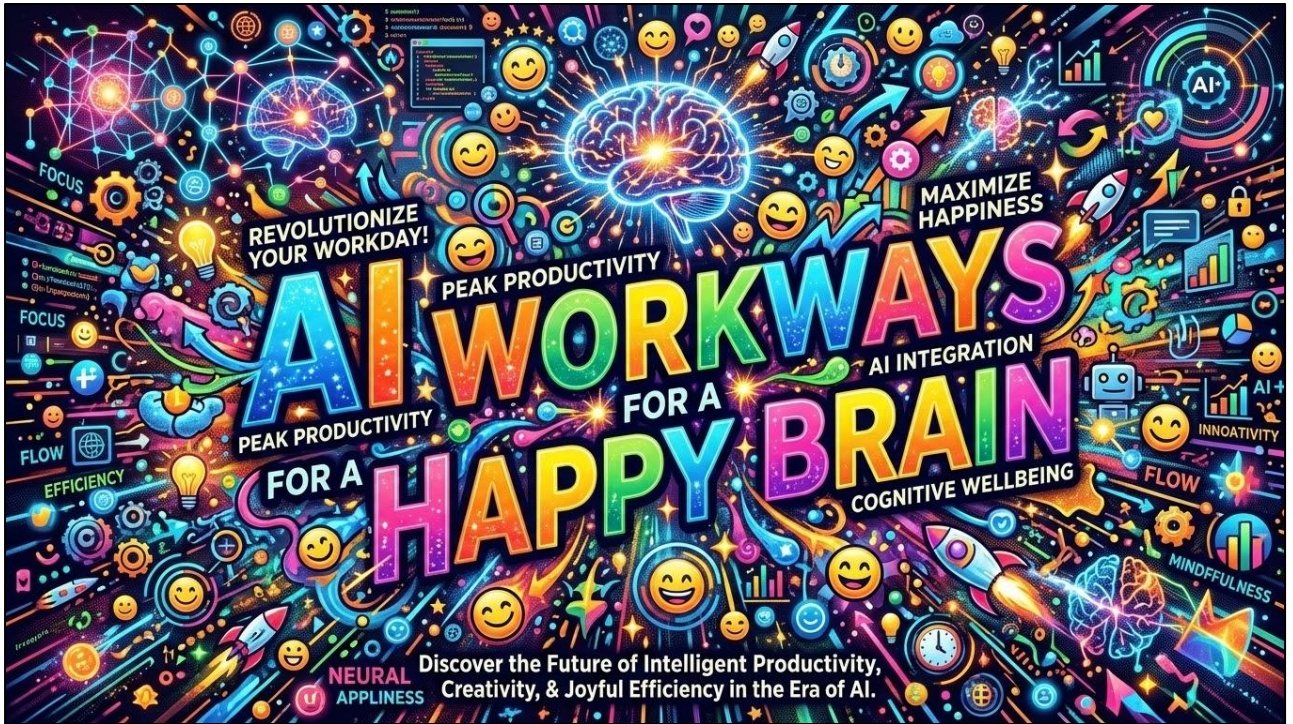


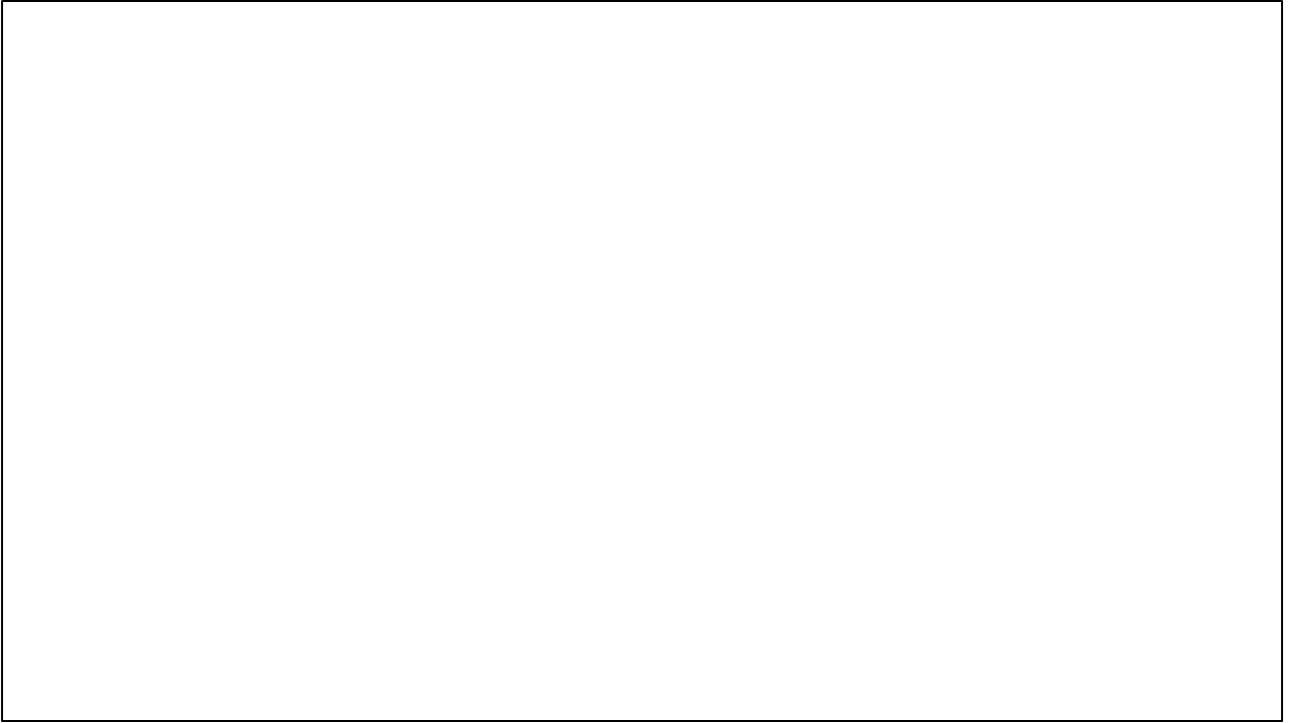




Welcome to our talk AI workways for a Happy Brain

AARGH!





Take a deep breath and let's start over

AI WORKWAYS for a HAPPY BRAIN



Antonin
Fouques



Maia
Grocepass

(Maia + Antonin) Intro - who we are and why you should listen to us. The problem statement human brains stay the same tools change. How can we use the tools sustainably. This info should be useful no matter your tech stack or which tools you use.

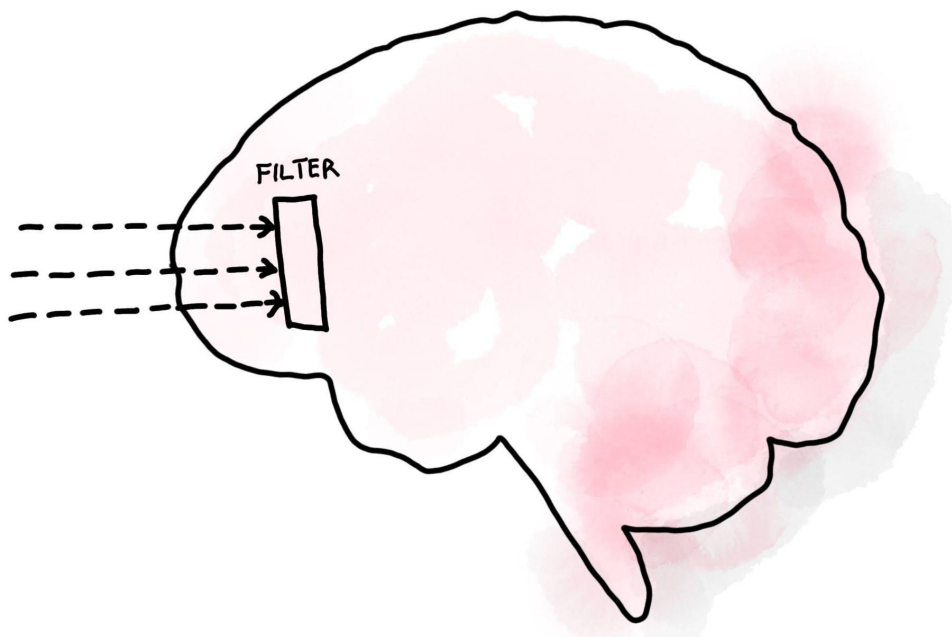
Antonin's huge complicated overwhelming scenario
picture with lots of arrows and boxes and dependencies

(Antonin), **share a scenario that caused exhaustion and overwhelm.** → **Ask audience if they can relate**

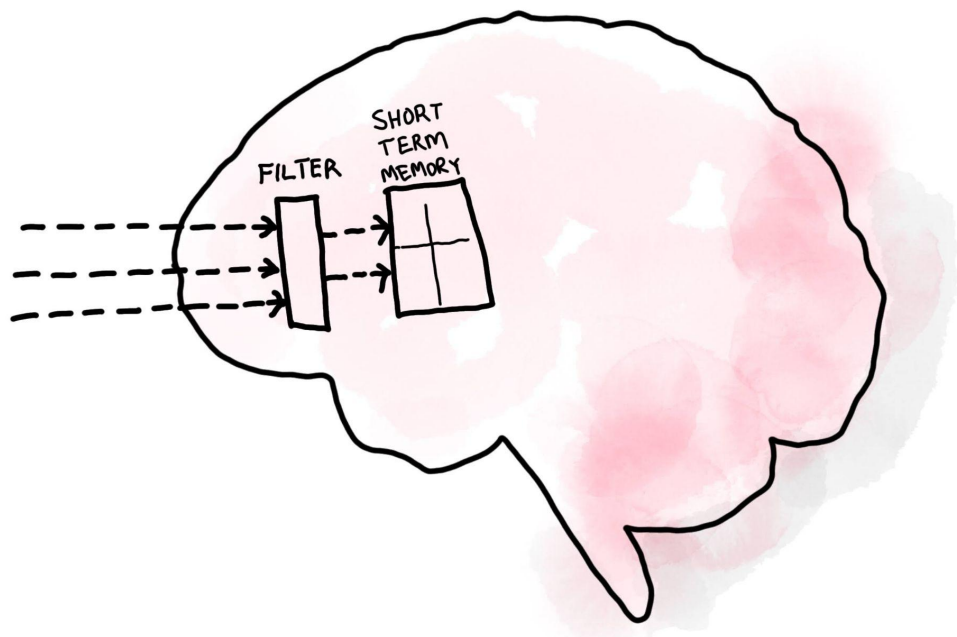
- 6 months scaling XML → Compose: Hard to define, organise, multiple agents analyzing, organizing, migration implementation, testing, reviewing. Where are we, what is left, how to re-organise, re-evaluate?
- 2 months feature to plan. Complex specs, codebase spread, multiple stacks, many discussions, lots of doc written by AI quickly outdated.
- both subject happening at the same time.



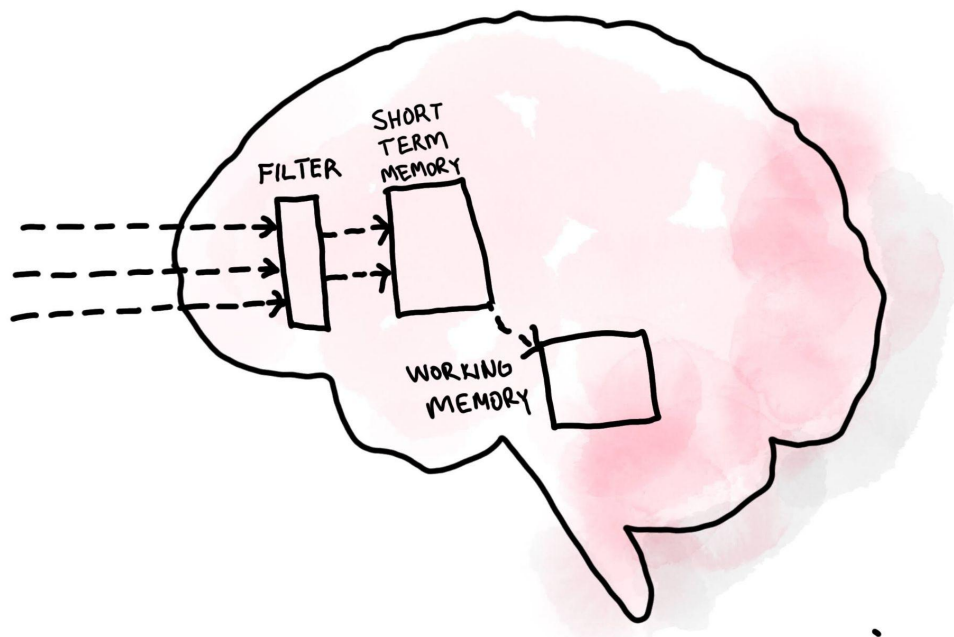
take a step back and understand how our brains work and then break down the scenario to see what we can mitigate.



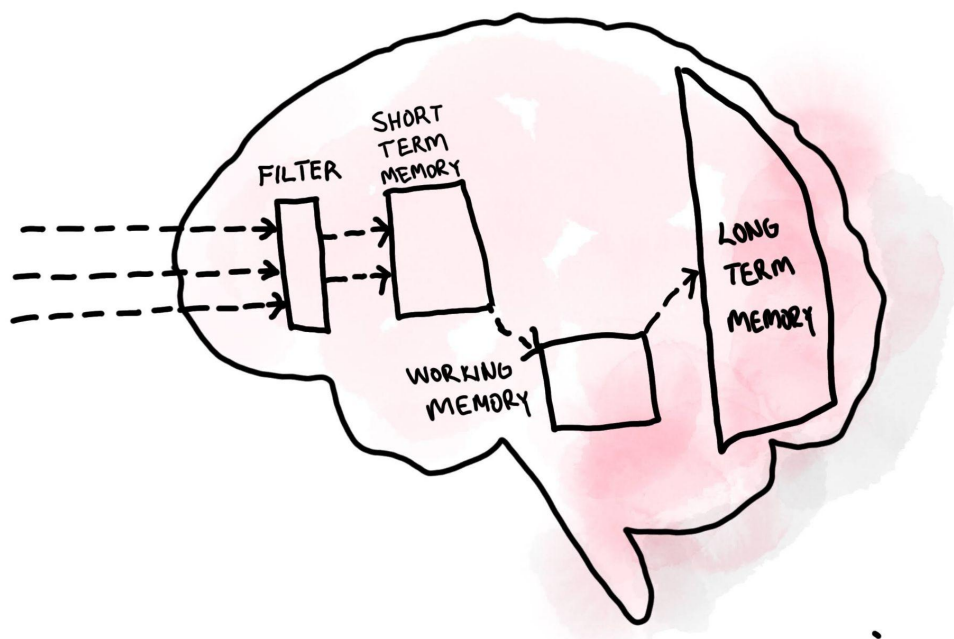
Filter



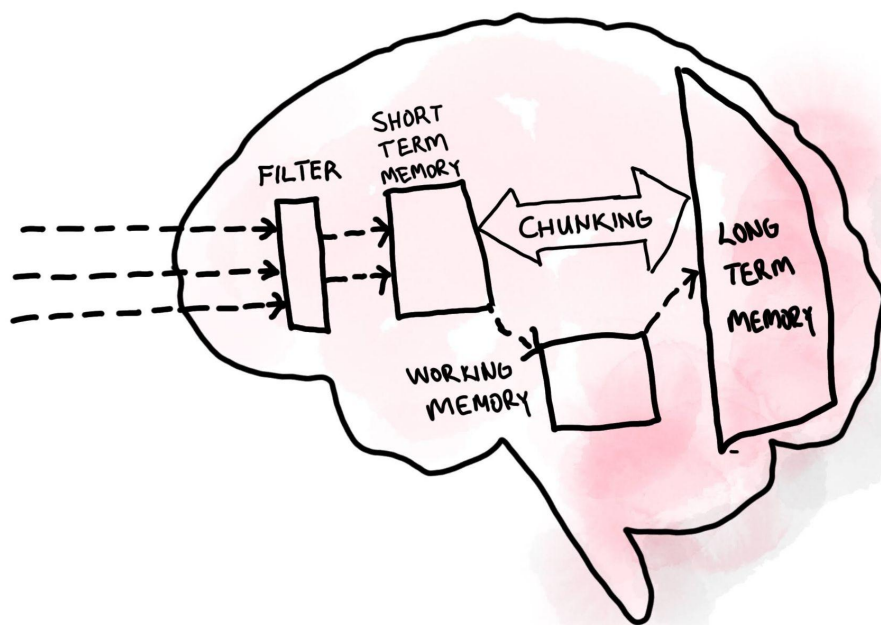
Short term memory with limited slots



Working memory



Longterm memory



chunking



Cognitive load and why to spilt,

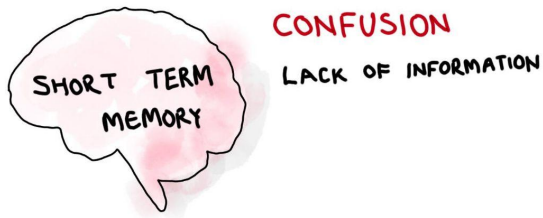


LEARN?



German load -> learning

Confusion - Identify which specific brain function is overwhelmed. Try to split so not all are overloaded. If all are overloaded you have no more cognitive capacity to learn new things. Assistance mechanisms are different



Confusion because of short term memory overload. what did I ask for, which step am I on, which part comes next, what just happened, what signal do I have for task completing correctly.

Antonin describes:

- big migration of hundreds of screen from XML to Compose, with 4 coworkers, all repeating the same request in several sessions in parallel.
 - At some point, I have a dozen of similar opened sessions, different issues to understand and resolve.
 - Every 5 minutes, I switch from one session to another, I need to recall what was the issue I asked the agent to solve for which screen,
 - often I get confuse, and eventually I prompt an agent to do something I wanted another agent to do. And then the agent gets confused too.
- **Solution:** Keep track of what you asked for in each session, where you are, what are you waiting, what issue you are fixing. Use the prompt box, or the sessions note if you have one, to store your short term memory status.

How to support→ Use external support to track and add to short term memory. plans and progress summaries. Keep track of step Antonin applies



CONFUSION
LACK OF PROCESSING POWER

Confusion because of working memory overload. complex steps and history, complex algorithms implemented, tracing through the AI process.

Antonin describes:

- After migrating whole app to Compose, I get pinged for all new funny bugs related to UI glitches assigned to me, even if it is not related.
 - I often start sessions by “*investigate, find the root cause*”, and it leads me steps after steps to trying to understand big blocks of generated text explaining deep Nav3 tree algorithms, and complex recomposition rules.
 - These big blocks are hardly understandable as is, and my working memory get quickly overloaded.
- **Solution:** request visual management, get diagrams, flows, even screenshots if possible. Request links for external documentation in order to organise your thought and be able to analyse the code yourself.

How to support→ Use diagrams and documents to understand how pieces fit together. Split structure from function. Dependency graphs and state tables



Confusion because of long term memory overload. Much more common because we are becoming generalists. what concepts, language, programming principles, frameworks or patterns were used. What traps does the current implementation have. How consistent is it with what already exists. Is the AI hallucinating.

Antonin describes

- Across this migrations and features, I jump between a dozen framework in the same week. Compose and Nav3, Protobuf, Retrofit, GraphQL, ou Dependency Injection...
- At some point, I stopped holding any of them deeply, I read but don't learn.
- So when an agent hands me code, or a colleague raise a doubt, I often can't tell on sight whether it's our idiomatic pattern, an anti-pattern, or a plain hallucination.

Solution → **Use AI to learn.** When you need to understand a pattern, a flow, a language, ask the AI to write you tutorial, exercises, regarding this specific subject, in the specific subject you are working on. It will help you to learn, fill your long term memory, and at the same time understand in the context of your ongoing subject

How to support→ Identify missing parts and actively support LTM. Not only reading but retrieval, deliberate practise, connect knowledge to other know ideas, ask questions about the items, spaced repetition and sleep. Pick your battles, it's impossible to know all things. This causes stress too. determine which parts are important. Find a focal point, expand, find related entities, connect to multiple entities

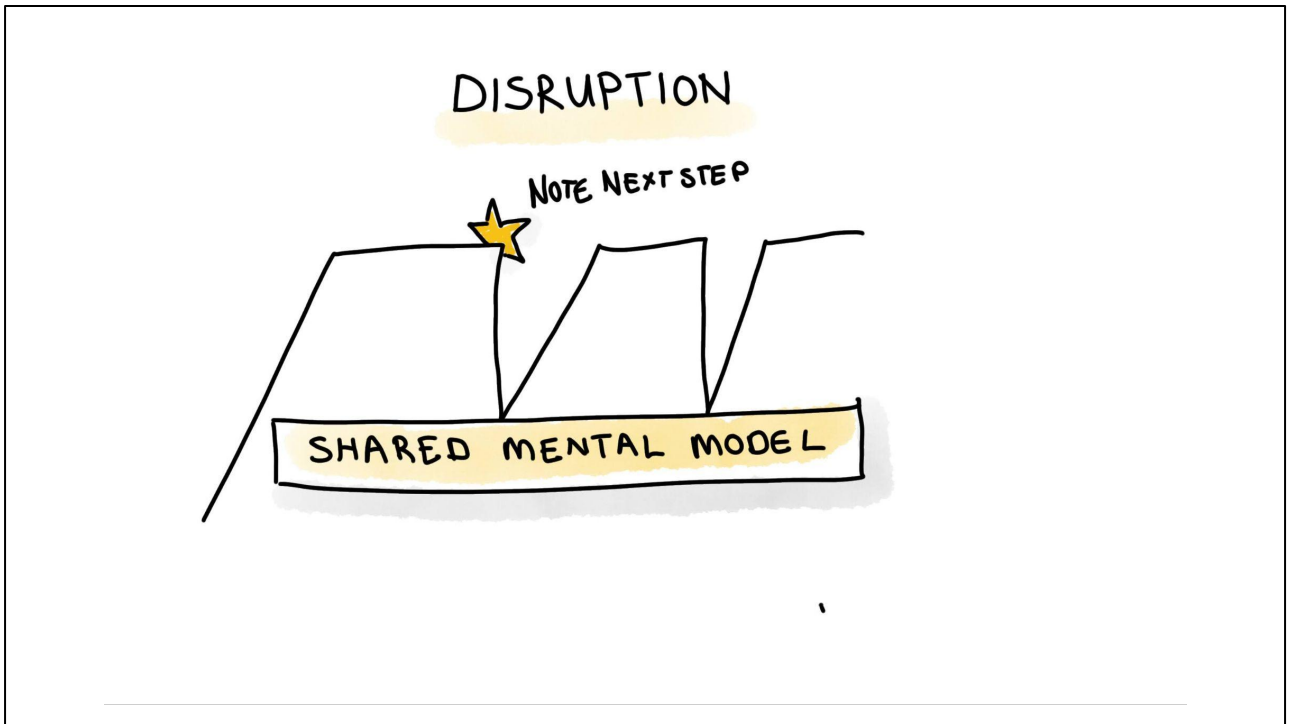
DISRUPTION



Disruptions - causes errors, impacts mood, takes time, if you can stay with the task long enough understanding stays superficial. humans also need a context of the task, loading this is a warm up period, context bleed and loading a mental model. We can use this to support (some form of graph showing too many interrupts

Antonin describes:

- I run many agents in parallel, so I don't choose when they'll have finished, they do.
- I'm deep in one session, tracing a bug, mentally holding that one screen's flow, when another agent finishes and pings me for the next step. on a completely different subject, in another session.
- If I switch, I lost the warm up. I no longer remember what I expected that agent to have done, or where I left the first one. And even the context bleed between the two, in my mind.



Solution → as we close your door, put our headset, turn off notifications on Slack, let's do the same with AI tools. Also , keep focus time on one subject during few hours, and only open related context sessions. Other sessions can wait, the agents will keep their memory for when you will be ready.

Create an easy accessible mental model or share mental model among tasks that you switch between. e.g. don't switch to a completely related topic. Or if you switch from e.g. frontend to backend, create a link between the two in the mental model. 2. Store where you are and what has to happen next when you switch. E.g. before switching from one agent to the next, note what you expect that first agent to have achieved when you come back.



Be kind to yourself.



BE KIND

Sometimes you need a glass of water, a break, a stretch, a walk, a nap, a connection with another human. There is research for this too, dehydration impacts cognitive functions. sleep improves building long term memories, movement improves attention and human connection improves decision making. Sometimes if you let a bit of the previous context bleed into your thoughts while you are doing something else, the most creative solutions appear. Experiment with one small thing to make it better, the agency is a mood booster and you'll definitely learn something about yourself

- **Short term memory** - notes, plans
- **Working memory** - dependency diagrams, state diagrams, chunks for easy loading
- **Long term memory** - practise recall, spaced repetition, connect concepts with each other maps and chunking, ask questions about material, pick battles, sleep
- **Disruptions** - stay with one task longer, match mental models, make mental models easier to load, track next step
- **Be kind** - water, stretch, break, walk, nap, connect

QR code to references
Link to web page
Antonin contact
Maia contact