Context, Process, Intent

HyperDave: mental models and design patterns for personal agency.
And interesting facts about algae.

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GDG Faro DevFest, 27 November 2026
Slides will be on divydovy.com
Find me @divydovy



We've spent far longer working with intelligence than working with computers.

How I think about building intelligent systems, and how I built HyperDave.



Intro Context Process Intent HyperDave and next steps

I want you to leave with:

Mental models for designing intelligent systems.

A framework for building durable, intelligent processes.

Easy things to try next week.

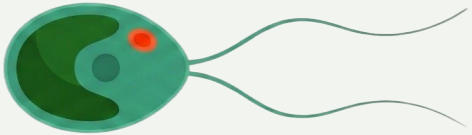
I'm a zoologist.

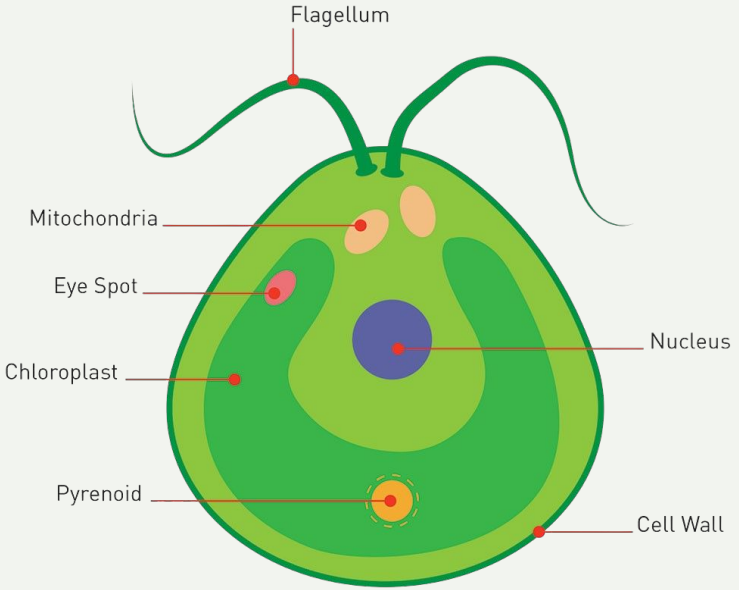
What's the smallest thing that perceives, decides and acts?

Meet Clammy

Chlamydomonas is a single-celled alga.

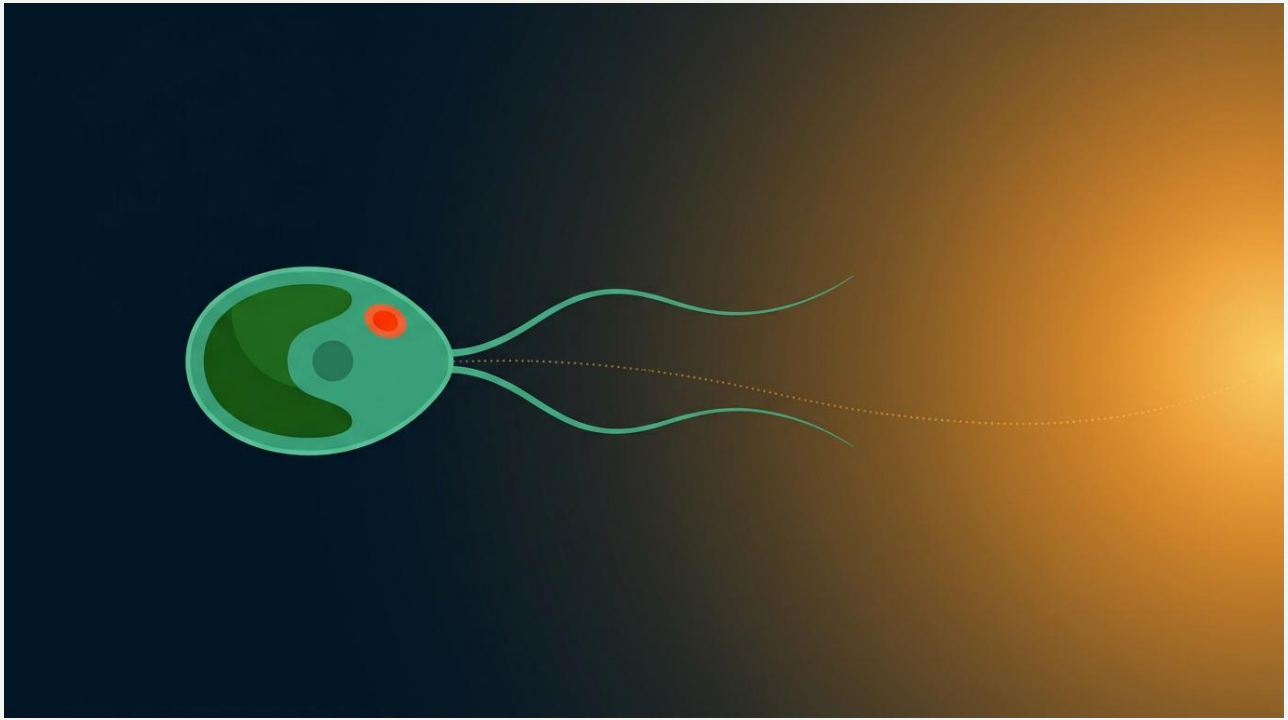
- **Favourite food:** sunlight.
- **Favourite swimming stroke:** breaststroke.
- **Favourite sense:** sight.
- **Favourite holiday:** snow.
- **Favourite brain:** none.





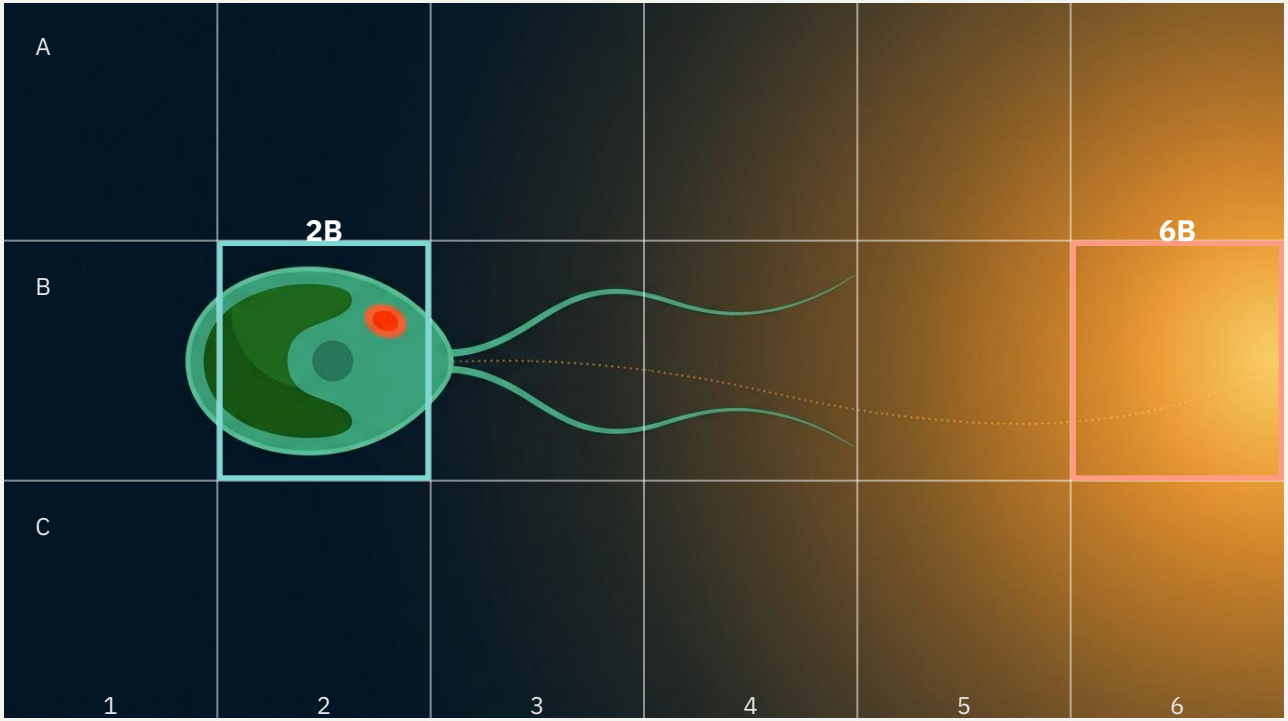
Credit: https://www.singerinstruments.com/resource/what-is-chlamydomonas/

A day in the life of Clammy



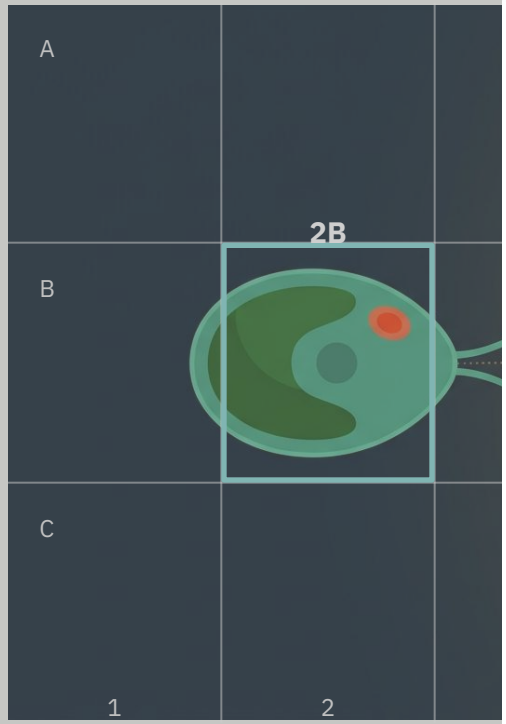
- Perceives light
- Light good
- Swims towards light

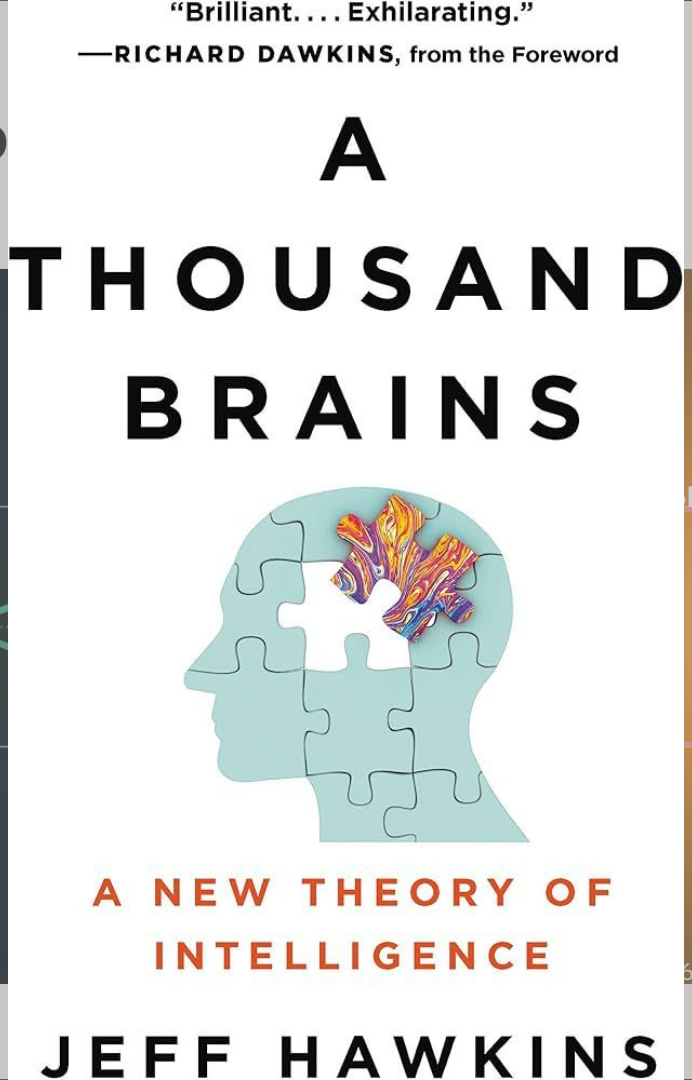
Clammy has a plan

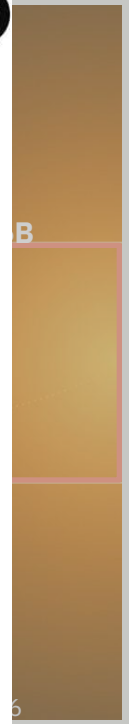


- **Where Clammy is**
  2B
- **Where light is**
  6B
- **The path**
  4 across

Clammy has a p

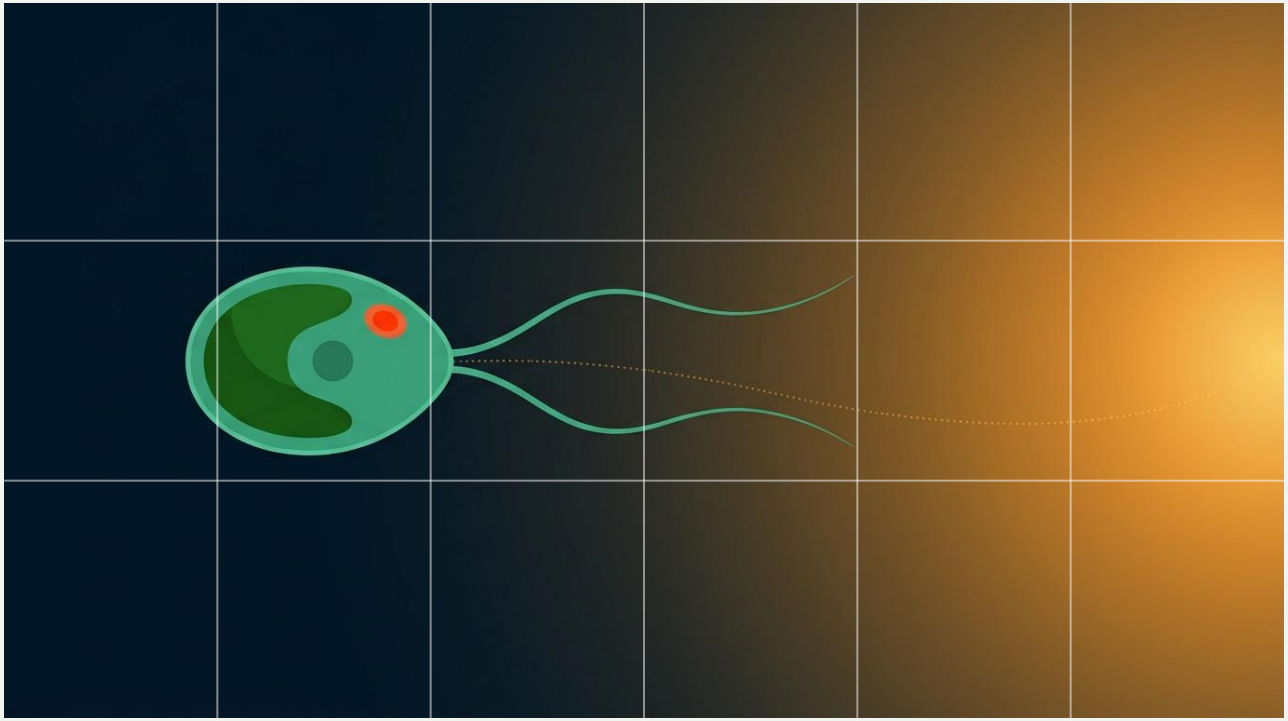






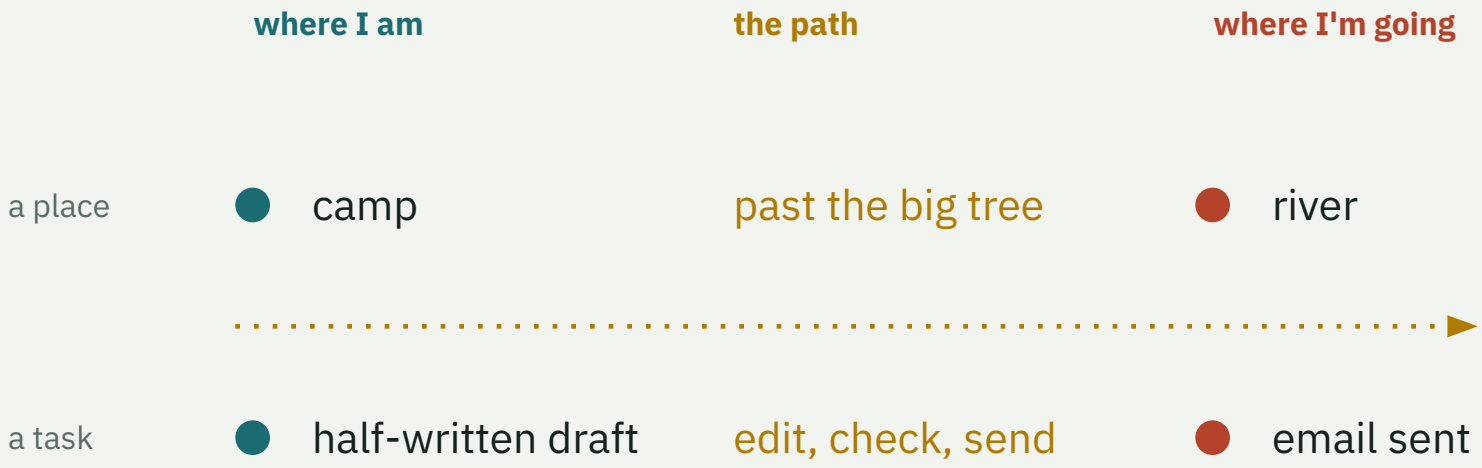
- **Where Clammy is**
  2B
- **Where light is**
  6B
- **The path**
  4 across

Why are we talking about algae, Dave?



- **Context**
  the map, and where I am
- **Intent**
  where I'm going
- **Process**
  the path

Brains reuse this pattern for concepts too*



*Hawkins' theory: tasks and concepts are repurposed reference frames.

Why make it work like us?

A person is still accountable, so a person needs to understand it.

Why make it work like us

We evolved to understand people.

A system that behaves like a person is easier for us to understand.

1

Context

The map, and where you are



Intro | **Context** | Process | Intent | HyperDave and next steps

Context

HyperDave's context is specific.

An Obsidian vault structured with PARA: projects, areas, resources, archive.

Different domains have their own vault & config (e.g. personal vs job).

This creates a specific map for the agent to use.

Context

One folder = one context.

Start in a folder, get that folder's context, inheritance from ancestors.

Add context manually, via automations, and through self-generation.

Each session can have different skills, model, config, according to needs.

Context

Top-level folder = global access & routing

```
$ qmd query "where do I keep notes about the home network and servers"

score  note
0.96   2. Areas/Digital Systems/intent.md
0.58   2. Areas/Digital Systems/index.md
0.38   4. Archive/.../NAS Service Directory.md
0.28   2. Areas/Digital Systems/Home Server & Network Setup.md
```

2

Process

The path from here to there



Intro: the big idea | Context | **Process** | Intent | HyperDave and next steps

Process

A process is just something that happened.

In the body	In software
Heartbeat	Scheduled job
Knee jerk	Event trigger
Homeostasis	An operating system

None of it needs what we think of as intelligence.

Process

Levels of agency

1 Coded reflex

Deterministic: knee jerk, cron job: same in, same out.

2 Model call

Probabilistic: responsive, stateless: muffin or chihuahua?

3 Persistent/agentic

Looping: memory and intent: deliberate progress towards a goal.

You and Clammy both use all these levels.

Pain is a process that flags a process.

Processes nest and recurse.

Process

Process process process

Making them

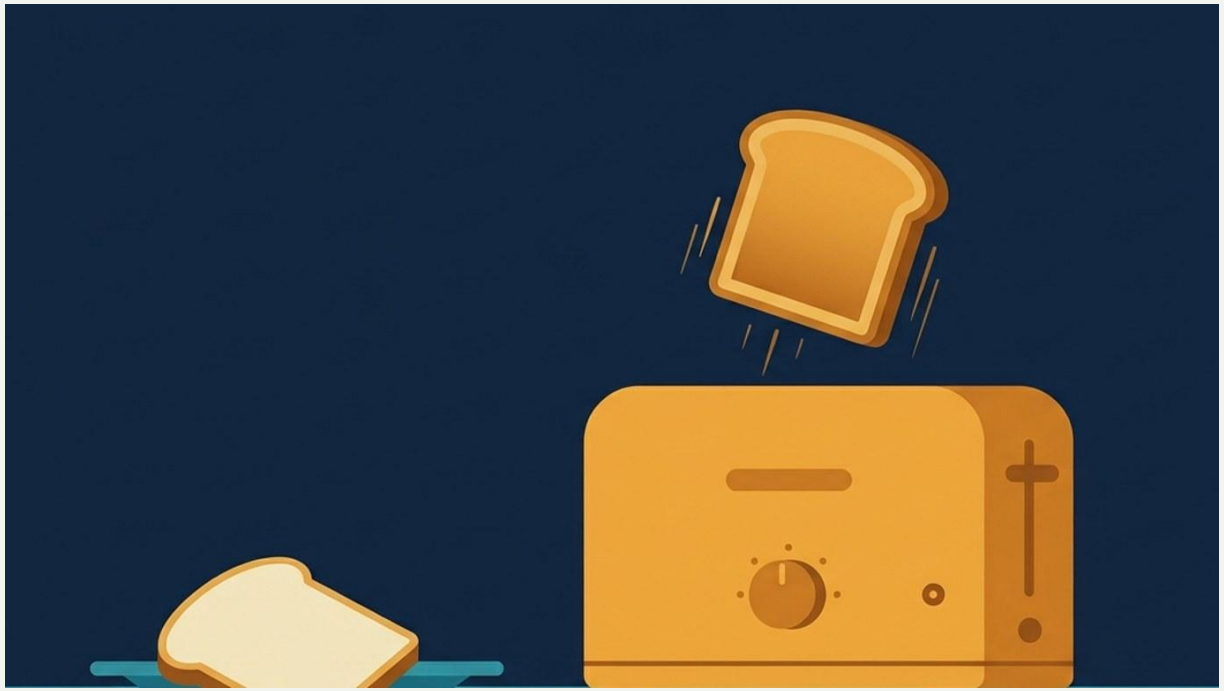
1. The actual process
2. The process of creating a process
3. The process of rolling these processes out through the domain

Running them

1. The actual process
2. The watchdog process
3. The auto-heal or escalate process

Process

A process turns bread into toast.



- **Process**
  the toaster
- **Happy path**
  golden toast

Process

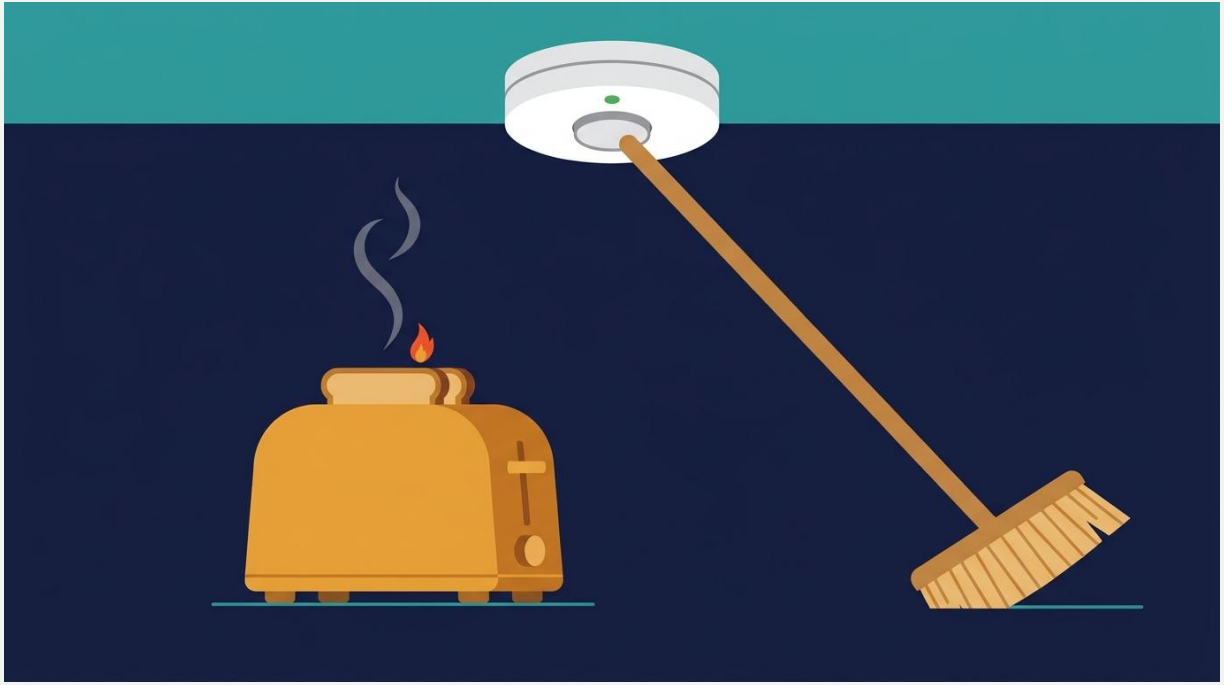
A watchdog watches for the sad path.



- **Process**
  the toaster
- **Watchdog**
  the smoke alarm
- **Sad path**
  the toaster burns the toast

Process

A watchdog needs to map all sad paths



- **Process**
  the toaster
- **Watchdog**
  the smoke alarm
- **Also the watchdog**
  watching for silent failure

3

Intent

Where you're going



Intro: the big idea | Context | Process | **Intent** | HyperDave and next steps

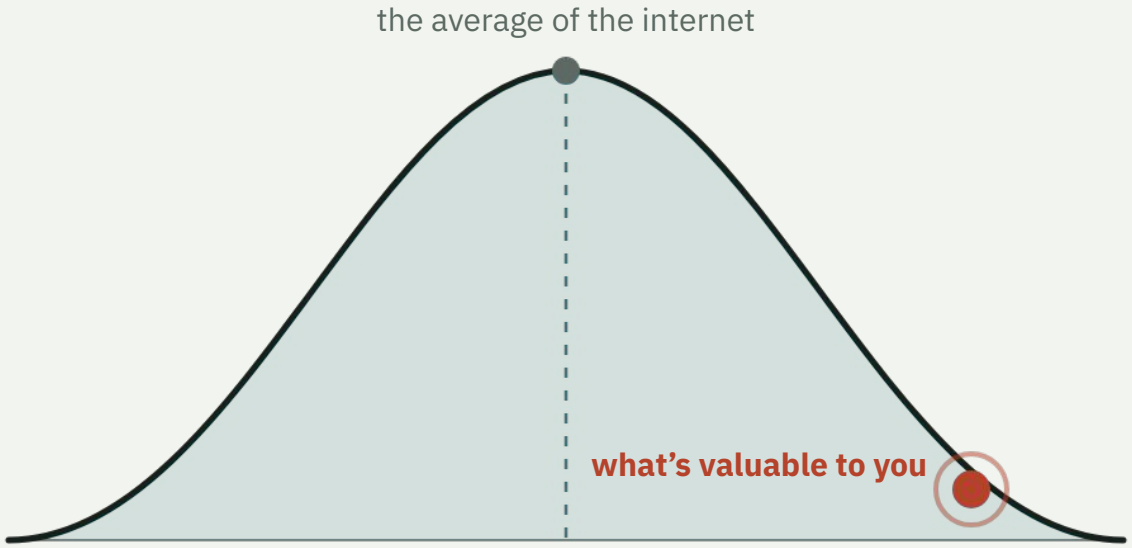
Intent

Answers used to be the scarce resource.

Now we have infinite answer machines.

Intent

Now, the constraint is the quality of the question.



What do you want to do?

What will make your outcome different from the average of the internet?

Intent

The best answer I have is that this is deep, personal work.

Learning to recognise what you authentically want, truly and deeply.

Intent

The old brain still does the wanting.

Neocortex: the new brain

works out how to fulfil old brain as well as it can, tells stories about why

Old brain

wants, needs, autonomously controls, overrides

Intent

The old brain still does the wanting.

AI: the new new brain

sum-total-of-humanity answers, superhuman, digitally and bureaucratically native

Neocortex: the new brain

works out how to fulfil old brain as well as it can, tells stories about why

Old brain

wants, needs, autonomously controls, overrides

Intent

My intent stack inherits downwards.

Lifetime

Live a good life, be a good human, etc.

Work domain

Policy, my job role, brand guidelines, systems to use, etc.

Personal domain

My personal tone of voice, my values, systems, preferences, etc.

Then, in each domain: five years, this year, all projects, a project.

Each level inherits everything above it, so a folder's intent never has to repeat the rules above it.

Intent

What an area intent file looks like.

```
2. Areas/Digital Systems/intent.md
---
type: area-intent
updated: 2026-11-27
---

# Intent

The source of truth for my entire digital systems
estate. Anything to do with architecture, devices,
networks, connections, configuration, and functional
and non-functional requirements lives here.
```

My system

How it fits together.

A channel

one thing I want to do

intent

Discord: a message or a photo, from laptop, phone, bot or webhook

A folder

everything about the project or area

context

The bridge, a Python service on the Mac mini. It only answers me, and looks up which folder the channel belongs to

An agent

starts in that folder and does the work

process

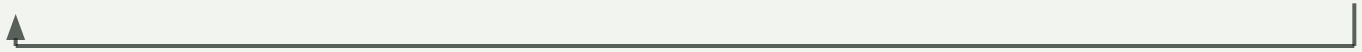
A pi session with the channel's own memory, using the folder's rules and skills. Tools: Gmail, Calendar, AnyList, Todoist, qmd, files

Checks

evals and a watchdog

verify

Watchdogs, eval results and my corrections, fed back



replies go back to the channel, optionally into a thread

Demo

Adding a recipe to my shopping list.

I send a photo

to the channel for that job

→

It adds it

to my shopping list

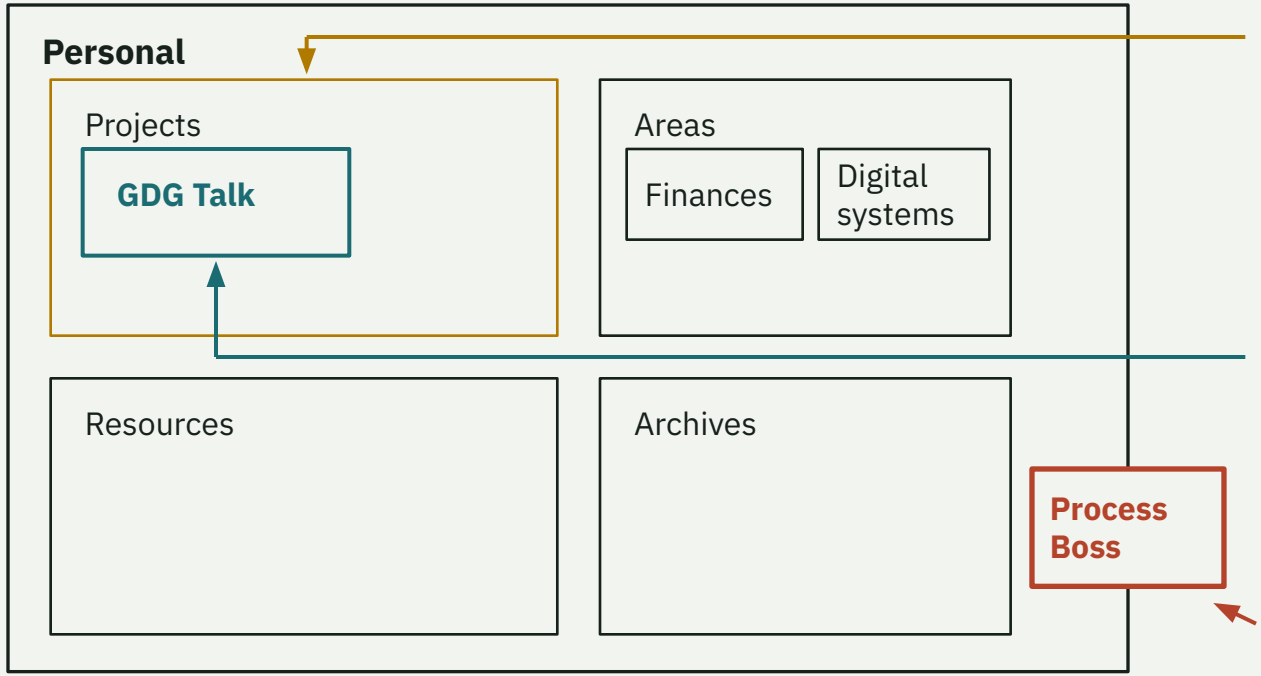
→

One day

my kitchen robot will just have it ready for dinner

My system

Most agents live in folders, but not all.



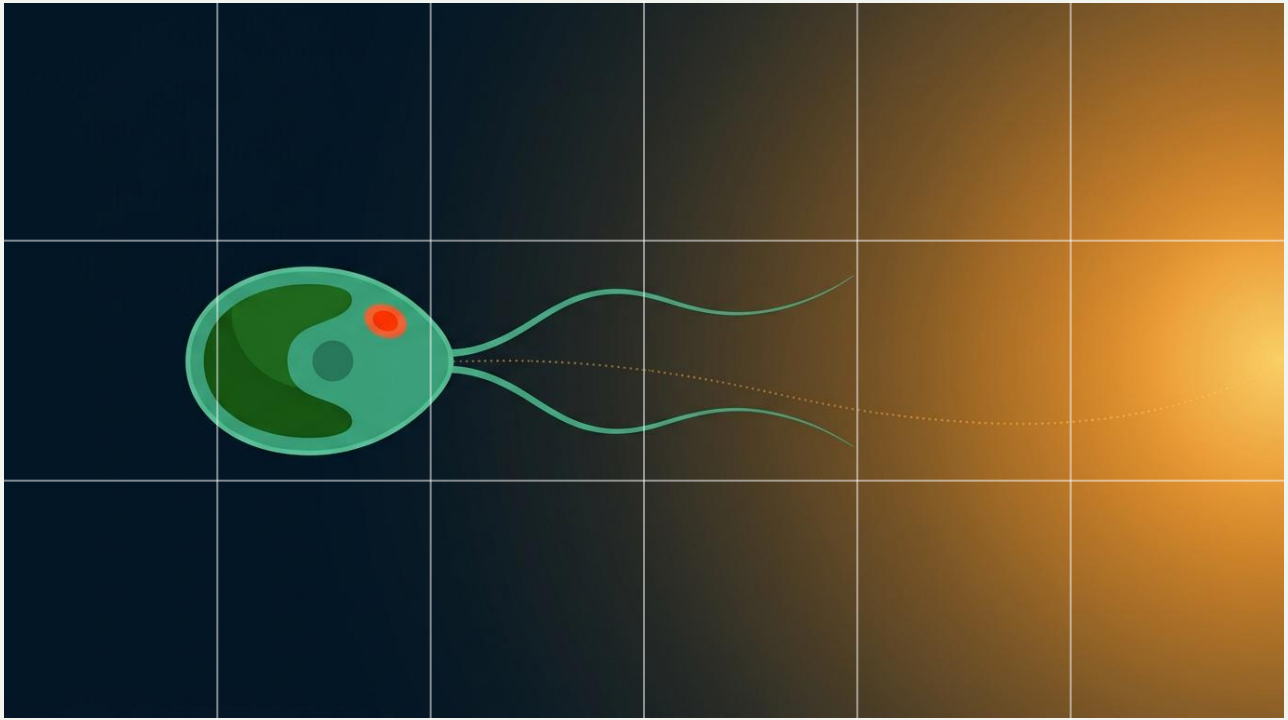
Projects Boss
"Make sure all my projects are compliant"

The GDG Talk agent
"Help me plan and create a great talk for Faro nerds interested in personal assistant AIs"

Process Boss
"Check any automations follow process process process and fix any non-compliance"

Work and personal are separate domains. There's a DMZ for requests that cross.

Be like Clammy



- Context
- Intent
- Process

Next week

Four steps to getting going

Pick one thing: a project or area, write one line of intent for it.

Define the happy and sad paths.

Decide what ‘pain’ looks like: the alert that tells you it's broken.

Give it some agency: let it do one small thing without asking.

Close

Compounding our capabilities means understanding ourselves.

Thanks. Questions?

Backup

The brain science behind the map.

What I believe

Building the best intelligent systems means building them to be like us.

Like us, not us.

Backup

Your brain keeps a map like this.



Fig. 2 One grid cell firing as a rat explores. Nobel Prize, 2014.

My system

What it's actually made of.

Context

Obsidian vault, in git

qmd semantic search

Gmail, Calendar and file changes come in as signals

Intent

Discord: one channel per project

intent.md in every folder

Intent Stack

Process

Coding agents (pi, Claude Code), one session per folder

Skills: markdown files

launchd schedules, and watchdogs that post to Discord

All of it runs on one always-on Mac mini.

Backup

Your neocortex has about 150,000 of these, and they vote.

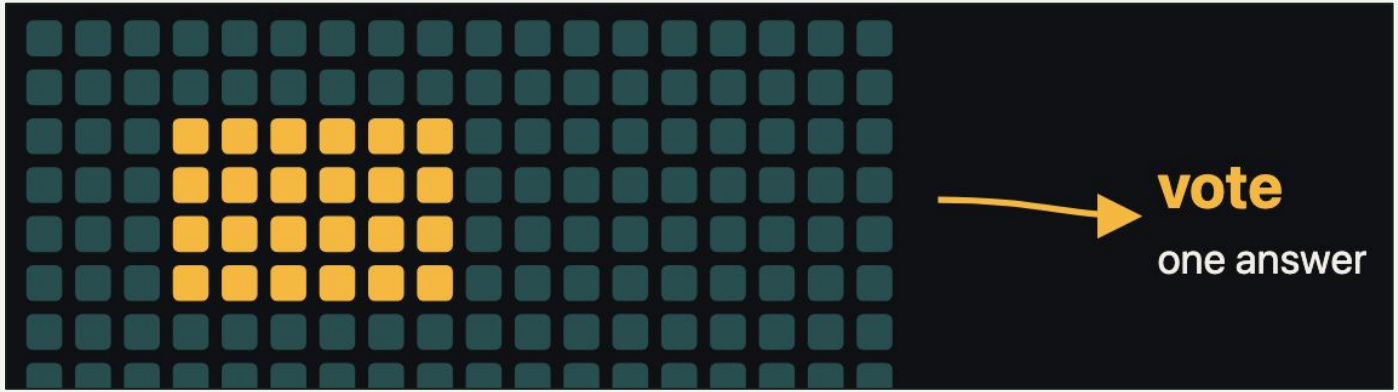


Fig. 3 Each column builds its own models. Hawkins, A Thousand Brains.

Process

Skills work like plasmids.

A small portable package that gives an agent a new ability.

They spread sideways, not down the family tree.

Intent

Do it first and fix it later, unless you can't undo it.

Do it, tell me after

append, tag, draft, edit under git

Ask first

delete, send, publish, spend

The model suggests. The harness and I decide.

Backup

One entry from the intake log.

I only check the ends: what goes in, and what should come out. The middle can change.

```
intake-log.jsonl
{
  "channel":      "discord",
  "text":         "Did you set up the watch/wake up stuff from DMZ?"
  "gloss":        "Checking whether the wake-up/watch features…"
  "distribution": { "answer": 0.8, "update": 0.15 },
  "chosen":       "answer",
  "mode":         "silent",
  "action":       "No, wake-ups from DMZ #26 aren't built…"
  "outcome":      null   // my correction lands here
}
```

Fig. 4 One entry from the intake log. My correction goes in the outcome field.

Intent

My intent stack inherits downwards.

Domain
At work: policy, my job role, brand guidelines.

Lifetime
Live a good life. Decide as well as I can, by my principles.

Five years
The direction.

This year
The focus.

Active
The work in hand.

Project
One folder, one intent.md.

Each level inherits everything above it, so a folder's intent never has to repeat the rules above it.