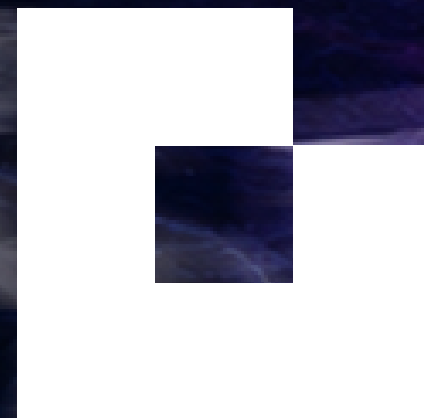


$$\frac{\partial X}{\partial t} = D \nabla^2 X - k_{on} X + k_{off} U$$

$$\Delta G = \Delta H - T \Delta S$$

$$E_{\tilde{g}} = - \sum p_{\text{model}} [\log D(x)] + E_{x \sim p_{\tilde{g}}} [\log (1 - D(G(x_r)))]$$

EQUIPMENT



$$E = \sum_b E_{\text{bond}} + \sum_{\theta} E_{\text{angle}} + \sum_{\phi} E_{\text{dihedral}} + \sum_{i < j} E_{\text{nonbonded}}$$

Who we are



Bytespace Labs is an SF-origin AI research and product lab focused on healthcare AI infrastructure.

We help healthcare institutions identify, adopt, and scale practical AI systems across operations, administration, and research.

Our work focuses on building the data, context, and integration layers that make AI useful inside real organizations.



CEO & Co-Founder

Karanveer Dhillon

UC Berkeley

Datacenters, Telecommunications, SaaS



CTO & Co-Founder

André Nuyens

Penn M & T

Software, AI Systems, Data Infrastructure

What 's happening?



The way that companies operate is changing. A new wave is coming.

The question isn't whether or not it's on it's way. It's whether you'll be ready to catch it.

AI is becoming core infrastructure: moving from chatbots into the operating layer of companies.



What is AI?

1.	Applications (co-pilots, agents, robots, tools, etc.)
2.	Models (LLMs, image models, voice, etc.)
3.	Infrastructure (datacenters, networking, storage, etc.)
4.	Chips / Compute (GPUs, CPUs, memory, interconnects)
5.	Energy (power, grid capacity, electricity procurement, etc.)



Most Companies Focus On..

Applications / Tools

without understanding..

Tokens

Context

Data

Integrations

Models

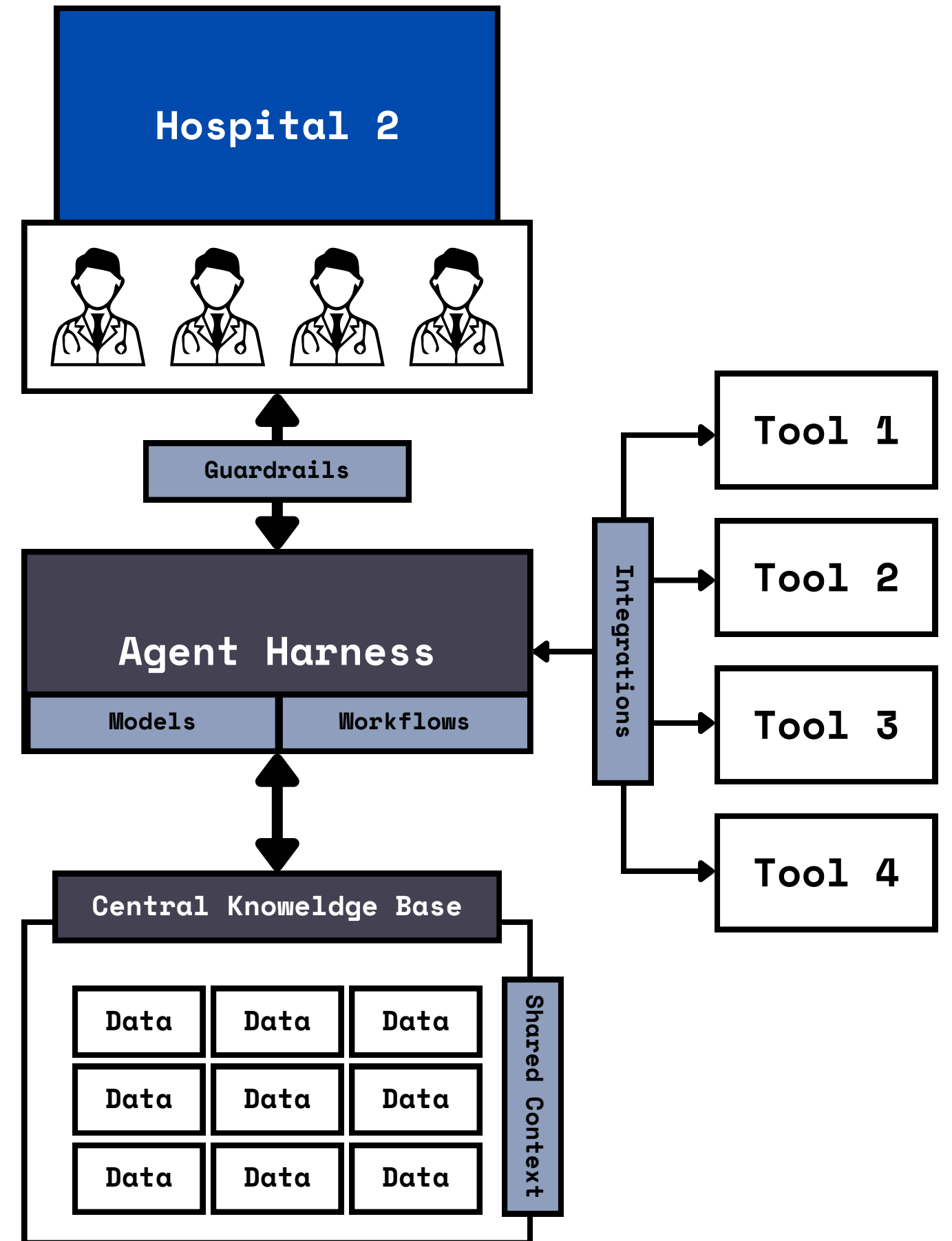
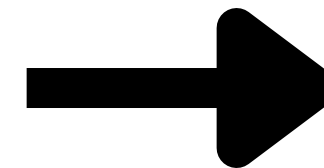
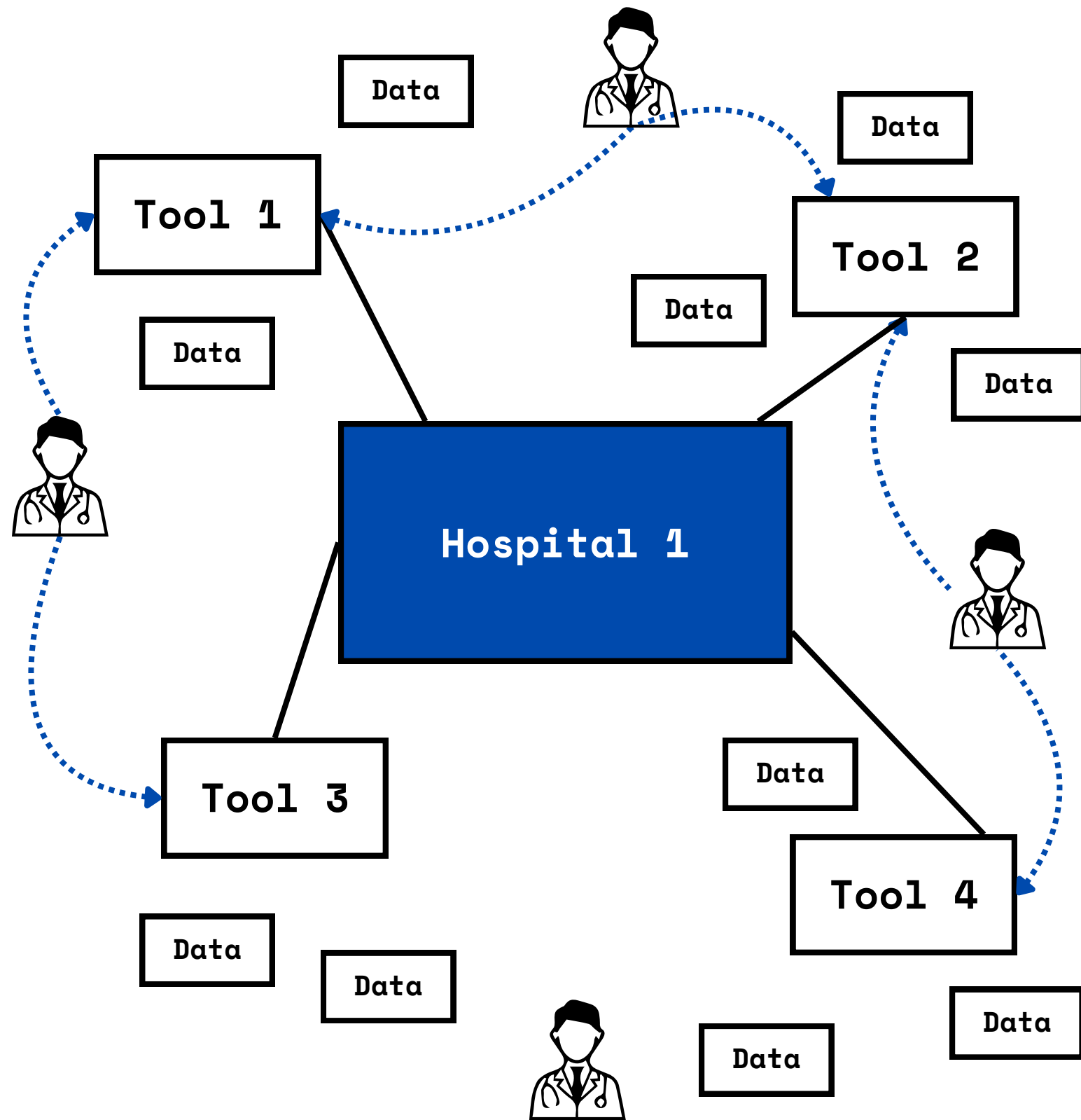
Harnesses

Guardrails

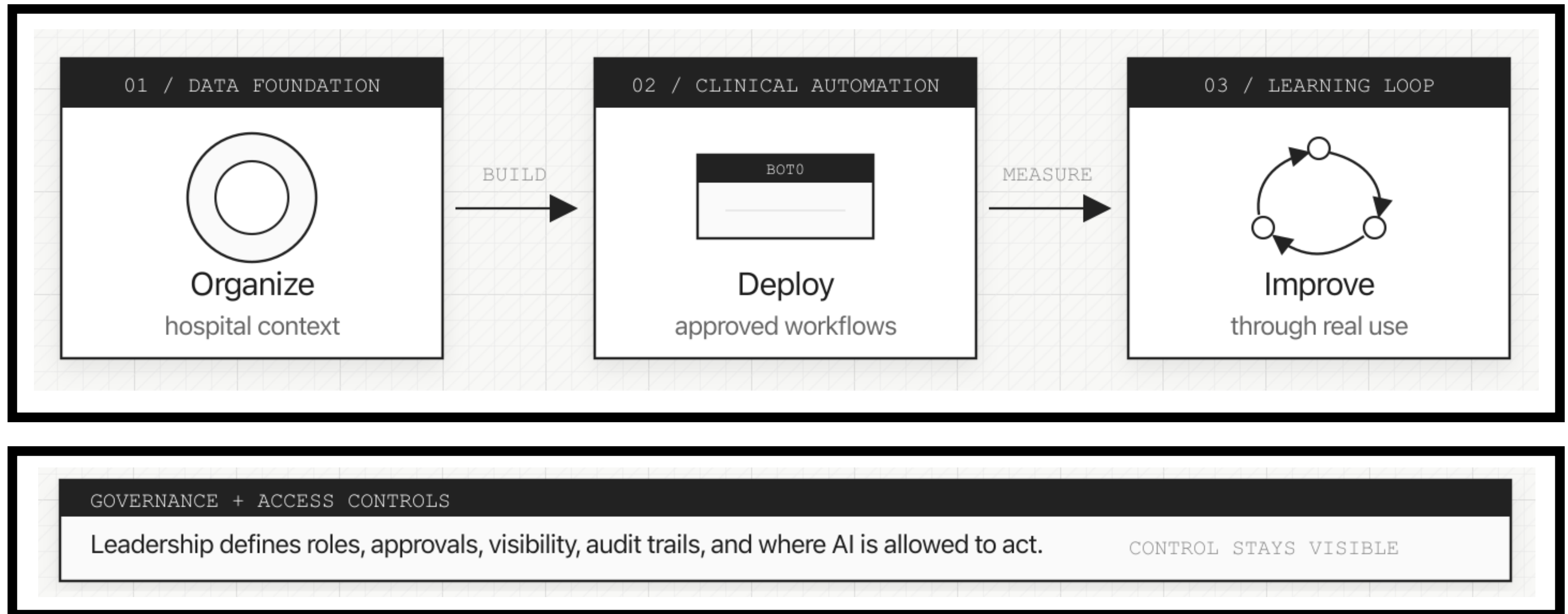
Workflows

. . and random tool adoption gets expensive fast

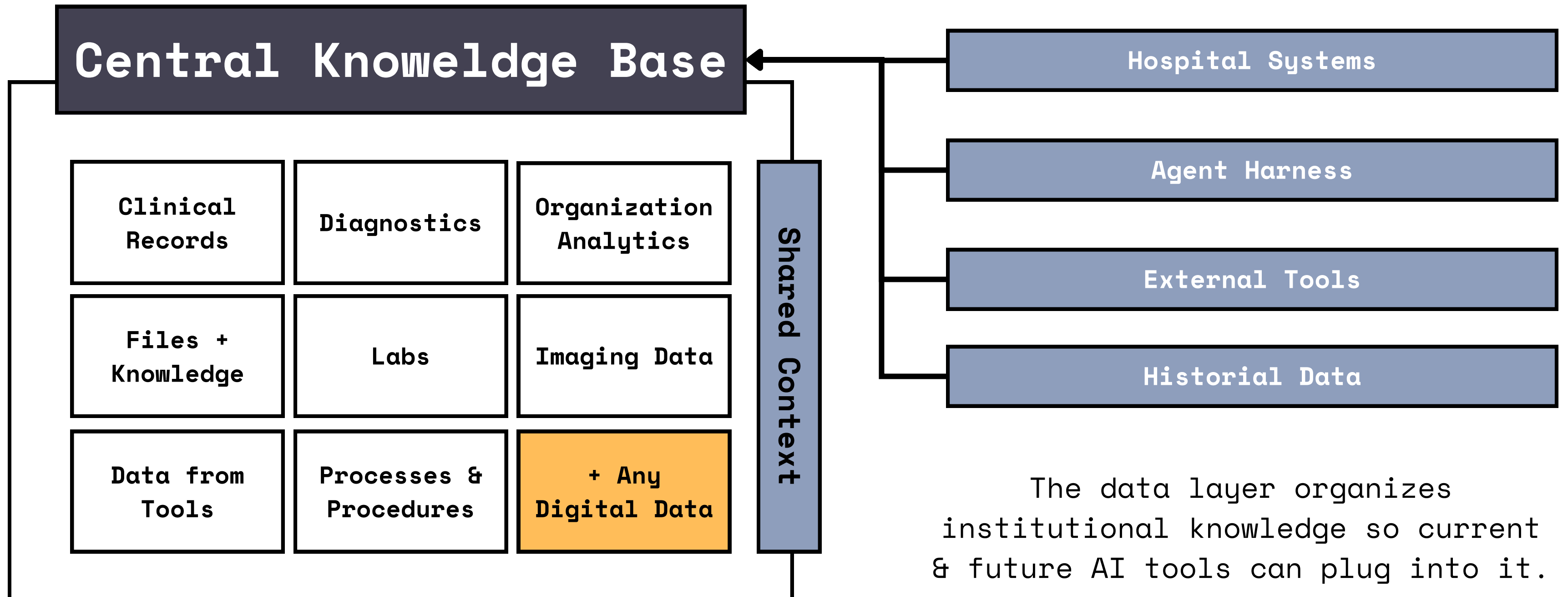
- Tools are not connected to each other
- Knowledge is not shared
- Instructions get rewritten over and over
- Files get re-read
- Simple tasks use expensive models
- Token spend grows faster than value



How we get there



1. Set a strong data foundation



The Data Layer is the Critical Foundation

Context Is What Makes AI Useful

AI needs to know how your organization works, what documents matter, what rules apply, and what good output looks like. **It's just like an employee.**

Data Ownership Is Important

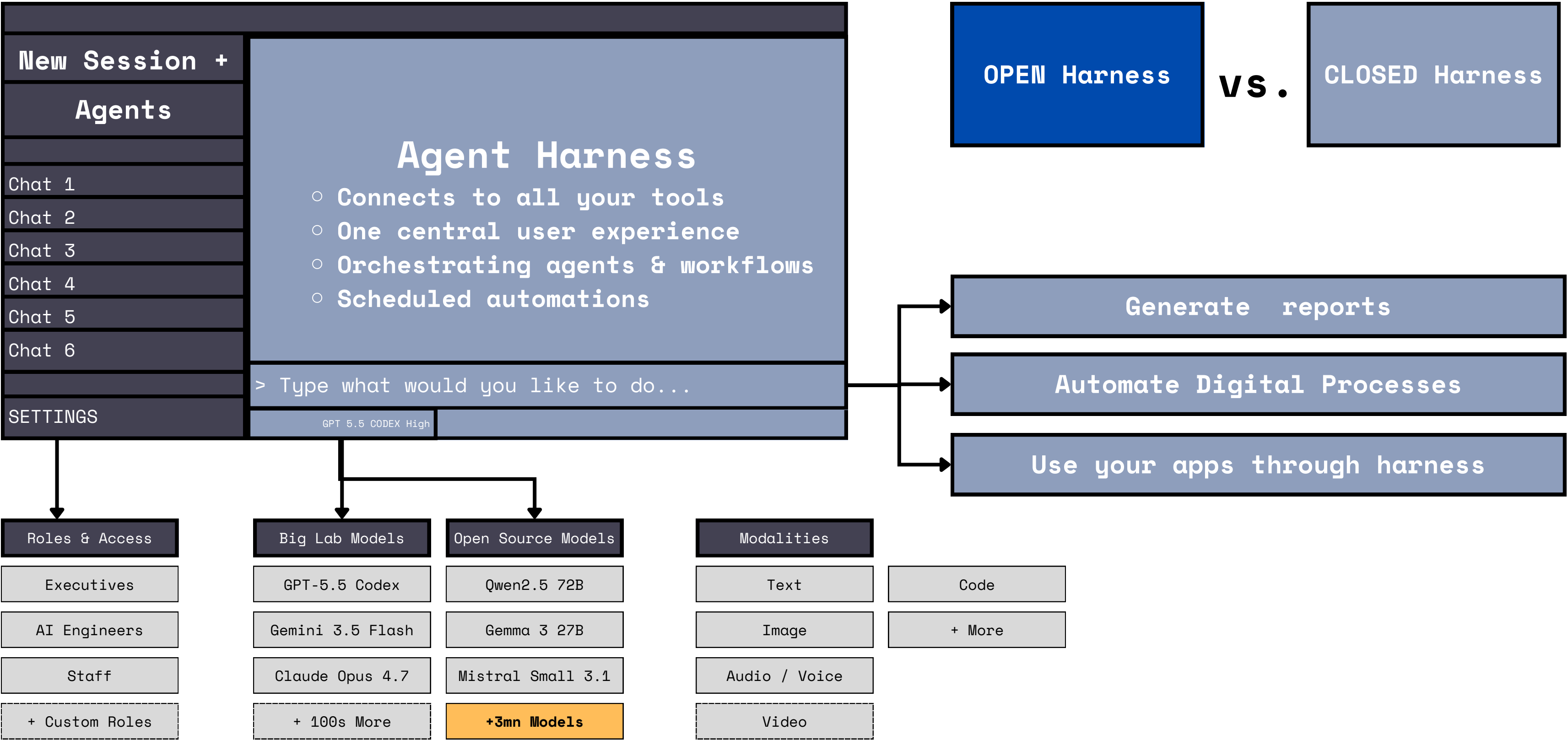
Owning your internal knowledge increases company value, improves onboarding, makes vendors easier to integrate, **and reduces dependence on external platforms.**

Agents Are Digital Workers, Not Magic

They need instructions, access, guardrails, and review.

All of that lived inside your Data Foundation.

2. Setup Agent Harness & Deploy Approved Workflows



Now, what fuels the engine?

Tokens are how AI usage is measured. The more tokens an AI uses, the more compute it leverages, and the more it costs.

Input Tokens
Output Tokens

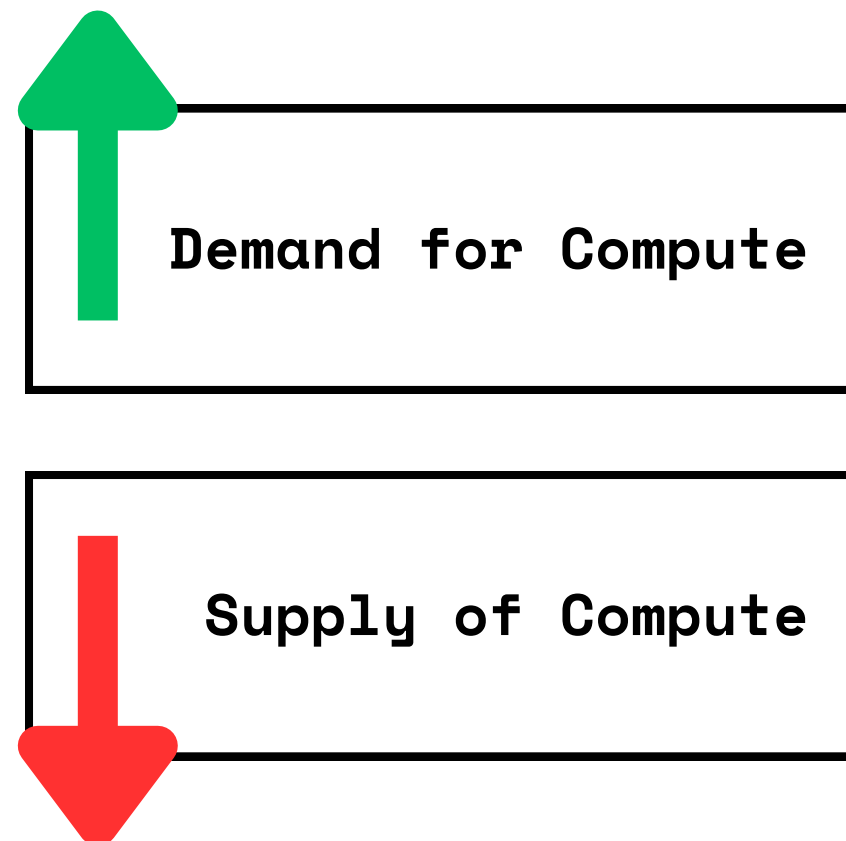
Token Maxing vs. Optimizing Token Usage

AI cost is not like buying a normal SaaS license. Every read, write, search, summary, and agent action consumes compute. If managed incorrectly, can get exponentially expensive.

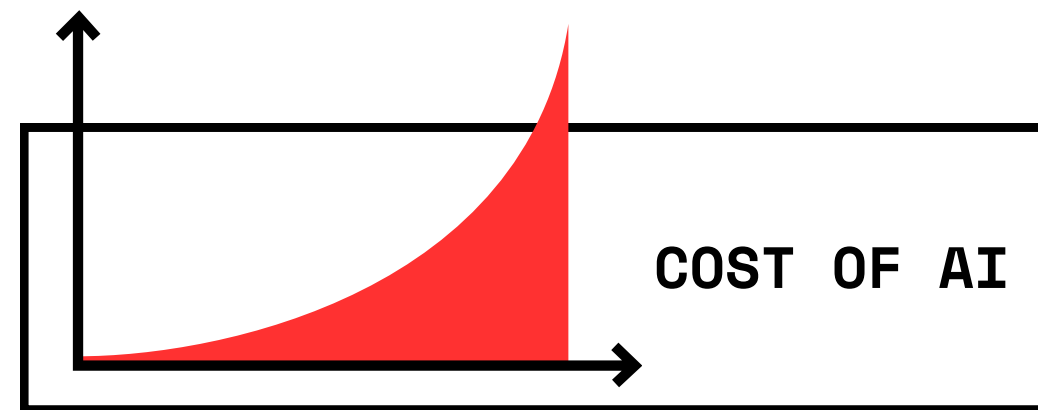
What does the future look like?

Today: \$200 = \$3000
Tomorrow: \$200 = \$200

WHY?

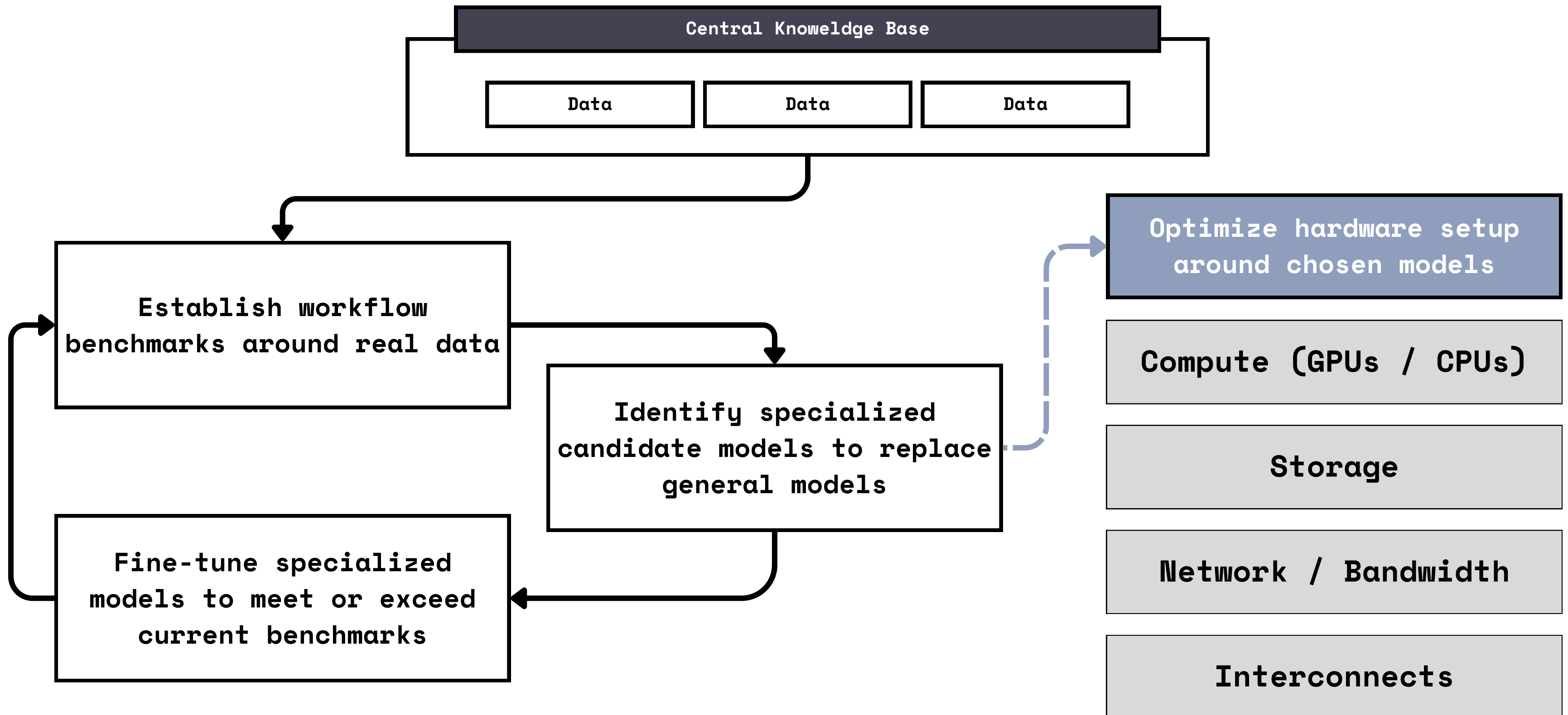


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- **Current model is unsustainable.**
- AI adoption is rapidly growing globally
- Datacenters aren't being built fast enough
- Supply constraints on chips in GPUs
- Energy grids are not built for this level of demand

3. Leverage data to optimize the system



Systems should **always** get
more cost effective and
improve over time.

Benefits of the right architecture:

- Adopt new products & AI technologies very fast within the organization, to support clinical care, growth, or revenue operations.
- Increase the value of your company in terms of exit value
- More data partners want to work with you
- Run analytics on anything real time
- Train and onboard people much faster

Where We Can Start Safely

NOW

Data foundation



Admin workflows, internal search,
scheduling/intake, reporting,
marketing, onboarding, operations.

LATER

Physician-supervised clinical automation, Population Health
Insights, Personalized Patient Experiences, Medical Imaging
Triage, Lab Interpretation, Imaging Interpretation,
Predictive Staffing and Hospital Operations

Partnership Model: Phase 1

ESTABLISH A GOOD FOUNDATION

60-90 Days

Establish SOW &
Partnership

Setup Basic
Data Foundation

Setup Bot0 Harness

Train Staff

Centralized Knowledge
Base

Basic knowledgebase
search

Basic Agent Harness
Use

A few core data
streams

Connect Some Tools

1-2 Agent
Workflows

Partnership Model: Phase 2

DO MORE OF WHAT'S WORKING

Data Foundation

Centralized Some
Org Knowledge

More connected data
streams

Agent & Tool Expansion

More bot0 Agents +
workflows

More external tools
connected

Deeper knowledgebase
search

System Optimization

Begin AI model
selection optimization

Explore potential
hardware options

Train Staff

Help recruit / hire
staff AI Engineer

Monitor & support
adoption

Partnership Model: Phase 3

OPTIMIZE & SCALE

Data Foundation

Centralized Most
Org Knowledge

All Data Streams
Connected

Digitize All Paper
Processes

Agent & Tool Expansion

More bot0 Agents +
workflows

More external tools
connected

System Optimization

Optimized model
selections

Hardware

Train Staff

AI engineer regularly
building automations

Established onboarding
and training systems

Widespread Usage

Our Proposal

Let's partner do a 90 day pilot and complete Phase 1.

What We Need From You

One internal sponsor who can make decisions that we can coordinate with. That way we can iterate fast and test things as we go.

Questions?