circle)”, “Show legend” and “PDF format”.
- “Meaning of the lines” – one field per line type; “How it works” – short instructions.

Properties on the right with a selection

- Tree: “Fix tree (can no longer be clicked)” and “Hide tree”; you can drag the tree as long as it is not fixed.
- Element with a label: “Label”, “Symbol” (for example swap the bud for a blossom, later for a fruit), “Size”, position “inside the element” and “Colour” (from “Default colour” to white).
- Other symbols: “Label”, “Symbol”, “Size”, position of the label and “Background”.
- All symbols: “Connect to …”, the list “Connections” and “Delete symbol”.
- Connection, area, text box and several elements as in the resource garden: “Line type”, “Fill”, “Border colour”, “Change together”, “Align at same height”, “Distribute evenly horizontally”, “Delete all”.

Mouse and keys

- Dragging moves, several are selected with `Ctrl` + click or `Shift` + click (again = remove) or `Shift` + frame on an empty area, all with `Ctrl` + `A` ; dragging a selected element or the arrow keys move all of them, `Del` deletes all after one confirmation, `Esc` clears the selection. On a phone or tablet the “Multiple selection” button at the bottom left switches on adding by tapping and the frame by swiping. Dragging an empty area moves the view, the mouse wheel zooms.
- Shaping lines: click a line, drag + to add a handle, drag ◆ to shape it (snaps horizontally and vertically, `Alt` = free), double-click ◆ to remove it, “／ Straight” removes all of them.
- `Del` deletes, the arrow keys move, `Esc` cancels a tool, `Ctrl` + `A` selects everything.

Resource tree: saving, export and handovers

"Save" creates a `.ressourcenbaum.json` file. In addition, the browser keeps an automatic interim version; after a crash, the tool reports on the next opening that the last working state has been restored.

The "Export ▾" menu offers "PDF" (A4 or A3, landscape or portrait, size on the right under "PDF format"), "PowerPoint (.pptx)" and "LibreOffice Impress (.odp)" with individual, editable shapes in a group, "Visio (.vsdx)", "SVG" and "PNG image" in high resolution. SVG and PNG are suitable for Word and e-mail.

If you switch off the coloured symbols, the tree turns black and white – for example as a worksheet to fill in on paper. There are no handovers to other tools here. In the suite you open and save via the suite's window, as described in the chapter 'Tools in the suite: working together'.

Resource tree: phone, systems and browsers

On phones and tablets, "+ Elements" opens the left bar and "✎ Properties" the right one; "☰" expands the header. You place an element by tapping it in the bar and then tapping the spot on the tree. Fix the tree first so that it does not slip while you work. I tested placing in simulated screen sizes with touch, not on real devices.

The tree works with single files and needs no folder feature. In Safari and Firefox it saves via the browser's download, including the exports – details in the chapter 'How do I use a tool?'. I checked the PowerPoint and Impress files in PowerPoint, the Visio files only for their structure.

Resource tree: tips

- Possible guiding questions from the help: What are my roots? What sustains me? In which areas of life am I growing? What abilities do I have? What have I achieved? What would still like to unfold? What nourishes me – and what puts a strain on the tree?
- Fix the tree before you place many elements. A fixed tree can no longer be clicked; untick the box on the right with nothing selected to release it.
- With "Symbol" you show development: the bud becomes a blossom, the blossom a fruit – the text stays.
- Also show what nourishes the tree – sun, rain, a spring or people – and what puts a strain on it, for example a pest, an axe or drought.
- "Hide tree" only removes the template; your elements stay where they are, and "Show tree" brings the tree back.

Ikigai



Ikigai: purpose and use

Ikigai is a Japanese word that roughly means "that which makes life worth living"; in Japan it often also refers to small things in everyday life. The tool works with the Western diagram of four circles that is widespread in coaching: "What I love", "What I am good at", "What the world needs" and "What I can be paid for". Where two circles overlap lie "Passion", "Mission", "Vocation" and "Profession", with the Ikigai in the centre. Next to them are two boxes: "Small joys in everyday life" and "Still open (parking area)" for thoughts that do not have a place yet.

I use the diagram above all for career reorientation and for the question of how to shape a stage of life in a meaningful way. With the template for organisations and teams, it is a good way into vision and mission in the 8-level model. The four-circle diagram is a Western representation, not a Japanese teaching. The tool serves as a reflection and conversation model, not a diagnostic instrument; coaching is not psychotherapy.

The tool is still beta and is listed on the website under "Experimental"; you can also download it as a file or start it in the suite. It saves to files with the extension `.ikigai.json`. Background on the method and its sources is in the post Ikigai: what gives me meaning – in four circles.

Ikigai: step by step

1. Open the tool. "View example" shows a completed Ikigai; "New" starts an empty one.
2. On the right under "Template", choose "Personal Ikigai" or "Ikigai of an organisation or a team" and enter "Title", "For whom" and "Date".
3. Collect: on the left under "Collect", write in the field of each circle and press `Enter` – each time a card is created. A click on one of the "Guiding questions" puts it into the input field as a prompt.
4. Connect: drag cards that fit several circles into the matching overlap; while you drag, a label shows the area.
5. Take a look: on the right under "Analysis", read which overlaps are filled and which are empty, and use the follow-up questions for the empty areas.
6. Assess ideas: create ideas and options as "Idea / option", rate them on the right with 0 to 5 points per circle and click "Place by rating".
7. Evaluate: in the "Ikigai check", assess for each circle how fulfilled it is today and how it should be (0 to 10).
8. Record: on the right, formulate your sentence in the field "My Ikigai sentence" and note small next steps under "Next steps (one line per step)".
9. Use "+ Picture" to create a copy, for example as a target picture in three years, and change it independently of the first picture.
10. Save with "Save" and choose "Print record" under "Export ▾" – on paper or as a PDF.

Ikigai: functions and buttons

Header

- The large arrows "Undo" and "Redo" (`Ctrl` + `Z`, `Ctrl` + `Y`); the small arrow ▾ between them shows the history: a click on an entry restores the state before that change (up to 300 steps while the file is open).
- "New", "Open …", "Save", "Save as …" – start, open and save a file (`Ctrl` + `O`, `Ctrl` + `S`).
- − and +, "Fit to view" – zoom and overall view.
- "⛶ Large picture" – hides the side bars and shows them again, for more space.
- "Export ▾" – picture exports, "Print record" and "Entries as a table (CSV)".
- "Example", "Help" and "👥 Master data" (field help with `Ctrl` + `Space`; the Ikigai keeps no list of people of its own).

Left bar

- "Collect" – for each circle a heading with a counter (a click edits the circle), the input field "+ Entry, Enter" and expandable "Guiding questions".
- "Elements" – the tiles "Cards", "Idea / option", "Small joy" and "Still open"; drag them onto the picture or click them.
- "Overlaps" – the centre and the four overlaps of two circles with counters, and below them, expandable, "Three circles" with "Fulfilling – but without income", "Inspiring and in demand – but uncertain", "Safe and useful – but without heart" and "Content – but is it needed?".

Picture bar at the top of the drawing area

- One button per picture with the number of cards; a click shows the picture, a double-click renames it.
- "+ Picture" – a new picture as a copy of the one shown.

Properties on the right with nothing selected

- “Title”, “For whom” (for organisations “Organisation / team”), “Date” and “Template”; switching the template takes over names and questions, the cards stay where they are.
- Section for the picture shown: “Name of this picture”, “ + Copy as new picture”, “ + Empty picture”, ◀ and ▶ for reordering, “Delete picture” and the changes compared with the previous picture.
- “Ikigai check” – two sliders per circle, today and desired; below them a note on where the largest gap lies, and “Clear assessment”.
- “My Ikigai sentence” and “Next steps (one line per step)”.
- “Analysis” – number of cards per circle and overlap, the empty areas with follow-up questions, the ideas compared, plus “Place all ideas by rating” and “Arrange all cards”.
- “Appearance” – “Size of the circles”, “Overlaps” (large, medium, small), “Coloured”, “Subtitles and questions in the boxes”, “Description of the triple overlaps”, “Colour dots for the circles on the card”, “Small cards”, the two boxes on or off, “Ikigai check in the picture”, Ikigai sentence and steps in the picture, “Title above the picture”, “Move cards fully into the area when dropped”, “Place ideas from” (2, 3 or 4 points) and “PDF format”.

Properties on the right with a selection

- Card: “Text”, “Area”, “Type” (“Entry” or “Idea / option”), “Colour”, “★ highlight” and “Note (appears only in the record)”, plus the “Follow-up questions” of the area and “✎ Edit in picture (F2)”, “⧉ Duplicate”, “Delete”.
- Idea: in addition “Rating (0 to 5)” per circle, the total out of 20 and “Place by rating”.
- Several cards: “All into the area” and “Type for all”.
- Circle: “ + Card here”, “Arrange”, “Name”, “Short word (for overlaps)”, “Subtitle”, “Guiding questions (one per line)”, “Colour”, “Follow-up question for entries only in this circle” and “Restore template”.
- Overlap or box: “ + Card here”, “Arrange”, “Name” and the follow-up question; below that “Cards in this area”.

Right mouse button

- On a card: “✎ Edit text”, “Place in area” with all areas, “ 💡 As idea / option” or “As normal card”, “★ Highlight on / off”, “⧉ Duplicate” and “🗑 Delete”.
- On an area: “ + Card here”, “ 💡 Idea / option here”, “Arrange cards here”, “Arrange all cards”, “ + Create picture as a copy” and “Fit everything to view”.

Keys

- A double-click on a spot in the picture or the `N` key creates a card; a double-click on a card or `F2` changes the text – `Enter` done, `Tab` done and straight on to the next card, `Esc` cancel.
- With the `Alt` key held down, a dragged card stays exactly where you drop it; you select several with `Ctrl` + click or `Shift` + click (again = remove) or `Shift` + frame on an empty area, all with `Ctrl` + `A`; dragging a selected element or the arrow keys move all of them, `Del` deletes all after one confirmation, `Esc` clears the selection. On a phone or tablet the “Multiple selection” button at the bottom left switches on adding by tapping and the frame by swiping.
- `Del` deletes, `Ctrl` + `D` duplicates, the arrow keys move.

Ikigai: saving, export and handovers

“Save” creates an `.ikigai.json` file with all pictures. In addition, the browser keeps an automatic interim version; the next time you open the tool, it reports that the last working state has been restored.

The “Export ▾” menu offers:

- “PDF” – the current picture in A4 or A3.
- “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image” – in each case the picture shown.
- “Print record” – all pictures, the entries per area, the changes between the pictures, Ikigai check, ideas, Ikigai sentence and steps; via the browser’s print dialog also as a PDF.
- “Entries as a table (CSV)” – picture, area, circles, text and rating for Excel.

There are no handovers to other tools. In the suite you open and save via the suite’s window, as described in the chapter ‘Tools in the suite: working together’.

Ikigai: phone, systems and browsers

On phones and tablets, "+ Elements" opens the left bar with "Collect", "Elements" and "Overlaps", "✎ Properties" the right one; "☰" expands the header. You create a card by typing under "Collect" or by tapping a tile under "Elements". I tested this in simulated screen sizes with touch, not on real devices.

The Ikigai works with single files and needs no folder feature. In Safari and Firefox it saves via the browser's download, including the exports – details in the chapter 'How do I use a tool?'. I checked the structure of the PowerPoint, Impress and Visio files, but did not open them in PowerPoint.

Ikigai: tips

- The centre is often empty. That is not a shortcoming but a good starting point for the conversation.
- The gaps are what is interesting: which overlaps are empty? The analysis gives a follow-up question for each empty area.
- With "+ Picture" you compare, for example, today and three years from now; the record shows what is new, what has shifted and what has dropped out.
- Whatever does not fit any circle for sure, you first put in "Still open (parking area)".

Vision Board



Vision Board: purpose and use

A vision board – also called a mood board – makes wishes and goals visible: pictures, words and colours show how a good life, a role or a project should feel. It does not work by itself. It helps you clarify priorities, keep the direction in view and use the strength of your own wishes for the next steps – at its strongest together with an honest look at obstacles.

In coaching, I use vision boards for career reorientation, for a motto for the year, for a team's vision or as a mood board for a project. In the tool you arrange your own pictures, note slips, texts, stickers, motifs and colour swatches freely on a canvas, with templates if you wish. In coaching, the vision board serves as a reflection and conversation model, not a diagnostic instrument. Coaching is not psychotherapy.

The tool is still beta and is listed on the website under "Experimental"; you can also download it as a file or start it in the suite. It saves to files with the extension `.zielbild.json`, which contain all boards and pictures. Background on the method and the research is in the post Vision boards: making your wishes visible.

Vision Board: step by step

1. Open the tool. "View example" shows a finished vision board; "New" starts an empty one.
2. On the right, choose the "Format" of the canvas, for example "landscape (A4/A3)" or "Phone wallpaper 9:16", plus "Structure" and "Background".
3. If needed, insert a template on the right under "Insert template", for example "Today – on the way – in three years".
4. Bring in your own pictures: drag them onto the canvas, paste them with `Ctrl` + `V` or use "Add images …" on the left. They stay on the left under "My images" and can be used more than once.

5. Drag note slips, texts, stickers and motifs from the left onto the canvas, or click them.
6. Click an element and set text, colour, frame, tape and shadow on the right.
7. Rotate elements at the round handle at the top or with `Q` and `E`; you change the size at the square at the bottom right.
8. For a mood board, choose “Colours from the image” on the right for a picture – colour swatches with its main colours appear.
9. Formulate a guiding statement and note first steps on the right under “Notes on this board”.
10. Save with “Save” and output the board via “Export ▾”, for example as a PDF for printing or as a PNG image for the screen.

Vision Board: functions and buttons

Header

- “New”, “Open …”, “Save”, “Save as …” – start, open and save a file (`Ctrl` + `O` , `Ctrl` + `S`).
- ↶ and ↷ – undo and redo (`Ctrl` + `Z` , `Ctrl` + `Y`).
- − and + – zoom; “Fit to view” shows the whole canvas.
- “Export ▾” – PDF, PNG, PowerPoint, LibreOffice Impress, Visio and SVG.
- “Example”, “Help” and “👥 Master data” (field help with `Ctrl` + `Space` ; the vision board keeps no list of people of its own).

Board bar at the top of the canvas

- One button per board with number and name; a click switches the board.
- “+ Board” – creates a further vision board in the same file, as a copy of the current one, for example for work and private life or to develop further.

Left bar

- “My images” – your picture collection with “Add images …”; ✕ (“Remove from the collection”) removes a picture that is on no board.
- “Note slip” – in seven colours.
- “Texts” – “Heading”, “Motto”, “Single word”, “Text” and “Quote on a panel”.
- “Sticker” – 22 drawings of my own, for example “Heart”, “Star”, “Bullseye”, “Trophy”, “Rocket”, “Clover”, “Speech bubble” and “Banner”; the speech bubble and the banner carry a text.
- “Motifs” – 54 motif drawings of my own.
- “More elements” – “Colour swatch” for the colour palette and “Area” as a box with a heading.

Properties on the right with nothing selected

- “Title of the file”, then for the current board “Name of the board”, “Format” (“landscape (A4/A3)”, “portrait (A4/A3)”, “Screen 16:9”, “Phone wallpaper 9:16”, “square” or “free (no canvas)”), “Structure” (“Dot grid”, “ruled”, “Cork texture” or none) and “Background” with colour chips and “custom background colour”.
- “+ Copy as new board”, “+ Empty board” and “Delete board”.
- “Insert template” – “Areas of life (8 fields around the middle)”, “Today – on the way – in three years”, “My year (motto and four seasons)”, “Me in the middle”, “Professional – personal” and “Mood board (images, colours, words)”.
- “Settings” – “place new notes, images and stickers slightly tilted” and “PDF format”.
- “Guiding questions for orientation” and “Notes on this board”.

Properties on the right with a selection

- Picture or motif: “Caption” (for the instant photo “Label (in the frame)”), “Frame” (“no frame”, “white border”, “Instant photo with caption”), “Size”, a shadow tick box and “Tape”; for your own pictures also “Colours from the image”.
- Note slip: “Text”, “Colour”, “Font size”, “Alignment”, “Width”, “Height”, bold and “Tape”.

- Text: “Text (line break with Enter)”, “Font size”, “Alignment”, bold, “Text colour”, “custom text colour” and “Background”.
- Sticker: a text where available, “Shape” (swaps the sticker), “Size”, “Colour” and “custom colour”.
- Colour swatch: “Colour”, “Name (otherwise colour code)” and “Size”.
- Area: “Heading”, “Fill”, “Border colour”, “solid border” and “Delete area”. If you move an area, the elements in it move with it.
- For all elements: “Rotation” with fixed angles from −15° to +15° and ↺ ↻ in 5° steps, “Arrange” with buttons for front, forward, backward and back plus “Duplicate”, and a button for deleting.
- Several elements: “Rotation”, “Align at same height”, “Align in a column”, “Distribute horizontally”, all to the front or back, “Duplicate” and “Delete all”.

Mouse and keys

- Rotate at the round handle at the top in 5° steps, with `Shift` continuously; size at the square at the bottom right.
- Dragging moves; several with `Ctrl` + click or `Shift` + click (again = remove) or `Shift` + frame on an empty area, all with `Ctrl` + `A`; dragging a selected element or the arrow keys move all of them, `Del` deletes all after one confirmation, `Esc` clears the selection. On a phone or tablet the “Multiple selection” button at the bottom left switches on adding by tapping and the frame by swiping. Dragging an empty area moves the view, the mouse wheel zooms.
- `Del` deletes, `Ctrl` + `D` duplicates, `Q` / `E` rotates, `Page Up` / `Page Down` brings forward or sends back, the arrow keys move, `Ctrl` + `A` selects everything, `Ctrl` + `V` pastes a picture or a text.

Vision Board: saving, export and handovers

“Save” creates a `.zielbild.json` file with all boards and pictures. Pictures are reduced in size when inserted and stored as JPEG; transparency becomes white. In addition, the browser keeps an automatic interim version; the next time you open the tool, it reports that the last working state has been restored.

The exports always show the current board:

- “PDF” – for printing, A4 or A3 (on the right under “PDF format”).
- “PNG image” – high resolution, for example as a screen or phone wallpaper; for this, choose the format “Phone wallpaper 9:16” first.
- “PowerPoint (.pptx)” – pictures, notes and texts remain editable, grouped.
- “LibreOffice Impress (.odp)”, “Visio (.vsdx)” and “SVG”.

There are no handovers to other tools. In the suite you open and save via the suite’s window, as described in the chapter ‘Tools in the suite: working together’.

Vision Board: phone, systems and browsers

On phones and tablets, “+ Elements” opens the left bar and “✎ Properties” the right one; “☰” expands the header. If you tap an element in the bar, it then appears in the middle of the canvas. I tested placing in simulated screen sizes with touch, not on real devices.

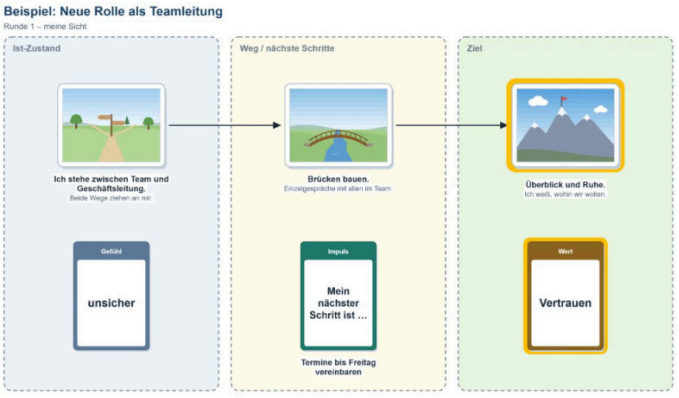
The vision board works with single files and needs no folder feature. In Safari and Firefox it saves via the browser’s download, including the exports – details in the chapter ‘How do I use a tool?’. I checked in PowerPoint and in the PDF that rotated pictures and texts appear correctly; I have not opened Visio files in Visio, because I do not have Visio.

Vision Board: tips

- You may use pictures from the internet for your personal vision board, but not publish or pass them on without permission. The supplied motifs and stickers are my own drawings and, like the tool, are under the GPL.
- A template is laid over existing elements. For a new vision board, use “+ Board” or “+ Empty board” first.
- Add honestly: What could hold me back – and what will I do then? A good vision board is a starting point for concrete steps, not a substitute for them.

- Guiding questions for orientation from the tool: What does my life look like in three years if things go really well? Which feelings would I like to feel more often? What is my first small step this week?
- Put the finished picture where you will see it regularly – or use it as your screen background.

Card work



Card work: purpose and use

In card work, people choose picture or text cards that match their situation, their goal or their feelings, and describe what they see in them. The card is merely the prompt; the meaning comes from the person themselves. The tool brings the cards onto a digital board, also for coaching by video.

Supplied are 54 picture cards of my own and seven sets of text cards, from questions for changing perspective to sentence starters; you can add sets of your own. Layout templates provide fields, and rounds record different points of view. In coaching, the cards serve as a starting point for reflection and conversation, not as a diagnostic instrument – they are not interpreted. Coaching is not psychotherapy.

The tool is still beta and is listed on the website under “Experimental”; you can also download it as a file or start it in the suite. It saves to files with the extension `.kartenarbeit.json`, and your own card sets additionally as `.kartenset.json`. Background on the method is in the post Card work with picture cards – digital, too.

Card work: step by step

1. Open the tool. “View example” shows a board with cards laid out; “New” starts an empty one.
2. On the right under “Title / concern”, enter the question it is about.
3. If needed, insert fields on the right under “Insert layout template”, for example “Current state – path – goal”; later you drag the cards into them.
4. On the left under “Card set”, choose a set, for example “Motif cards (pictures)”. “Search cards …” narrows down the selection.
5. Lay out cards: drag a card from the list onto the board or click it (it then appears in the middle), use “Draw at random”, “3 face down” (or 5 or 7) for an intuitive choice, or “All face up” for a deliberate choice.
6. Reveal cards: a double-click on the card opens the large view; the `F` key or “Flip (F)” on the right turns it over.
7. Mark the cards chosen with `M` and clear away the others on the right with “Remove unmarked”.
8. Record associations: click a card and write on the right under “Association / note (below the card)”.
9. Change perspective: “+ Round” at the top copies the board, and you interpret the same cards from a different point of view.
10. Save with “Save”; via “Export ▾” you output the round as a picture or the “Card record (CSV)” of all rounds.

Card work: functions and buttons

Header

- “New”, “Open …”, “Save”, “Save as …” – start, open and save a board (`Ctrl` + `O` , `Ctrl` + `S`).
- ↶ and ↷ – undo and redo (`Ctrl` + `Z` , `Ctrl` + `Y`).

- − and +, “Fit to view” – zoom and overall view.
- “Export ▾” – picture exports, “Card record (CSV)” and “Print card set”.
- “Example”, “Help” and “👥 Master data” (field help only, `Ctrl` + `Space`).

Round bar at the top of the board

- One button per round with number and name; a click switches the round.
- “+ Round” – copies the current round, for example for a different point of view.

Left bar: cards

- “Card set” – the eight supplied sets, from “Motif cards (pictures)” to “Sentence starters and prompts”, and your “Own sets”, each with the number of cards.
- “Search cards …” – filters the cards of the set.
- “Draw at random” – lays one random card; face down if “place randomly drawn cards face down” is ticked.
- “3 face down”, 5, 7 – lays that many random cards face down; “All face up” lays all filtered cards face up.
- The card list – drag or click; cards already on the board are marked.

Left bar: own card sets

- “+ New set” – opens the “New card set” window.
- “Edit set” for your own sets, or “Copy as own set” for supplied sets.
- “Open set …” – reads in a `.kartenset.json` file.

Left bar: more elements

- “Free card” – a card with your own text; click on the board.
- “Text box” and “Area / field” – note and field with a heading.
- Connections “Connection”, “Arrow”, “loose” (dashed) and “Tension” (zigzag) – click two cards one after the other, `Esc` ends.

Properties on the right with nothing selected

- “Title / concern”; for the current round “Name of the round”, “Notes on this round”, “+ Copy as new round”, “+ Empty round” and “Delete round”.
- “Insert layout template” – “Past – present – future”, “Current state – path – goal”, “Concern – solution”, “Perceptual positions”, “Dreamer – Realist – Critic”, “Self-image – external image”, “Strength and change (four fields)” and “Ranking (e.g. values)”.
- “Revealing and tidying up” – “Reveal all”, “Turn all face down”, “Remove face-down cards”, “Remove unmarked” and “Arrange in a grid”.
- “Appearance” – “New picture cards” (small, medium, large), “PDF format”, “place randomly drawn cards face down”, “Show picture titles on the picture cards” and “Title and round above the board”; plus “How it works” and “Guiding questions”.

Properties on the right with a selection

- Card: “Flip (F)” or “Reveal (F)”, “Large view”, “Mark (M)” or “Remove mark”, “Association / note (below the card)”, “Size”, the position of the “Note”, “Arrange” with forward, backward and “Duplicate”, “Connect to …”, the list “Connections” and “Remove card from board”.
- Free card: in addition “Text on the card”, “Header” and “Colour”.
- Several cards: “Flip (F)”, “Reveal”, “Turn face down”, “Mark (M)”, “Size”, “Align at same height”, “Distribute horizontally”, “Arrange in a grid” and “Remove all”.
- Connection: “Line type”, “Label”, “Colour”, “dashed”, for the arrow “⇄ Reverse direction”, and “Delete connection”.
- Area: “Label”, “Fill”, “Border colour”, “solid border” and “Delete area”. If you move an area, the cards in it move with it.

Large view (double-click on a card)

- The card in large format with “Association / note (appears below the card)”, questions as prompts, “Flip”, “Mark”, “← previous card”, “next card →” and “Close”.

Window for your own card sets

- “Name of the set”, “Short name (header of text cards)”, “Colour (back, header)” and “Type of cards” (“Picture cards” or “Text cards”).
- Picture cards: “Picture format”, “Always show title on the card”, drag pictures in or “Choose pictures …”, then “Fill format (crop)” or “show whole picture (white border)”.
- Text cards: “New cards – one card per line” and “Add cards”.
- “Save and close”, “Export as file …”, “Delete set” and “Cancel”.

Mouse and keys

- The blue square at the bottom right of the selected card changes its size. Dragging moves; several with `Ctrl` + click or `Shift` + click (again = remove) or `Shift` + frame on an empty area, all with `Ctrl` + `A`; dragging a selected element or the arrow keys move all of them, `Del` deletes all after one confirmation, `Esc` clears the selection. On a phone or tablet the “Multiple selection” button at the bottom left switches on adding by tapping and the frame by swiping. Dragging an empty area moves the view, the mouse wheel zooms.
- Connections: Shaping lines: click a line, drag + to add a handle, drag ◆ to shape it (snaps horizontally and vertically, `Alt` = free), double-click ◆ to remove it, “／ Straight” removes all of them.
- `F` flips, `M` marks, `Del` removes from the board, the arrow keys move, `Esc` clears the selection, `Ctrl` + `A` selects everything.

Card work: saving, export and handovers

“Save” creates a `.kartenarbeit.json` file with all rounds and the own card sets used. Your own sets are also kept in this browser’s storage; “Export as file …” backs up a set as `.kartenset.json` or passes it on. Pictures are reduced to at most 1000 pixels and stored in the set as JPEG. If you drag pictures directly onto the board, they end up in the set “Pictures of this board”, which is saved with the board. In addition, the browser keeps an automatic interim version.

The “Export ▾” menu offers:

- “PDF” – the current round, A4 or A3, landscape or portrait.
- “PowerPoint (.pptx)” – cards as pictures and shapes, grouped; plus “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image”.
- “Card record (CSV)” – all rounds with card, area and association, for Excel.
- “Print card set” – the set chosen on the left as a print sheet or PDF.

There are no handovers to other tools. In the suite you open and save via the suite’s window, as described in the chapter ‘Tools in the suite: working together’.

Card work: phone, systems and browsers

On phones and tablets, “+ Elements” opens the left bar with card set and cards, “✎ Properties” the right one; “☰” expands the header. If you tap a card in the list, it then lies in the middle of the board. On a tablet and on a phone held sideways, the bars come in from the side. I tested this in simulated screen sizes with touch, not on real devices.

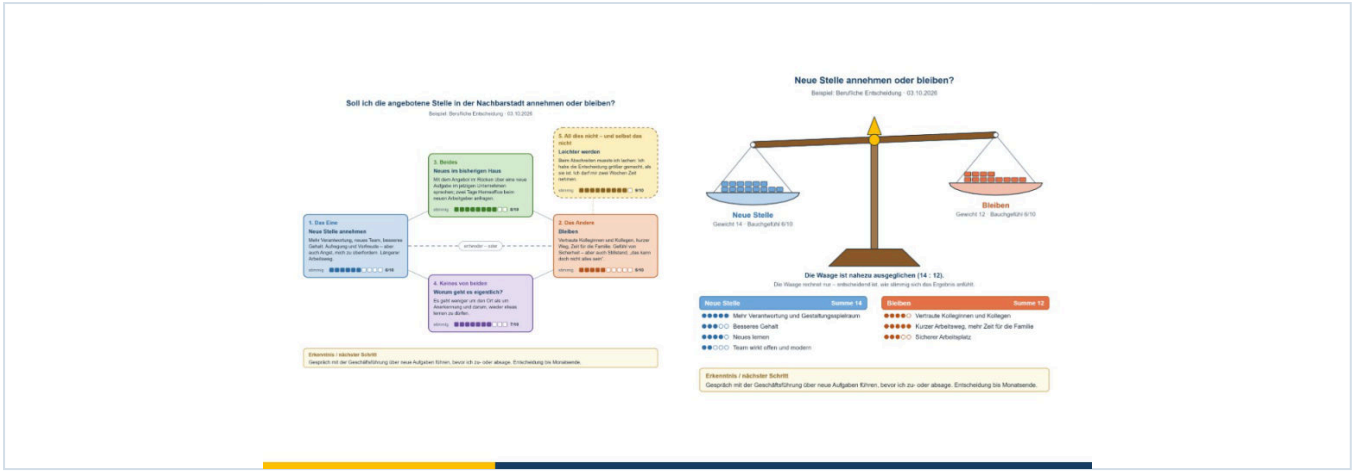
Card work operates with single files and needs no folder feature. In Safari and Firefox it saves via the browser’s download, including the exports and card sets – details in the chapter ‘How do I use a tool?’. Your own sets in browser storage only exist in the browser in which you created them; so back them up as a file. I checked the PowerPoint and Impress files in PowerPoint, the Visio files only for their structure.

Card work: tips

- Please only use pictures for which you hold the rights of use. Card sets bought from publishers may generally not be photographed and used digitally or passed on.
- Change of perspective: place a role card such as “My team” or “A neutral observer” next to the picture card, or start a new round with “+ Round” and write the notes from that point of view.

- With large sets, “All face up” lays out many cards; narrow them down first with “Search cards …”.

Decision



Decision: purpose and use

The Decision tool combines three methods for difficult decisions in one file: the **tetralemma**, the **decision balance** and the **utility analysis**. The tetralemma leads out of the either-or and looks at five positions: “The one”, “The other”, “Both”, “Neither of the two” and “None of this – and not even that”. In coaching it is mostly used in the form developed by Matthias Varga von Kibéd and Insa Sparrer. The decision balance weighs up reasons, weights each point from 1 (not very important) to 5 (very important) and also records your gut feeling. The utility analysis is its tabular sister for more than two options: two to eight options are rated against weighted criteria; the weighted sum gives the utility score and from it the ranking.

The tool helps when someone is stuck between two options – in career decisions as well as business decisions, for example whether to take a new job or stay, or whether to invest now or wait. The typical route has two steps: first open up the range of possibilities in the tetralemma, then weigh them up on the balance. If there are more than two options, the utility analysis compares them criterion by criterion. All three parts belong to the same file; you switch between them at the top.

The tool is still in beta (“Experimental”). It saves to files with the extension `.entscheidung.json`. You will find it on the website under Experimental, as a single file to download and in the suite’s toolbox under “People and coaching”. I describe the background and origin of both methods in the post Deciding with the tetralemma and the decision balance.

In coaching, the tetralemma, the decision balance and the utility analysis serve as models for reflection and dialogue, not as diagnostic instruments. Coaching is not psychotherapy.

Decision: step by step

1. Open the tool. It starts with the tetralemma; “Example” loads a fictitious career decision to try out.
2. On the right under “General”, enter a “Title” and the “Date”.
3. On the left under “What is it about?”, write down the dilemma in one sentence. For a further question, add a second tetralemma to the same file with “ + New” at the very top left (likewise further balances and utility analyses).
4. Under “The five positions”, give each position a short name and describe what belongs to it: thoughts, feelings, images. The guiding questions on the right help you with this.
5. Rate each position: “How coherent does this position feel? (0–10)”. On the right under “Analysis” you can see which position feels most coherent.
6. Switch to “Decision balance” at the top and choose the suitable form under “Type of balance”.
7. Name the “Left side” and the “Right side”, for example after the two options.
8. Add reasons with “+ Point” and give each one a weight from 1 to 5. The balance tips towards the heavier side.
9. Record your gut feeling for each side from 0 to 10 and compare it on the right with the result of the balance.

10. If there are more than two options, switch to “Utility analysis” at the top. Name the options under “Options” (three are given, “+ Option” adds up to eight).
11. Under “Criteria, weights and ratings”, add the criteria with “+ Criterion”, give each a weight in points (0 to 100; the share in per cent appears next to it) and rate every option from 0 (does not meet it at all) to 10 (meets it fully).
12. Read the ranking and utility score on the right under “Analysis” and record under “Gut” how good each option feels; if the gut feeling differs from the ranking, a note appears.
13. On the right under “Insight / next step”, note what is clearer now and what a first small step could be.
14. Save with “Save” and output the picture currently shown via “Export ▾”, for example as a PDF.

Decision: functions and buttons

Header

- “Tetralemma”, “Decision balance” and “Utility analysis” – switch between the three parts; all are kept in the same file, each part with as many sheets as you need (up to 20).
- “New” – starts afresh (asking first if anything is unsaved).
- “Open …” – opens a saved file (`Ctrl` + `O`).
- “Save” – saves to the file (`Ctrl` + `S`); “Save as …” creates a new file (also `Ctrl` + `Shift` + `S`).
- ↶ and ↷ – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`).
- “Export ▾” – menu with “PDF” (vector graphic, A4 or A3), “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)” and “Visio (.vsdx)” with individual, editable shapes, “SVG” for browsers and graphics programs, “PNG image” in high resolution and “Table (.csv)” with all texts and weights for Excel.
- “Example” – loads a fictitious example into both parts; the tool asks first if unsaved changes would be lost.
- “Help” – shows the quick guide; the button with the build version shows the licence and notes on use.

At the very top of the left column (all three parts) – the choice of the sheet shown, “+ New” (another, empty sheet, e.g. a second tetralemma for a different question), “⧉ Copy” (a copy to think further, e.g. the same balance from a different perspective) and “✕” (deletes the sheet shown after asking; undo is possible). From two sheets on, “Name of this tetralemma (for the selection)” or “Name of this balance …” and “Name of this utility analysis …” appears; as long as no question has been entered, the name is the heading in the picture. “Insight / next step” applies to the whole file.

Left column in the tetralemma

- “What is it about?” – the question shown above the picture.
- “The five positions” – for each position a short hint, a field for the name, a field for the description and the coherence rating from 0 to 10.

Left column in the decision balance

- “Type of balance” – “Two options (A or B)”, “For and against” or “Change balance (four fields)” with “Advantages of change”, “Disadvantages of the existing situation”, “Advantages of the existing situation” and “Disadvantages of change”.
- “Left side” and “Right side” – the names of the two scale pans.
- “+ Point” – adds a new reason in that field; next to it the weighting from “1 · little” through “3 · medium” to “5 · very important”, and ✕ to delete.
- Gut feeling – a selection from 0 to 10 for each side.

Left column in the utility analysis

- “What is it about?” – the decision question above the picture.
- “Options” – for each option its name, “Gut” (gut feeling 0 to 10) and ✕ to delete it (together with its ratings; at least two remain); “+ Option” up to eight.
- “Criteria, weights and ratings” – for each criterion its name, the weight in points from 0 to 100 with its share in per cent (all weights 0 = all criteria count equally), ✕ to delete it and the rating from 0 to 10 for each option; “+ Criterion” up to 20. A missing rating counts as 0; the right-hand column shows how many fields are still open.

Right column

- “General” – “Title”, “Date” and the display options: in the tetralemma “Show texts in the picture” and “Show coherence in the picture”, on the balance “Show balance result in the picture”, in the utility analysis “Show utility analysis result in the picture”; in all of them “Show insight in the picture”, “Colour (off = black and white)” and the “PDF format” A4 or A3.
- “Analysis” – in the tetralemma the ratings with the most coherent position; on the balance the totals of both sides, the sentence on the result and the gut feeling; in the utility analysis rank, option and utility score (weighted sum, 0 to 10) and the sentence on the result – if the two best are less than 0.25 apart, it says “Close: … are almost level”. If head and gut point in different directions, a note says so.
- “Guiding questions” – three questions per position in the tetralemma, five questions each on the whole decision on the balance and in the utility analysis.
- “Insight / next step” – your result; if you wish, it also appears in the picture.

In the picture and on the keyboard

- Clicking a field or a point in the picture jumps to the matching input field on the left.
- `Esc` removes the highlight in the picture and closes the export menu.

Decision: saving, export and handovers

“Save” creates a file `*.entscheidung.json` that contains the tetralemma, the decision balance and the utility analysis with all their sheets together. The PDF, PowerPoint, LibreOffice Impress, Visio, SVG and PNG exports each show the picture currently selected – for the utility analysis the table with weights, ratings and partial values, the row “Utility score (weighted sum)” with the rank and bars in ranking order; the table (.csv) contains all parts with all texts, weights, ratings, totals, utility score, rank and the gut feeling. An older version of the tool opens a file with a utility analysis without errors but does not know this part – if you save the file there, it is gone afterwards. Likewise, it opens a file with several sheets with the sheet shown in each part; the others are gone after saving there. The table (.csv) contains all sheets. How opening and saving work in the individual browsers is described in the chapter ‘How do I use a tool?’.

After every change the tool remembers the working state in your browser. When you open it again, the status bar at the bottom reports that the last working state has been restored, with date and time; “New” discards this state. All data stays on your computer; the file loads nothing from the internet and sends nothing. There are no handovers to other tools. In the suite you open and save via the storage on the server, as described in the chapter ‘Tools in the suite: working together’.

Decision: phone, systems and browsers

On narrow screens – up to 900 pixels wide or 500 pixels high – the header is collapsed; “☰” expands it, for example for the export menu. Two fixed buttons below the picture open the columns as windows: on the left the “Inputs”, on the right “✎ Properties”. Between 900 and 980 pixels wide the columns sit one below the other under the picture, and you scroll the page. I tested phone and tablet use in simulated screen sizes (375 × 611, 768 × 854 and 844 × 384 pixels), not on real devices.

The tool works only with single files and needs no folder features; it therefore runs the same in Edge, Chrome, Firefox and Safari. In Safari and Firefox you save via the browser’s download. I have not tested Safari on a real Mac; more on this in the chapter ‘Which operating system and which browser?’.

Decision: tips

- The surprising answer often lies in position 3, 4 or 5 of the tetralemma – take time explicitly for “Both” and “Neither of the two”.
- You can also walk through the positions in the room with floor anchors; record in the tool what emerges.
- The balance only calculates – what matters is how right the result feels. If calculation and gut feeling contradict each other, ask which reason weighs more heavily than the numbers say.
- If a third option is missing on the balance, switch back to the tetralemma – or compare all options in the utility analysis.

- In the utility analysis a cross-check pays off: does the ranking change if you lower the most important weight a little? Then the decision hinges on that one criterion – and that is exactly what is worth talking about.
- With "Show insight in the picture", your next step appears as a box of its own in the picture – and therefore also in the PDF and the presentation.

Riemann-Thomann cross



Riemann-Thomann cross: purpose and use

The Riemann-Thomann cross describes four basic needs on two axes of tension: **closeness** (connection, harmony) and **distance** (independence, clarity) on the horizontal axis, **permanence** (order, reliability) and **change** (spontaneity, curiosity) on the vertical one. Everyone carries all four within them – to differing degrees. The further out a marker lies, the stronger the tendency; in the centre things are balanced. Differences between people are both complementary and a source of friction.

With the tool you place up to four perspectives for one person or several people on the cross: "Self-image" (how I see myself), "External image" (how others experience me), "Desired image" (where I want to go) and "Under pressure" (how I react under stress). Typical uses: reflecting on your own development, and clarifying friction in a team or between two people with an agreement that respects both people's needs.

The tool is still in beta ("Experimental") and saves to files with the extension `.riemann-thomann.json`. You will find it on the website under Experimental, as a single file and in the suite under "People and coaching". I describe its origin and the approach in the post Riemann-Thomann cross: closeness, distance, permanence, change.

The model goes back to Fritz Riemann and Christoph Thomann. The tool serves as a reflection and conversation model about basic needs, not as a personality diagnosis; coaching is not psychotherapy.

Riemann-Thomann cross: step by step

1. Open the tool. "Example" shows two fictitious people with self-image, external image and "Under pressure", plus a second picture "Agreement".
2. On the right under "Template", choose between "One person (self-image and external image)" and "Team or two people in conversation"; enter the "Title" and "Date".
3. Under "Elements", drag a "Self-image" onto the cross and type the name; `Enter` completes the entry.
4. On the right under "Position", read how the marker lies – in words and as a percentage.
5. Add "External image", "Desired image" and "Under pressure" for the same person: with the same name or by right-clicking the self-image. Lines connect the markers of one person; click a line and drag it to shape it with handles, "／ Straight" resets it.
6. On the left under "Observations per field", enter what shows up in a field – needs, strengths, points of conflict. `Enter` creates a card.
7. Look on the right under "Analysis" to see how the people relate to each other.
8. Use " + Picture" to create a copy, for example for an agreement within the team, and move the markers there.
9. Record the "Result" and "Next steps" on the right.

10. Save with “Save” and use “Export ▾” to print the record with all pictures and the position of every marker.

Riemann-Thomann cross: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); ▾ between them shows the history of the latest changes, and one click goes back several steps.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`) and “Save as …”.
- The minus and plus buttons zoom out and in, “Fit to view” shows everything, “⛶ Large picture” hides and shows the side bars.
- “Export ▾” – “PDF”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG” and “PNG image” (each the picture shown), “Print record” and “Entries as a table (CSV)”.
- “Example” and “Help”.

Picture bar below the cross

- One button per picture: a click shows the picture, a double-click renames it. The first picture is called “Today”.
- “+ Picture” – creates a copy of the picture shown; both can then be changed independently.

Left bar

- “Observations per field” – for each field (“Closeness and permanence”, “Distance and permanence”, “Closeness and change”, “Distance and change”) an input field and expandable “Guiding questions”; clicking a guiding question puts it into the input field as a prompt.
- “Elements” – “Self-image”, “External image”, “Desired image”, “Under pressure” and “Cards”: drag them onto the picture or click them.

Right bar: marker selected

- “Person’s name” – the same name connects the markers.
- “Perspective” – switches between self-image, external image, desired image and “Under pressure”.
- “Person’s colour” – choose a fixed colour or “automatic”.
- “Position” – a description in words and the percentages for each axis; below it the direction compared with the self-image.
- “★ highlight”, “Note (appears only in the record)”, “✎ Rename in picture (F2)”, “⧉ Duplicate” and “Delete”.

Right bar: nothing selected

- “Title”, “For whom / team”, “Date” and “Template”.
- Section on the picture – “Name of this picture”, “+ Copy as new picture”, “+ Empty picture”, ◀ and ▶ to reorder, “Delete picture” and the changes compared with the previous picture.
- “Result” and “Next steps” (one line per step).
- “Analysis” – a table of all people with the position of the self-image and the directions to the desired image, external image and “Under pressure”; with several people, the distribution of the self-images over the fields. Plus “Arrange all cards”.
- “Appearance” – “Poles with keywords”, “Show exaggerations at the poles”, “Rings around the centre”, the lines from the self-image to the other perspectives, “Coloured”, “Small cards”, “Title above the picture”, “Move cards fully into the area when dropped” and “PDF format”.
- “How it works” – the most important steps in brief.

Cards and fields

- Card selected: “Text”, “Area”, “Colour”, “★ highlight”, note, “Follow-up questions” and the buttons for editing, duplicating and deleting.
- Field selected: “+ Card here”, “Arrange”, “Name”, “Guiding questions (one per line)”, “Follow-up question” and “Restore template”.

Right mouse button

- On a marker – change the “Perspective”; on a self-image also “ + Desired image of this person”, “ + External image of this person” and an “Under pressure” marker for this person.
- On a card – “✎ Edit text”, “Place in area”, “★ Highlight on / off”, “⧉ Duplicate” and “🗑 Delete”.
- On an empty area – “ + Card here”, “Arrange cards here”, “Arrange all cards”, “ + Create picture as a copy” and “Fit everything to view”.

Keys and mouse

- Double-clicking a field or pressing `N` creates a card; `F2` changes names or text; `Del` deletes; `Ctrl` + `D` duplicates; `Ctrl` + `A` selects everything.
- The arrow keys move in small steps, with `Shift` in larger ones; select several elements with `Ctrl` + click or `Shift` + click or with `Shift` + frame; `Del` asks once when several are selected.
- While dragging, a hint shows the position; the mouse wheel zooms, and dragging on an empty area moves the view.

Riemann-Thomann cross: saving, export and handovers

“Save” creates a file `*.riemann-thomann.json` containing all pictures. The picture exports each show the picture currently selected. “Print record” combines all pictures, with a table for each picture (person, perspective, position and the percentages for closeness/distance and permanence/change) and the changes compared with the previous picture; in the print dialog you can also choose “Save as PDF”. The CSV table for Excel contains the position in percent: closeness and permanence with a minus sign, distance and change with a plus sign.

After the first change the tool keeps an interim state in this browser’s storage and restores it the next time you open the tool. You can also simply drag a file onto the drawing area to open it. With master data, the tool takes over the names of the person markers; self-image, external image and desired image with the same name count as the same person, and the position on the cross stays here. The details are in the chapter ‘Master data in every tool’; for the suite see ‘Tools in the suite: working together’.

Riemann-Thomann cross: phone, systems and browsers

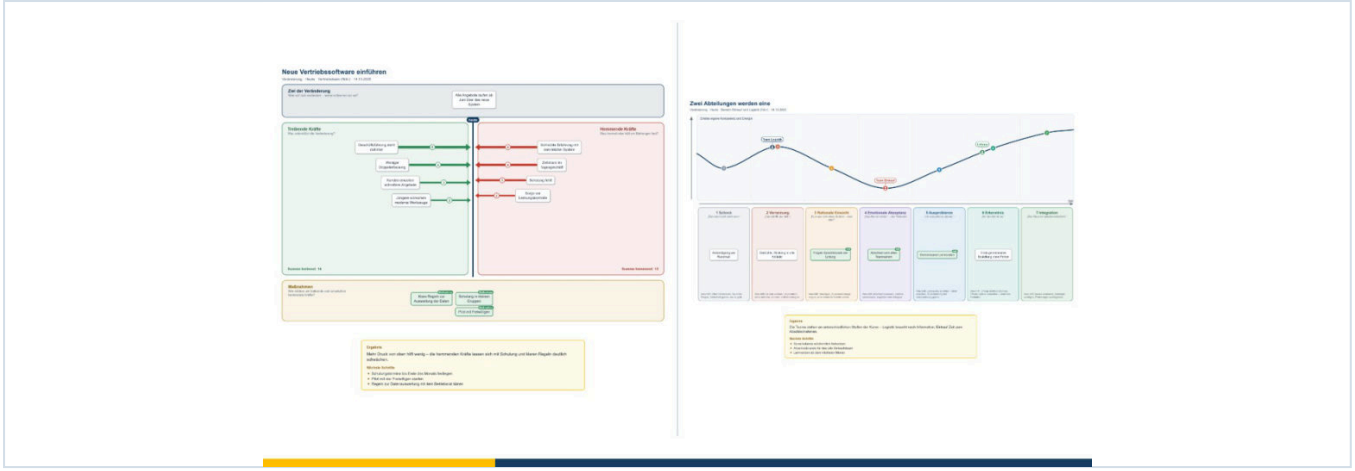
On phones and tablets the board-tool controls from the chapter ‘How do I use a tool?’ apply: the header is collapsed (“☰”), and “ + Elements” and “✎ Properties” open the bars as windows. Tapping an element in the bar places it in the centre or in the matching area; you then drag the marker to its position. Select several elements with the “Multiple selection” button at the bottom left of the picture. I tested this in simulated screen sizes (375 × 611, 768 × 854 and 844 × 384 pixels), not on real devices.

The tool needs no folder features. In Safari and Firefox you save via the browser’s download; I have not tested Safari on a real Mac.

Riemann-Thomann cross: tips

- Please record assessments of other people only with their consent.
- Under “Appearance” you can show the exaggerations at the poles – every strength can turn into a weakness when overdone, such as closeness into dependence or permanence into rigidity.
- Under pressure, people usually slide further in their own direction; comparing “Under pressure” with the self-image shows where a strength turns into an exaggeration.
- For a team, first create today’s picture and then, with “ + Picture”, the agreement – the record then shows the changes.

Change



Change: purpose and use

The Change Tool contains two models for change initiatives, which you choose per picture on the right under “Template of this picture” – one file can contain both, and several variants too. **Force field analysis** after Kurt Lewin sees the current state as a balance of driving and restraining forces; change often succeeds more easily when restraining forces are weakened than when you only push harder. The **change curve** in seven phases – shock, denial, rational insight, emotional acceptance, trying out, realisation, integration – shows how people typically experience a change and what can help in each phase.

The tool suits initiatives such as new software, a restructuring or two departments that are to grow together. With the force field analysis you plan measures against what is holding things back; with the curve you see where individual people or groups currently stand. People go through the phases at different speeds and not always in this order – the curve is a conversation model, not a roadmap.

The tool is still in beta (“Experimental”) and saves to files with the extension `.veraenderung.json`. You will find it on the website under Experimental, as a single file and in the suite under “People and coaching”. More in the post Guiding change: force field analysis and change curve. A deeper force field analysis with the view “What if …” is offered by the separate tool Force field analysis.

Force field analysis and the change curve (after Richard K. Streich, among others) are reflection and conversation models, not a diagnosis; coaching is not psychotherapy.

Change: step by step

1. Open the tool and choose “Force field analysis (after Kurt Lewin)” or “Change curve (seven phases)” on the right under “Template of this picture”. If you need both, “ + Picture: force field analysis” or “ + Picture: change curve” adds another, empty picture with that template to the same file.
2. Enter the “Title”, “For whom / team” and “Date”.
3. Force field analysis: on the left under “Collect forces”, enter the goal, the driving and the restraining forces in the fields “Goal of the change”, “Driving forces” and “Restraining forces”. `Enter` creates a card each time; in the picture the goal is at the top, the driving forces on the left and the restraining forces on the right.
4. Set the strength of each force from 1 (weak) to 5 (very strong): on the right with the slider, by right-clicking or with the keys `1` to `5`. The arrow length shows the strength, and the totals appear at the bottom.
5. Order the forces by dragging a card up or down, or have them sorted by strength.
6. Collect the “Measures” at the bottom: how do you strengthen driving forces and weaken restraining ones?
7. Change curve: under “Elements”, drag a “Person / group” onto the curve or double-click in the curve area. The figure snaps onto the curve; the phase follows from its position.
8. Enter observations and support for each phase; “What helps” at the bottom of each column offers suggestions.
9. Use “ + Picture” to create a copy – “After the measures” for the force field analysis, “A few weeks later” for the curve – and show the later state there.
10. Record the “Result” and “Next steps” on the right, save and print the record.

Change: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); ▾ shows the history and goes back several steps.
- "New", "Open …" (`Ctrl` + `O`), "Save" (`Ctrl` + `S`), "Save as …".
- The minus and plus buttons, "Fit to view" and "⛶ Large picture" for the view and space.
- "Export ▾" – "PDF", "PowerPoint (.pptx)", "LibreOffice Impress (.odp)", "Visio (.vsdx)", "SVG", "PNG image", "Print record" and "Entries as a table (CSV)".
- "Example" – loads the example for the template currently selected; "Help" shows the quick guide.

Left bar

- "Collect forces" or "Collect per phase" – an input field and expandable "Guiding questions" for each area.
- "Elements" – for the force field analysis "Force / card" and "Measure", for the curve "Person / group", "Observation" and "Support".

Right bar

- Nothing selected: "Title", "For whom / team", "Date", "Template of this picture" with "+ Picture: force field analysis" and "+ Picture: change curve", the section on the picture shown ("Name of this picture", "+ Copy as new picture", "+ Empty picture", ◀ ▶, "Delete picture"), "Result" and "Next steps", "Analysis" with "Arrange all cards", "Appearance" and "How it works".
- Force selected: "Text", "Area", "Type", "Colour", "★ highlight", the slider "Strength of the force (1 = weak, 5 = very strong)", "Note (appears only in the record)", "Follow-up questions", "✎ Edit in picture (F2)", "⧉ Duplicate", "Delete".
- Person or group selected: "Name", "Colour" (or "automatic"), "What can help now" for the phase, highlighting, note, "✎ Rename in picture (F2)".
- Area selected: "+ Card here", "Arrange", "Name", "Guiding questions (one per line)", "Follow-up question", "Restore template"; for driving and restraining forces also "⇅ Sort by strength" (strongest forces at the top, both sides).

Appearance

- Force field analysis: "Totals of the forces" and "Strength as a number on the arrow".
- Change curve: show or hide "What helps" in each phase.
- Both: "Guiding question under the name", "Coloured", "Small cards", "Title above the picture", "Move cards fully into the area when dropped", "PDF format".

Analysis

- Force field analysis: totals of driving and restraining forces, which side has the upper hand, the strongest restraining force and a note if no measures have been collected yet.
- Change curve: a table of all people and groups with their phase and what helps there.

Right mouse button, keys and mouse

- On a force: "Strength of the force" from 1 (weak) to 5 (very strong); plus "✎ Edit text", "Place in area", "Type", "★ Highlight on / off", "⧉ Duplicate", "🗑 Delete".
- On an empty area: "+ Card here", for the force field analysis "⇅ Sort forces by strength", "Arrange cards here", "Arrange all cards", "+ Create picture as a copy", "Fit everything to view".
- Keys: `1` – `5` strength, `N` new card, a double-click in an area does the same, `F2` change text (`Enter` done, `Tab` done and next card, `Esc` cancel), `Del` delete, `Ctrl` + `D` duplicate, arrow keys move.

Change: saving, export and handovers

"Save" creates a file `*.veraenderung.json`. The PDF, PowerPoint, LibreOffice Impress, Visio, SVG and PNG exports each show the picture shown. "Print record" combines all pictures together with the changes – for the force field analysis with the totals and the strength of each force, for the curve with the phase of each person or group. The CSV table for Excel contains the strength of the forces.

The template applies per picture; in the picture bar at the top, ⇄ marks a force field analysis and ∿ a change curve. The record and the CSV contain all pictures with their template. If you change the template of a picture, the tool asks first: the cards of this picture belong to the previous template and then lie next to the picture; they are not lost, undo is possible, and the other pictures keep their template. An older version of the tool shows all pictures with the template of the picture last shown; if you save there, the template per picture is lost (the cards remain). An automatic interim state stays in this browser's storage. With master data, the tool takes over the names of the people and groups on the change curve, not the forces; you set groups under "In the master data" to "as a role" or "do not take over". On master data and the suite see the chapters 'Master data in every tool' and 'Tools in the suite: working together'.

Change: phone, systems and browsers

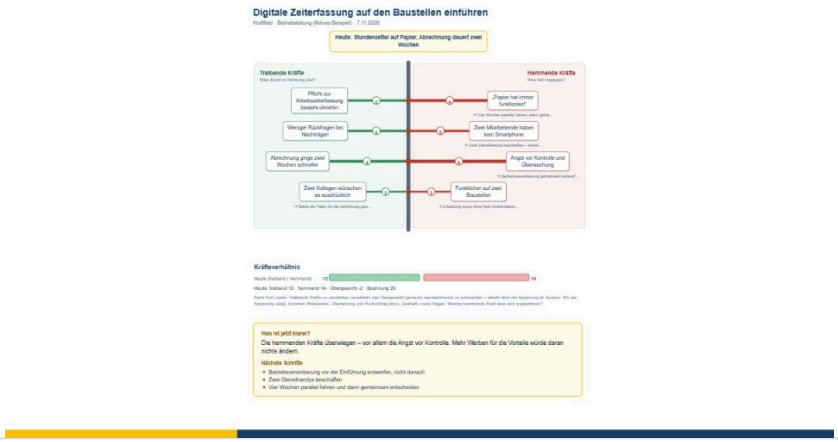
On phones and tablets the board-tool controls from the chapter 'How do I use a tool?' apply: "☰" expands the header, and "＋ Elements" and "✎ Properties" open the bars as windows. Tapping an element places it in the centre or in the matching area. If a new card lies outside the visible section, the tool moves the view there. Select several elements with the "Multiple selection" button at the bottom left of the picture. I tested this in simulated screen sizes (375 × 611, 768 × 854 and 844 × 384 pixels), not on real devices.

The tool needs no folder features; in Safari and Firefox you save via the browser's download. I have not tested Safari on a real Mac.

Change: tips

- Ask first: which restraining force is easiest to weaken? Lewin recommends weakening restraining forces rather than just pushing harder.
- "Example" always loads the example for the template of the picture shown – so for the change curve, first show a picture with that template.
- Force field and curve often belong together: next to the force field of the initiative, use "＋ Picture: change curve" to add the picture on which you accompany the people involved – both stay in one file.
- Anyone stuck in denial needs reliable information; anyone in the valley of emotional acceptance needs to be heard; anyone trying things out needs room for mistakes.
- With the second picture, the record shows what has changed – for example a force whose strength has fallen from 4 to 2.

Force field analysis



Force field analysis: purpose and use

Force field analysis after Kurt Lewin shows the current state as a vertical line in the centre. From the left the **driving forces** push, from the right the **restraining** ones hold against them. As long as both sides are equally strong, nothing moves – often for years. For each force you set a strength from 1 to 5; arrow length and arrow thickness follow, and the card moves outwards. Below the picture there are three figures: the two totals, the **upper hand** (driving minus restraining) and the **tension** (all forces together).

The heart of the tool is the second view “What if …”. Arithmetically it makes no difference whether you raise a driving force by 2 or lower a restraining one by 2 – the upper hand shifts by 2 either way. The tension, however, rises in the first case and falls in the second. That is exactly what Lewin pointed out: more pressure creates more counter-pressure. That is why the first question is: “Which restraining force can be removed?” The tool suits initiatives in a company as well as a personal change.

The tool is still in beta (“Experimental”) and saves to files with the extension `.kraftfeld.json`. You will find it on the website under Experimental, as a single file and in the suite under “People and coaching”. An example and the thinking behind it are in the post Release the brake instead of pressing the accelerator – force field analysis. The Change Tool contains force field analysis as one of two templates together with the change curve; this tool is the deeper version.

The strengths are assessments by those involved, not measurements – a reflection and conversation model, not a diagnostic instrument.

Force field analysis: step by step

1. Open the tool. “Example” loads a fictitious initiative with eight forces around digital time recording.
2. On the right under “Template”, choose “Initiative or change” or “Personal change” and enter the “Title” and “Date”.
3. On the right under “Initiative or current state”, enter what it is about – the text appears above the centre line.
4. On the left under “Forces”, collect the driving and the restraining forces; `Enter` creates a card each time. Better many small forces than three large ones.
5. For each force, choose the “Strength today” on the right, from “1 – barely noticeable” to “5 – determines what happens”.
6. Order the forces by dragging: left or right determines the side, up or down the order.
7. Enter a measure for each force: what removes this brake, what strengthens this drive? Add “Responsible” and “By when?”.
8. Switch on “◑ What if …” in the picture bar and set the target strength for each force. Below the picture you see how the upper hand and the tension change.
9. On the right, record the result under “What is clearer now?” and the steps under “Next steps”.
10. If needed, hand over measures and next steps on the right under “Measures → Tasks”.
11. Save and print the record or export the picture.

Force field analysis: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); ▾ shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …”.
- The minus and plus buttons, “Fit to view”, “⛶ Large picture”.
- “Export ▾” – “PDF”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG”, “PNG image”, “Print record”, “Entries as a table (CSV)”.
- “Example” and “Help”.

Picture bar

- One button per picture (a double-click renames it) and “ + Picture” for a copy, such as “After the measures”.
- “◑ What if …” – switches the second view on and off. There the arrows show the target strengths, the cards show ▲ or ▼ with today’s value, and the comparison of both routes appears below the picture.

Left bar

- “Forces” – one input field each for driving and restraining forces; `Enter` adds them.
- “Elements” – “Driving force” and “Restraining force” to drag or click.

Right bar: force selected

- “Force” – the text of the card.

- “Strength today” – 1 to 5; “Target strength” – the value for “What if …”, or unchanged.
- “Measure: what changes this force?”, “Responsible” (name or role) and “By when?”; after a handover, the status of the task appears here.
- “Colour”, “★ highlight”, “Note (appears only in the record)”.
- “⇄ To the other side”, “✎ Edit in picture (F2)”, “⧉ Duplicate”, “Delete”.

Right bar: nothing selected

- “Title”, “Project or team”, “Date”, “Template” and “Initiative or current state”.
- Section on the picture: “Name of this picture”, “ + Copy as new picture”, “ + Empty picture”, ◀ ▶, “Delete picture” and the changes compared with the previous picture (such as strength 4 → 2).
- “What is clearer now?” and “Next steps”.
- “Measures → Tasks” – a list of all measures with owners and dates, and “ 📋 Hand over as tasks …”.
- “Analysis” – a table with the forces, total and target total for each side, the upper hand and “Tension (all forces)”; plus where to start first (strong brakes from strength 4), which forces still have no measure and what was changed in “What if …”.
- “Appearance” – “Show the strength as a number on the arrow”, “Show measures beneath the cards”, “Coloured”, “Small cards”, “Title above the picture”, “Move cards fully into the area when dropped”, “PDF format”; plus “How it works”.

Right mouse button and keys

- On a card – “✎ Edit text”, “Place in area”, “Type”, “Strength” with all five levels (in the “What if …” view it sets the target strength), “⇄ To the other side”, “★ Highlight on / off”, “⧉ Duplicate”, “🗑 Delete”.
- On a side – “ + Card here”, “ + Enter a driving force” or “ + Enter a restraining force” (puts the cursor in the matching input field), edit the side, “ + Create picture as a copy” and “Fit everything to view”.
- `F2` edit, `Del` delete, `Ctrl` + `D` duplicate; dragging a card across the centre line changes its side.

Force field analysis: saving, export and handovers

“Save” creates a file `*.kraftfeld.json`. The picture exports show the picture shown; “Print record” contains, for each picture, all forces with strength, target strength and measure including owner and date, plus totals, upper hand, tension and the initiative. The CSV table for Excel also has the columns side, strength, target strength, measure, responsible and date.

You hand over the measures and the next steps on the right under “Measures → Tasks” when nothing is selected in the picture: in the MC4Y suite to its tasks, otherwise to the Kanban board in this browser. Strong brakes get high priority there. The status – open, in progress, done – comes back and also appears at the force; handing over again updates the same tasks. Nothing is handed over unless you press the button.

With master data, “Responsible” is a link to a person or role (suggestions as you type, 👥 opens the selection); a linked name is changed in the master data. Without master data it remains a free text field. See also ‘Handovers between tools’ and ‘Tools in the suite: working together’.

An automatic interim state is kept in this browser’s storage only after the first change. The tool loads nothing from the internet and sends nothing.

Force field analysis: phone, systems and browsers

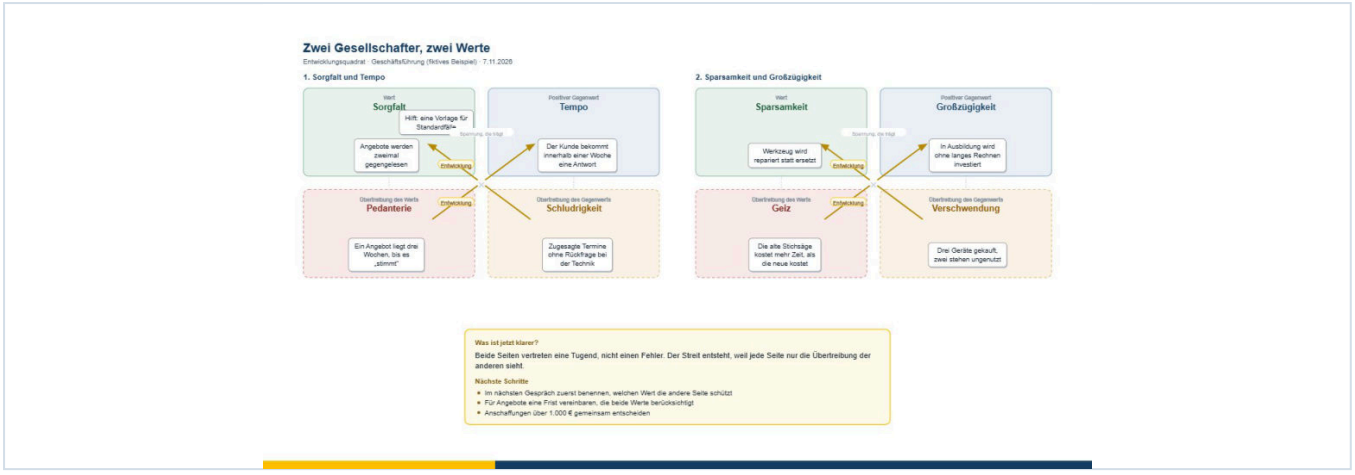
On phones and tablets the board-tool controls from the chapter ‘How do I use a tool?’ apply: “☰” expands the header, and two buttons below the picture open the left bar (“Inputs”) and “✎ Properties” as windows. Tapping “Driving force” or “Restraining force” creates a card on the matching side. Select several elements with the “Multiple selection” button at the bottom left of the picture. I tested touch operation in simulated screen sizes, including 375 pixels wide – handing over by tapping as well – not on real devices.

The tool needs no folder features; in Safari and Firefox you save via the browser’s download. I have not tested Safari on a real Mac.

Force field analysis: tips

- What you can name, you can change: “Two employees have no smartphone” can be removed, a general force such as resistance in the team cannot.
- In “What if …”, try both routes – once raising a driving force, once lowering a restraining one – and compare the tension.
- The analysis names the strong brakes that still have no measure; that is where to look first.
- The “Personal change” template names the sides “What draws me” and “What holds me”.
- With “ + Picture” you record what the force field should look like after the measures.

Values and development square



Values and development square: purpose and use

The values and development square after Friedemann Schulz von Thun shows that every good quality needs a **sister virtue** that keeps it in balance. Without it, thrift turns into miserliness and generosity into wastefulness. Each square has four fields – the two values at the top, each with its exaggeration below – and two **development arrows** along the diagonals. That is the core of the model: anyone caught in an exaggeration does not develop back towards their own value but diagonally towards the counter-value – from miserliness to generosity, from wastefulness to thrift. And anyone who goes too far ends up in the next exaggeration.

In a conversation the square defuses conflicts because it shows that both sides stand for a virtue, not a fault. The dispute arises because each side only sees the other’s exaggeration. You can use it for yourself or for a team and the two sides of a conflict, with as many squares as you like in one file.

The tool is still in beta (“Experimental”) and saves to files with the extension `.entwicklungsquadrat.json`. You will find it on the website under Experimental, as a single file and in the suite under “People and coaching”. More in the post Miserliness does not turn into thrift – the values and development square.

The model builds on Nicolai Hartmann and Paul Helwig. It is a reflection and conversation model, not a diagnostic instrument: it describes values, not people. Coaching is not psychotherapy (Section 1(2) sentence 3 of the German Psychotherapists Act, PsychThG).

Values and development square: step by step

1. Open the tool. “Example” loads two fictitious squares – “Care and speed” and “Thrift and generosity”.
2. On the right under “Template”, choose “For myself” or “For a team or two sides” and enter the “Title”, “For whom or which team” and “Date”.
3. Click a field in the picture and enter the text on the right under “Text in this field”. The easiest start is the exaggeration that bothers you in everyday life; then look for the value behind it.
4. Look for the counter-value: which virtue is missing so that the value does not tip into the extreme? It is often exactly what the other side stands for.
5. Add the exaggeration of the counter-value. If you wish, an empty field shows an example text such as “e.g. thrift”.

6. Give the square a name under “Name of the square”.
7. On the left under “Examples and observations”, collect cards for each field: sentences that were actually said, observations, and what helps. `Enter` creates a card.
8. Use “ + Another square” on the right below the title to create further squares, for example one for each side of a conflict.
9. Record a copy with “ + Picture” and note the next step of development in it.
10. Enter your result on the right under “What is clearer now?” and “Next steps”, save and print the record.

Values and development square: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); ▾ shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …”.
- The minus and plus buttons, “Fit to view”, “⛶ Large picture”.
- “Export ▾” – “PDF”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG”, “PNG image”, “Print record”, “Entries as a table (CSV)”.
- “Example” and “Help”.

Picture bar

- One button per picture (a double-click renames it); “ + Picture” creates a copy. The second picture is first called “Step of development”.

Left bar

- “Examples and observations” – an input field for each field of every square; `Enter` creates a card. You enter the field texts themselves on the right.
- “Elements” – “Cards” to drag or click.

Right bar: field selected

- Heading with the type of field: “Value”, “Positive counter-value”, “Exaggeration of the value” or “Exaggeration of the counter-value”, with a short explanation.
- “Text in this field” – the value or the exaggeration; below it, what lies vertically and what lies diagonally opposite.
- “Guiding questions (one per line)” and “Name of the square”.
- “ + Card here”, “Arrange” and the list “Cards in this field”.
- “🗑 Delete this square” – only with several squares; if there are cards in it, the tool asks first, because they are deleted too. Undo is possible.

Right bar: nothing selected

- “Title”, “For whom or which team”, “Date”, “Template”.
- “ + Another square” – creates a new square (twelve at most); next to it the number of squares.
- Section on the picture – “Name of this picture”, “ + Copy as new picture”, “ + Empty picture”, ◀ ▶, “Delete picture”.
- “What is clearer now?” and “Next steps”.
- “Analysis” – for each square a table with field, text and number of cards, the fields still empty and, as soon as all four fields are filled, the direction of development in one sentence; plus “Arrange all cards”.
- “Appearance” – “Show the development arrows (diagonals)”, “Show the tension line between value and counter-value”, “Show example texts in empty fields”, “Coloured”, “Small cards”, “Title above the picture”, “Move cards fully into the area when dropped”, “PDF format”; plus “How it works”.

Cards, mouse and keys

- Card selected: “Text”, “Area”, “Colour”, “★ highlight”, “Note (appears only in the record)”, “✎ Edit in picture (F2)”, “⧉ Duplicate”, “Delete”.

- Double-clicking a field creates a card; `F2` edits, `Del` deletes, `Ctrl` + `D` duplicates.
- Right mouse button on a card: "✎ Edit text", "Place in area", "★ Highlight on / off", "⧉ Duplicate", "🗑 Delete"; on a field: "＋ Card here", "Arrange cards here", "Arrange all cards", "＋ Create picture as a copy", "Fit everything to view".

Values and development square: saving, export and handovers

"Save" creates a file `*.entwicklungsquadrat.json`. The picture exports show the picture shown. "Print record" contains all pictures with their cards and, at the end, all squares with the four field texts. The CSV table for Excel names the square, type of field and field text for each card and appends an overview of all squares at the bottom.

An automatic interim state is kept in this browser's storage only after the first change; the tool loads nothing from the internet and sends nothing. If master data is switched on, the field "For whom or which team" suggests people and organisations – see 'Master data in every tool'. There are no handovers to other tools; for working in the suite see 'Tools in the suite: working together'.

Values and development square: phone, systems and browsers

On phones and tablets the board-tool controls from the chapter 'How do I use a tool?' apply: "☰" expands the header, and "＋ Elements" and "✎ Properties" open the bars as windows. To enter a field text, tap the field and open "✎ Properties". Select several elements with the "Multiple selection" button at the bottom left of the picture. I tested operation by finger taps in a simulated frame of 375 × 611 pixels, not on real devices.

The tool needs no folder features; in Safari and Firefox you save via the browser's download. I have not tested Safari on a real Mac.

Values and development square: tips

- Start with the exaggeration that bothers you in everyday life – everyone has one to hand – then the value behind it, then the counter-value, then its exaggeration.
- In the conversation, first name which value the other side is protecting.
- The counter-value is not the opposite of the value but its balance.
- One square for each side of a conflict shows that both sides bring values of their own.
- Nobody is a field of the square: it describes values, not people.

Johari window



Johari window: purpose and use

The Johari window after Joseph Luft and Harrington Ingham divides what is known about a person into four fields – depending on whether the person sees it themselves and whether others see it: **Open** (known to me, known to others), **Blind spot** (not known to me, known to others), **Private** (known to me, not known to others) and **Unknown** (known to nobody). The yield lies in the blind spot: in what others perceive and you yourself do not.

In this tool you record for each quality whether you see it in yourself and who else names it – the field then follows by itself. For teams you enter several names; this shows how unanimous a piece of feedback is. The fields grow with what they hold: a large blind spot then also looks large. A Johari window only works on a voluntary basis, and

what it contains belongs to the person concerned – not to the team and not to management.

The tool is still in beta (“Experimental”) and saves to files with the extension `.johari.json`. You will find it on the website under Experimental, as a single file and in the suite under “People and coaching”. More in the post The blind spot grows as large as it is – the Johari window.

The Johari window is a reflection and conversation model, not a diagnostic instrument: it records feedback and does not measure personality. Coaching is not psychotherapy (Section 1(2) sentence 3 of the German Psychotherapists Act, PsychThG).

Johari window: step by step

1. Open the tool. “Example” loads the fictitious Johari window of a team leader with ten qualities and three outside assessments.
2. On the right under “Template”, choose “One person” or “Role in the team”; enter the “Title”, “Who it is about” and “Date”.
3. On the left under “Qualities by field”, collect qualities, behaviours and strengths. `Enter` creates a card – you can also collect first and sort later.
4. For each card, choose “Do I see this in myself?” on the right and enter the names under “Who else names it? (names, separated by commas)”.
5. Read in the box below which field this results in.
6. Click “↓ Sort by the assessments” at the bottom left: every card goes into the field that follows from the assessments.
7. Discuss the blind spot – with examples, not judgements.
8. Use “ + Picture” to create a copy and, after the conversation, show what has shifted.
9. Record on the right under “What is clearer now?” and “Next steps” what you take away.
10. Save and print the record with all qualities for each field.

Johari window: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); ▾ shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …”.
- The minus and plus buttons, “Fit to view”, “⛶ Large picture”.
- “Export ▾” – “PDF”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG”, “PNG image”, “Print record”, “Entries as a table (CSV)”.
- “Example” and “Help”; “👥 Master data” links the names of the people giving feedback if you wish.

Picture bar

- One button per picture (a double-click renames it) and “ + Picture”; the second picture is first called “After the conversation”.

Left bar

- “Qualities by field” – an input field and expandable “Guiding questions” for each field.
- “Elements” – “Quality” to drag or click.
- “↓ Sort by the assessments” – puts every card into the field that follows from self-assessment and outside assessment.

Right bar: card selected

- “Text”, “Area”, “Colour” and “★ highlight”.
- “Do I see this in myself?” – “— nothing said yet —”, “yes, I see this in myself” or “no, I do not see this”.
- “Who else names it? (names, separated by commas)” – several names for several outside assessments.
- Result box – names the field that results; if the card lies elsewhere, a button moves it there.
- “Note (appears only in the record)”, “Follow-up questions”, “✎ Edit in picture (F2)”, “⧉ Duplicate”, “Delete”.

Right bar: nothing selected

- “Title”, “Who it is about”, “Date”, “Template”; a section on the picture with “Name of this picture”, “ + Copy as new picture”, “ + Empty picture”, ◀ ▶, “Delete picture” and the changes compared with the previous picture.
- “What is clearer now?” and “Next steps”.
- “Analysis” – cards and share for each field, whom the outside assessments come from, which cards do not lie in their calculated field, the entries in the blind spot, a note if more lies in the private field than in the open one, and what still has no assessment; plus “Arrange all cards”.
- “Appearance” – “Show the fields sized by what they hold”, “Label axes”, “Show on every card who names it”, “Coloured”, “Small cards”, “Title above the picture”, “Move cards fully into the area when dropped”, “PDF format”; plus “How it works”.

Labels on the cards

- The card shows who names it, for example “only I”, “I + 2” or “nobody”.
- “does not fit” means: position and assessment differ – for example because you placed a card in another field by hand.

Right mouse button, keys and mouse

- On a card: quickly set “Do I see this in myself?” to “yes”, “no” or “open”; plus “✎ Edit text”, “Place in area”, “★ Highlight on / off”, “⧉ Duplicate”, “🗑 Delete”.
- On a field: “ + Card here”, “Arrange cards here”, “Arrange all cards”, “ + Create picture as a copy”, “Fit everything to view”.
- Double-clicking a field creates a card; drag cards freely; `F2` edit, `Del` delete, `Ctrl` + `D` duplicate.

Johari window: saving, export and handovers

“Save” creates a file `*.johari.json`. The picture exports show the picture shown; “Print record” contains all qualities for each field, each with a note of who names it. The CSV table for Excel also has the columns “I see it myself”, “Who else names it” and “Field from the assessments”.

With master data, “Who it is about” is a link to a person or role (suggestions as you type, 👥 opens the selection). “👥 Master data” also links the names of those who gave feedback. Who named which quality always stays here in the tool alone. An automatic interim state is kept in this browser’s storage only after the first change. See also ‘Master data in every tool’ and ‘Tools in the suite: working together’.

Johari window: phone, systems and browsers

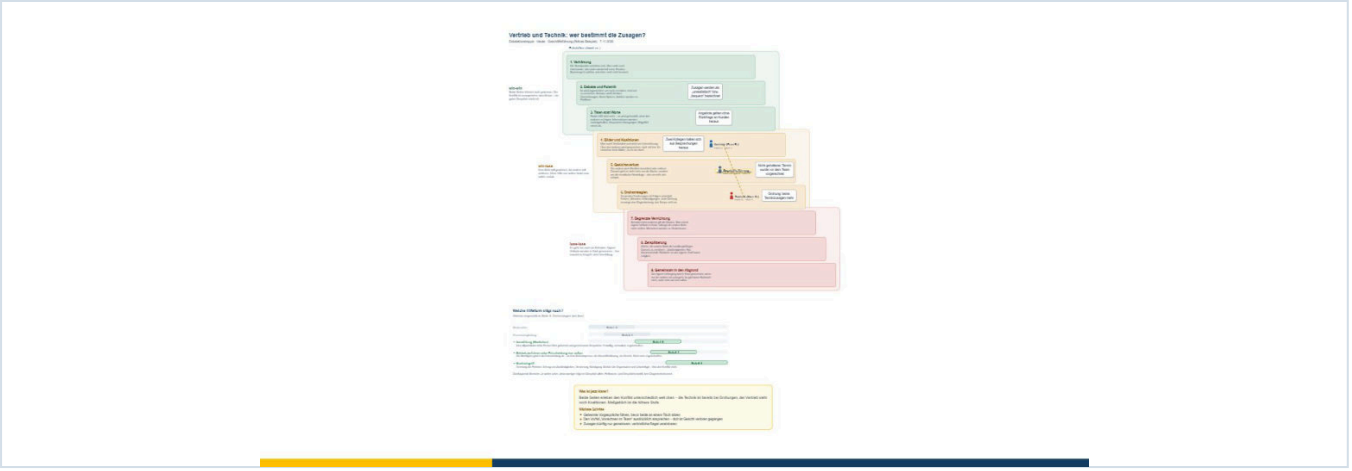
On phones and tablets the board-tool controls from the chapter ‘How do I use a tool?’ apply: “☰” expands the header, and “ + Elements” and “✎ Properties” open the bars as windows. Tapping “Quality” creates a card. Select several elements with the “Multiple selection” button at the bottom left of the picture. I tested touch operation in a simulated frame 375 pixels wide, not on real devices.

The tool needs no folder features; in Safari and Firefox you save via the browser’s download. I have not tested Safari on a real Mac.

Johari window: tips

- Feedback needs examples, not judgements: “in Monday's meeting you interrupted me three times” instead of “you are domineering”.
- If several people name the same quality, it is no longer a supposition but feedback.
- Nobody has to tell anything from the private field, and nobody may enter feedback against the will of the person concerned.
- If you need the classic grid with four equally sized fields, switch off sizing by content under “Appearance”.
- The file contains assessments of a named person and the names of those who gave them – pass it on only with consent.

Escalation ladder



Escalation ladder: purpose and use

The escalation ladder answers a single but decisive question: where does this conflict stand right now? It shows the nine stages of escalation after Friedrich Glasl as a ladder going downwards, grouped into three levels: **win-win** (stages 1–3, both can still win), **win-lose** (4–6, one side wants to win) and **lose-lose** (7–9, it is only about damage now). For each stage there is an observable characteristic showing how to recognise it – from “Hardening” to “Together into the abyss”.

You place the parties to the conflict as figures on the stages – separately for each party, because the same situation is almost always experienced differently. Below the picture you can see which form of help still works on the highest stage assessed: “Facilitation” (1–3), “Process guidance” (2–4), “Mediation” (4–6), “Arbitration or a decision from outside” (5–7) and “Forceful intervention” (6–9). The ranges overlap on purpose. A forceful intervention protects the organisation and uninvolved people – it does not resolve the conflict. Typical occasions in small and medium-sized companies are two partners who can no longer agree, or sales against engineering.

The tool is still in beta (“Experimental”) and saves to files with the extension `.eskalation.json`. You will find it on the website under Experimental, as a single file and in the suite under “People and coaching”. More in the post Where does this conflict stand? The escalation ladder after Glasl.

The ladder is a reflection and conversation model, not a diagnostic instrument: it records assessments and does not judge people. Coaching is not psychotherapy (Section 1(2) sentence 3 of the German Psychotherapists Act, PsychThG).

Escalation ladder: step by step

1. Open the tool. “Example” shows a fictitious conflict between sales and engineering with the second picture “After the conversation”.
2. On the right under “Template”, choose “Conflict between two sides” or “Tension in the team”; enter the “Title”, “Conflict or team” and “Date”.
3. Under “Elements”, drag “Party A” and “Party B” onto the stage on which each side itself experiences the conflict. Place further people involved as a “Further party” and an outside perspective as an “Outside view”.
4. Type names or roles. On the right you can also choose the stage under “Stage experienced”.
5. For each figure, enter a nameable incident, a sentence or an observation under “How I notice it (example, sentence, incident)”.
6. Record observations for each stage as cards: double-click in a stage or drag the element “Observation” onto the stage. The guiding questions for each stage help with asking.
7. Read off below the picture which form of help still works on the highest stage assessed.
8. Use “ + Picture” to create a copy and show in it where the conflict should stand after the conversation.
9. Record “What is clearer now?” and “Next steps” on the right.
10. Save and print the record with all parties, stages and evidence.

Escalation ladder: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); ▾ shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …”.
- The minus and plus buttons, “Fit to view”, “⛶ Large picture”.
- “Export ▾” – “PDF”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG”, “PNG image”, “Print record”, “Entries as a table (CSV)”.
- “Example” and “Help”; “👥 Master data” links all people, organisations and roles at once if you wish.

Picture bar

- One button per picture (a double-click renames it) and “ + Picture” for a copy.

Left bar

- “Elements” – “Party A”, “Party B”, “Further party”, “Outside view” and “Observation”.
- “Levels” – all nine stages with their level and the number of entries. A click selects the stage; on the right its name, characteristic and guiding questions can then be changed freely.

Right bar: figure selected

- “Name or role”.
- “Role in the conflict” – Party A, Party B, further party or outside view.
- “Stage experienced” – puts the figure on a stage; below it the level and characteristic of this stage.
- “How I notice it (example, sentence, incident)” – a concrete example instead of a judgement.
- With master data switched on: “In the master data” – “as a person”, “as an organisation”, “as a role”, “as an organisational unit” (with “🧩 Choose a unit from the master data …”) or “do not take over”.
- “★ highlight”, “Note (appears only in the record)”, “✎ Rename in picture (F2)”, “⧉ Duplicate”, “Delete”.

Right bar: stage selected

- “ + Card here”, “Arrange”, “Name”, “Guiding questions (one per line)”, “Follow-up question” (the characteristic in the picture) and “Restore template”.
- “How to recognise it”, the forms of help for this stage, the figures on it and the list of cards.

Right bar: nothing selected

- “Title”, “Conflict or team”, “Date”, “Template”; a section on the picture with “Name of this picture”, “ + Copy as new picture”, “ + Empty picture”, ◀ ▶, “Delete picture”.
- “What is clearer now?” and “Next steps”.
- “Analysis” – a table of all figures with role, stage and level; the decisive highest stage, what still works there, the difference between Party A and B, figures without a stage and assessments without a concrete example; plus “Arrange all cards”.
- “Appearance” – “Show in the picture how to recognise the stage”, “Shade in the levels win-win, win-lose, lose-lose”, “Show the forms of help below the picture”, “Highlight the difference between Party A and B”, “Coloured”, “Small cards”, “Title above the picture”, “Move cards fully into the area when dropped”, “PDF format”; plus “How it works”.

In the picture, right mouse button and keys

- If Party A and Party B stand on different stages, a dashed line connects the two figures, showing the number of stages between them.
- Right mouse button on a figure: change the “Role in the conflict”; plus the usual entries for highlighting, duplicating and deleting. On a stage: “ + Card here”, edit the stage, “Arrange cards here”, “Arrange all cards”, “ + Create picture as a copy”, “Fit everything to view”.
- Drag figures freely; `F2` renames; `Del` deletes; `Ctrl` + `D` duplicates.

Escalation ladder: saving, export and handovers

"Save" creates a file `*.eskalation.json`. The picture exports show the picture shown, including the forms of help below the ladder. "Print record" contains, for each picture, all parties with role, stage, level and evidence as well as the highest stage with the forms of help that still work there. The CSV table for Excel also has the columns role in the conflict, stage, stage name, level and "How you notice it".

With master data you set for each figure who the party is – person, organisation, role or organisational unit; linked names are changed in the master data and then appear here updated. The stage, the evidence and the notes stay in the tool. An automatic interim state is kept in this browser's storage only after the first change. See also 'Master data in every tool' and 'Tools in the suite: working together'.

Escalation ladder: phone, systems and browsers

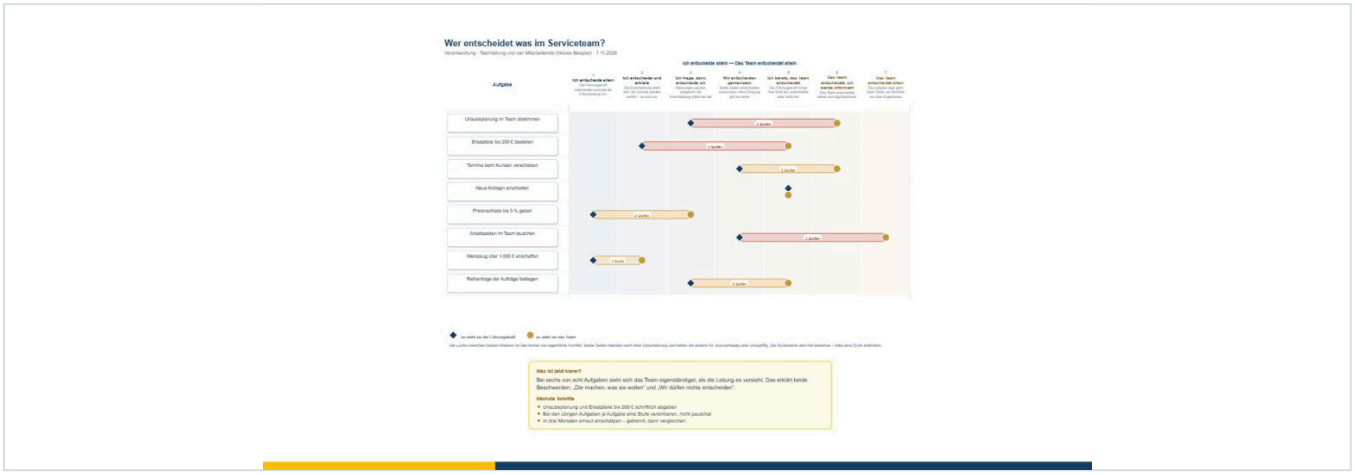
On phones and tablets the board-tool controls from the chapter 'How do I use a tool?' apply: "☰" expands the header, and two buttons below the picture open the left bar ("Figures") and "✎ Properties" as windows. Tapping a figure places it in the centre; you then drag it onto its stage or choose the "Stage experienced" on the right. Select several elements with the "Multiple selection" button at the bottom left of the picture. I tested touch operation in a simulated frame 375 pixels wide, not on real devices.

The tool needs no folder features; in Safari and Firefox you save via the browser's download. I have not tested Safari on a real Mac.

Escalation ladder: tips

- What counts for the question of what still helps is the higher stage – not the average.
- If two figures stand on different stages, this difference is usually a topic in itself: someone who has reached stage 6 experiences an invitation to talk differently from someone at stage 3. Both views are valid.
- The decisive break lies between stage 3 and 4: from there on it is about the people, no longer about the matter.
- A nameable incident protects against suppositions; the analysis lists assessments without an example.
- Assessments of individual people's conflicts are particularly sensitive data – name people only where necessary.

Responsibility and delegation



Responsibility and delegation: purpose and use

Who decides what? In the Responsibility and delegation tool, every task sits in a row, with seven stages above it from "I decide alone" to "The team decides alone". For each task you set two markers: ◆ for how the **manager** classifies the task and ● for how the **team** classifies it. The **gap** between them is highlighted – it is almost always the real conflict.

Delegation rarely fails because of ill will, but because both sides classify the same task differently. If the team sees itself as more independent (● to the right of ◆), the management experiences people going it alone and the team experiences control. If it sees itself as less independent (● to the left of ◆), work is left undone or comes back although it had been handed over. The tool helps managers and teams to make this visible and to reach an agreement for each task – including when handing over to a successor.

The tool is still in beta (“Experimental”) and saves to files with the extension `.verantwortung.json`. You will find it on the website under Experimental, as a single file and in the suite under “People and coaching”. More in the post They do what they like – and we are not allowed to decide anything.

The seven stages are based on the leadership continuum after Robert Tannenbaum and Warren H. Schmidt (1958); the texts can be changed freely. The assessments are points of view, not measurements – a reflection and conversation model, not a diagnostic instrument.

Responsibility and delegation: step by step

1. Open the tool. “Example” loads a fictitious service team with eight tasks, six of them with a gap.
2. On the right under “Template”, choose “Manager and team” or “Handover to a successor”; enter the “Title” and “Date”.
3. Record on the right who the two views belong to: “◆ Manager”, “● Team” and the “Team members”.
4. On the left under “Tasks”, enter one task or decision per row; `Enter` appends it at the bottom. Concrete is better (“Order spare parts up to €200”) than general.
5. In each row, drag ◆ and ● onto their stage – or choose “◆ How the manager sees it” and “● How the team sees it” on the right.
6. Read the gaps: the coloured bar shows how far apart the views are; the analysis on the right sorts them by size.
7. For each task, enter under “What applies in future? (agreement)” which stage applies in future, from when, and who tells whom.
8. Adapt the stage texts: click a stage on the left and rewrite it in your organisation’s own language.
9. Record a copy with “ + Picture” and show what has been agreed in it.
10. Enter “What is clearer now?” and “Next steps” on the right, save and print the record.

Responsibility and delegation: functions and buttons

Header

- Large arrows – undo (`Ctrl` + `Z`) and redo (`Ctrl` + `Y`); ▾ shows the history.
- “New”, “Open …” (`Ctrl` + `O`), “Save” (`Ctrl` + `S`), “Save as …”.
- The minus and plus buttons, “Fit to view”, “⛶ Large picture”.
- “Export ▾” – “PDF”, “PowerPoint (.pptx)”, “LibreOffice Impress (.odp)”, “Visio (.vsdx)”, “SVG”, “PNG image”, “Print record”, “Entries as a table (CSV)”.
- “Example” and “Help”.

Picture bar

- One button per picture (a double-click renames it) and “ + Picture”; the second picture is first called “Agreed”.

Left bar

- “Tasks” – input field “+ Task, Enter”; every new task is added at the bottom.
- “Elements” – “Task” to drag or click.
- “Levels” – the seven stages with the number of markers (◆ and ●) on each. A click selects the stage; on the right its name and explanation can be changed freely.

Right bar: task selected

- “Task or decision” – the text of the row.
- “◆ How the manager sees it” and “● How the team sees it” – one of the seven stages each, or “— not assessed yet —”.
- Box on the gap – the number of stages and its direction; with the same stage, the confirmation that the expectation is clear.
- “What applies in future? (agreement)”.
- “★ highlight”, “Note (appears only in the record)”, “✎ Edit in picture (F2)”, “⧉ Duplicate”, “Delete”.

Right bar: stage selected

- “Name” and “Follow-up question” – the explanation of the stage in the picture; “Guiding questions (one per line)” and “Restore template”.
- Which tasks the manager and which the team sees on this stage.

Right bar: nothing selected

- “Title”, “Team or manager”, “Date”, “Template”; plus the number of tasks and gaps.
- “◆ Manager” (name or role), “● Team” (unit, team or role) and “Team members” (“+ Member, Enter”; ✕ removes an entry).
- A section on the picture with “Name of this picture”, “ + Copy as new picture”, “ + Empty picture”, ◀ ▶, “Delete picture”.
- “What is clearer now?” and “Next steps”.
- “Analysis” – a table of all tasks with ◆, ● and gap; the largest gap, split into “Team sees itself as more independent” and “Team sees itself as less independent”, tasks without both assessments and gaps without an agreement. Plus “◇ Suggestion: put on the middle stage” – puts both markers on the middle stage for every gap, as a suggestion for the conversation, not as a result.
- “Appearance” – “Show the explanation beneath every stage”, “Highlight the gap between the two views”, “Show the grid”, “Coloured”, “Small cards”, “Title above the picture”, “Move cards fully into the area when dropped”, “PDF format”; plus “How it works”.

In the picture, right mouse button and keys

- Drag ◆ and ● directly in the picture; while dragging, a hint shows the stage. Dragging a task up or down changes the order of the rows.
- Right mouse button on a task: “◆ Manager” and “● Team” with all seven stages; plus “✎ Edit text”, “★ Highlight on / off”, “⧉ Duplicate”, “🗑 Delete”. On an empty area: “ + Card here” (a new task), “ + Append a task” (puts the cursor in the input field on the left), “ + Create picture as a copy”, “Fit everything to view”.
- `F2` edit, `Del` delete, `Ctrl` + `D` duplicate.

Responsibility and delegation: saving, export and handovers

“Save” creates a file `*.verantwortung.json`. The picture exports show the picture shown with its legend. “Print record” contains, for each picture, all tasks with both views, the gap and the agreements, plus “Who is assessing?” and the seven stages with their explanations. The CSV table for Excel also has the stages and names for both views, the gap and the agreement.

With master data, manager, team and members are links: suggestions as you type, 👥 opens the selection; linked names are changed there and then appear here updated. Without master data they remain free entries. Tasks, stages and agreements stay in the tool. An automatic interim state is kept in this browser’s storage only after the first change. See also ‘Master data in every tool’ and ‘Tools in the suite: working together’.

Responsibility and delegation: phone, systems and browsers

On phones and tablets the board-tool controls from the chapter ‘How do I use a tool?’ apply: “☰” expands the header, and two buttons below the picture open the left bar (“Inputs”) and “✎ Properties” as windows. There you can also set the markers on the right using the two selection fields. Select several elements with the “Multiple selection” button at the bottom left of the picture. I tested touch operation in a simulated frame 375 pixels wide, not on real devices.

The tool needs no folder features; in Safari and Firefox you save via the browser’s download. I have not tested Safari on a real Mac.

Responsibility and delegation: tips

- It is most honest when both sides assess separately and only compare afterwards – moving the markers together produces the polite middle.
- Concrete tasks can be classified, general ones such as “Purchasing” cannot.
- Agree task by task – a blanket announcement across all tasks does not last.

- Only when the stage texts are written in your organisation's own language does the team recognise itself in them.
- If all tasks are seen the same way, check whether both sides really assessed separately.

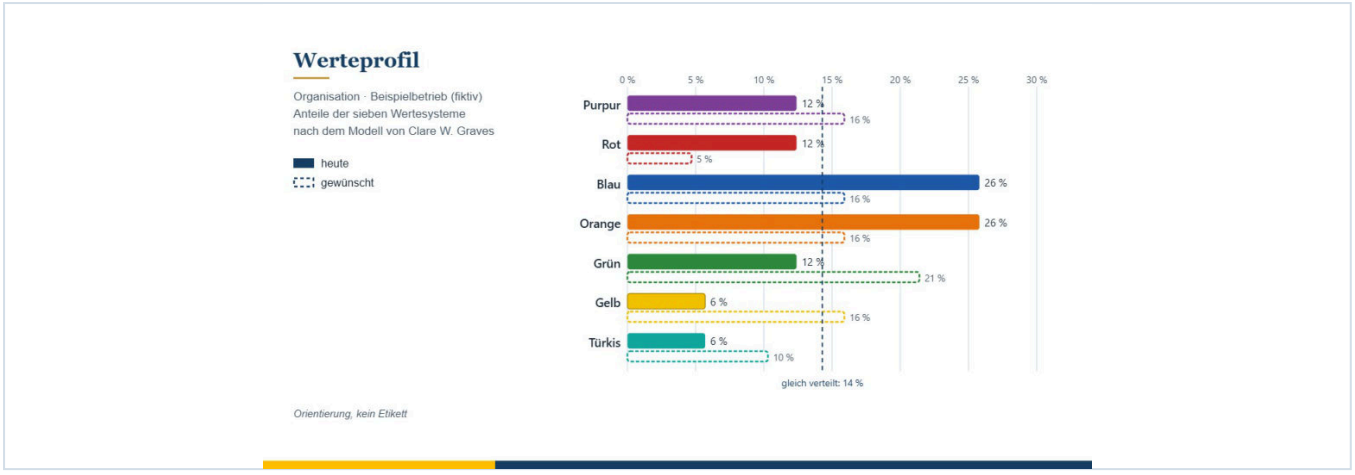
Questionnaires

The questionnaires run in the browser, without signing in and also on phones and tablets; they transmit no data. They are models for reflection and conversation – the IT survey form and the maturity check are survey and self-assessment forms –, not diagnostic instruments, and have not been scientifically validated; the introduction of every questionnaire says so as well. The results are an orientation, not a label.

Every answer can be taken back: the curved arrows at the top next to the title or Ctrl+Z / Ctrl+Y; ▾ shows the latest steps and jumps back several at once (the steps apply as long as the questionnaire is open).

How the values model, Theory U and logical levels can be combined in a constellation is something I describe in the post on the Values Prism.

Personal Values Profile



Personal Values Profile: purpose and use

The Personal Values Profile shows how much weight seven value systems currently carry for you. It is based on the values model of Clare W. Graves, known as Spiral Dynamics, with the colours purple (belonging and security), red (strength and drive), blue (order and duty), orange (achievement and progress), green (community and humanity), yellow (systemic, flexible thinking) and turquoise (wholeness and connectedness). Beige, the drive for survival, is not asked about because it hardly plays a role in everyday life.

The questionnaire helps you understand what drives you, where you feel at home and why you get on more easily with some people than with others – for self-reflection, to prepare for coaching or to compare with your organisation's profile. Ten topics range from what gives you stability through decisions, work, rules, relationships and conflicts to learning, change and meaning.

The result is orientation, not a label: no colour is better than another. The questionnaire is a trial version and not scientifically validated. I use Spiral Dynamics as a reflection and conversation model, not a diagnostic instrument. It is not a psychological test and no substitute for psychotherapy or medical treatment.

It is experimental: on the website under Experimental, as a single HTML file and in the suite toolbox under People and coaching; it saves `.json` files. More in the post The values profile: which values shape us? and, on constellating the colours, in The Values Prism: Spiral Dynamics in coaching.

Personal Values Profile: step by step

1. Open the questionnaire on the website, as a file, in the suite or from the 8EM Modeller; there is no separate help button.
2. If you like, enter your name; it appears only on your result.
3. Under “Scope”, choose the detailed version (140 statements, about 20 minutes) or the short version (70 statements, about 10 minutes).
4. If you wish, tick “Today under pressure” and the desired picture; both lengthen the time needed.
5. Click “Start the questionnaire”. Each page is one of the ten topics.

6. Answer each statement spontaneously from “not at all” to “very much”. Pointing at an answer or the label on the left (tapping on a phone) explains the levels with an example.
7. Move on with “Next” and “Back”; open statements are marked and you are asked before continuing.
8. Pause with “Save interim state” and carry on later on the same page with “Open saved state”.
9. On the last page, click “Evaluate”.
10. Keep the result with “Save result as file” or “Print / as PDF” – or use “Hand result over to the 8EM Modeller” if you opened it from there.

Personal Values Profile: functions and buttons

Start page

- Name field – optional.
- “Scope” – detailed (20 statements per value system) or short version.
- Tick box “Today under pressure” – how you actually react in crises, not a wish.
- Tick box for the desired picture – each statement is rated for today and as desired; next to both, an explanation of what the answers mean.
- “Start the questionnaire”, “Open saved state” (interim state or result) and “View example result” (entirely fictitious).
- “Combine several results” – open at least two saved results together (Ctrl or Shift key) or drag them onto the start page; “View example of a combination” shows four entirely fictitious individual results.

Question pages

- Scale “not at all”, “hardly”, “rather not”, “rather yes”, “largely”, “very much” – six levels without a midpoint, in rows for today, “Desired” and “Today under pressure” as chosen.
- Explanation by pointing, tapping or keyboard; `Esc` closes it.
- “Back” (first page: “To the introduction”), “Next” (last page: “Evaluate”) and “Save interim state”.

Result page

- With the desired picture and “Today under pressure”, up to three bars stand side by side for each colour: today as a filled bar, desired as a dashed outline, under pressure hatched – in print as well.
- Only for combined results: at the top the box “Combined result of … questionnaires” with the list of individual results (×), “Show names”, “Add further results” and the reasons under “Not taken over:”; further down the section “Differences in the group” with “Today”, “Desired” or “Today under pressure”, the legend (a click highlights a profile) and a chart and table (mean, spread) for each building block. “Change answers” is not offered then.
- One-sentence interpretation and bars for the shares; together 100 per cent, the dashed line at 14 per cent is the even distribution.
- “Today and desired” – gaps per colour; plus the shift under pressure.
- “I and we” – balance between red, orange, yellow and purple, blue, green, turquoise.
- “The value systems in detail” – cards with share, classification from “Main emphasis” to “little pronounced”, strengths, excesses and a question.
- “Print / as PDF”, “Save result as file”, “Change answers” and “Start over” (discards everything after asking).
- The build version button at the top right jumps to licence and disclaimer.

Personal Values Profile: saving, export and handovers

Interim state and result are `.json` files with answers and profile; the name starts with `werteprofil-person` (interim state: `zwischenstand-`) and ends with the date. Chrome and Edge show the save dialog, Safari and Firefox use the browser download (chapter ‘How do I use a tool?’). Only this questionnaire's files open. Unsaved answers trigger a warning when you leave; printing leaves out buttons and questions.

Combining: each person saves their result; “Combine several results” opens all files together. All values are means of the individual results; “Differences in the group” shows for each colour the lowest and highest value and the individual profiles on top of each other, and the box at the top names where respondents disagree most. Files that

do not fit – an interim state, a result for a person instead of an organisation or vice versa, another questionnaire, incomplete answers, the same file twice or an older version – are listed under “Not taken over:” with the reason (on screen only).

The detailed version is evaluated only if all files have it; the desired picture and “Today under pressure” only if all contain them. By default the individual results appear as “Person 1”, “Person 2” …; “Show names” shows the name for persons and the file name for organisations – this also applies to printing and the group file (name with `-gruppe-`). The group file contains the individual results; when it is opened, spread and individual profiles are back, and it can be combined with further results. Older versions of the questionnaire open it with an approximate group result (each statement rounded to whole levels), without the spread.

In the 8EM Modeller you open the personal questionnaire for employees and unit heads; it appears in a new window with your name pre-filled. The handover sends the result to that window on the same device; only the shares are taken over, not the answers. Otherwise import the result file there; interim states are not accepted. Results of individuals belong in the model only with their consent.

In the suite, the questionnaire saves and opens via the suite's dialog (chapter ‘Tools in the suite: working together’).

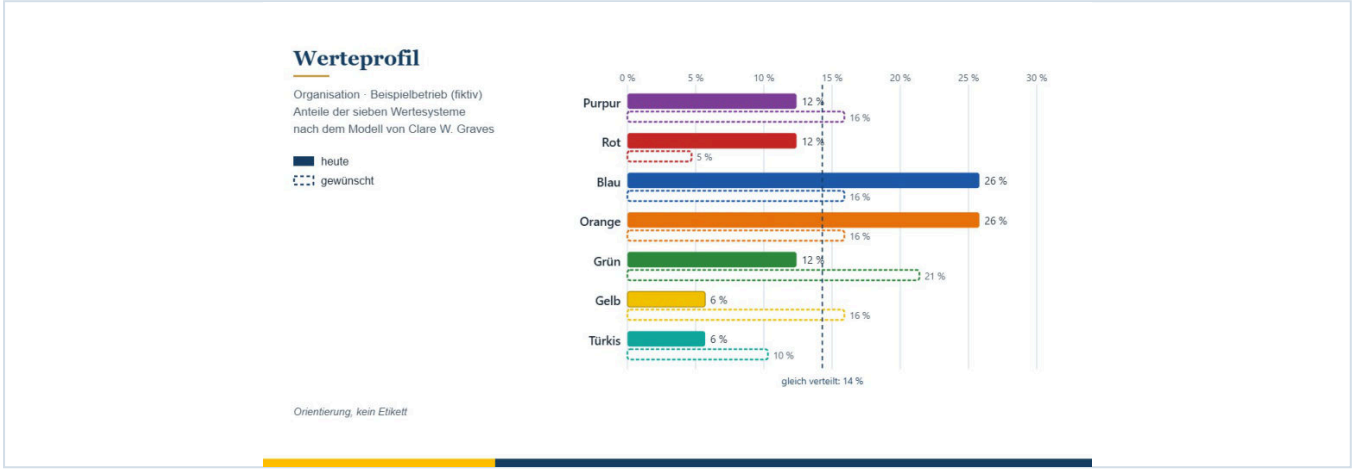
Personal Values Profile: phone, systems and browsers

- Runs in every current browser, transmits nothing, needs no folder functions.
- On phones, tablets and in narrow windows the answer areas are 44 pixels high; explanations open by tapping.
- Tested in emulated screen sizes with touch; not on real devices, in Safari on a real Mac or on real iPhones and iPads.
- The handover needs a new window; if it is blocked, use the file route.
- Language as in all tools at the top right; statements and examples are translated, your name is not.

Personal Values Profile: tips

- Describe yourself as you actually are; how you would like to be belongs in the desired picture.
- The desired picture may be lower than today; if nothing changes under pressure, give the same value as for today.
- Comparing with your organisation's values profile shows why you feel at ease in some places and experience friction in others.
- Values and attention together: see the Values–U Compass (chapter ‘Values–U Compass’).
- Workshop “questionnaire evening”: complete the questionnaire twice – for yourself and the way the people around you probably see you – and combine both files with “Combine several results”; the spread per colour shows where self-image and presumed outside view diverge.

Values Profile Organisation



Values Profile Organisation: purpose and use

Which values shape an organisation – today, desired and under pressure? The Values Profile Organisation shows how much weight seven value systems carry, from your point of view, in the whole company or in one area. It is based on the values model of Clare W. Graves, known as Spiral Dynamics, with the colours purple, red, blue, orange, green, yellow and turquoise. Which of them are in the foreground shapes how people lead, decide, reward and change – and who feels at home there.

The ten topics are basic character, leadership and decisions, dealing with employees, what holds us together, strategic priorities, how we measure success, rules and processes, information and communication, mistakes and learning, and change and the new. If several people complete it for the same organisation, the real conversation begins where the profiles diverge.

The result is orientation, not a label – a snapshot from your point of view. No colour is better than another; what matters is whether the mix suits tasks, people and environment. The questionnaire is a trial version and not scientifically validated. I use Spiral Dynamics as a reflection and conversation model, not a diagnostic instrument.

It is experimental: on the website under Experimental, as a single HTML file and in the suite toolbox under People and coaching; it saves `.json` files. More in the post The values profile: which values shape us? and, on constellating the colours, in The Values Prism: Spiral Dynamics in coaching.

Values Profile Organisation: step by step

1. Open the questionnaire on the website, as a file, in the suite or from the 8EM Modeller; there is no separate help button.
2. If you like, enter the company or area you are looking at; it appears only on the result.
3. Under “Scope”, choose the detailed version (140 statements, about 20–25 minutes) or the short version (70 statements, about 10–12 minutes).
4. If you wish, tick “Today under pressure” and the desired picture; both lengthen the time needed.
5. Click “Start the questionnaire”. Each page is one of the ten topics.
6. Answer each statement spontaneously from “not at all” to “fully”. Pointing at an answer or the label on the left (tapping on a phone) explains the levels with an example from a fictitious business.
7. Move on with “Next” and “Back”; open statements are marked and you are asked before continuing.
8. Pause with “Save interim state” and carry on later with “Open saved state”.
9. On the last page, click “Evaluate”.
10. Keep the result with “Save result as file” or “Print / as PDF” – or use “Hand result over to the 8EM Modeller” if you opened it from there.
11. Let several people answer; each saves their result. With “Combine several results” on the start page you open all files together and see mean, spread and individual profiles for each colour – without names by default.

Values Profile Organisation: functions and buttons

Start page

- Field for the unit you are looking at – optional.
- “Scope” – detailed (20 statements per value system) or short version.
- Tick box “Today under pressure” – how things actually are in crises; according to Graves, earlier value systems then often come to the fore.
- Tick box for the desired picture; next to both, an explanation of what the answers mean.
- “Start the questionnaire”, “Open saved state” and “View example result” (an entirely fictitious sales department).
- “Combine several results” – open at least two saved results together (Ctrl or Shift key) or drag them onto the start page; “View example of a combination” shows four entirely fictitious individual results.

Question pages

- Scale “not at all”, “hardly”, “rather not”, “rather yes”, “largely”, “fully”, in rows for today, “Desired” and “Today under pressure” as chosen.
- Explanation by pointing, tapping or keyboard; `Esc` closes it.

- “Back” (first page: “To the introduction”), “Next” (last page: “Evaluate”) and “Save interim state”.

Result page

- With the desired picture and “Today under pressure”, up to three bars stand side by side for each colour: today as a filled bar, desired as a dashed outline, under pressure hatched – in print as well.
- Only for combined results: at the top the box “Combined result of … questionnaires” with the list of individual results (×), “Show names”, “Add further results” and the reasons under “Not taken over:”; further down the section “Differences in the group” with “Today”, “Desired” or “Today under pressure”, the legend (a click highlights a profile) and a chart and table (mean, spread) for each building block. “Change answers” is not offered then.
- One-sentence interpretation and bars for the shares (evenly distributed would be 14 per cent); the desired picture appears as a dashed outline.
- “Today and desired” – a table with the direction (more of it, less of it or “roughly fitting”); plus the shift under pressure.
- “I and we” – balance between self-related and community-related value systems.
- “The value systems in detail” – cards with share, classification from “Main emphasis” to “little pronounced”, strengths, excesses and a question for the team.
- “Print / as PDF”, “Save result as file”, “Change answers” and “Start over”.
- The build version button at the top right jumps to licence and disclaimer.

Values Profile Organisation: saving, export and handovers

Interim state and result are `.json` files with answers and profile; the name starts with `werteprofil-organisation` (interim state: `zwischenstand-`) and ends with the date. Chrome and Edge show the save dialog, Safari and Firefox use the browser download (chapter ‘How do I use a tool?’). Only organisation files of the values profile open. Unsaved answers trigger a warning when you leave; printing leaves out buttons and questions.

Combining: each person saves their result; “Combine several results” opens all files together. All values are means of the individual results; “Differences in the group” shows for each colour the lowest and highest value and the individual profiles on top of each other, and the box at the top names where respondents disagree most. Files that do not fit – an interim state, a result for a person instead of an organisation or vice versa, another questionnaire, incomplete answers, the same file twice or an older version – are listed under “Not taken over:” with the reason (on screen only).

The detailed version is evaluated only if all files have it; the desired picture and “Today under pressure” only if all contain them. By default the individual results appear as “Person 1”, “Person 2” …; “Show names” shows the name for persons and the file name for organisations – this also applies to printing and the group file (name with `-gruppe-`). The group file contains the individual results; when it is opened, spread and individual profiles are back, and it can be combined with further results. Older versions of the questionnaire open it with an approximate group result (each statement rounded to whole levels), without the spread.

In the 8EM Modeller you open the organisation questionnaire for the whole organisation, organisational units and locations; it appears in a new window with the unit pre-filled. The handover sends the result to that window on the same device; only the shares are taken over, and the Modeller shows the three strongest colours. Otherwise import the result file there; interim states are not accepted.

In the suite, the questionnaire saves and opens via the suite's dialog (chapter ‘Tools in the suite: working together’).

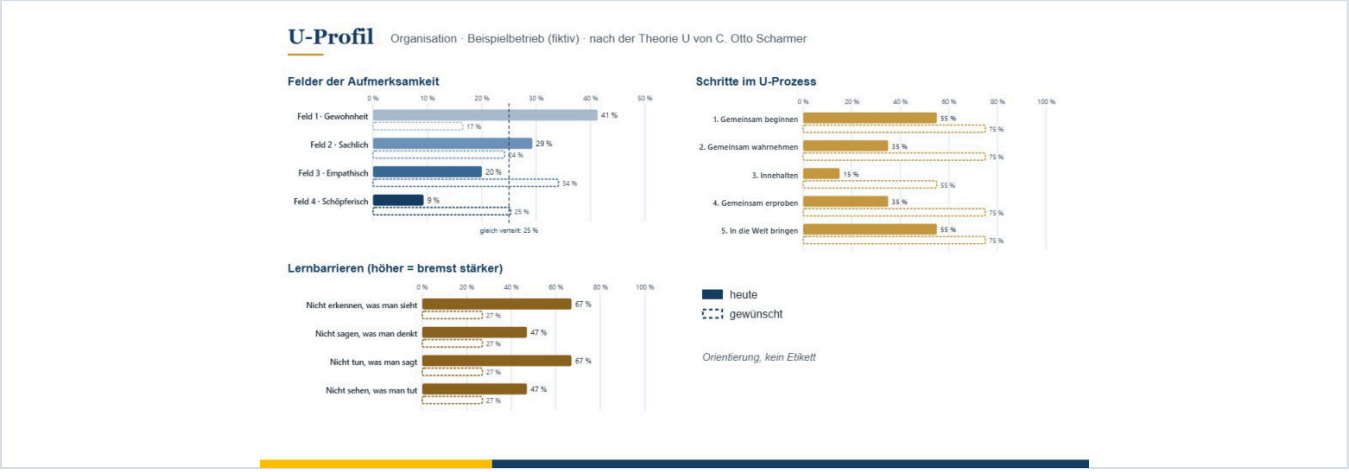
Values Profile Organisation: phone, systems and browsers

- Runs in every current browser, transmits nothing, needs no folder functions.
- On phones, tablets and in narrow windows the answer areas are 44 pixels high; explanations open by tapping.
- Tested in emulated screen sizes with touch; not on real devices, in Safari on a real Mac or on real iPhones and iPads.
- The handover needs a new window; if it is blocked, use the file route.
- Language at the top right; statements and examples are translated, your unit is not.

Values Profile Organisation: tips

- Describe normal working life – not the mission statement and not the rare exception.
- The desired picture may be lower than today; under pressure, your observation counts, not a wish.
- Others may see the organisation differently – precisely these differences are valuable for the conversation.
- Values and attention together: see the Values–U Compass (chapter 'Values–U Compass').

Personal U Profile



Personal U Profile: purpose and use

The Personal U Profile is based on Theory U by C. Otto Scharmer: the quality of our actions depends on the quality of our attention. Scharmer distinguishes four fields – habitual (you confirm what you already know), factual (you pay attention to facts and form your own judgement), empathic (you see through the eyes of others) and generative (you sense what wants to emerge). All four have their place.

Part 1 covers the fields in eight everyday situations: listening, conversations, decisions, collaboration, learning, crises and upheavals, shaping the new, and inner attitude. Part 2 assesses the five steps of the U process – co-initiating, co-sensing, presencing (pausing), co-creating and performing. Part 3 asks about the three inner voices of judgement, cynicism and fear. The result describes how you currently perceive and act, not who you are – orientation, not a label. The questionnaire is a trial version and not scientifically validated. I use Theory U as a reflection and conversation model, not a diagnostic instrument. It is not a psychological test and no substitute for psychotherapy or medical treatment.

It is experimental: on the website under Experimental, as a single HTML file and in the suite toolbox under People and coaching; it saves `.json` files. More in the post The U profile: questionnaires on Theory U.

Personal U Profile: step by step

1. Open the questionnaire on the website, as a file, in the suite or from the 8EM Modeller; there is no separate help button.
2. If you like, enter your name; it appears only on the result.
3. Under "Scope", choose the detailed version (93 statements, about 15 minutes) or the short version (48 statements, about 8 minutes).
4. If you wish, tick "Today under pressure" and the desired picture; you then rate fields, capabilities and inner voices twice.
5. Click "Start the questionnaire" and, in "Part 1 · Fields of attention", answer spontaneously from "not at all" to "very much". Pointing or tapping explains the levels with an example.
6. "Part 2 · Capabilities in the U process" asks "How do you approach something new?", "Part 3 · Inner voices" asks "What is holding you back?" – the more you agree, the more the voice holds you back.
7. Move on with "Next" and "Back"; open statements are marked and you are asked before continuing.
8. Pause with "Save interim state" and carry on later with "Open saved state".
9. On the last page, click "Evaluate".

10. Keep the result with “Save result as file” or “Print / as PDF” – or use “Hand result over to the 8EM Modeller” if you opened it from there.

Personal U Profile: functions and buttons

Start page

- Name field – optional.
- “Scope” – detailed (each field with 16 statements) or short version.
- Tick box “Today under pressure” – how you actually react in crises; according to Scharmer, attention then easily slips back into habit.
- Tick box for the desired picture.
- “Start the questionnaire”, “Open saved state” and “View example result” (entirely fictitious).
- “Combine several results” – open at least two saved results together (Ctrl or Shift key) or drag them onto the start page; “View example of a combination” shows four entirely fictitious individual results.

Question pages

- Scale “not at all”, “hardly”, “rather not”, “rather yes”, “largely”, “very much”, in rows for today, “Desired” and “Today under pressure” as chosen.
- Explanation by pointing, tapping or keyboard; `Esc` closes it. In part 3 a low desired value means: this voice should hold you back as little as possible.
- “Back” (first page: “To the introduction”), “Next” (last page: “Evaluate”) and “Save interim state”.

Result page

- With the desired picture and “Today under pressure”, the charts show up to three bars side by side in each row: today as a filled bar, desired as a dashed outline, under pressure hatched – in print as well.
- Only for combined results: at the top the box “Combined result of … questionnaires” with the list of individual results (×), “Show names”, “Add further results” and the reasons under “Not taken over:”; further down the section “Differences in the group” with “Today”, “Desired” or “Today under pressure”, the legend (a click highlights a profile) and a chart and table (mean, spread) for each building block. “Change answers” is not offered then.
- “The four fields of attention” – interpretation and shares (evenly distributed would be 25 per cent).
- “Where does which field show itself?” – the “Strongest field today” for each situation.
- Cards for each field with strengths, the risk when it becomes the only mode, a rough reference to the colours of Spiral Dynamics (my own interpretation) and a question.
- “Capabilities in the U process” – agreement in per cent per step; if they differ clearly, a suggestion for the weakest.
- “Inner voices” – if one stands out, the result names an antidote: curiosity, appreciation or courage; with the desired picture, also the greatest leverage.
- With “Today under pressure”, the shift for each part.
- “Print / as PDF”, “Save result as file”, “Change answers” and “Start over”.
- The build version button at the top right jumps to licence and disclaimer.

Personal U Profile: saving, export and handovers

Interim state and result are `.json` files; the name starts with `u-profil-person` (interim state: `zwischenstand-`) and ends with the date. Chrome and Edge show the save dialog, Safari and Firefox use the browser download (chapter ‘How do I use a tool?’). Only this questionnaire's files open; unsaved answers trigger a warning when you leave. Printing leaves out buttons and questions.

Combining: each person saves their result; “Combine several results” opens all files together. All values are means of the individual results; “Differences in the group” shows for each building block (fields, U steps, inner voices) the lowest and highest value and the individual profiles on top of each other, and the box at the top names where

respondents disagree most. Files that do not fit – an interim state, a result for a person instead of an organisation or vice versa, another questionnaire, incomplete answers, the same file twice or an older version – are listed under “Not taken over:” with the reason (on screen only).

The detailed version is evaluated only if all files have it; the desired picture and “Today under pressure” only if all contain them. By default the individual results appear as “Person 1”, “Person 2” …; “Show names” shows the name for persons and the file name for organisations – this also applies to printing and the group file (name with `-gruppe-`). The group file contains the individual results; when it is opened, spread and individual profiles are back, and it can be combined with further results. Older versions of the questionnaire open it with an approximate group result (each statement rounded to whole levels), without the spread.

In the 8EM Modeller you open the questionnaire for employees and unit heads via the button for Theory U; it appears in a new window with your name pre-filled. The handover sends the result to that window on the same device; only the shares of the four fields are taken over, and the Modeller names the strongest. Otherwise import the result file there; interim states are not accepted. Results of individuals belong in the model only with their consent.

In the suite, the questionnaire saves and opens via the suite's dialog (chapter ‘Tools in the suite: working together’).

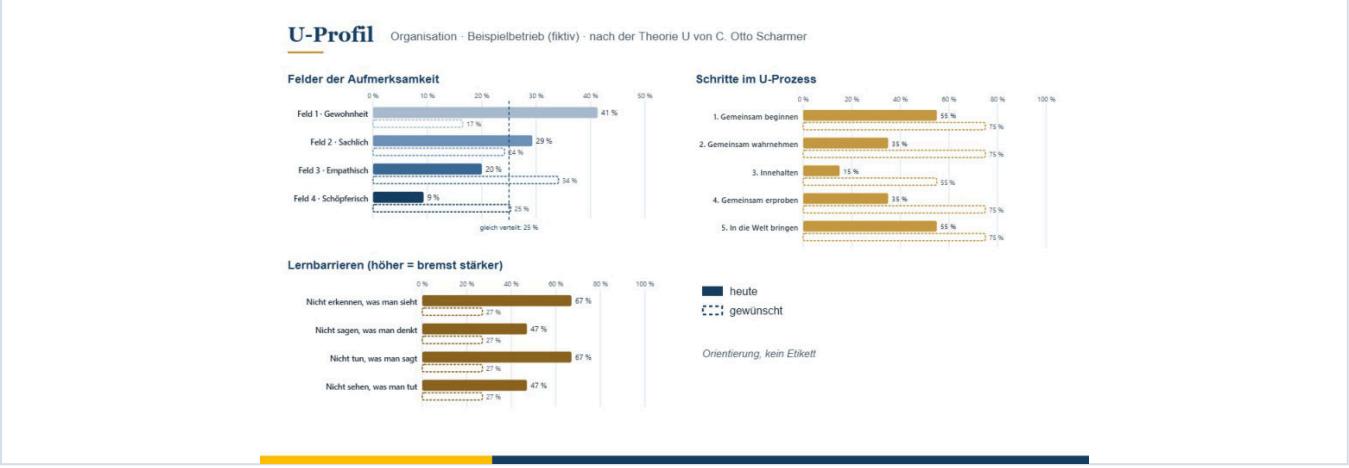
Personal U Profile: phone, systems and browsers

- Runs in every current browser, transmits nothing, needs no folder functions.
- On phones, tablets and in narrow windows the answer areas are 44 pixels high; in landscape the first answer is one swipe further down.
- Tested in emulated screen sizes with touch; not on real devices, in Safari on a real Mac or on real iPhones and iPads.

Personal U Profile: tips

- Describe yourself as you actually are; how you would like to be belongs in the desired picture.
- Habit is no flaw: it saves energy and only becomes a problem when it is the only mode.
- Typical under pressure: pausing goes first – just when it would matter most.
- Values and attention together: see the Values–U Compass (chapter ‘Values–U Compass’).
- Put two points in time, or self-image and presumed outside view, side by side with “Combine several results”.

U Profile Organisation



U Profile Organisation: purpose and use

The U Profile Organisation is based on Theory U by C. Otto Scharmer: the quality of results depends on the quality of the attention from which people act. Scharmer distinguishes four fields – habitual (you confirm what you already know), factual (you strive for the best argument), empathic (you see through the eyes of others) and generative (together you sense what wants to emerge).

Part 1 covers the fields in eight everyday situations: listening, meetings, deciding and leading, organising and coordinating, customers and partners, learning, disruptions and crises, and new ideas and innovation. Part 2 asks about the five steps of the U process – co-initiating, co-sensing, presencing (pausing), co-creating and performing. Part 3 asks about four learning barriers: not recognising what you see; not saying what you think; not doing what you say; not seeing what you do.

The result is a snapshot from your point of view – orientation, not a label. The questionnaire is a trial version and not scientifically validated. I use Theory U as a reflection and conversation model, not a diagnostic instrument.

It is experimental: on the website under Experimental, as a single HTML file and in the suite toolbox under People and coaching; it saves `.json` files. More in the post The U profile: questionnaires on Theory U.

U Profile Organisation: step by step

1. Open the questionnaire on the website, as a file, in the suite or from the 8EM Modeller; there is no separate help button.
2. If you like, enter the unit, such as sales or a project team.
3. Under "Scope", choose the detailed version (96 statements, about 15 minutes) or the short version (50 statements, about 8 minutes).
4. If you wish, tick "Today under pressure" and the desired picture; you then rate fields, capabilities and learning barriers twice.
5. Click "Start the questionnaire" and, in "Part 1 · Fields of attention", answer spontaneously from "not at all" to "fully". Pointing or tapping explains the levels with an example.
6. "Part 2 · Capabilities in the U process" asks "How do you approach something new?", "Part 3 · Learning barriers" asks "What slows learning down?" – the more you agree, the more the barrier slows you down.
7. Move on with "Next" and "Back"; open statements are marked and you are asked before continuing.
8. Pause with "Save interim state" and carry on later with "Open saved state".
9. On the last page, click "Evaluate".
10. Keep the result with "Save result as file" or "Print / as PDF" – or use "Hand result over to the 8EM Modeller" if you opened it from there.

U Profile Organisation: functions and buttons

Start page

- Field for the unit you are looking at – optional.
- "Scope" – detailed (each field with 16 statements) or short version.
- Tick box "Today under pressure" – how things actually are in crises; according to Scharmer, attention then easily slips back into habit.
- Tick box for the desired picture.
- "Start the questionnaire", "Open saved state" and "View example result" (an entirely fictitious project team).
- "Combine several results" – open at least two saved results together (Ctrl or Shift key) or drag them onto the start page; "View example of a combination" shows four entirely fictitious individual results.

Question pages

- Scale "not at all", "hardly", "rather not", "rather yes", "largely", "fully", in rows for today, "Desired" and "Today under pressure" as chosen.
- Explanation by pointing, tapping or keyboard; `Esc` closes it. For the learning barriers a low desired value means: this obstacle should slow you down as little as possible.
- "Back" (first page: "To the introduction"), "Next" (last page: "Evaluate") and "Save interim state".

Result page

- With the desired picture and "Today under pressure", the charts show up to three bars side by side in each row: today as a filled bar, desired as a dashed outline, under pressure hatched – in print as well.
- Only for combined results: at the top the box "Combined result of … questionnaires" with the list of individual results (×), "Show names", "Add further results" and the reasons under "Not taken over:"; further down the

section “Differences in the group” with “Today”, “Desired” or “Today under pressure”, the legend (a click highlights a profile) and a chart and table (mean, spread) for each building block. “Change answers” is not offered then.
- “The four fields of attention” – interpretation, shares (evenly distributed would be 25 per cent) and, with the desired picture, the gaps in percentage points.
- “Where does which field show itself?” – the “Strongest field today” for each situation.
- Cards for each field with strengths, the risk when it becomes the only mode, a rough reference to the colours of Spiral Dynamics (my own interpretation) and a question.
- “Capabilities in the U process” – agreement in per cent per step; if they differ clearly, a suggestion for the weakest.
- “Learning barriers” – if one stands out, the result names what can help; with the desired picture, also the greatest leverage.
- With “Today under pressure”, the shift for each part.
- “Print / as PDF”, “Save result as file”, “Change answers” and “Start over”.
- The build version button at the top right jumps to licence and disclaimer.

U Profile Organisation: saving, export and handovers

Interim state and result are `.json` files; the name starts with `u-profil-organisation` (interim state: `zwischenstand-`) and ends with the date. Chrome and Edge show the save dialog, Safari and Firefox use the browser download (chapter ‘How do I use a tool?’). Only organisation files of the U profile open; unsaved answers trigger a warning when you leave. Printing leaves out buttons and questions.

Combining: each person saves their result; “Combine several results” opens all files together. All values are means of the individual results; “Differences in the group” shows for each building block (fields, U steps, learning barriers) the lowest and highest value and the individual profiles on top of each other, and the box at the top names where respondents disagree most. Files that do not fit – an interim state, a result for a person instead of an organisation or vice versa, another questionnaire, incomplete answers, the same file twice or an older version – are listed under “Not taken over:” with the reason (on screen only).

The detailed version is evaluated only if all files have it; the desired picture and “Today under pressure” only if all contain them. By default the individual results appear as “Person 1”, “Person 2” …; “Show names” shows the name for persons and the file name for organisations – this also applies to printing and the group file (name with `-gruppe-`). The group file contains the individual results; when it is opened, spread and individual profiles are back, and it can be combined with further results. Older versions of the questionnaire open it with an approximate group result (each statement rounded to whole levels), without the spread.

In the 8EM Modeller you open the questionnaire for the whole organisation, organisational units and locations via the button for Theory U; it appears in a new window with the unit pre-filled. The handover sends the result to that window on the same device; only the shares of the four fields are taken over, and the Modeller names the strongest. Otherwise import the result file there; interim states are not accepted.

In the suite, the questionnaire saves and opens via the suite's dialog (chapter ‘Tools in the suite: working together’).

U Profile Organisation: phone, systems and browsers

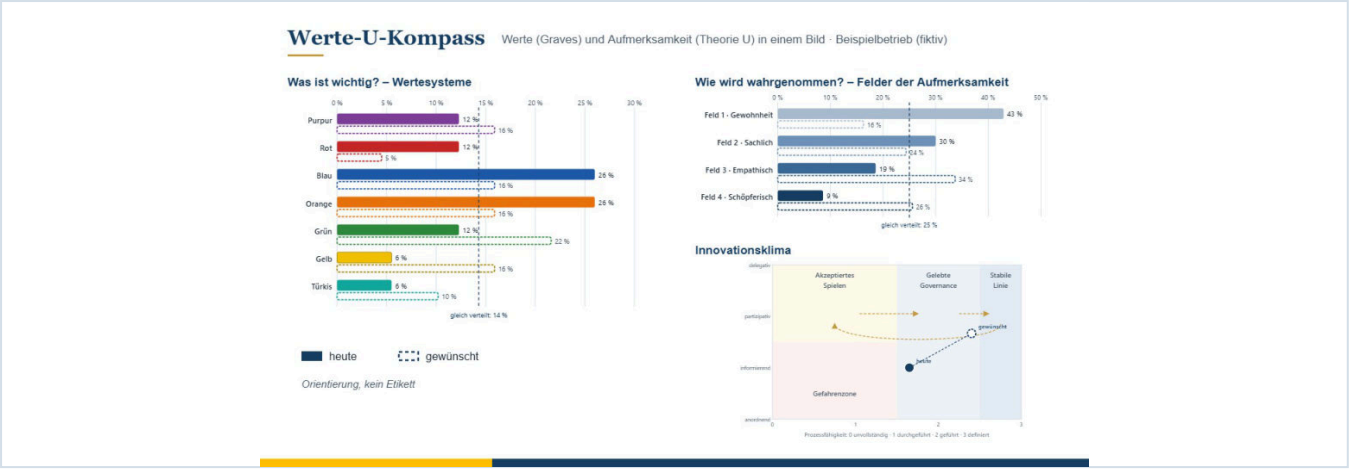
- Runs in every current browser, transmits nothing, needs no folder functions.
- On phones, tablets and in narrow windows the answer areas are 44 pixels high; explanations open by tapping.
- Tested in emulated screen sizes with touch; not on real devices, in Safari on a real Mac or on real iPhones and iPads.

U Profile Organisation: tips

- Habit makes sense for the familiar and only becomes a problem when it is the only mode.
- For capabilities and learning barriers, the differences between them matter more than the single figure.
- Under pressure, pausing often goes first – plan time for joint reflection into important projects.
- Values and attention together: see the Values–U Compass (chapter ‘Values–U Compass’).

- To compare several managers, each saves their result; “Combine several results” puts the profiles on top of each other – the debate about the differences is the real gain.

Values–U Compass



Values–U Compass: purpose and use

The Values–U Compass combines two models in one questionnaire: the value systems according to Clare W. Graves, known as Spiral Dynamics, and the fields of attention according to Theory U by C. Otto Scharmer. Together they answer the question: is what matters to us actually lived? It also shows the next development step and whether its conditions are in place.

You look at an organisation – the whole company or one area – or at yourself, for example to prepare for coaching. For organisations, the innovation climate is added, based on the model from my master's thesis at the Europäische Fernhochschule Hamburg. Several results – for the same organisation or from several people – can be combined: with the mean, the spread and the individual profiles on top of each other, without names if you wish.

The result is a snapshot – orientation, not a label. The compass is a trial version and not scientifically validated. I use the values model according to Graves and Theory U each as a reflection and conversation model, not a diagnostic instrument. Connecting the two is my own interpretation and marked as such. For individuals: not a psychological test and no substitute for psychotherapy or medical treatment.

It is experimental: on the website under Experimental, as a single HTML file and in the suite toolbox under People and coaching; it saves `.json` files. More in the post The values U compass: two models, one picture.

Values–U Compass: step by step

1. Open the compass on the website, as a file, in the suite or from the 8EM Modeller; there is no separate help button.
2. Under “Who are you looking at?”, choose an organisation or yourself; the field below asks for the unit or your name (optional).
3. Under “Scope”, choose “Standard” – 146 statements for organisations (about 21 to 27 minutes), 134 for individuals – or the detailed version with twice as many per colour and field.
4. Under “Additional perspectives (optional)”, choose the desired picture and “Today under pressure”; both apply to questions on behaviour only.
5. Click “Start the questionnaire”. Up to seven parts follow: values, attention, U steps, learning barriers or inner voices, situation and change, warning signs and – for organisations – innovation climate.
6. Answer spontaneously (pointing or tapping explains the levels), move on with “Next” and “Back”, pause with “Save interim state” and carry on with “Open saved state”.
7. On the last page, click “Evaluate”: a short summary first, then the numbered sections.
8. Keep the result with “Save result as file” or “Print / as PDF”.
9. For a group, each person saves their result; then choose “Combine several results” and select all files together – or drag them onto the start page with the mouse. The section “Differences in the group” shows the mean, the spread and the individual profiles for every building block; “Add further results” and × change the selection.

10. If opened from the 8EM Modeller: “Hand result over to the 8EM Modeller”.

Values–U Compass: functions and buttons

Start page

- “Who are you looking at?” – organisation or yourself; determines questions, examples and analysis.
- “Scope” – “Standard” or detailed.
- “Additional perspectives (optional)” – desired picture and “Today under pressure”.
- “Start the questionnaire”, “Open saved state”, “View example result” (for the chosen perspective), “Combine several results” and “View example of a combination” (four entirely fictitious individual results). Result files can also be dragged onto the start page with the mouse.

Question pages

- Scale from “not at all” to “fully” (organisation) or “very much” (individual) in rows for today, “Desired” and “Today under pressure”; `Esc` closes explanations.
- “Back” (first page: “To the introduction”), “Next” (last page: “Evaluate”) and “Save interim state”.

Result page

- With the desired picture and “Today under pressure”, the charts show up to three bars side by side in each row: today as a filled bar, desired as a dashed outline, under pressure hatched.
- “1. What matters? – Values Profile” – seven value systems and “I and we”.
- “2. How do we perceive? – Fields of attention”.
- “3. Do values and attention fit together?” – expected versus lived fields, conflicts of interest and “Which fields fit which colours (model assumption)”.
- “4. The situation: what kind of complexity?” – dynamic, social or emergent, each with a suitable approach.
- “5. Development path” – starting point, next step, help from Theory U; “Are the prerequisites for change in place?” checks six conditions according to Don Beck (in place from 60 per cent).
- “6. Steps in the U process and what holds us back” – U steps, obstacles, warning signs.
- “7. Innovation climate” (organisations only) – classification along both axes, as in the model from my master's thesis: process capability (0 to 3, boundary at 1.5 between “performed” and “managed”) and leadership style (1 directive to 4 delegating, boundary at the participative style, 3.0). Top left “Accepted play”, bottom left “Danger zone”, top right “Stable line function” (leadership involves people and allows room again), bottom right “Lived governance” (leadership informs, advises and decides). The result gives process capability and leadership style as numbers, the next step and the ideal path play → governance → line → play; boundary values count towards the right or upper field. If none of the four statements on leadership style is answered (or all with “not at all”), the compass does not assign a quadrant: it names only the side according to process capability, draws a dashed line “no leadership style” and says that the quadrant cannot be determined without a leadership style; in a group, the leadership style is based on the individual results that contain it.
- Only for combined results: at the top the box “Combined result from … questionnaires” with the list of individual results (×), “Show names”, “Add further results”, the reasons under “Not included:” and “To mean, spread and individual profiles”; before the questions the section “Differences in the group” with “Today”/“Desired”/“Today under pressure”, the legend (a click highlights one profile) and a chart and table (mean, spread) for every building block. In the innovation climate the individual results appear as small numbered dots.
- “Questions for the conversation”, plus “Print / as PDF”, “Save result as file”, “Change answers” (not for groups) and “Start over”.
- The build version button at the top right jumps to licence and disclaimer.

Values–U Compass: saving, export and handovers

Interim state and result are `.json` files; the name contains `werte-u-kompass`, the perspective and the date, `gruppe` for a group result and `zwischenstand-` in front for an interim state. Chrome and Edge show the save dialog, Safari and Firefox use the browser download (chapter ‘How do I use a tool?’).

Result files from before 17 November 2026 still open. The compass then classifies the innovation climate anew according to the model of the master's thesis; if the classification differs, a note names the previous and the new one for each perspective. The answers remain unchanged.

Only individual results with the same perspective can be combined; select at least two files together (hold down Ctrl or Shift) or drag them onto the start page. All sections show the mean of the individual results; “Differences in the group” shows, for every building block (values, fields, U steps, learning barriers or inner voices, situation, prerequisites, conflicts, warning signs, processes and leadership), the lowest and highest value and the individual profiles on top of each other; the box at the top says where respondents disagree most. A mean hides differences – hence both. The detailed version is evaluated only if all files have it; desired picture and “Today under pressure” count only if all files contain them – the box at the top says so in each case.

Files that do not fit are not included; the compass lists them under “Not included:” with the reason: interim state, other perspective (the majority applies), result of a different questionnaire, incomplete answers, the same file twice, a group file from the earlier version without individual results, or a file it cannot read. This message appears on screen only, not in the printout.

By default the individual results appear anonymously as “Person 1”, “Person 2” …; “Show names” shows the entered name for individuals and the file name for organisations. The setting also applies to the printout and the saved group file: saved anonymously, it contains no names, units or dates of the individuals – “Show names” can then no longer be switched on when it is opened. The group file contains the individual results; when it is opened, the spread and the individual profiles are back, and it can be combined with further results. Group files from the version before 17 November 2026 contain only the means. Older versions of the compass still open a new group file – then without the spread.

In the 8EM Modeller you open the compass for the organisation, units and locations, or for employees and unit heads as an individual; perspective and name are pre-selected, and only the shares of values and fields are taken over. Without a handover, import the result file; interim states are not accepted.

In the suite, the compass saves and opens via the suite's dialog (chapter ‘Tools in the suite: working together’). To combine results there, select several files in the storage dialog with Ctrl + click (a range with Shift + click). Saving, reopening and combining two files from the storage are tested.

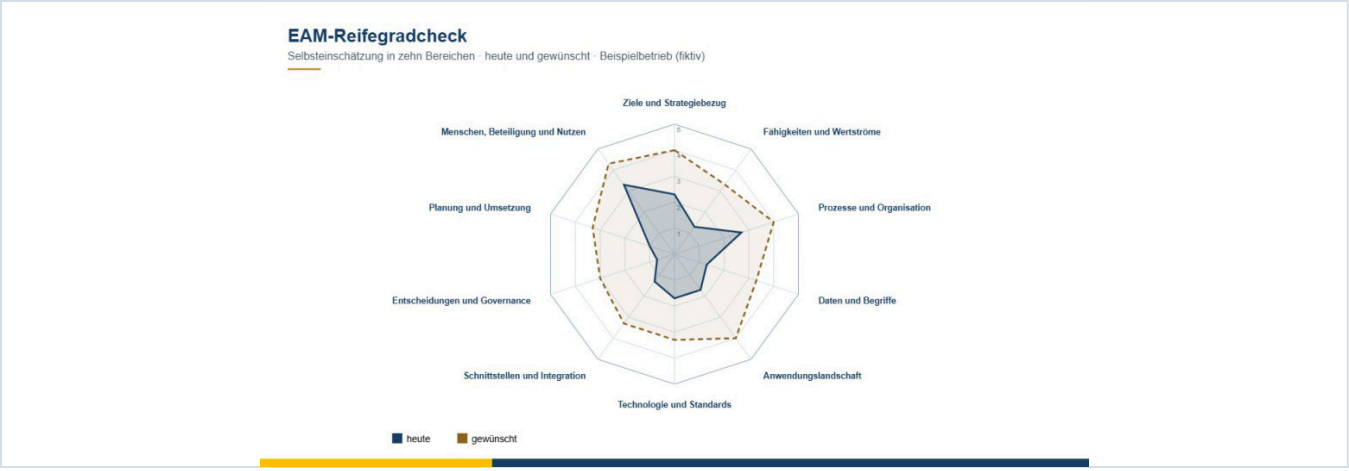
Values–U Compass: phone, systems and browsers

- Runs in every current browser, transmits nothing (not even when combining) and needs no folder functions. Dragging with the mouse works on a computer only; on a phone, choose the files via “Combine several results”.
- On phones, tablets and in narrow windows the answer areas are 44 pixels high; explanations open by tapping.
- Tested in emulated screen sizes with touch, in English too; not on real devices, in Safari on a real Mac or on real iPhones and iPads.
- For the handover the browser must allow the new window.

Values–U Compass: tips

- Read fit, development path and innovation climate as food for thought; the impulse is an offer, not an obligation.
- If fewer than three of the six conditions are in place, create them before a larger development step.
- In organisations, clear warning signs mark the danger zone of the innovation model – look closely early.
- If the point in the innovation climate lies close to a boundary (process capability around 1.5, leadership style around 3.0), discuss both neighbouring fields.

EAM maturity check



EAM maturity check: purpose and use

How well is architecture management set up in your company? The EAM maturity check is a self-assessment in ten areas, today and desired. Enterprise architecture management (EAM) connects strategy, processes, organisation and IT so that change succeeds. The check shows where you stand, where you want to go and where the next step brings the most – an honest assessment before introducing tools.

The areas follow my 8-Level Model: goals and strategic alignment, capabilities and value streams, processes and organisation, data and terms, application landscape, technology and standards, interfaces and integration, decisions and governance, planning and implementation, and people, participation and benefit. There are three statements per area, one in the short version. The check suits a small group of senior management, IT and business departments: where the assessments diverge, the real conversation begins.

The check is a self-assessment for orientation, not an audit and not a certification, and has not been scientifically validated; it shows your assessment, not a measurement. The levels follow the usual structure of maturity models; statements and recommendations are my own wording.

It is experimental: on the website under Experimental, as a single HTML file and in the suite toolbox under Business Support Tools; it saves `.json` files. More in the post Architecture management: maturity check and IT survey.

EAM maturity check: step by step

1. Open the check on the website, as a file, in the suite or from the 8EM Modeller; there is no separate help button.
2. If you like, enter the company or department; it appears on the result and in the file name.
3. Under “Scope”, choose the detailed version (30 statements, about 10 minutes) or the short version (10 statements, about 4 minutes).
4. Leave the pre-selected tick box for the desired picture on if the result is to show the gap between today and desired.
5. Click “Start the check”. Each page is one area with a short description; at the top you see how many statements are answered.
6. For each statement, assess how far it applies today and how it should be – from 0 “not at all” to 5 “complete”.
7. Move on with “Next” and “Back” (first page: “To the home page”). Open statements are marked and you are asked; they do not count in the analysis.
8. Pause with “Save interim state” and carry on later with “Open saved state”.
9. On the last page, click “Show result”.
10. Keep the result with “Save result as file” or “Print / as PDF”.
11. Take it into the 8EM Modeller: with “Hand result over to the 8EM Modeller” if you opened the check from there, otherwise via Import › EAM maturity check.

EAM maturity check: functions and buttons

Start page

- Company or department – optional.
- “Scope” – detailed (three statements per area) or short version (one).
- Tick box for the desired picture – a second row “Desired” under each statement.
- “Start the check”, “Open saved state” and “View example result” (an entirely fictitious sample company).

Question pages

- Rows for today and “Desired” with six levels from 0 to 5, each with number and word.
- “Back” (first page: “To the home page”), “Next” (last page: “Show result”) and “Save interim state”.

Result page

- Average across all areas (0 to 5) with classification.
- Radar chart with today as a filled area and desired as a dashed line.
- “The areas in detail” – today, desired, “Gap” and “Classification” from “hardly present” through “first approaches”, “partly established”, “mostly established” and “largely established” to “lived and continuously improved”.
- “Where the next step brings the most” – the three areas with the largest gap to the desired picture (without it, the three weakest), each with a recommendation for a first step.
- “Print / as PDF”, “Save result as file”, “Change answers” and “Start over” (asks if not yet saved).
- The build version button at the top right jumps to licence and disclaimer.

EAM maturity check: saving, export and handovers

Interim state and result are `.json` files; the name starts with `eam-reifegrad`, contains the name you entered and the date, and an interim state ends in `-zwischenstand`. Chrome and Edge show the save dialog, Safari and Firefox use the browser download (chapter ‘How do I use a tool?’). Only the check's own files open; unsaved answers trigger a warning when you leave. Printing leaves out buttons and questions.

In the 8EM Modeller you open the check from the EAM menu in a new window, with the organisation's name pre-filled. The handover sends the result to that window on the same device; without it, import the file via Import › EAM maturity check. The result appears in the EAM maturity report alongside indicators from the model, such as how many IT systems are already assessed. Interim states are not accepted; while the example is shown, the handover is hidden.

In the suite, the check saves and opens via the suite's dialog (chapter ‘Tools in the suite: working together’).

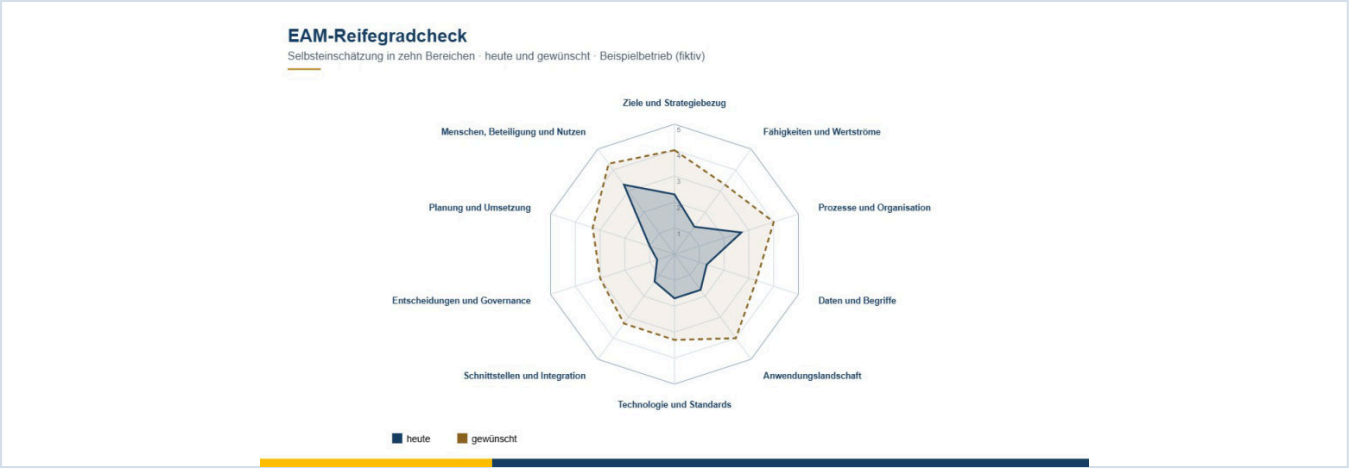
EAM maturity check: phone, systems and browsers

- Runs in every current browser, transmits nothing, needs no folder functions.
- On phones, tablets and in narrow windows the answer areas are 44 pixels high and the tick boxes larger; in landscape the first answer is one swipe further down.
- Tested in emulated screen sizes with touch; not on real devices, in Safari on a real Mac or on real iPhones and iPads.
- For the handover the browser must allow the new window; otherwise use the file route.

EAM maturity check: tips

- Let several people involved complete the check and discuss the differences – that brings the most.
- Keep the desired picture: only the gap shows where the greatest leverage lies.
- Take the recommendation on each card as a first step, for example agreeing five to ten architecture principles or setting up an interface catalogue.
- For the application landscape, start with an inventory of the IT systems, for example with the IT survey form (chapter ‘IT survey form’).

IT survey form



IT survey form: purpose and use

The IT survey form is a profile for IT systems – to be filled in by business departments and system owners. Each IT system has its own tab with profile, lifecycle, responsibility, use, data, operation and emergency, interfaces, costs and your assessment – "What do you trust the system to do?" – according to the same criteria as the application portfolio of the 8EM Modeller, plus in words the benefit, the risks and what should be done first. The form is a survey and self-assessment form, not a diagnostic instrument, and has not been scientifically validated; its introduction says so as well.

The details feed into the corporate model in the 8EM Modeller. Only the name of the system is mandatory; leave empty what you do not know – better an honest gap than an estimate without a basis. Please name people only as far as necessary for the responsibility.

The form is experimental (trial version 2026): on the website under Experimental, as a single HTML file and in the suite toolbox under Business Support Tools; it saves `.json` files. More in the post Architecture management: maturity check and IT survey.

IT survey form: step by step

1. Open the form on the website, as a file, in the suite or from the 8EM Modeller; there is no separate help button.
2. "View example" shows a completed form; "Start an empty form" takes you back to an empty one.
3. In the first tab, enter the name under "Name of the IT system" and fill in the profile.
4. In the lifecycle, enter one date per phase (DD.MM.YYYY or MM/YYYY); the form shows which phase follows from them today.
5. Fill in responsibility, use, data, and operation and emergency; separate several names, roles or departments with a semicolon.
6. Under "Interfaces", add one row per data exchange with " + Interface".
7. Enter known costs and, under "Your assessment", rate business value and technical condition from 1 to 5. Under "What do you trust the system to do?" write your opinion – explicitly as an opinion: "What benefit does it bring today – what works well?", "What risks does it carry?", "What is annoying or missing?", "What should be done first?" and "What is planned (switch, renewal, replacement)?".
8. For the next system, click " + another IT system".
9. Check the summary for each system under "Complete".
10. Pause at any time with "Save interim state" and open it later with "Open saved form".
11. Keep the finished form with "Save form as file" or "Print / as PDF".
12. Hand it over with "Hand over to the 8EM Modeller" if you opened it from there, or import the file in the Modeller via Import › IT survey form.

IT survey form: functions and buttons

Top and tabs

- “Open saved form” and “View example” (two entirely fictitious IT systems; “Start an empty form” discards them).
- One tab per IT system, named after it, and “ + another IT system”; “Remove this IT system from the form” appears once there are several, and asks first.

Fields per IT system

- “Profile” – “Name of the IT system” (mandatory), “What is it used for?”, “Type”, “Standardisation (in-house development or purchased solution)”, “Manufacturer or product”, “Version or release”, “Operation” and “Where does it run? (operating location or provider)”, with free text for “Other”.
- Lifecycle – “Idea created on”, “Project implemented by”, “introduced by”, “in operation until”, “Decommissioning planned by”, “decommissioned on” and “Current phase (only if it does not follow from the dates)”; unclear dates and a wrong order are flagged in red.
- Responsibility – “Functionally responsible”, “Technically responsible”, departments, “Service provider or manufacturer (company)”, “Contact person there”.
- “Use” – “Number of users”, “How important for the business?” (from “low” to business-critical), departments and supported processes.
- “Data” – managed and read-only data, “Personal data?”, “Special categories (e.g. health)?”, storage location.
- “Operation and emergency” – “Maximum tolerable downtime”, “Tolerable data loss”, emergency plan, backup, maintenance contract.

Interfaces, costs, assessment

- “Interfaces” – “Other IT system”, “Direction” (“sends to”, “receives from”, “both (= two interfaces)”), “Which data?”, “How?” (up to “manual (transferred by hand)”), “How often?” and status (“Idea”, “Project”, “Introduction”, “Operation”, “Decommissioning planned”, “decommissioned” – like the lifecycle in the 8EM Modeller); × removes the row.
- “Costs” – “Licences per year”, “Maintenance and support per year”, “Operation or hosting per year”, “One-off purchase or introduction”.
- “Business value” (five criteria) and “Technical condition” (six criteria), 1 = very weak to 5 = very good, – = not specified; above them “What do you trust the system to do?” (explicitly your opinion, not a measurement) and the text fields “What benefit does it bring today – what works well?”, “What risks does it carry?”, “What is annoying or missing?”, “What should be done first?” and “What is planned (switch, renewal, replacement)?”.

Complete

- Summary with key details, interfaces and assessed criteria; a missing name is marked in red.
- “Save form as file” (checks the names), “Save interim state”, “Print / as PDF” and, if opened from the 8EM Modeller, “Hand over to the 8EM Modeller”.

IT survey form: saving, export and handovers

The form is a `.json` file; the name starts with `it-erhebung`, contains the first two system names and the date, and an interim state ends in `-zwischenstand`. Chrome and Edge show the save dialog, Safari and Firefox use the browser download (chapter ‘How do I use a tool?’). Printing shows all tabs one below the other; unsaved details trigger a warning when you leave. Older versions of the form open new files but do not know the fields “What risks does it carry?” and “What should be done first?” – saving again there loses these two entries.

In the 8EM Modeller you open the form from the EAM menu in a new window. If an IT system is selected there, the form is pre-filled with its details; the assessment criteria come from the model. Saved forms, several at once, are imported via Import › IT survey form. Same-named IT systems are supplemented, new ones created, persons and roles looked up or created; missing interface partners become IT systems, costs become entries without a cost centre yet; your assessment in words – strengths, risks, weaknesses, “To do first” and plans – then appears in the note on the IT system's assessment. Undo reverses the whole import; interim states are not accepted.

In the suite, the form saves and opens via the suite's dialog (chapter ‘Tools in the suite: working together’).

IT survey form: phone, systems and browsers

- Runs in every current browser, transmits nothing, needs no folder functions.

- On phones, tablets and in narrow windows, tabs, buttons, input fields and rating buttons are at least 40 pixels high.
- Tested in emulated screen sizes with touch on the completed example; not on real devices, in Safari on a real Mac or on real iPhones and iPads.

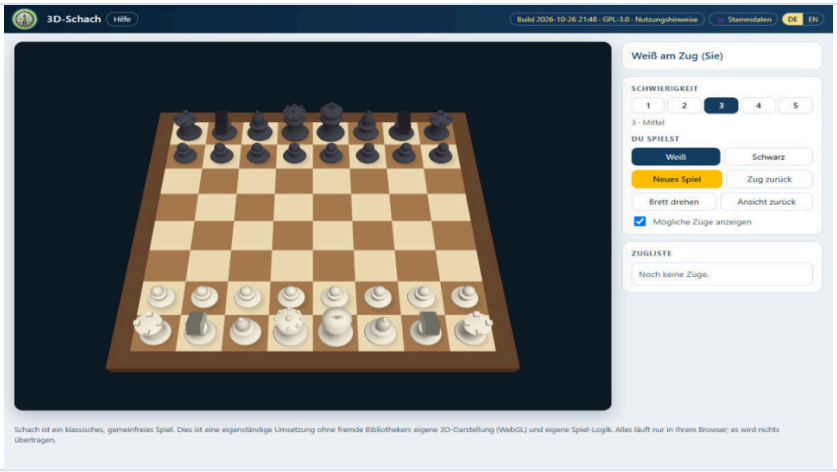
IT survey form: tips

- Manual transfers too – such as exporting a list and entering it elsewhere – are interfaces.
- For end dates (by or until), the month is enough: MM/YYYY then means the last day of that month.
- How mature architecture management is overall: see the EAM maturity check (chapter 'EAM maturity check').

Games

All games run only in the browser; nothing is transmitted. Stack the Blocks, 3D muncher, Space defence and Solitaire can be played with keyboard, mouse or finger – Stack the Blocks with the mouse via the buttons below the playing field, Solitaire also entirely without a mouse; Skat, Schafkopf and the environmental simulation game have finger-sized controls on the phone. The finger controls have been tested with touch in simulated phone sizes, not on real devices.

3D chess



3D chess: purpose and use

Chess against the computer on a three-dimensional board: its own 3D rendering (WebGL) with lit pieces, cast shadows and a freely rotatable camera. All the rules apply, including castling, en passant, promotion, checkmate and stalemate. Five difficulty levels, move hints, a move list in German notation and “Take back” make it a good game for practising; its own engine makes no claim to tournament strength.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category); it has no file format of its own and transmits nothing. More in the post 3D chess against the computer.

3D chess: how to play

1. Under “Difficulty” choose a level from 1 to 5, and under “You play” choose White or Black.
2. Click “New game”. The status line shows whose move it is.
3. Tap one of your pieces. The possible target squares are marked: a dot for a free square, a ring for a capture. A second click on the same piece cancels the selection.
4. Tap a marked square. The move appears in the “Move list”, then the computer replies.
5. To castle, move the king two squares to the side. When a pawn reaches the back rank, the “Promotion” window asks for queen, rook, bishop or knight.
6. If you have misjudged a move, “Take back” takes back your last move together with the reply.
7. The status line reports checkmate, stalemate or a draw (50-move rule, insufficient material, threefold repetition).

3D chess: controls and buttons

Control panel

- “Difficulty” 1 to 5 – 1 Beginner and 2 Easy make deliberate mistakes, 3 Medium looks a few half-moves ahead, 4 Advanced and 5 Hard calculate deeper and need time to think.
- “You play” – White or Black; “New game” – start a game.
- “Take back” – take back your move and the computer's reply.
- “Rotate board” – view from the other side; “Reset view” – standard view.
- “Show possible moves” – move hints on or off.

Board and keys

- Dragging with the mouse or your finger rotates the camera; the mouse wheel or two fingers zoom.
- “Help” or `F1` opens the help; `Esc` closes it or cancels a selection.

3D chess: phone, systems and browsers

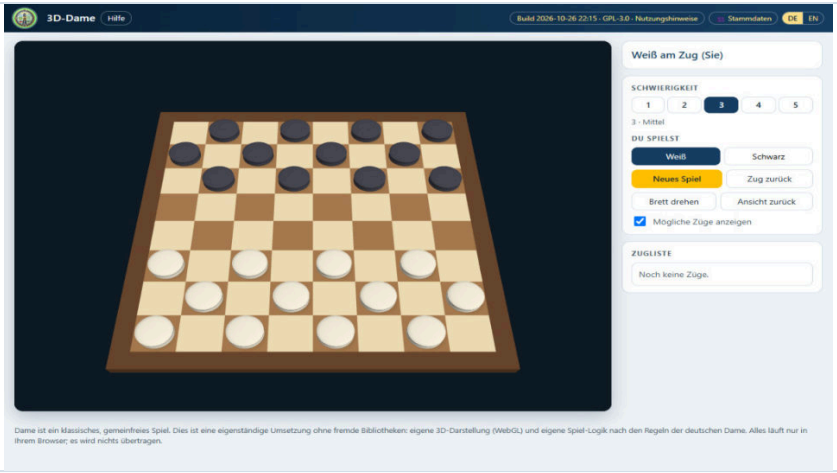
On phones and tablets a move takes two taps: piece, then target square. Swiping rotates the camera, two fingers zoom. The buttons are at least 44 pixels high and sit below the board on a phone. I tested this in simulated screen sizes with touch, not on real devices.

The game saves no files, so Chrome, Edge, Safari and Firefox behave the same (in general, see the chapter ‘Which operating system and which browser?’). Level, colour and move hints stay only in this browser on your device.

3D chess: tips

- Levels 1 and 2 are good for getting started.
- Leave “Show possible moves” on while practising – the rings show where you can capture.
- “Rotate board” shows the position from your opponent's side.

3D draughts



3D draughts: purpose and use

Draughts against the computer by German rules, on a three-dimensional board with its own 3D rendering (WebGL) and a freely rotatable camera. You play on the dark squares of an 8×8 board with twelve pieces each, with forced capture, backward and forward captures, multiple jumps and flying kings. Five difficulty levels, move hints, a move list and “Take back” make it a game for practising; its own engine makes no claim to tournament strength.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category); it has no file format of its own and transmits nothing. More in the post 3D draughts against the computer.

3D draughts: how to play

1. Under “Difficulty” choose a level from 1 to 5 and under “You play” White or Black; then “New game”.
2. Tap one of your pieces. The target squares are marked: a dot for a move, a ring for the landing square of a jump.
3. Pieces move one square diagonally forwards onto a free dark square.
4. Capturing is compulsory: then only pieces that can capture are selectable. Pieces capture forwards and backwards by jumping over an adjacent opponent onto the free square behind.
5. For a multiple jump, tap the target square; the game carries out the whole jump. Captured pieces are removed at the end of the move.
6. A piece that stays on the opponent's back row becomes a king. It flies any distance diagonally, jumps over exactly one opponent and lands on any free square behind it.

7. “Take back” takes back your last move together with the computer's reply.

3D draughts: controls and buttons

Control panel

- “Difficulty” 1 to 5 – 1 Beginner and 2 Easy make deliberate mistakes, 3 Medium looks a few moves ahead, 4 Advanced and 5 Hard calculate deeper.
- “You play” – White or Black; “New game” – start a game.
- “Take back”, “Rotate board”, “Reset view” – as in 3D chess.
- “Show possible moves” – move hints on or off; “Move list” – all moves.

Board and keys

- Dragging with the mouse or a finger rotates the camera; the mouse wheel or two fingers zoom.
- “Help” or `F1` – help with all the rules; `Esc` closes it.

3D draughts: phone, systems and browsers

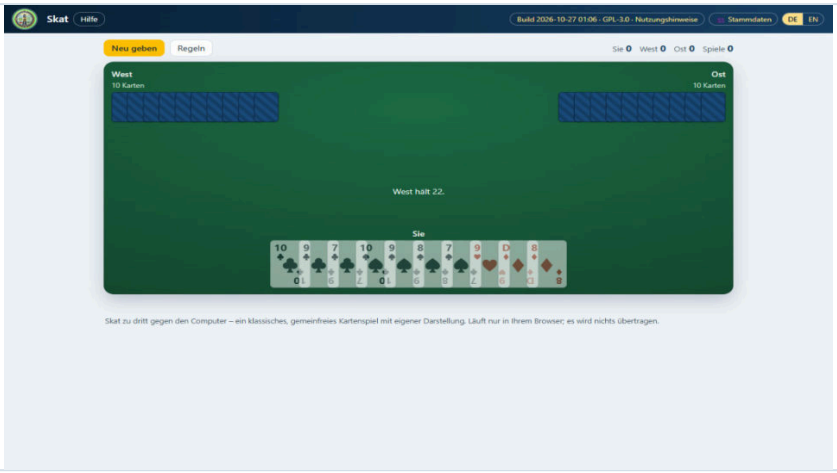
On phones and tablets you move with two taps: piece, then target square; swiping rotates the camera. The buttons are at least 44 pixels high and sit below the board on a phone. I tested this in simulated screen sizes with touch, not on real devices.

The game saves no files and behaves the same in every browser. Level, colour and move hints stay in this browser.

3D draughts: tips

- Forced capture compels you to think ahead.
- If only some of your pieces can be selected, a capture is required; the status line says so.
- Start with level 1 or 2 and leave “Show possible moves” on.

Skat



Skat: purpose and use

Skat for three against the computer – the classic German card game. You play against West and East with full bidding, picking up and discarding the skat or a hand game, and the game types Grand, suit game, Null and Null ouvert; in a hand game you can announce Schneider, Schwarz or ouvert for Grand and suit games. Trump order, following rules, point counting (120 points) and scoring with matadors, Schneider, Schwarz, announcements and overbidding follow the International Skat Rules – Schneider and Schwarz also count when the declarer himself ends up Schneider or Schwarz. Permitted cards are highlighted. The opponents play by rules of thumb.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category); it has no file format of its own and transmits nothing. More in the post Skat for three against the computer.

Skat: how to play

1. The cards are dealt on opening: ten each, two face down in the skat. Your hand lies at the bottom, sorted by trump.
2. Bidding: bid with the button showing the next value (for example 18) or drop out with “Pass”; as the listener answer yes or “Pass”.
3. As declarer, choose “Pick up the skat” or “Play hand”.
4. After picking up, click two cards and then the discard button, which counts your choice.
5. Announce “Grand”, one of the suit games clubs, spades, hearts, diamonds, “Null (23)” or “Null ouvert (46)” (as a hand game 35 or 59). A Null game below your bid is greyed out.
6. Only in a hand game with Grand or a suit game: choose “No announcement”, “Schneider announced”, “Schwarz announced” or “Ouvert (open)”.
7. Click a card to play it. You follow suit; whoever cannot trumps or sheds a card.
8. After the last trick the result appears – at the top the line with game, points, Schneider/Schwarz and the number of levels, below it won or lost with the game value; the score at the top counts you, West and East. “Deal again” starts the next round.

Skat: controls and buttons

Header and table

- “Deal again” – new round (key `N`).
- “Rules” – rules and operation, as are “Help”, `F1` or `H`; `Esc` closes the window.
- Buttons in the middle of the table, by phase: bid, yes, “Pass”, “Pick up the skat”, “Play hand”, discard, “Grand”, the four suit games, “Null (…)”, “Null ouvert (…)”; in a hand game then “No announcement”, “Schneider announced”, “Schwarz announced”, “Ouvert (open)”.

Scoring in brief (International Skat Rules 2.5 and 3.6)

- Grand: only the four jacks are trumps (24). Suit game: jacks and the chosen suit (♦ 9, ♥ 10, ♠ 11, ♣ 12). Null: no trumps, no trick allowed (23, hand 35, Null ouvert 46, Null ouvert hand 59).
- The declarer wins with 61 points; the two skat cards count for him, in a hand game too.
- Schneider is the side with 30 points or fewer, Schwarz the side without a trick – for both sides.
- Game value = base value × (matadors + 1 + one level each for hand, Schneider, Schneider announced, Schwarz, Schwarz announced, ouvert). Won, it counts for you; every lost game is debited twice the same value. Example: diamonds without three, the declarer takes no trick: (3 + 1 + Schneider + Schwarz) × 9 = 54, lost −108.
- If the game value does not cover the bid, the game is overbid and lost; it is scored as the base value multiplied until it reaches the bid, twice.

Skat: phone, systems and browsers

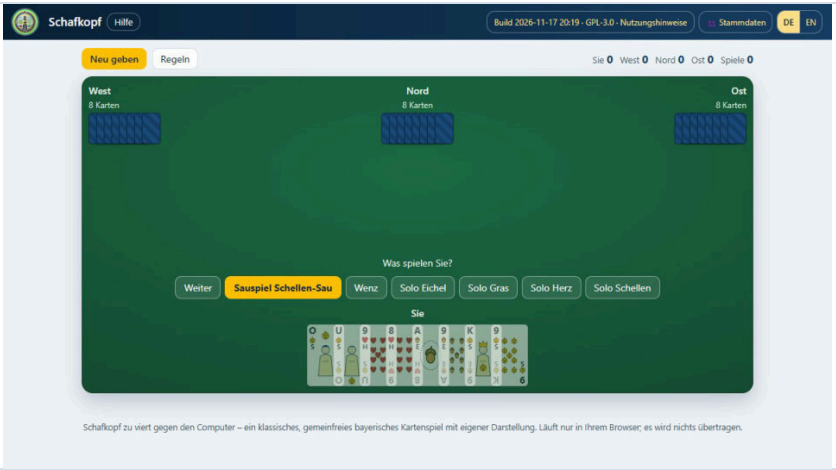
On a phone your hand always lies in one row; bidding and announcement buttons, “Deal again” and “Rules” are at least 44 pixels high and thus finger-sized. In landscape, opponents and trick are on the left, buttons and hand on the right. I tested this in simulated phone sizes with touch, also with Safari's browser engine, not on real devices.

The game saves no files; the score stays only in this browser on your device.

Skat: tips

- Bid only as high as your game value safely covers.
- The base values are always under “Rules”.
- Highlighted cards show what you may play; `N` deals again without the mouse.

Schafkopf



Schafkopf: purpose and use

Schafkopf for four against the computer – the Bavarian card game with 32 long cards. You sit with West, North and East and play a Sauspiel, a Wenz or a suit solo, with the hidden partner search via the called ace and full scoring. The cards show the Bavarian pack: acorns, leaves, hearts and bells with ace (Sau), ten, king, Ober, Unter, nine, eight and seven in the narrow, tall long-card format, drawn by ourselves; top left you see the value, the suit sign and the initial of the suit (A, L, H, B in the English interface). If you are used to the French design, switch under “Rules”. Permitted cards are highlighted; the opponents play by rules of thumb.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category); it has no file format of its own and transmits nothing. More in the post Schafkopf for four against the computer.

Schafkopf: how to play

1. The cards are dealt on opening: eight each. Your hand lies at the bottom, sorted by trump.
2. Announcements go round in turn: choose a game or pass. A higher game (solo, Wenz) beats the Sauspiel; if everyone passes, the cards are dealt again.
3. In a Sauspiel you call the ace of a suit (not hearts) of which you hold a card but not the ace. Its owner plays with you and only reveals himself when that suit is played.
4. In the “Wenz” or a solo in acorns, leaves, hearts or bells you play alone against three.
5. Click a card to play it. You follow suit; whoever cannot trumps or sheds a card.
6. After the last trick the result appears; the score at the top counts all four. “Deal again” starts the next round.

Schafkopf: controls and buttons

Header and table

- “Deal again” – new round (key `N`).
- “Rules” – rules and operation, as are “Help”, `F1` or `H`; `Esc` closes the window.
- Announcement in the middle: pass, a Sauspiel on each ace you may call (for example “Sauspiel Acorns ace”), “Wenz” and a solo in each suit (for example “Solo Hearts”).
- At the top of “Rules”, “Card design”: “Bavarian pack – Acorns, Leaves, Hearts, Bells” (default) or “French pack – ♣ ♠ ♥ ♦”.

The Bavarian pack

- Ober: suit sign at the top above the figure; Unter: suit sign at the bottom; king: with a crown; ace: one large suit sign in the middle; nine, eight, seven and ten: that many suit signs.
- Every corner shows value, suit sign and letter – the colour is never the only cue.

Trumps and scoring

- Sauspiel and solo: Ober (acorns, leaves, hearts, bells), then the Unter, then the trump suit (A, 10, K, 9, 8, 7); in a Sauspiel hearts is trumps. Wenz: only the four Unter.

- Points: ace 11, ten 10, king 4, Ober 3, Unter 2. The declarer's team wins with 61.
- Base value: Sauspiel 20, solo and Wenz 50. Schneider and Schwarz +10 each, Laufende from three upwards +10 each. In a solo each opponent pays separately.

Schafkopf: phone, systems and browsers

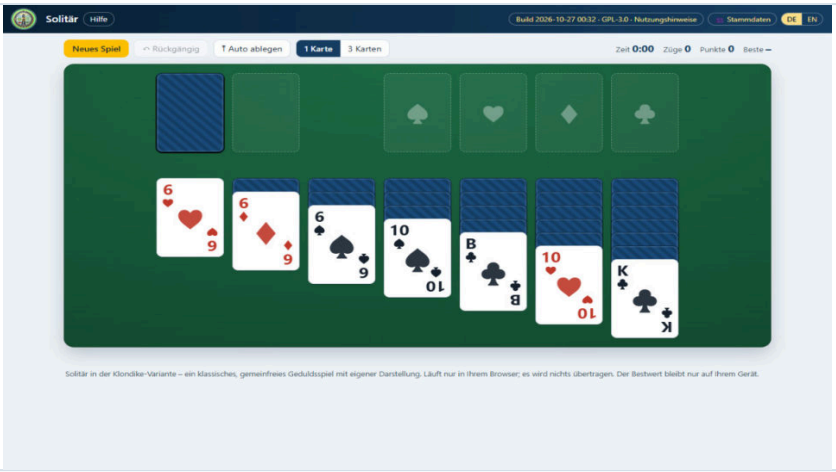
On a phone all eight cards lie in one row (Bavarian pack: 44 × 73 pixels at 375 pixels width). Announcements with many options appear as a three-column grid; all buttons are at least 44 pixels high and thus finger-sized. In landscape, opponents and trick are on the left, buttons and hand on the right. I tested this in simulated phone sizes with touch, also with Safari's browser engine, not on real devices.

The game saves no files; the score stays only in this browser on your device. The browser only remembers the chosen card design once you switch.

Schafkopf: tips

- Only when the called suit is played does everyone know who plays together.
- Laufende count from three upwards.
- The full rules are always under “Rules”.

Solitaire



Solitaire: purpose and use

Solitaire in the classic Klondike variant – the quiet round for a short break, without registration and without advertising. The aim is to bring all 52 cards, sorted by suit from ace to king, onto the four foundations at the top right. You move cards with the mouse or your finger, whole matching sequences together; a double-click moves a card to the foundations automatically. Every move also works entirely with the keyboard. Time, moves, points and best score are counted.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category); it has no file format of its own and transmits nothing. More in the post Solitaire – the classic Patience in your browser.

Solitaire: how to play

1. Choose “1 card” or “3 cards” – that is how many a click on the stock reveals – and click “New game”.
2. Drag a face-up card onto another column or a foundation; cards lying on top of each other in sequence come along. The target card lights up when the move is allowed.
3. In the seven columns you build downwards in alternating colour: red on black, black on red. An empty column takes only a king. Face-down cards turn over as soon as they lie on top.
4. You fill the foundations by suit upwards from ace to king. A double-click sends a card straight to the matching foundation.
5. If you are stuck, click the stock at the top left. When it is empty, a click puts the cards back.
6. Towards the end, “⤒ Auto to foundations” clears away everything that already fits. When all cards are on the foundations, “Won!” appears.

Solitaire: controls and buttons

Button bar

- “New game” – shuffles and deals again.
- “↶ Undo” – takes moves back, also with `Ctrl` + `Z`.
- “⤒ Auto to foundations” – puts everything possible onto the foundations.
- “1 card” / “3 cards” – number of cards revealed per click.
- Displays for time, “Moves”, “Points” and best score.

Mouse, finger and keys

- Dragging moves a card or sequence; a double-click moves it to the foundations automatically.
- A click on the stock reveals cards or puts them back.
- “Help”, `F1` or `H` – help with the rules and all keys.

Entirely with the keyboard

- A golden frame shows the selected pile; below the table you read what lies there. It appears with the first arrow or number key or when you `Tab` to the table; mouse or finger hide it.
- `←` `→` choose the pile, `↑` `↓` switch between the top row (stock, waste, foundations) and the seven columns; within a column `↑` chooses the face-up card from which several cards move together. `1` … `7` jump to a column.
- `Enter` or `Space` picks up the card, a second `Enter` on the target pile places it (on the stock: draw); if the move is not allowed, “This move is not allowed.” appears below. `Esc` cancels the selection.
- `D` draws, `F` moves the selected card to the matching foundation, `A` moves everything that fits, `U` or `Ctrl` + `Z` undoes, `N` starts a new game.

Solitaire: phone, systems and browsers

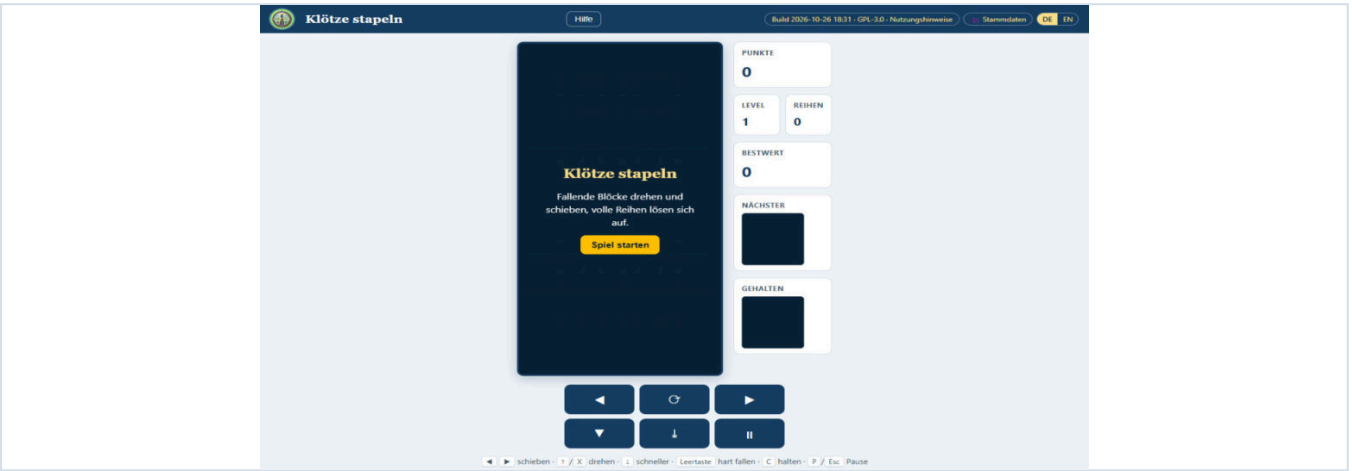
On phones and tablets you drag the cards with your finger; a tap on the stock reveals cards. The button bar is at least 44 pixels high. I tested this in simulated screen sizes with touch, not on real devices.

The game saves no files and behaves the same in every browser. The chosen variant and best score stay only in this browser on your device; they are stored only once something about them changes.

Solitaire: tips

- The best score is kept per variant – “1 card” and “3 cards” count separately.
- A double-click saves dragging cards to the foundations.
- An empty column takes only a king – bear that in mind before you clear a column completely.
- With “↶ Undo” you can try a different path.

Stack the Blocks



Stack the Blocks: purpose and use

A classic stacking game for a short break: blocks made of four cells fall into the field. You rotate and slide them so that a row becomes completely full – then it clears and scores points. The more rows you clear, the higher the level and the faster the blocks fall, until the field is full. There is also a preview of the next block, a hold function and a best score.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category); it has no file format of its own and transmits nothing. More in the post Stack the blocks – the classic for in between.

Stack the Blocks: how to play

1. Click “Start game”.
2. Slide the block with the left and right arrow keys; rotate it clockwise with the up arrow or `X`, anticlockwise with `Y`.
3. The faint outline shows where the block will land.
4. The down arrow makes it fall faster (one point per cell), the space bar drops it hard (two points per cell).
5. If a block does not fit right now, put it aside with `C` or Shift and use it later – once per block. It then appears under “Held”; under “Next” you see the following block.
6. “Points”, “Level”, “Lines” and “Best” are counted. `P` or `Esc` pauses, `Enter` starts a new game.

Stack the Blocks: controls and buttons

Keyboard

- Left / right arrow – slide; up arrow or `X` – rotate clockwise; `Y` – anticlockwise.
- Down arrow – fall faster; space bar – hard drop.
- `C` or Shift – hold block; `P` or `Esc` – pause; `Enter` – new game; `F1` – help.

Buttons below the field

- ◀ and ▶ – slide; ⟳ – rotate.
- ▼ – fall faster; ⤓ – hard drop; ⏸ – pause.

Points

- One row 100, two 300, three 500, four at once 800 – each multiplied by the level.

Stack the Blocks: phone, systems and browsers

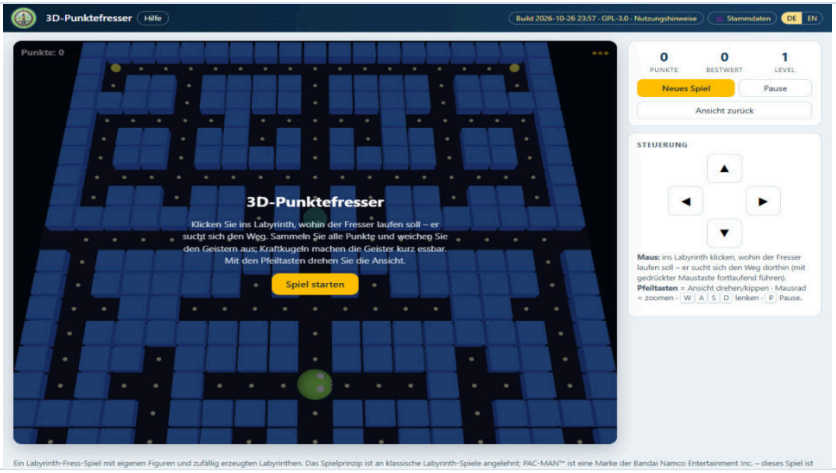
On a phone you play with the six buttons below the field. In portrait, field and values sit side by side with the buttons in one row directly below; in landscape the buttons sit three by two on the right. The field adapts to the free window height, so the buttons can be reached without scrolling. I tested this in several simulated phone sizes, portrait and landscape, with touch, not on real devices.

The game saves no files and runs the same in every browser. The best score stays only in this browser on your device.

Stack the Blocks: tips

- Four rows at once score 800 points – more than four single rows.
- Use “Held” for a block that does not fit right now.
- Check the outline before you drop hard.
- A hard drop scores twice as many points per cell as falling faster.

3D muncher



3D muncher: purpose and use

A maze muncher game in its own 3D rendering (WebGL), with its own characters and randomly generated mazes. You steer the muncher through the maze, collect all the dots and dodge the ghosts; power pills in the corners make the ghosts edible for a short time. Every level brings a new, faster maze. Lives, level and best score are counted; you steer with the mouse, keyboard or touch, and the camera can be rotated.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category); it has no file format of its own and transmits nothing. More in the post 3D Dot Muncher – the maze game in your browser.

3D muncher: how to play

1. Click “Start game”. You start with three lives.
2. Click the place in the maze where the muncher should go. It finds its own way there, and a golden ring marks the target. Holding the mouse button down guides it continuously; alternatively steer with `W`, `A`, `S`, `D`.
3. Collect all the dots. If a ghost touches you, you lose a life.
4. After a power pill the ghosts turn blue and fearful for a few seconds, and you can eat them – more points for each ghost in a row. Eaten ghosts return to the centre as a pair of eyes.
5. At the edge of the middle row there is a tunnel: out on the left, back in on the right.
6. Once all the dots are collected, the next level follows.

3D muncher: controls and buttons

Buttons

- “Start game” and “New game” – start a game; “Pause” – pause.
- “Reset view” – standard camera view.
- Under “Controls”: the direction buttons ▲, ◀, ▶, ▼ – steer.
- Displays “Points”, “Best”, “Level” and the remaining lives.

Mouse and keyboard

- Click in the maze – set a target; mouse button held down – guide continuously.
- Arrow keys – rotate and tilt the board; mouse wheel – zoom.
- `W`, `A`, `S`, `D` – steer; `P` – pause; `F1` – help.

3D muncher: phone, systems and browsers

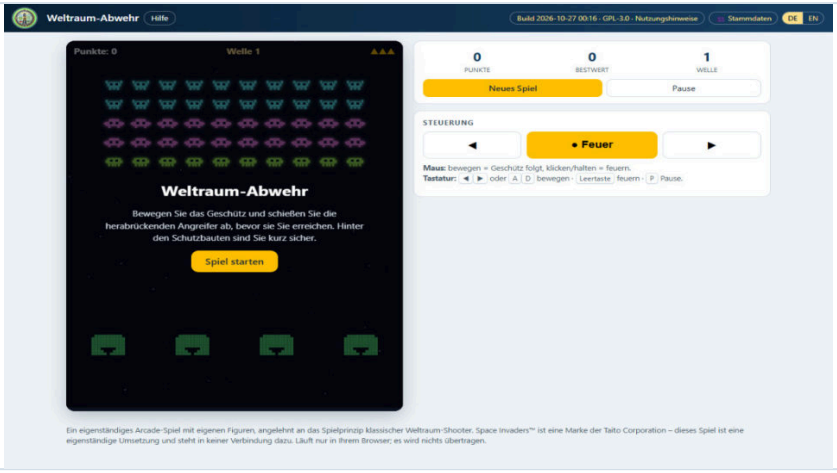
On a phone you steer with the direction buttons: in portrait as a row directly below the maze, in landscape as a cross. A tap in the maze also sets a target. The maze adapts to the free window height so that the buttons can be reached without scrolling. I tested this in simulated screen sizes with touch, not on real devices.

The game saves no files and runs the same in every browser. The best score stays only in this browser on your device.

3D muncher: tips

- After a power pill each further ghost in a row scores more points – you only have a few seconds.
- The tunnel connects the left and right edges of the middle row.
- If the view has become twisted, “Reset view” helps.

Space defence



Space defence: purpose and use

A self-contained arcade game with its own characters for the minute in which only reaction counts. A formation of alien invaders moves ever lower in zigzag paths. You move your defence cannon along the bottom edge and shoot the invaders down before they reach the bottom, dodging the falling bombs. Four shields cover you, and occasionally a flying mothership passes by for bonus points. Lives, ever faster waves and a best score are counted; you play with the mouse, keyboard or touch buttons.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category); it has no file format of its own and transmits nothing. More in the post Space Defence – an arcade game for your break.

Space defence: how to play

1. Click “Start game”. You have three lives.
2. Move the mouse over the field – the cannon follows horizontally. Alternatively move it with the left and right arrow keys or with `A` and `D`.
3. Click or hold the mouse button to fire; on the keyboard the space bar fires.
4. Invaders in the upper rows score more points, the mothership at the top a bonus.
5. The fewer invaders are left, the faster they advance. Once the formation is cleared, the next “Wave” comes – a little faster and starting lower.
6. Behind the shields you are safe for a moment, but they crumble when hit – by bombs as well as by your own shots.
7. If a bomb hits you, you lose a life. If the formation reaches your height, the game is over.

Space defence: controls and buttons

Buttons

- “Start game” and “New game” – start a game.
- “Pause” – pause (also key `P`).
- Under “Controls”: ◀ and ▶ – move the cannon; “● Fire” – shoot.
- Displays “Points”, “Best” and “Wave”, plus the remaining lives.

Mouse and keyboard

- Move the mouse – the cannon follows; click or hold – fire.
- Left / right arrow keys or `A` / `D` – move; space bar – fire.

- `P` – pause; `F1` – help.

Space defence: phone, systems and browsers

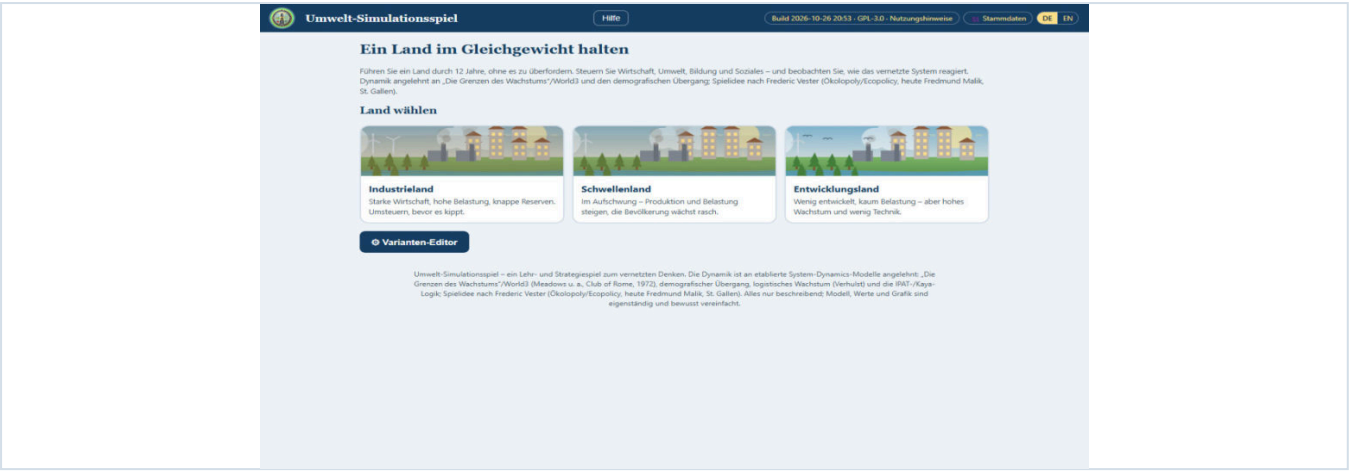
On a phone you use the buttons ◀, "● Fire" and ▶. In portrait they sit directly below the field, in landscape at the top right beside the field. The field adapts its width to the free height so that the control buttons are visible without scrolling; "Pause" and "New game" are at least 44 pixels high and sit below them. I tested this in simulated screen sizes with touch, not on real devices.

The game saves no files and runs the same in every browser. The best score stays only in this browser on your device.

Space defence: tips

- Hit the upper rows first if you want points – they count for more.
- Do not shoot through your own shields: your shots make them crumble too.
- Towards the end of a wave the last invaders become fast – be ready for it.
- You get continuous fire by holding the mouse button down.

Environmental simulation game



Environmental simulation game: purpose and use

A learning and strategy game about networked thinking. You govern a country for twelve years and allocate action points to four levers: remediation, production, education and quality of life. Politics, environmental burden, reproduction rate and population follow through feedback loops, often with a delay. It is a simplified learning and thought model, not a scientific forecasting tool.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category). Your own variants are saved as `.json` files; nothing is transmitted. More in the post The environment simulation game – keeping a country in balance and in Networked thinking – why simple cause and effect often leads you astray.

Environmental simulation game: how to play

1. Under "Choose country" tap "Industrial country", "Emerging country" or "Developing country" – or a variant under "Your own variants".
2. Allocate your action points to the four levers with + and –; your political support determines how many you get each year.
3. Click "Simulate year ▶". The effects run visibly through the system; "Skip ⏭" shows the result at once.
4. Read the adviser and the tabs for feedback loops, "History" and "Landscape".
5. Continue with "Next year ▶", after the last year with "To the result ▶".
6. If you lose support, quality of life collapses, the environment breaks down or the population crashes, the game ends early.
7. The evaluation shows a score out of 100, the line "Does it serve the people?" and the curves; "Again" returns to the choice of country.

Environmental simulation game: controls and buttons

During the game

- + and – per lever; “Simulate year ▶”, “Skip ⏭”, “Next year ▶”, “To the result ▶”.
- “New game” – back to the choice of country after a confirmation.
- Feedback tab – green arrows reinforce, red ones dampen; “History” – levers solid, resulting quantities dashed; “Landscape” – the country as a picture.
- At the bottom left also “Prosperity”, “Resources” and “Technology”.

“⚙ Variant editor” (start page)

- Starting values from 0 to 100, years, coupling strength and “Name”.
- “💾 Save” – keep in the browser; the download button saves a `.json` file; “⬆ Load file” – read one in; “▶ Play” – play at once.

Environmental simulation game: phone, systems and browsers

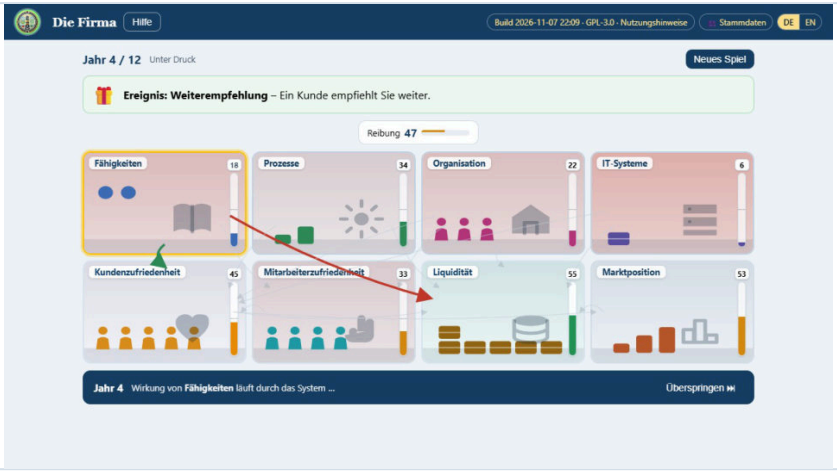
On a phone the status band with the action points and “Simulate year ▶” is pinned to the bottom. All buttons and tabs are at least 44 pixels high; each year the game brings the levers into view. I tested this in simulated phone sizes with touch, also with Safari's browser engine, not on real devices.

The variant file arrives as a browser download (see the chapter ‘How do I use a tool?’). Saved variants stay only in this browser.

Environmental simulation game: tips

- Betting on production alone drives up the environmental burden and depletes resources; remediating everything leaves you without economic strength.
- Decisions often only take effect years later – sometimes differently from what you expected.
- The “History” tab shows early when something is getting out of balance.

The Company



The Company: purpose and use

The 8-level model as a simulation game: you steer a small company for twelve years and allocate a tight budget to the four lower levels – capabilities, processes, organisation, and tools and IT systems. Customer satisfaction, employee satisfaction, liquidity and market position follow from that. A hidden quantity, friction, grows quietly when you economise on IT systems. At the start the budget is enough for two levels properly, not four by halves, and the weakest level limits all the others. A simplified learning and thought model, not a forecasting tool.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category). Your own variants are saved as `.json` files; nothing is transmitted. More in the post The Company – the 8-level model as a simulation game.

The Company: how to play

1. Under “Choose a starting situation” tap “A solid house”, “Under pressure” or “A turnaround case”.

2. Allocate your “Budget” with + and - ; the status band shows what is free.
3. Click “Calculate round ▶”. Arrows show the effects; “Skip ⏭” shows the result at once.
4. Read the adviser and the tabs, then continue with “Next round ▶”.
5. Each year every setting decays by about a seventh; you reallocate the freed points. If things go well, the budget grows by at most about a quarter.
6. After twelve years “To the result ▶” shows customers, people, market, cash and friction, the line “Does it serve the people?”, your average allocation and, on harder starting situations, the difficulty bonus. “Again” starts afresh.

The Company: controls and buttons

Start page

- “Choose a starting situation”, “Your own variants” and your best score so far.
- “⚙ Variant editor” – starting values 0 to 100, rounds, coupling strength, “Name”; “💾 Save” (in the browser), the download button (`.json`), “⬆ Load file”, “▶ Play”.

During the game

- + and - ; “Calculate round ▶”, “Skip ⏭”, “Next round ▶”, “To the result ▶”.
- Feedback tab, “History” (curves), “Distribution” (your allocation).
- “New game” – back to the start page; `F1` – help.

The four levers

- Capabilities only reach customers after two years; “Processes” lower costs from the next year while friction is low; “Organisation” amplifies processes and IT; “IT systems” keep friction low.

The Company: phone, systems and browsers

On a phone the status band with the budget and “Calculate round ▶” is pinned to the bottom; at the start of each round the first lever moves into view. I tested this in simulated phone sizes with touch, not on real devices.

Variant files arrive as a browser download (see the chapter ‘How do I use a tool?’); variants and best score stay in this browser.

The Company: tips

- Below about 20 points a lever does almost nothing; a level cannot absorb more than 44 a year.
- Serve two levels properly – for example capabilities and IT systems, or processes and organisation.
- Friction only becomes visible from about 28 points, when it is already eating up the process gains.

Technical Debt



Technical Debt: purpose and use

A simulation game about technical debt: for ten years you are responsible for an IT landscape that has grown over time. Building new, modernising, securing operations and standardising share an IT budget. Technical debt, failure rate, speed of change, IT costs and functional scope develop from that. The debt appears on no invoice, grows every round by a share of itself – compound interest – and weakens every investment. A simplified learning and thought model, not a forecasting tool.

Released, it is on the website's Resources page, as an HTML file to download and in the suite (Games category). Your own variants are saved as `.json` files; nothing is transmitted. More in the post Technical debt – ten years of an IT landscape as a simulation game.

Technical Debt: how to play

1. Under “Choose a starting situation” tap “Grown over time”, “Overgrown” or “Legacy burden”.
2. Allocate the “IT budget” with + and - ; the status band shows what is free.
3. Click “Calculate round ▶” and follow the arrows, or “Skip ⏭”.
4. Read the adviser and the tabs; continue with “Next round ▶”.
5. Each year every setting decays by about a seventh. If the landscape improves, the IT budget grows by at most about a quarter.
6. If the functional scope falls too far, the departments build their own shadow IT and the game ends early.
7. After ten years “To the result ▶” shows what IT delivers and how much was built on credit, plus your average allocation. “Again” starts afresh.

Technical Debt: controls and buttons

Start page

- “Choose a starting situation”, “Your own variants” and your best score so far.
- “⚙ Variant editor” – starting values 0 to 100, rounds, coupling strength, “Name”; “💾 Save”, the download button (`.json`), “⬆ Load file”, “▶ Play”.

During the game

- + and - ; “Calculate round ▶”, “Skip ⏭”, “Next round ▶”, “To the result ▶”.
- Feedback tab, “History”, “Distribution”; “New game” – to the start page; `F1` – help.

The four levers

- “Build new” – immediately raises the functional scope and the debt; below about 12 points the departments build their own solutions and the functional scope collapses.
- “Modernise” – lowers the debt, brings no new function itself.
- “Secure operations” – below about 18 points the failure rate jumps.
- “Standardise” – only takes effect after two years, then lowers operating costs and debt growth for good.

Technical Debt: phone, systems and browsers

On a phone the status band with the IT budget and “Calculate round ▶” is pinned to the bottom; at the start of each round the first lever moves into view. I tested this in simulated phone sizes with touch, not on real devices.

Variant files arrive as a browser download (see the chapter ‘How do I use a tool?’); variants and best score stay in this browser.

Technical Debt: tips

- Building only means buying functions on credit: after three or four years the same lever delivers half as much.
- Only modernising – with or without standardising – delivers nothing to anyone: in every starting situation the game ends early with shadow IT.
- A balanced split with standardisation does best: keep operations just above 18 points, standardise steadily and put the rest into building and modernising depending on the debt.
- Standardisation acts latest and lasts longest; hold out for the two years.

The Change Initiative



The Change Initiative: purpose and use

Change management as a simulation game: you lead a change initiative through twelve months. Communication, participation, pace and pressure share your energy; acceptance, resistance, exhaustion and progress follow from that. Pressure works on progress at once and on resistance only two months later; communication only works if it matches actual progress. At the end comes the question of how well placed you are for the next initiative. For management, project managers and HR development. The game is a model for reflection and conversation about the dynamics of change – not a diagnostic instrument for people or organisations and not a forecast.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category). Your own variants are saved as `.json` files; nothing is transmitted. More in the post The change initiative – change management as a simulation game.

The Change Initiative: how to play

1. Under “Choose a starting situation” tap “On board”, “Sceptical” or “Burnt out”.
2. Allocate your energy with + and - ; the status band shows what is free.
3. Click “Calculate round ▶” and follow the arrows, or “Skip ⏭”.
4. Read the adviser and the tabs; continue with “Next round ▶”.
5. Each month every setting decays by about a seventh. If things go well, your energy grows by at most about a quarter.
6. If resistance rises above 93 points, the initiative is stopped.
7. After twelve months “To the result ▶” shows the evaluation with your average allocation and the outlook for the next initiative. “Again” starts afresh.

The Change Initiative: controls and buttons

Start page

- “Choose a starting situation”, “Your own variants” and your best score so far.
- “⚙ Variant editor” – starting values 0 to 100, rounds, coupling strength, “Name”; “💾 Save”, the download button (`.json`), “⬆ Load file”, “▶ Play”.

During the game

- + and - ; “Calculate round ▶”, “Skip ⏭”, “Next round ▶”, “To the result ▶”.
- Feedback tab, “History”, “Distribution”; “New game” – to the start page; `F1` – help.

The four levers

- “Communication” – announcements without deeds raise resistance.
- “Participation” – costs pace, but builds lasting acceptance after one month.
- Pace – the main engine of progress and the strongest driver of exhaustion.
- “Pressure” – works on progress at once and on resistance two months later.

The Change Initiative: phone, systems and browsers

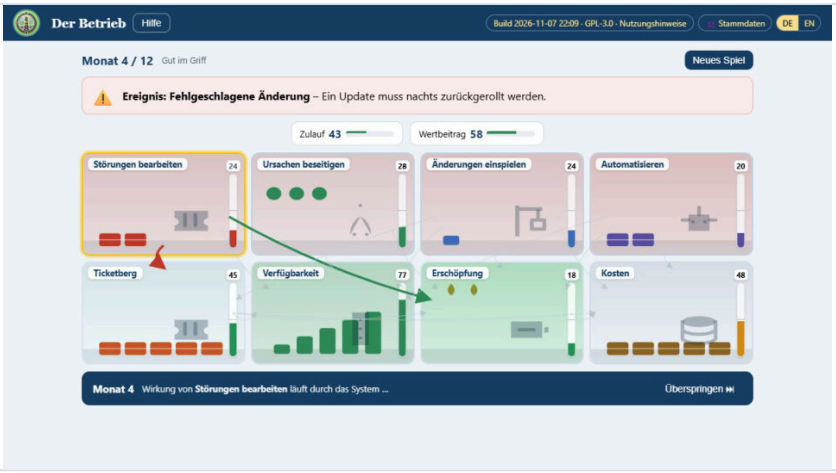
It runs on computers, tablets and phones, with mouse or finger. On a phone the status band with your energy and "Calculate round ▶" is pinned to the bottom; at the start of each round the first lever moves into view. I tested this in simulated phone sizes with touch, not on real devices.

Variant files arrive as a browser download (see the chapter 'How do I use a tool?'); variants and best score stay in this browser.

The Change Initiative: tips

- Prepare the ground, then pick up the pace: plenty of participation and sparing, honest communication at first.
- Exhaustion rises quickly and falls slowly.
- Two games with the same score can lie far apart in the outlook.

Operations



Operations: purpose and use

A simulation game on IT operations between firefighting and prevention: you lead a small IT team through twelve months. Handling incidents, removing root causes, deploying changes and automating share the same capacity – every hour spent on an incident is missing from its root cause. Ticket backlog, availability, exhaustion and costs follow, as do inflow and value delivered. Exhaustion lowers capacity and at the same time the effect of every point: more work, less result. With the variant "one extra position" (additional budget) you experience that extra capacity alone changes little as long as it flows into firefighting. A simplified learning and thought model, not a forecasting tool and not a method.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category). Your own variants are saved as `.json` files; nothing is transmitted. More in the post Operations – why firefighting does not shrink the ticket backlog.

Operations: how to play

1. Under "Choose a starting situation" tap "Under control", "Constant firefighting" or "Firefighting". For the variant with additional budget, tick "Variant "one extra position"" first – your team then has 16 more points of capacity every month, and the bar at the top shows " + one extra position".
2. Allocate the "Capacity" with + and - ; the status band shows what is free.
3. Click "Calculate round ▶" and follow the arrows, or "Skip ⏭".
4. Read the adviser and the tabs; continue with "Next round ▶".
5. Each month every setting decays by about a seventh. If operations calm down, capacity grows by at most about a quarter.
6. Below 41 availability the situation is no longer sustainable.
7. After twelve months "To the result ▶" shows availability, backlog, the state of the team, value delivered, costs and inflow with your average allocation. With the extra position, "The extra position compared" follows: the same game (same starting situation, same events, your allocation) replayed without the position, the difference

in points, your share in “Handle incidents” and the result had the position gone entirely into “Remove root causes”. Such games do not count towards the best score. “Again” starts afresh.

Operations: controls and buttons

Start page

- “Choose a starting situation”, above it the tick box “Variant “one extra position”” (applies to the next game, not stored), “Your own variants” and your best score so far.
- “⚙ Variant editor” – starting values 0 to 100, rounds, coupling strength, “Name”; “💾 Save”, the download button (`.json`), “⬆ Load file”, “▶ Play”.

During the game

- + and - ; “Calculate round ▶”, “Skip ⏭”, “Next round ▶”, “To the result ▶”.
- Feedback tab, “History”, “Distribution”; “Inflow” and “Value delivered” appear below as key figures; “New game” – to the start page; `F1` – help; with additional budget “ + one extra position” at the top.

The four levers

- “Handle incidents” – lowers the backlog at once, prevents nothing.
- “Remove root causes” – lowers the inflow after two months; the strongest lever.
- “Deploy changes” – delivers value, but creates incidents if quality is lacking.
- “Automate” – takes effect late and strongly.

Operations: phone, systems and browsers

On a phone the status band with the capacity and “Calculate round ▶” is pinned to the bottom; at the start of each round the first lever moves into view. I tested this in simulated phone sizes with touch, not on real devices.

Variant files arrive as a browser download (see the chapter ‘How do I use a tool?’); variants and best score stay in this browser.

Operations: tips

- Here an even allocation is a good strategy; it only goes wrong when a lever drops out completely.
- Play “Constant firefighting” once with the extra position and put everything into incident handling: measured, the position then brought one point (14 instead of 13); entirely in root cause work it would have been 36.
- Fight as many fires as the team can bear; put the rest into root causes and automation.
- Put up with a growing backlog for two or three months – root-cause work only pays off then.

The Team



The Team: purpose and use

A simulation game on team development: you lead a team through twelve rounds. Task clarity, feedback, conflict resolution and recovery share the team's time; performance, trust, level of conflict and attrition follow from that. The conflict potential grows unseen as long as nobody clears things up and breaks out above a threshold – the

later, the more violently. Trust is the factor by which all other levers are multiplied.

The game is a simplified model for reflection and conversation about team dynamics – not a diagnostic instrument and not a basis for decisions about people; it classifies nobody. Still experimental (beta), it is on the website's Experimental page, as an HTML file and in the suite (Games category). Your own variants are saved as `.json` files; nothing is transmitted. More in the post The Team – why the storming phase can only be postponed.

The Team: how to play

1. Under “Choose a starting situation” tap “Settled”, “Newly thrown together” or “Permanently overloaded”.
2. Allocate the team's time with + and -.
3. Click “Calculate round ▶” or “Skip ⏭”; continue with “Next round ▶”.
4. Each round every setting decays by about a seventh.
5. The conflict potential becomes visible from about 34 and breaks out from about 50. From 55 attrition someone resigns; from 92 level of conflict the team is split.
6. After twelve rounds “To the result ▶” shows performance, trust, level of conflict, attrition and what was left unsaid, the line “Does it serve the people?” and your average allocation. If performance is below 45, the result counts only 70 per cent.

The Team: controls and buttons

Start page

- “Choose a starting situation”, “Your own variants” and your best score so far.
- “⚙ Variant editor” – starting values 0 to 100, rounds, coupling strength, “Name”; “💾 Save”, the download button (`.json`), “⬆ Load file”, “▶ Play”.

During the game

- + and -; “Calculate round ▶”, “Skip ⏭”, “Next round ▶”, “To the result ▶”, “Again”.
- Feedback tab, “History”, “Distribution”; “New game” – to the start page; `F1` – help.

The four levers

- “Task clarity” – works on performance at once, but must be topped up.
- “Feedback” – raises trust one round later; the slowest and most important lever.
- “Conflict resolution” – costs performance: early about one round, late three times as much.
- Recovery – lowers attrition.

The Team: phone, systems and browsers

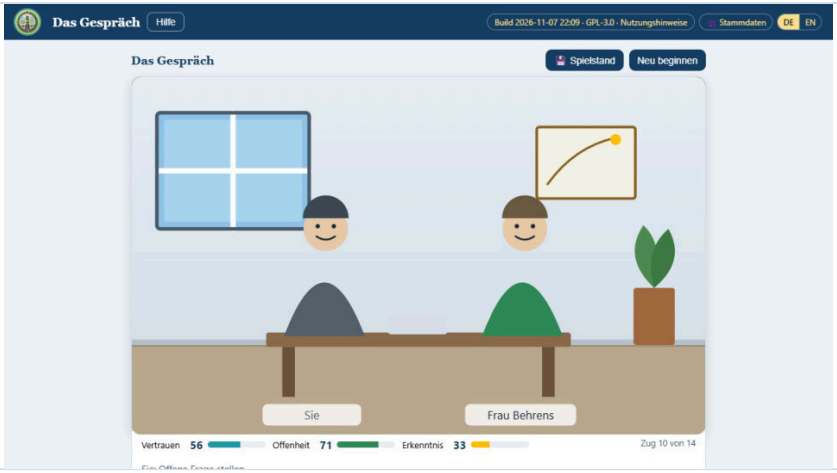
On a phone the status band with the time and “Calculate round ▶” is pinned to the bottom; at the start of each round the first lever moves into view. I tested this in simulated phone sizes with touch, not on real devices.

Variant files arrive as a browser download (see the chapter ‘How do I use a tool?’); variants and best score stay in this browser.

The Team: tips

- Here an even allocation is right: a team needs all four levers at once.
- Clear things up early – the storming phase can only be postponed, and what is postponed gets dearer.
- Do not cut recovery: a resignation costs trust, clarity and performance in one go.

The Conversation



The Conversation: purpose and use

A learning game for conversational skills: for fourteen moves you choose between an open question, reflecting, staying silent, giving advice, confronting and changing the subject. Trust, openness and insight run visibly alongside; the winner is not whoever says the most. Three conversation partners serve as difficulty levels, with four endings; after every move you see what it did and why, and at the end an evaluation of every move.

A practice game for conversational technique – not a therapy simulator, not a diagnosis, no substitute for advice or treatment. People and concerns are invented and deliberately work-related; coaching is not psychotherapy (§ 1 (2) sentence 3 of the German Psychotherapists Act). Still experimental (beta), it is on the website's Experimental page, as an HTML file and in the suite (Games category); no file format of its own, nothing is transmitted. More in the post The Conversation – a learning game for conversational skills.

The Conversation: how to play

1. Under "Who are you talking to?" choose "The sceptic" (Mrs Behrens), "The talker" (Mr Timm) or "The reticent one" (Mrs Kramer). "Continue saved game" resumes one.
2. Under "Your move:" choose one of the six options; the gauges show trust, openness and insight. Right above the moves you then see the evaluation of this move: its number and name, "– what this move did" with plus or minus for each quantity and below it "Why?" with the rule that applied.
3. If the other person talks about themselves – longer, more personal, often unfinished sentences – the moment for silence has come.
4. Only confront once trust is strong enough.
5. The conversation ends after fourteen moves or with "End the conversation here" under "From here:".
6. The evaluation shows every move with its effect and its reason below and marks the move at which the conversation tipped. "Again" starts afresh.

The Conversation: controls and buttons

The six moves

- "Ask an open question" – reliable but weak, and ever weaker if you only ask.
- "Reflect" – builds trust and openness, especially right after something essential.
- "Stay silent" – at the right moment the biggest gain in insight, at random embarrassing.
- "Give advice" – lowers openness even when the advice is good, especially early on.
- "Confront" – above the trust threshold the breakthrough; below it the other person closes up for the rest of the conversation.
- "Change the subject" – rescues you from a dead end, but costs insight.

Other buttons

- "💾 Game state" – saves the game in this browser; "Start over" – to the start page after a confirmation.
- "End the conversation here" – straight to the evaluation.

- “Again” and the endings found – at the end; `F1` – help.

The Conversation: phone, systems and browsers

On a phone the scene is smaller during the game. Each move button is 45 pixels high; after each move the game brings the moves into view, with the evaluation of the move and the latest answer just above. I tested this in a simulated phone size over eight moves in German and English with touch, not on real devices.

The game saves no files; the saved game and the endings found stay only in this browser. An older saved game can be continued; for its moves you see only the numbers, from the next move on also the reason.

The Conversation: tips

- Play fourteen moves of nothing but advice once: the ending is “Polite and without result”.
- Staying silent twice in a row does not work; the moment has to arise again.
- No strategy works with all three conversation partners.

The Lighthouse



The Lighthouse: purpose and use

A graphical adventure in six scenes about orientation. The lighthouse is dark, ships are waiting outside, the last keeper is gone. You find items, combine them, set the mechanism going, talk to the ship by radio – and discover that the lamp was never broken: it points the wrong way. Two endings, no dead ends, no time pressure; about twenty quiet minutes.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category); it has no file format of its own and transmits nothing. More in the post The Lighthouse – when more light is not the answer.

The Lighthouse: how to play

1. Click “▶ Set off” – or “Continue saved game”.
2. Golden dots in the picture mark places to look at; the same places appear below as buttons under “Here you will find:”. What you can take ends up under “Carrying:”.
3. To use an item, tap it under “Carrying:” and then the place where you want to use it. Two items tapped one after the other are combined if they fit.
4. Under “From here:” are the ways to the beach, keeper's house, stairs, machine room, lamp room and gallery.
5. On the beach you find what opens the keeper's house. There you get a light, collect tools, read the logbook and talk to the ship by radio.
6. Do not climb the stairs in the dark. In the machine room you complete the turning gear and give it power; in the lamp room you light the lamp and examine it.
7. On the gallery the bearing disc shows the direction in degrees; the harbour entrance lies at 118 degrees.
8. The final card names your ending and the endings found; “Again” starts afresh.

The Lighthouse: controls and buttons

- "▶ Set off", "Continue saved game" – start page.
- "💾 Game state" – saves the game in this browser.
- "Start over" – back to the start page after a confirmation.
- "Here you will find:" and golden dots – look at, take, use.
- "Carrying:" – your items; one tap selects, a second cancels.
- "From here:" – ways to other scenes. In conversations you choose your answers from buttons.
- "Again" and the endings found – at the end; `Enter` or space on a selected place; `F1` – help.

The Lighthouse: phone, systems and browsers

On a phone the buttons below the picture are the most convenient. After every step the game brings the first action into view, with the latest answer visible above it. I tested this in a simulated phone size over several steps with touch, not on real devices.

The game saves no files; the saved game and the endings found stay only in this browser.

The Lighthouse: tips

- You cannot get stuck: everything you need stays within reach.
- The skipper only says the decisive sentence if you ask the right question.
- More light is not the same as orientation: the second ending needs no stronger lamp.

The Server Room



The Server Room: purpose and use

A graphical adventure in four scenes about dependencies. An inherited IT landscape and a note: the old server in the basement is to be switched off by Friday. Nobody knows any more what is connected to what – finding out is your real task. You read documents, follow a cable through the wall duct, talk to Mrs Weber, with the company since 1998, and clear up four open points before flipping the switch. Company, people and system names are invented.

Still experimental (beta), it is on the website's Experimental page, as an HTML file to download and in the suite (Games category); it has no file format of its own and transmits nothing. More in the post The Server Room – an adventure game about undocumented dependencies.

The Server Room: how to play

1. Click "▶ Set off" – or "Continue saved game".
2. The scenes: office (network plan, inventory list, monitoring console, notebook), server room (rack, patch panel, cable in the wall duct, main switch), archive and the tea kitchen with Mrs Weber.
3. Tap the golden dots or the buttons under "Here you will find:". What you take ends up under "Carrying:"; to use it, select it there and tap the target.

4. Two documents can be laid side by side – only then does a contradiction appear, and only then does Mrs Weber take you seriously.
5. Clear up four points: Does anything critical depend on it? What is actually running – measured, not documented? Where does the undocumented cable lead? What does a long-serving colleague know? Your notebook shows your progress.
6. Three endings: switch off too early, map first and then switch off (the winning ending), or leave it be.
7. The final card shows the endings found; "Again" starts afresh.

The Server Room: controls and buttons

- "▶ Set off", "Continue saved game" – start page.
- "💾 Game state" – saves the game in this browser; "Start over" – from the beginning after a confirmation.
- "Here you will find:" and golden dots – look at, take, use.
- "Carrying:" – your items; two tapped in turn are combined.
- "From here:" – ways to the other scenes.
- In the conversation with Mrs Weber you choose your answers.
- "Again" and the endings found – at the end; `Enter` or space on a selected place; `F1` – help.

The Server Room: phone, systems and browsers

On a phone, tapping the buttons below the picture is easiest. After every step the game brings the first action into view, with the latest answer visible above it. I tested this in a simulated phone size over ten steps with touch, not on real devices.

The game saves no files; the saved game and the endings found stay only in this browser.

The Server Room: tips

- You cannot get stuck: everything you need stays within reach.
- Mrs Weber only tells the decisive story if you have something in hand and ask properly.
- Leaving it be is an ending too – in real organisations the most common one.

Seven Voices



Seven Voices: purpose and use

The Values Prism as a game, in 3D: an invented medium-sized company wants to move three departments onto a common platform, and seven value voices speak at once. In twelve rounds you have one action each; every action raises some voices and lowers others. At the end the weakest voice counts, not the sum.

What is set up are parts, not types – the game does not tell anyone which colour they are, classifies nobody, measures no aptitude and is no basis for decisions about people. No colour is better than another. I use the values model after Clare W. Graves as a reflection and conversation model, not a diagnostic instrument. Still experimental (beta), it is on the website's Experimental page, as an HTML file and in the suite (Games category). More in the post Seven Voices – why the loudest approval saves nothing.

Seven Voices: how to play

1. Under “Choose the starting situation” tap “The usual”, “Under time pressure” or “After the false start”.
2. At the top you see the round, “Progress”, the weakest voice and how many voices you have understood; bars show each colour with its threshold.
3. Choose one action per round. The actions are grouped by path – pushing the pace, creating order, involving people, slowing down – and show the progress they bring.
4. Instead of acting you can listen to a voice and interpret what really matters to it. Interpreted correctly, it unlocks the second formulation: the same thing in its language – after that, actions cost this voice almost nothing.
5. Tap a figure to read its voice; the view-from button shows the picture from inside it.
6. After twelve rounds the initiative is carried only if every voice is above its threshold and there is enough progress. “Again” starts afresh.

Seven Voices: controls and buttons

- “Start over” – to the start page after a confirmation; “Best” – your best result at this level.
- “◂ turn”, “turn ▸”, the view from above and “All round” – camera.
- View from the selected figure; “✕ back into the picture” – out again.
- Dragging rotates the picture.
- Listen buttons cost a round and bring no progress; some actions work only once; `F1` – help.

Seven Voices: phone, systems and browsers

On a phone it brings an action fully into view after every move and shows all answers when you interpret. I tested this in simulated phone sizes, portrait and landscape, in German and English, also with Safari's browser engine, with touch – not on real devices.

Nothing is stored until a game has ended; merely opening it creates nothing. The best score per level stays only in this browser.

Seven Voices: tips

- Serving the loudest voices is hopeless: above about 55, approval adds hardly anything.
- Really understand three or four voices, then act – understanding all seven costs too many rounds.
- Below 25 a voice holds out against you; with five such voices the initiative stops from round 7.

Through Your Eyes



Through Your Eyes: purpose and use

The Values Prism as a game, in 3D: one scene, eight facts, one decision – and seven rounds, each in a different value colour. The facts stay word for word the same; only the description changes. The camera sits inside the figure, and whatever lies behind it is not in the picture: every colour overlooks its own fact, those of its two neighbours and the neighbouring colours themselves. Only all points of view together give the full situation.

What is set up are parts, not types; no colour is better than another, and there is no ladder upwards. I use the values model after Clare W. Graves as a reflection and conversation model, not a diagnostic instrument. Still experimental (beta), it is on the website's Experimental page, as an HTML file and in the suite (Games category). More in the post Through Your Eyes – the same scene, seven times over.

Through Your Eyes: how to play

1. Click "▶ Step into the first colour".
2. Looking around is free: drag the picture or use "◂ look around", "straight ahead" and "look around ▸".
3. Tap the visible facts and read what the colour says; under "The other colours:" you see how it views the others. Reading something outside the natural field of view costs a look – three per round, with five blind spots.
4. Under "When you have seen enough:" the colour draws its conclusion; the next button leads to the overview.
5. In "Which colour do you place yourself in?" choose the next colour; rounds and blind spots are counted.
6. The decide-now button leads to "The decision": five options are always open, each carries some colours and overrides others.
7. "The integrating formulation" carries all seven. It is unlocked once you have stood in all seven colours and turned into a blind spot for at least five of the eight facts. At the end "Again" starts afresh.

Through Your Eyes: controls and buttons

- "◂ look around", "straight ahead", "look around ▸" – viewing direction; dragging does the same.
- Fact buttons – show whether a fact is in view or costs a look; a counter shows the looks left.
- Back to the overview – leave the round; next – after the conclusion.
- Decide now and back – to the decision and back.
- "Start over" – from the beginning after a confirmation; `F1` – help.

Through Your Eyes: phone, systems and browsers

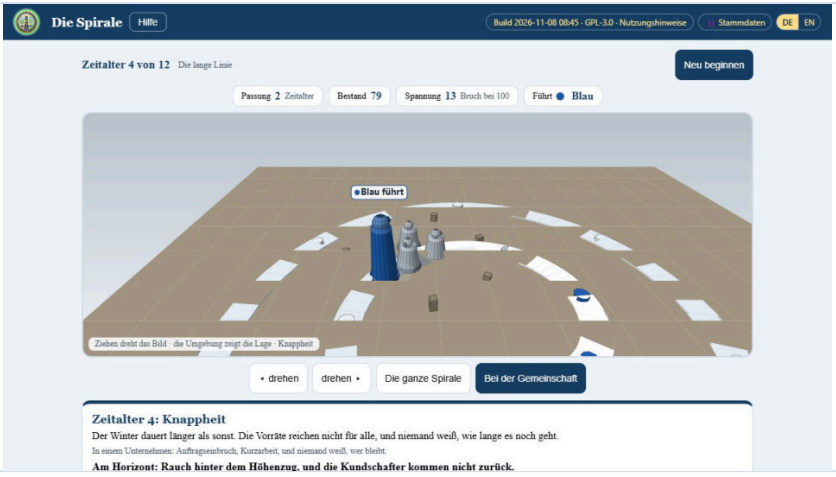
On a phone every new screen starts at the top, and after every step an action is fully in view. I tested this in simulated phone sizes, portrait and landscape, also with Safari's browser engine, with touch, not on real devices.

Nothing is stored until a game has ended or you explicitly ask; merely opening it creates nothing.

Through Your Eyes: tips

- Understanding a colour means knowing where it does not look.
- Plan your three looks: they are never enough for all five blind spots.
- Colours you have not stood in still speak up at the decision.

The Spiral



The Spiral: purpose and use

The Values Prism as a game, in 3D: values as an answer to life conditions, not as a ranking. You lead an invented community through twelve ages. The conditions change, and each of the seven value colours is the full answer to exactly one situation. Switching costs and only takes effect in the next age: whoever waits until it hurts is always

one age late. The spiral winds outwards – further out means later, not better.

What is set up are parts, not types; there is no final goal and no ladder upwards. I use the values model after Clare W. Graves as a reflection and conversation model, not a diagnostic instrument; the situations depict no historical development. Still experimental (beta), it is on the website's Experimental page, as an HTML file and in the suite (Games category). More in the post The Spiral – values are an answer, not a ladder.

The Spiral: how to play

1. Under “Choose the sequence of ages” tap “The long line”, “Restless times” or “Everything at once”.
2. The situation card names the age and its situation – scarcity, threat from outside, growth, saturation, division, complexity or interdependence – and the sign of what is coming.
3. Under “What do you do in this age?” stay with the leading colour (costs nothing) or choose “Lay in supplies and close ranks” (dampens whatever the age brings and relieves tension).
4. Or switch to one of the six other colours. That takes effect in the next age and costs more the longer a colour has led and the more recent the last switch.
5. Fit counts the matching ages. Reserves are what the community lives on – at 0 it dissolves. Tension builds up with a wrong answer or too frequent switching – at 100 the community breaks apart.
6. After twelve ages only fit counts; the final card shows the whole assignment of colours to situations with reasons. “Again” starts afresh.

The Spiral: controls and buttons

- Stay with it, “Lay in supplies and close ranks” and the colours' switch buttons – the moves.
- “◂ turn”, “turn ▸” – rotate the picture; “The whole spiral”, “With the community” – overview or close-up; dragging rotates the picture.
- “Start over” – from the beginning after a confirmation; “Best” – best result for this sequence; `F1` – help.

The Spiral: phone, systems and browsers

On a phone an action is fully in view after the start and after every age. I tested this in simulated phone sizes, portrait and landscape, also with Safari's browser engine, with touch, not on real devices.

Nothing is stored until a game has ended; merely opening it creates nothing. The best score stays only in this browser.

The Spiral: tips

- Do not ask which colour is higher, but which one answers these conditions.
- Watch the signs: whoever switches only once the new situation has arrived loses an age.
- On the harder levels, leave out the right things and sit out a bad situation with supplies.

The Valley



The Valley: purpose and use

The journey through the U as a valley you can walk, in 3D, based on Theory U by C. Otto Scharmer. On the left you go down through seeing and sensing to the stillness, on the right up through crystallizing and prototyping to anchoring. A bridge lies across: the shortcut is visible from the start, allowed at any time and delivers a solution that holds – a mediocre one. Whoever has not been down has nothing to build with up top.

I use Theory U here as a reflection and conversation model, not a diagnostic instrument; the game classifies nobody. Coaching is not psychotherapy (§ 1 (2) sentence 3 of the German Psychotherapists Act). Still experimental (beta), it is on the website's Experimental page, as an HTML file and in the suite (Games category). More in the post The Valley – the shortcut is open, and it costs.

The Valley: how to play

1. Click "▶ Into the valley". You stand at "Downloading" with sixteen moves; every step and every action costs one.
2. Choose an action at the station or the way to the next one. The way down brings insights that become building blocks up top.
3. Open at any time: "▸ Take the shortcut: straight across to the solution".
4. On the way down stand three voices: judgement, cynicism and fear. Taking them by force throws you back and costs two moves. An open mind needs two real observations, an open heart two outside points of view, an open will that you give up an insight.
5. At the bottom lies "Presencing"; the way up leads through "Crystallizing" and "Prototyping" to "Performing", where you anchor a solution.
6. What counts is that solution's effect, not the number of moves. The final card names the solutions you never came across; "Again" starts afresh.

The Valley: controls and buttons

- "▶ Into the valley" – start; "Start over" – from the beginning after a confirmation; "Best" – best result.
- Action and path buttons – warn when an attempt costs two moves; "▸ Take the shortcut: straight across to the solution" – the bridge.
- "◂ turn", "turn ▸" – rotate the picture; "The whole valley", "With the walker" – overview or close-up; dragging rotates the picture.
- `F1` – help.

The Valley: phone, systems and browsers

On a phone an action is fully in view after every move; at a gate the gate card comes before your insights. I tested this in simulated phone sizes, portrait and landscape, also with Safari's browser engine, with touch, not on real devices.

Nothing is stored until a game has ended; merely opening it creates nothing. The best score stays only in this browser.

The Valley: tips

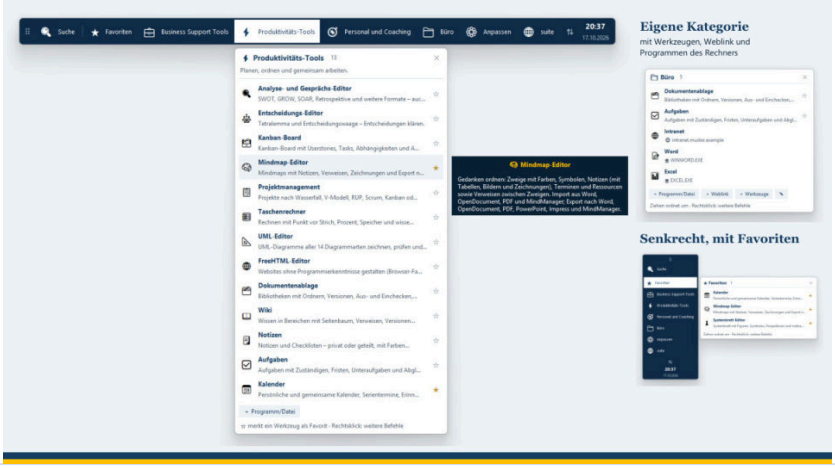
- The shortcut is not a trap; but every step down pays off, even half a one.
- Whoever uses up the moves down below ends worse off than with the bridge.
- An intention in one sentence and a small-scale trial raise any solution, even the familiar one.

The MC4Y Taskbar

The MC4Y Taskbar is a program of its own for Windows, macOS and Linux. The overview shows the differences between the operating systems; the chapter after it describes all functions.

Topic	Windows 10/11	macOS	Linux
Prerequisite	Python 3.8 or later; the installation script fetches it via winget if you wish	Python from python.org or Homebrew (the Python that comes with macOS is usually not enough)	Python 3.8 or later with tkinter, e.g. package python3-tk (Fedora: python3-tkinter)
Dragging with the mouse	programs, files and shortcuts since 1.6.0	from Finder since 1.7.8 (programs, files, folders, aliases) – not tested on a real Mac	not yet available; use the file window
Device key	protected with DPAPI	in the Keychain (“Always Allow”)	secret-tool, otherwise a file only you can read
Start at sign-in	set up by the installation script; switch on and off under Apps › Startup	tick “Start when signing in to the computer”, also under System Settings › Login Items	tick “Start when signing in to the computer”
Tried out	in my own use on Windows 11	test bench on a real Mac (macOS 15, 21 Nov 2026): interface, way of use, dropping; dragging with the real mouse not yet confirmed	automatically in Ubuntu (WSL), not on real computers

MC4Y Taskbar



MC4Y Taskbar: purpose and use

The MC4Y Taskbar is a small program of its own, version 1.7.9, for Windows, macOS and Linux. It floats above all windows – even when no browser is open – and brings the tools of your MC4Y Suite onto the screen with two clicks. The bar shows only the categories; a click expands their tools, another click opens a tool in a window of its own, already signed in. There is also a search, favourites, a clock leading to the calendar and, if you wish, Word, Excel, web links, folders or your own HTML tools.

The bar can be connected to your organisation's server and to the suite on your computer at the same time: the default is the server; if it cannot be reached, the bar switches to your computer. Without a suite, “Use without suite” lets you use it just for programs, files and web links.

The taskbar is a program, not a browser tool, and is released and available on the website's ‘Resources’ page (`mc4y-taskleiste.zip`; also in the complete package `mc4y-alles.zip` on the ‘Experimental’ page). It is easiest to download it in the suite under “Your account” › “Desktop taskbar and app”; the address of your suite is then already filled in. It needs Python 3.8 or later with tkinter but no administrator password, and it is licensed under GPL-3.0-or-later. In detail: The MC4Y Taskbar – your tools always at hand.

Do not confuse the two: the taskbar you switch on in the suite under “Your account” › “Appearance” belongs to the browser window and closes with it (chapter ‘The suite portal’). The desktop taskbar stays open until you quit it with ✕. Both share categories, order, colours and fonts through your account.

MC4Y Taskbar: step by step

1. In the suite, download the package under “Your account” › “Desktop taskbar and app”.
2. Windows: right-click `mc4y-taskleiste` › *Properties* › tick *Unblock*, then *Extract All…* and, in the folder `MC4Y-Taskleiste`, double-click `installieren-windows`. If Windows says *Windows protected your PC*: *More info* › *Run anyway*; if the window asks about installing Python via winget, type `j`.
3. Mac: first Python from python.org (the *macOS 64-bit universal2 installer*), then in Terminal, in the folder `MC4Y-Taskleiste`, `bash installieren-macos.command`. Linux: install `python3-tk`, then `sh installieren-linux.sh`.
4. In the window “Connect to the MC4Y Productivity Suite”, check “Address of the suite” and enter the “User name” and “Password” of your account in this suite; you can leave “Name of this device” as it is. Click “Connect”. If macOS asks about the keychain: *Always Allow*.
5. The bar appears at the bottom left. Click a category and then a tool – it opens in a window of its own, signed in.
6. Mark tools you use often as favourites with ☆; with 🔍 you search for tools and recently edited documents.
7. Drag the bar by the handle ⠿ to where you want it, even onto another screen; ⇅ makes it vertical, ⇆ horizontal again.
8. Arrange the categories with ⚙ “Customise” or drag them directly in the bar; create categories of your own.
9. Add your own programs: right-click the bar › “ + Add program or file …” – on Windows and macOS also by dragging onto a category.
10. Under “Settings …”, choose how tools open and how the bar looks, and click “Save”.
11. Quit the bar with ✕ at its end; it asks first.

MC4Y Taskbar: functions and buttons

The bar

- Handle ⠿ – drag to move it, double-click to put it back at the default position at the bottom left, right-click for the handle menu.
- 🛡 next to the handle – only when the bar itself runs with administrator rights (see settings).
- 🔍 “Search”; when there is a problem, ⚠ “No connection” (click: try again) or ⚠ “No tools made available” (click: message to copy).
- Categories – a click expands them; hovering shows the description; dragging rearranges the categories.
- ⚙ “Customise”, the connection (🌐 with the server name or 💻 “This PC”; a click switches or connects another suite), ⇅/⇆ (“Make vertical”/“Make horizontal”), the clock (opens the calendar) and ✕ (“Quit taskbar”).

An expanded category

- Tools, programs and web links; a click opens, ☆ or ★ marks a favourite.
- At the bottom “ + Program/file”, “ + Web link”, “ + Tools” and ✎ for name and symbol.

The search

- Search field – Return opens the first match; the language switch DE | EN at the top.
- “🕘 RECENTLY EDITED” – open documents directly in the right tool.
- SUITE: “Workplace”, “All tools in the browser”, “Your account” and, for administrators, “Administration”; “ADD”: “Add program or file …” and “New custom category …”.
- At the bottom “⚙ Customise”, “Settings” and “Quit”.

The handle menu (right-click; on a Mac a two-finger click or ctrl + click)

- “🔍 Search”, “Make horizontal” or “Make vertical”, “Move to default position”.
- “Always in front” and “Hide automatically” – these two switches are in every right-click menu of the bar.
- “Reload tool list”, the connection for switching, and “🌐 Sprache · Language”.
- “ + Add program or file …”, “ + New custom category …”, showing hidden categories again.

- "⚙ Customise taskbar …", "Settings …", "ℹ Help and version …" and "Quit".

Right-click on a category

- "◀ Move left"/"▶ Move right" (horizontal) or "▲ Move up"/"▼ Move down" (vertical).
- "＋ Add program or file …", "＋ Choose tools of the suite …", "＋ Web link …".
- "✎ Rename, symbol …", "🎨 Colour …", "🖼 Choose symbol …", "🎨 Remove colour", "Aa Font and colours …", "↺ Reset font and colours (default)".
- "👁 Hide in the bar", "🗑 Delete category …" (tools move to "Other", web links in it are lost), "＋ New category …", "Aa Font and colours of all categories …".

Right-click on an entry

- Suite tool: "＋ New" and "📂 Open …" or "↗ Open", "★ Add to favourites" or "☆ Remove from favourites", "✎ Rename …", "🖼 Choose symbol …", "➔ Move to another category" (containing "↺ Back to default"), "✕ Remove from the bar", "ℹ Description".
- Program or file: "↗ Open", "🛡 Run as administrator" (on Linux "🛡 Run as administrator (sudo)"), "✎ Edit …", "🖼 Choose symbol …", "➔ Move to another category", "📂 Open file location", "✕ Remove". If a program always starts elevated, you see "🛡 Open (as administrator)" and "↗ Open without administrator rights".
- Web link: "↗ Open", "✎ Edit …", "🖼 Choose symbol …", "✕ Remove". In favourites and custom categories, "▲ Move up" and "▼ Move down" rearrange.

Adding a program or file

- "Name", "Program or file" with "File …" and "Folder …" (on a Mac "Choose folder (also programs such as Word.app)"), "Arguments (optional)", "Category".
- "Choose from the programs and apps on this computer …" – all installed programs with a search field, on Windows including apps from the Store; several with `Ctrl` or Shift, then "Apply".
- "Open HTML file in an app window (Edge or Chrome – e.g. the mc4y-Editor or a tool saved as a file)" and "Always run with administrator rights – your system asks you each time"; then "Add". Web links: "Add web link" with "Name" and "Address" (https:// or http://).

Symbols, colours and fonts

- "Choose symbol" – 160 specially drawn symbols in eight groups (licence CC BY 4.0), "Search:", "↺ No image (use character)".
- "🎨 Colour …" opens the system's colour picker; the text is set light or dark depending on brightness.
- "Aa Font and colours …" – "Background colour", "Text colour", "Font", "Font size" (8 to 18 points) and "Preview"; with low contrast there is a notice, but you can still save. If the bar becomes too wide, it shortens the names and, if necessary, shows only symbols.

Customise taskbar

- "Taskbar behaviour" with "Always in front" and "Hide automatically" (take effect at once) and "Font and colours of all categories:" with "Aa Change default …" or "↺ Reset default".
- Per category: "Type", "Entries", ▲ and ▼, "hide" or "show", "＋ Program/file", "＋ Web link", "Tools …", "🎨 Colour …" and "Default", "Aa Font …" and ↺, ✎, 🖼 and 🗑.
- At the bottom "＋ New category …", "＋ Program or file …", "↺ Default order" and "Close".

Settings

- "Connection": "Tools come from:" – "Automatic – from the server if it can be reached, otherwise from the suite on this computer (recommended)" or one fixed suite; per suite "check", 🔒 for the certificate and "disconnect …"; "＋ Connect another suite (e.g. a server) …". Without a suite: "Connect to the suite …".
- "Opening tools": "in an app window of its own (without address bar)" or "as a new tab in the default browser"; "Browser for app windows": automatic, Edge, Chrome, Chromium, Brave or default browser.
- "Bar": "horizontal" or "vertical", "Symbols with names" or "symbols only (name on hover)", the two switches and "⚙ Customise categories and contents …".

- Start at sign-in: on Windows the current state and “Windows Settings › Startup apps …”; on Mac and Linux the tick box “Start when signing in to the computer”, on a Mac also “System Settings › Login Items …”.
- “Sprache · Language” with “Automatic – same as the system” (the system language in brackets after it) or a fixed language; at the very bottom version, fingerprint and the location of the settings; “Save”.
- If the bar itself runs elevated: “Administrator rights” with “🛡 Restart without administrator rights”.

Sign-in window and help

- “Connect to the MC4Y Productivity Suite”: “Address of the suite”, “User name”, “Password”, “Name of this device”, “Certificate (own server only)” with “File …”; “Connect”, “🔎 Check”, “Use without suite”, “Open in browser” (for the first account of a freshly installed suite) and the language switch DE | EN.
- If no encrypted service answers at https://, the bar offers “🔓 Connect via http://” – it never switches by itself.
- “ℹ Help and version …”: version, fingerprint of the program file (ten characters) with 📋, the state of “Drag and drop”, “How to use” and the licence.

MC4Y Taskbar: saving, export and handovers

The taskbar creates no documents; it only remembers its settings. It does not store the password: on first sign-in it receives a device key from the suite – on Windows encrypted for your user account, on a Mac in the keychain, on Linux via secret-tool, otherwise in a file only you can read. A device that has not been used for a long time has to sign in again. You can see and disconnect connected devices in the suite under “Your account”.

What applies to your account and what only to this computer: custom categories, order, visibility, colours, fonts and category symbols are kept in the suite and also apply in the browser and on other computers. Programs and files on your computer, their symbols, the position and appearance of the bar, addresses and user names stay in your user folder; the suite does not store them.

Handovers: tools open signed in via a key that is valid only once and only for one minute, and in the language of the bar – unless you have made a choice of your own in the browser. The bar loads the tool list at start-up and every five minutes. You copy the bar's messages with 📋; details of errors are in `taskleiste-fehler.txt` next to the settings.

Notifications from the suite – such as an assigned task, an invitation or a shared note – are shown in the portal: at the top of the header is the bell, the button “Notifications” with 🔔; a number on it gives the new notifications, and “Mark all as read” ticks them off. From the bar you get there via 🔍 › “Workplace”.

Updating: run the installation script of the new package again. Removing: `deinstallieren-windows` or the uninstall script for Mac and Linux; with `-EinstellungenLoeschen` (Windows) or `--einstellungen`, the settings and the device key are removed as well.

MC4Y Taskbar: phone, systems and browsers

There is no desktop taskbar for phones and tablets; there you use the suite's taskbar in the browser, which on a phone always sits at the bottom. Dragging is not available there.

Windows 10 and 11: the installation script fetches Python via winget if you wish. Dragging onto a category works since version 1.6.0 for programs, files, folders and shortcuts; a shortcut is resolved, an app from the Store is stored as a copy. The installation script sets up the start at sign-in; switch it off in Windows Settings under Apps › Startup. The bar has been tried out in my own use on Windows 11, as has starting as administrator; the automatic test did not check a real mouse drag from Explorer.

macOS: Python from python.org – the Python that comes with macOS is not enough. You open menus with a two-finger click or with ctrl + click – since version 1.7.9 everywhere on the bar, also on the handle, the categories and the entries (not yet tested on a real Mac). Dragging from the Finder (programs, files, folders, aliases; `.webloc` from Safari becomes a web link) exists since version 1.7.8 – checked only against a simulated Mac environment, **not on a real Mac**. The program with icon and start at sign-in are still to be confirmed on a real Mac; starting as administrator is prepared but has not run on a real device.

Linux: Python with tkinter from your distribution's packages. Drag and drop is **not built** (“Not yet available on Linux.”) – use “ + Add program or file …”. With Tk 8, some symbols are shown as a letter. Administrator rights are requested via pkexec, otherwise sudo in a terminal. Checked automatically in Ubuntu under WSL, not on real

computers.

Tools open in an app window of Edge, Chrome, Chromium or Brave; if none is present, in the default browser. The bar remembers its screen and, if that screen is missing, appears complete on the main screen. If you drag it onto a screen with different scaling, Windows adjusts the scale on release since 1.7.5; on macOS and Linux this has not been measured.

MC4Y Taskbar: tips

- “No tools made available” means: your account has no permissions in this suite yet – administrators neither, automatically. The administration adds you to a permission group.
- “User name or password incorrect”: this means your account in exactly this suite. Enter the user name without the domain.
- If your server has a self-signed certificate, it is best to add it once to the computer's certificate store; otherwise store it under “Certificate” or with 🔒. “🔎 Check” shows the fingerprints.
- If you cannot see the bar, start the program again from the Start menu, Launchpad or applications menu – it comes to the screen with the mouse pointer.
- For a support question, copy version and fingerprint with 📋 under “ℹ Help and version …”.

Frequently asked questions

How do I quickly find the right chapter?

In the PDF via the contents, the bookmarks or the index at the end. On the website, use your browser's search (Ctrl + F, on the Mac Command + F) for the name of the tool or a label.

Do I need the suite to use the tools?

No. Every tool runs on its own in the browser – on the website or as a downloaded file. You only need the suite if several people are to work together with the same files.

Are my entries transmitted?

Not without the suite: all entries stay on your device. The only exception is the company search in the Vertriebs-Navigator (to OpenStreetMap or Wikidata). A team session in "Analysis and conversation" runs only via the server of your suite or via your own server whose address you enter yourself. With the suite, your data is on your organisation's server.

Where do my files end up in Safari or Firefox?

In the "Downloads" folder – with "Save as" too. If you want to choose the location yourself each time, set "Ask for each download" in Safari under Safari › Settings… › General › "File download location:", and in Firefox "Always ask you where to save files".

"Downloads" is missing in the Mac's open window – what can I do?

The open window shows the same favourites on the left as the Finder; if "Downloads" is hidden there, the folder is also missing when opening. In the open window press Command + Shift + G, enter `~/Downloads` and confirm with Return. To show the folder permanently again, tick "Downloads" under Finder › Settings… › Sidebar.

Why is there no model folder and no receipt filing in Safari?

Because Safari and Firefox do not allow web pages to write to a folder on your computer. A folder on your computer is only available in Chrome and Edge. In Safari and Firefox, the receipts of the accounting tool are kept in the browser storage – with checksums, earlier versions, retention periods and search as in a folder; back up a data package there regularly. Otherwise you work with single files. In the suite, model and receipts are on the server.

Can I use the tools on my phone?

Yes. The board tools have their own controls for your finger; the questionnaires also run on phones and tablets. On the iPhone you will find saved files in the "Files" app. I tested this in simulated screen sizes, not on real devices.

Which tools are fully tested?

Released are the mind map, the 3D and the 2D systemic board, master data, the ITSM tool, the Kunden-Navigator and the Vertriebs-Navigator, the text editor and the game Technical Debt, plus the MC4Y Taskbar and the agents and crawlers packages. All others are beta and not fully tested; the questionnaires have not yet been validated.

Are the questionnaires and coaching tools diagnostic instruments?

No. I use Spiral Dynamics, Theory U and the Dilts pyramid as reflection and conversation models, not as diagnostic instruments. The results are an orientation, not a label.

Why does Windows not connect my network drive?

Windows only sends the password of a network drive over an encrypted connection with a trusted certificate. For this, the suite needs `https://` with an installed certificate. Also sign in with an access password, not with your sign-in password.

I have forgotten my password for the suite – what now?

The person who looks after your suite creates a recovery code that is valid for 30 minutes. With it, you set a new password on the sign-in page via “Forgot password?”. For an account in the Windows domain, you change the password on a Windows computer in the domain.

Is this manual available as a PDF?

Yes. The user manual and the installation manual are available in German and English as PDFs under Resources in the eBooks section – with contents, bookmarks and an index.

Important notes and trademark notices

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I am happy to receive questions, bug reports and suggestions for improvement via the contact form.

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