



2026 Midwest AI Summit

Not Every Team Needs a Dark Factory

How AI-Enabled Teams Actually Work

Chris Shinkle and Andrew Dunlap



Who we are



Chris Shinkle

Director of Innovation



Andrew Dunlap

Senior AI Engineer

The researchers have started measuring what AI actually does to teams.

Three studies. One pattern.

DORA · GOOGLE CLOUD

2025 State of AI-assisted Software Development

DORA research team

NBER WORKING PAPER

Writing Code vs. Shipping Code

Demirer, Musolff & Yang

HARVARD UNIVERSITY

Bottlenecks in Software Production

Chen & Stratton

Their conclusion...

AI doesn't fix a team.

It **amplifies** what's already there.

*We build software for companies
where being wrong matters.*

NOT EVERY TEAM NEEDS A DARK FACTORY.

*In the wrong mode, even great
teams struggle.*



Signs you're in the wrong mode...

- 1 “We’re shipping AI slop, and nobody can say what ‘right’ looks like.”
- 2 “We should be using more AI... but what does ‘more’ even mean?”
- 3 “The joy is gone. All I do is review code all day.”

Heard something like this in a meeting last week? You're in the right session.

*When the way you work
doesn't fit your situation...*

**MORE AI
WON'T MAKE
IT FIT.**





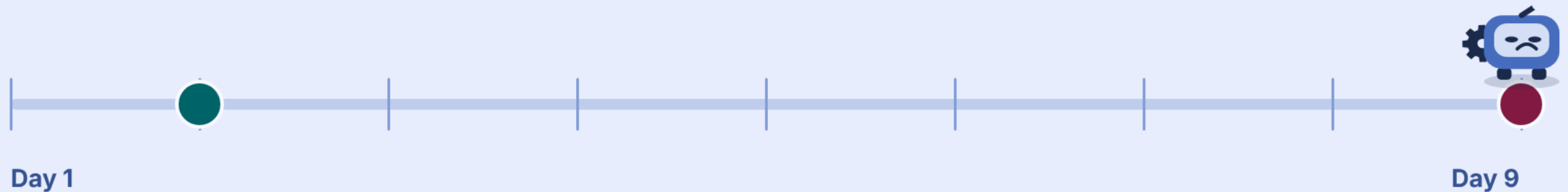
Regional Transmission Operator

THE TWO-DAY PROTOTYPE.

The Two-Day Prototype

Day 2: it works.

Day 9: nothing shipped.



Pinpoint your **constraints**
to understand the forces at play.

“

Why were we moving so slow?

Agentic Development Constraints

Agentic framework: **Robert Herbig**, SEP

The forces at play had changed.

Organization



Token Budget

How much can we spend on AI usage?



Organizational Readiness

What will leadership approve, fund, and defend?

Product / Domain



Goal Definition

Can we write down what "done" looks like before we begin?



Domain Knowledge

How much of what we know is written down where an agent can use it?

Technology



Verifiability

How manual or automated is verifying that a change is correct?



Code Oversight

Must humans inspect the code itself, or can we trust verified outcomes?

Agentic Development Constraints

Pinpointing your constraints is the first step.

Organization

 **Token Budget**



Per seat plan

Budgeted line item



Organizational Readiness



Approval per use

Leadership sponsors

Product / Domain

 **Goal Definition**



"We'll know it when we see it"

Clearly defined



Domain Knowledge



Knowledge in heads

Knowledge written down

Technology

 **Verifiability**



Experts verify

Machines verify



Code Oversight



Inspect every line

Verify outcomes

Agentic Operating Modes

Individual Agentic Coding

Each dev, own agent, own information

Shared Agentic Coding

Common infrastructure, compounding

Orchestrated Agentic Coding

Shared workflow, agents inside

Loop Engineering

(Dark Factory)

Agent autonomy

Agentic Operating Modes

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Agent autonomy



Building Components Manufacturer

CONSTRAINTS DETERMINE YOUR OPERATING MODE

Agentic Operating Modes

Individual Agentic Coding

Each dev, own harness

Shared Agentic Coding

Common infrastructure, compounding

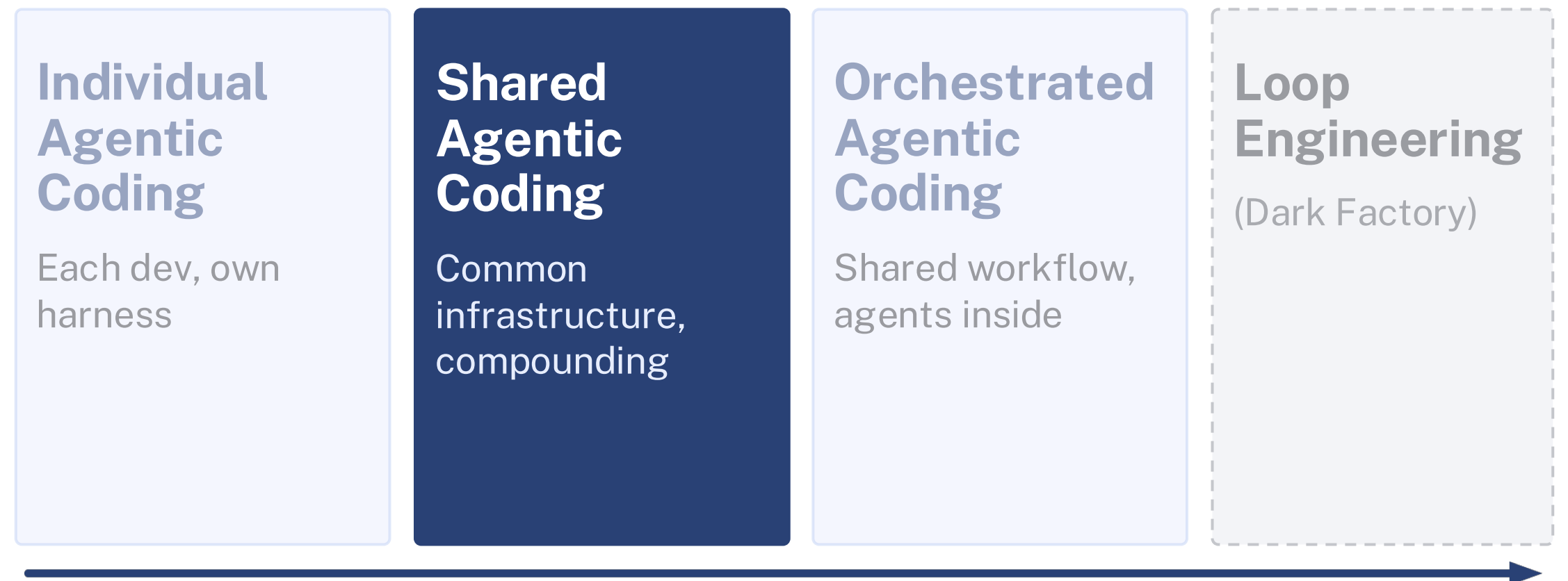
Orchestrated Agentic Coding

Shared workflow, agents inside

Loop Engineering

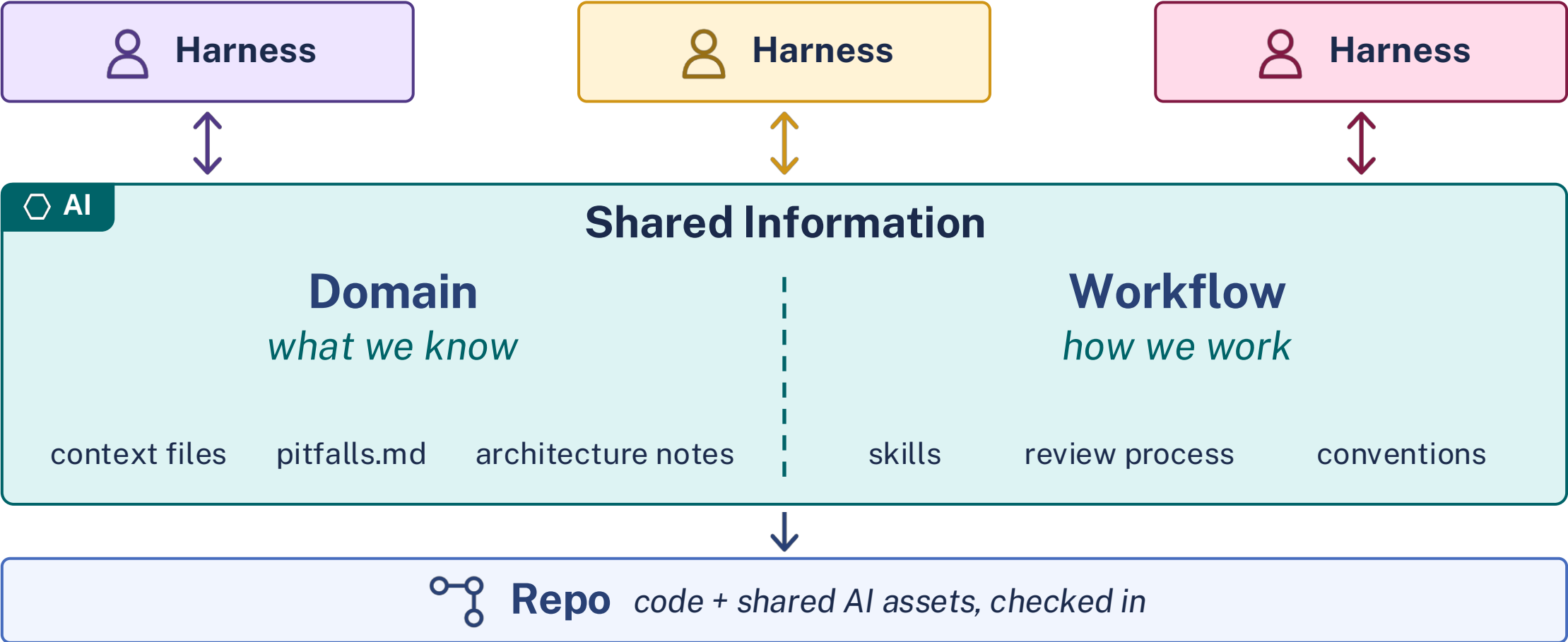
(Dark Factory)

Agent autonomy



Shared Agentic Coding

Common infrastructure, compounding



One hub between everyone. Each person's improvement flows back out to the whole team.

FORUM Mobile Banking App

ORCHESTRATING A TEAM OF AGENTS



Agentic Operating Modes

Individual Agentic Coding

Each dev, own harness

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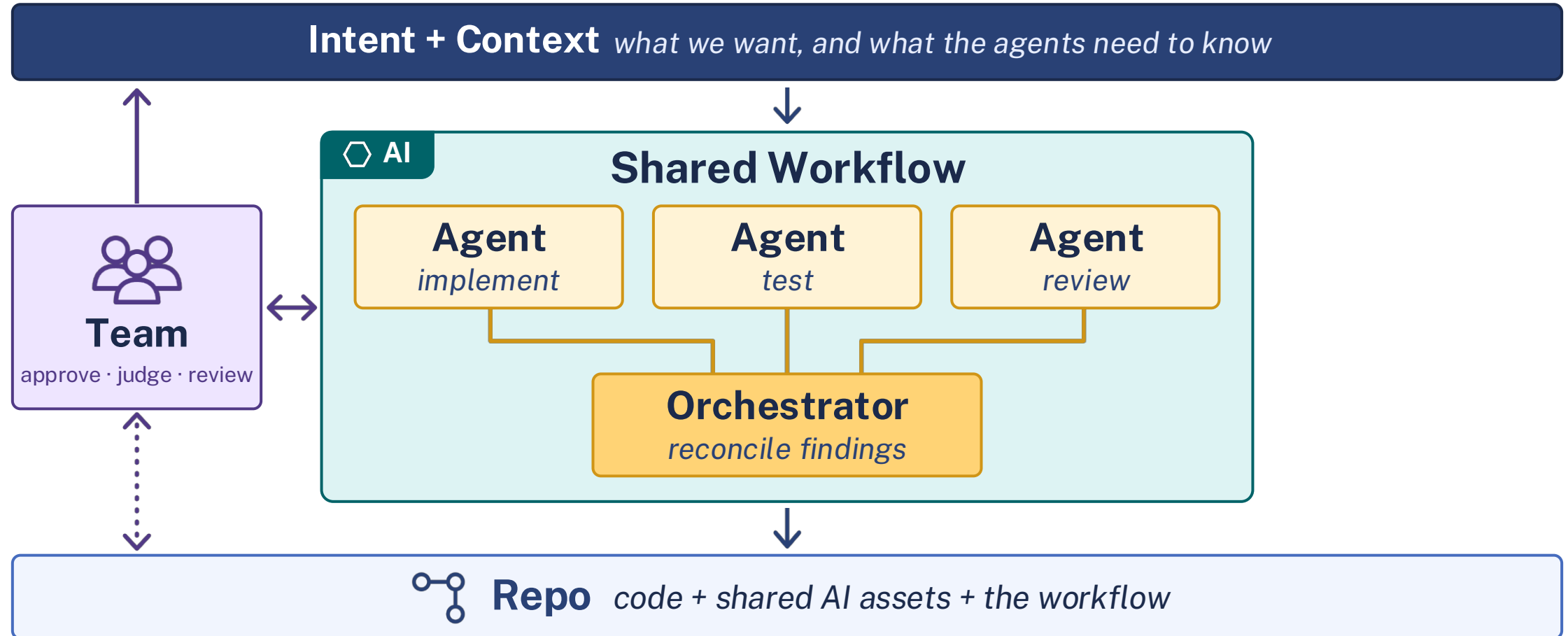
(Dark Factory)

Agent autonomy



Orchestrated Agentic Coding

Shared workflow, agents inside



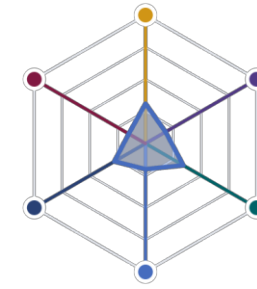
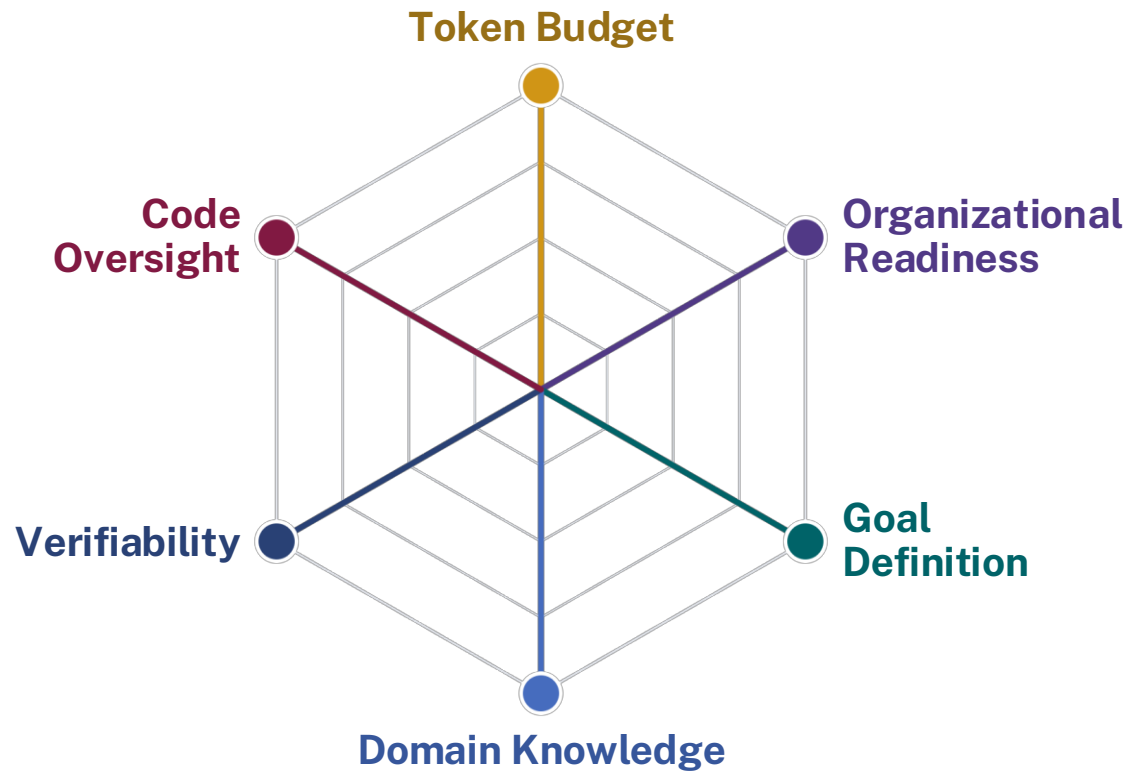
The shared hub has grown into a workflow agents run inside. Humans move to the checkpoints: approve and judge.

“

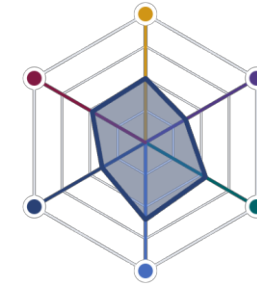
So the goal is to get to Dark
Factory?

The Goal Is Fit

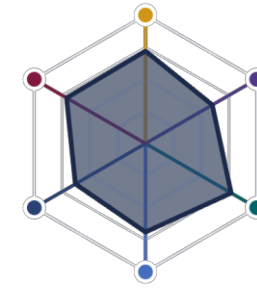
Identify your constraints, understand the mode they support, and you've found your good AI fit. Bigger isn't better; it's a matter of fit.



Individual Agentic Coding



Shared Agentic Coding



Orchestrated Agentic Coding

You might be asking,

“What does this look like for me?”



Lean's Answer

There's no single blueprint.

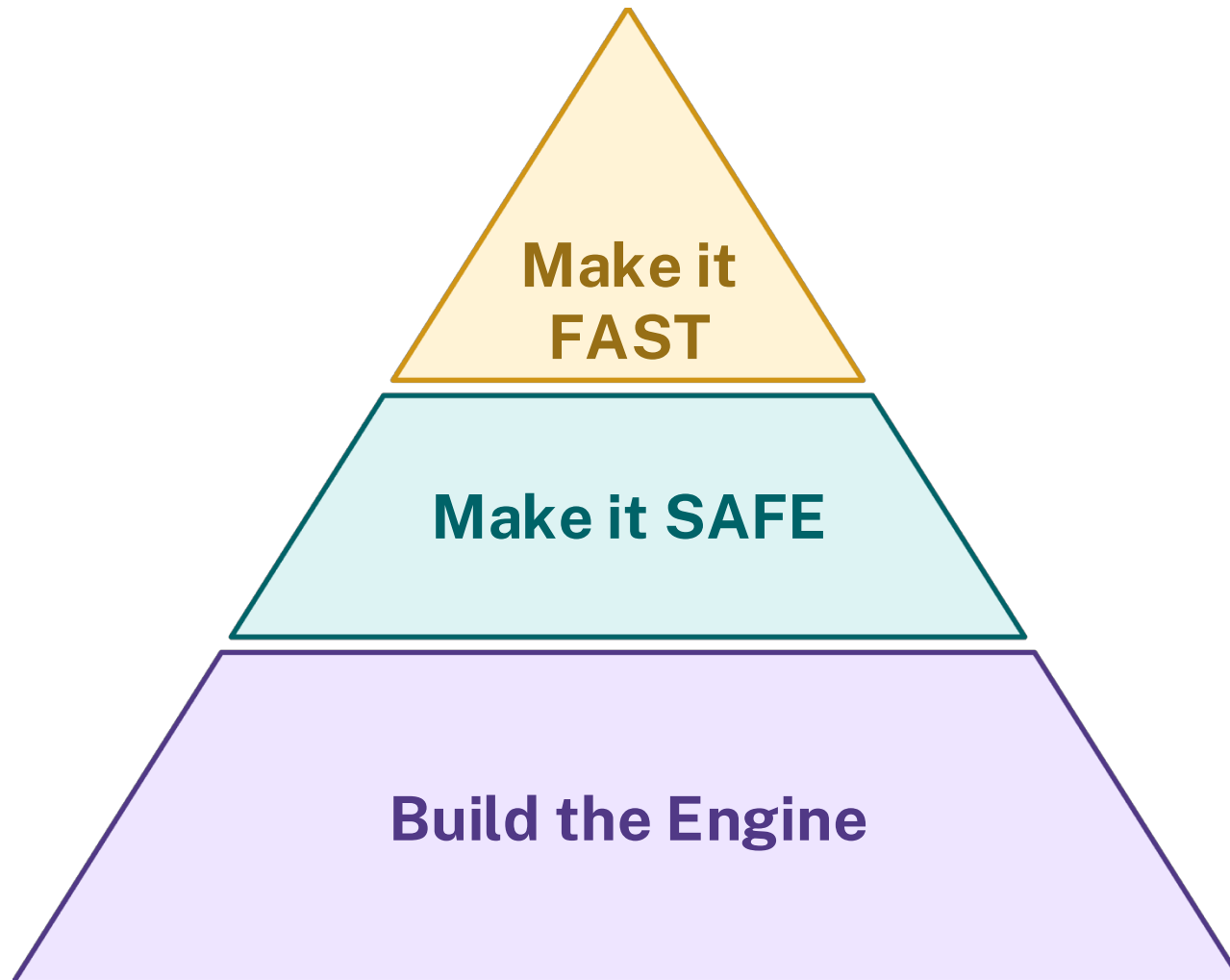
Toyota never told anyone to hang an andon cord.

**Principles are true everywhere.
Practices aren't.**

*I can't tell you what your practices should be,
but I'll give you five principles to find the ones that fit.*



Five Principles for Agentic Teams



Remove Toil

Automate what repeats. Save thinking for what doesn't.

Chase Systemic Bottlenecks

Speed up one step and the wait moves somewhere else. Go find it.

Verification Before Velocity

Never hand off more than you can verify.

Deliberate Iteration

Improvement that isn't scheduled doesn't happen.

Shared Infrastructure

If the AI can't see it, it doesn't exist.

“

Three teams.
Same principles.
Different modes.
Different practices.

Get it?

Same principle. Different practices.

Verification Before Velocity *Never hand off more than you can verify.*

Individual

Agentic Coding



**engineer verifies the
output files**

*Regional transmission operator
prototype*

Shared

Agentic Coding



**domain rules validated
by an outside source**

Andrew's team

Orchestrated

Agentic Coding



**existing requirements
allowed agents to verify**

FORUM Mobile Banking App

**The principle didn't pick the practice. The constraints did.
And that's exactly how it should work.**

Regardless of where you want
to operate...

“

A bad system
will beat a
good person
every time.

— W. Edwards Deming



Putting it together



Principles say what must stay true.



Constraints say what your environment can support.



Your mode and practices are the result.



NOT EVERY TEAM NEEDS A DARK FACTORY.

AI fit happens when your **mode**
matches your **constraints**,
without bending the **principles**.



Thank you



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*With thanks to **Robert Herbig**, AI Practice Lead at SEP, whose thinking on agentic principles, constraints, and modes shaped this talk.*

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