HOSPITAL DECISION INTELLIGENCE

# HORUS Decision Twin

**Calibrated on 10 million real outcomes.**
**Reads your hospital's own documents.**

THE PROBLEM

# AI made everyone fast.

Speed is no longer the moat. Every vendor ships a dashboard and an LLM.

The advantage now is deciding the **right thing** — grounded in **your data**, not textbook assumptions.

Today's tools

### Dashboards tell you what happened.

Generic simulators run on textbook math — Poisson arrivals, lognormal stays, hardcoded ratios. Nobody trusts a forecast that was never tested against reality.

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THE THESIS

# Two data assets you already own.

❶

## Outcome Corpus

**10M+ patient histories** calibrate the simulation on **real outcomes** — what's *likely* to happen, per cohort.

❷

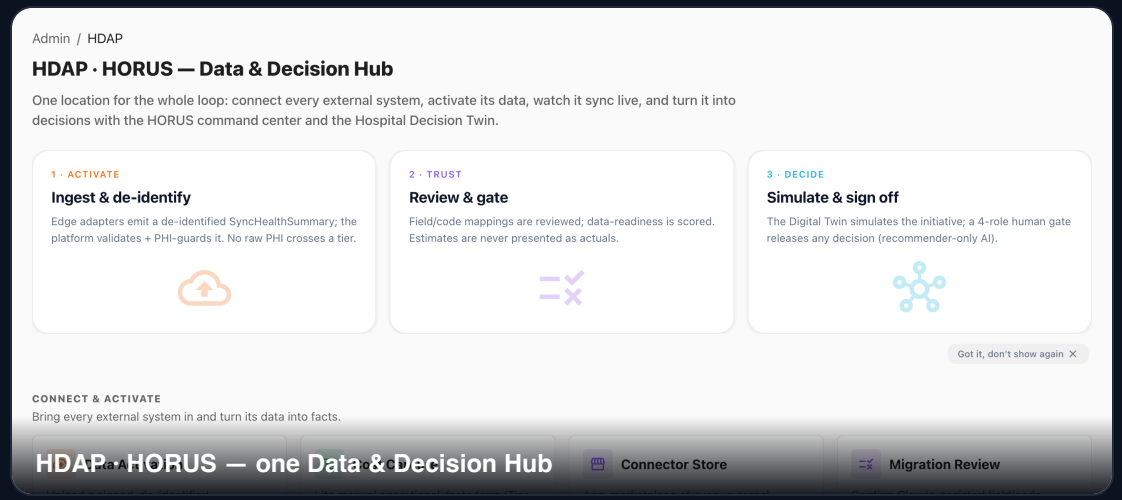
## Document Intelligence

Your **spreadsheets, policies & conference / rounding notes** — a private RAG that grounds every recommendation in **your context**.

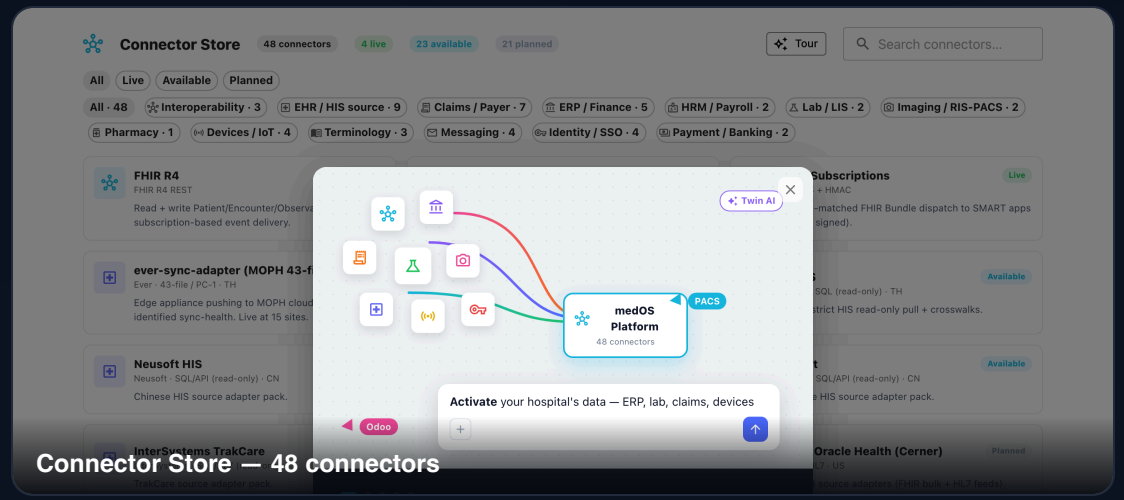
Structured connectors say **what happened**. These two say **what's likely** — and **why decisions were made**.

SHIPPING TODAY — NOT SLIDEWARE

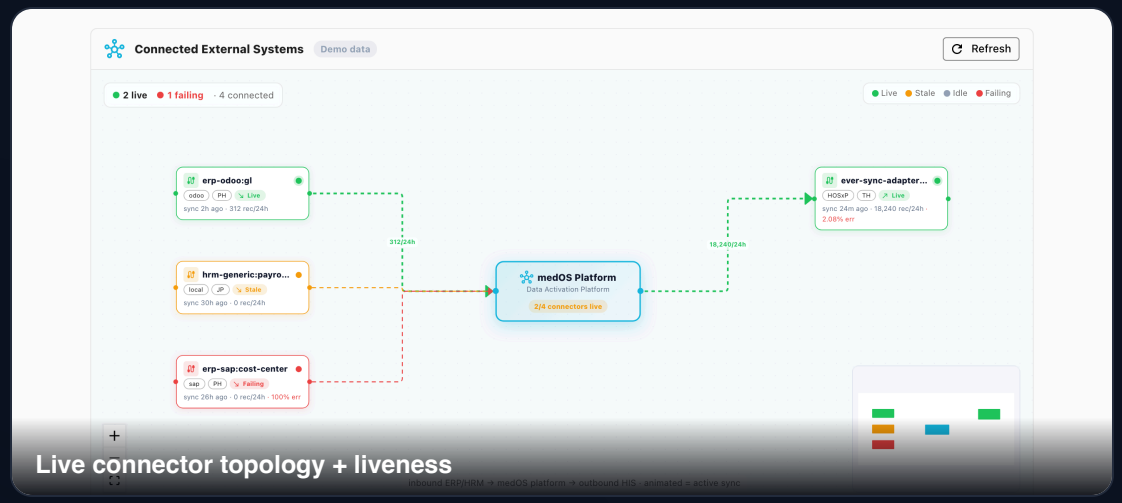
# One platform: connect → activate → decide.



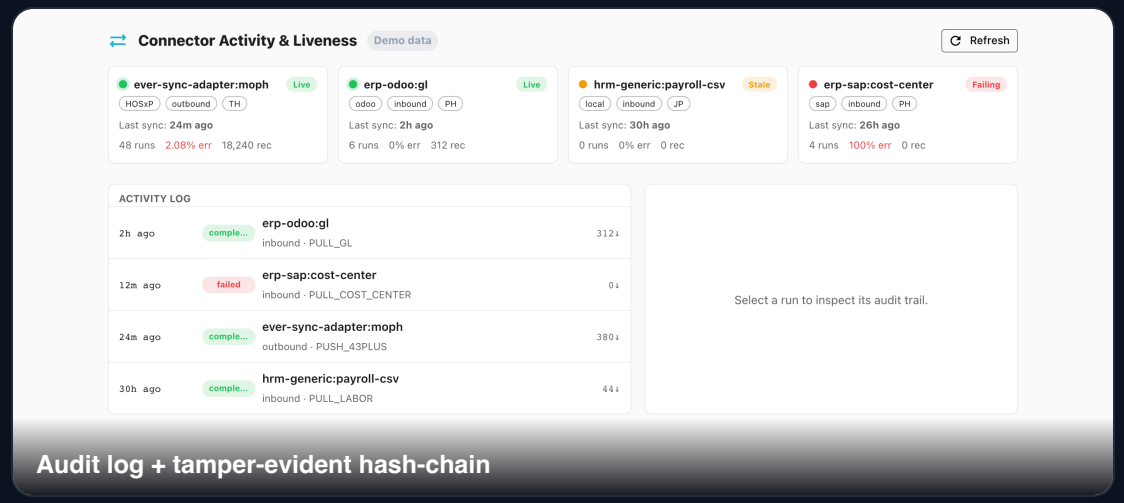

HDAP · HORUS — one Data & Decision Hub




Connector Store — 48 connectors




Live connector topology + liveness




Audit log + tamper-evident hash-chain

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PILLAR 1 · OUTCOME CORPUS

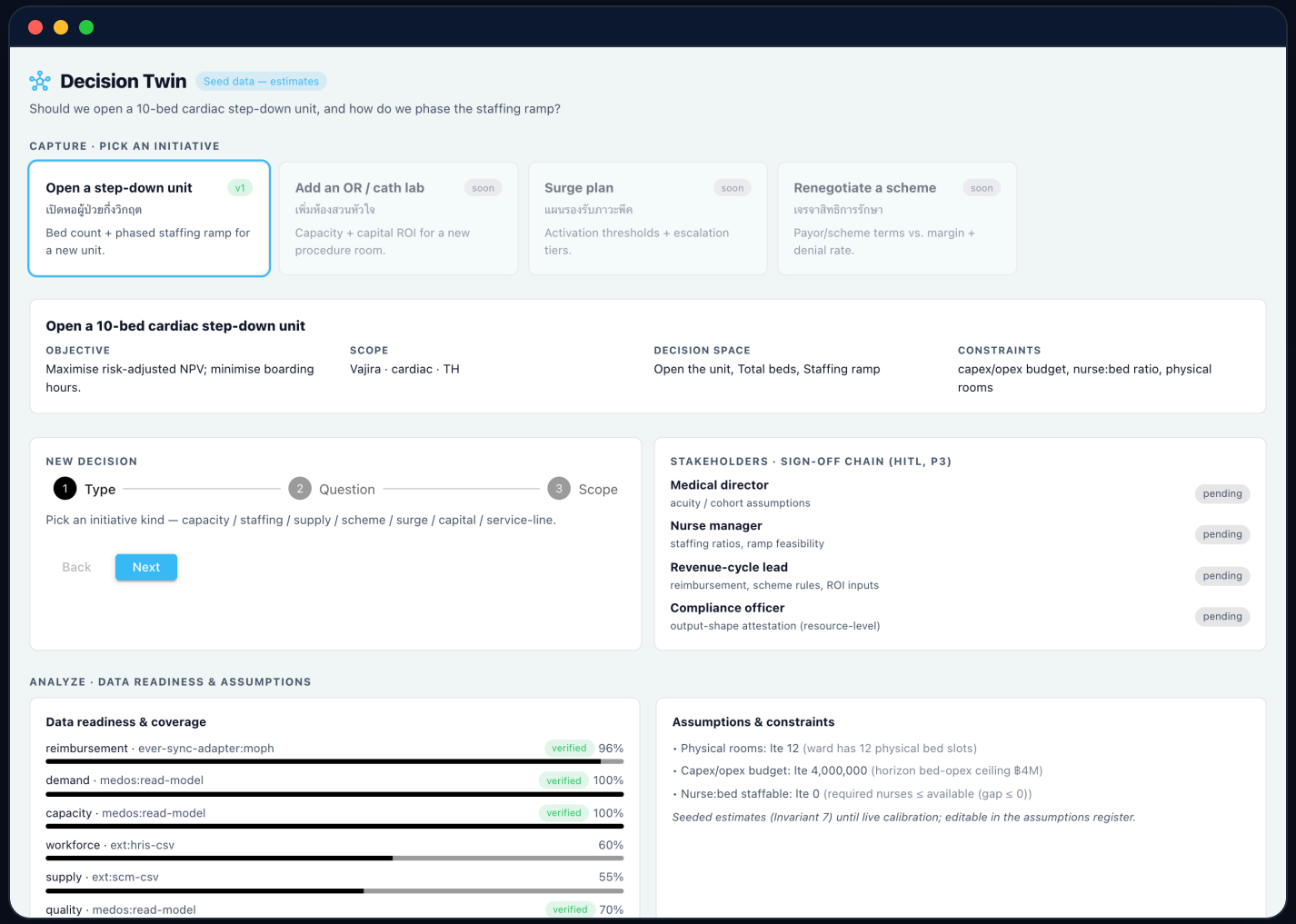
# The twin, calibrated on real outcomes.

Pick an initiative → the twin simulates it on **empirical, patient-level** distributions from 10M histories.

**Data readiness, per facet**
demand & capacity verified 100% · reimbursement 96% — calibration you can see.

**4-role sign-off chain**
medical · nursing · revenue · compliance — HITL on every decision.

**Backtested**
reproduce a held-out year before any forecast is trusted.



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PILLAR 1 · OUTCOME CORPUS

# Seven ways 10M outcomes feed the twin.

**1 · Empirical distributions**
LOS & arrivals per cohort — not one fitted curve.

**2 · Microsimulation**
A realistic synthetic patient population flows through.

**3 · Risk models**
Readmission · complication · cost as agent behaviors.

**4 · Demand & epi**
Prevalence & chronic-disease progression in the catchment.

**5 · Care-pathway mining**
The *actual* pathways, variants & bottlenecks.

**6 · Counterfactuals**
Comparable past cohorts → evidence-grounded effects.

**7 · Backtesting = trust**
Reproduce a held-out year → leadership trusts it.

**→ The two that sell**
#1 realism, cheap. #7 trust — the sign-off.

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PILLAR 2 · DOCUMENT INTELLIGENCE

# Activate the documents the EHR never captured.

Ingest **xlsx · docx · pdf · pptx** + conference, rounding & committee notes into a private, **de-identified** corpus + RAG.

**INGEST**

**Multi-format parsers**

xlsx→tables · docx/pdf/pptx→text · OCR · voice→STT

**DE-IDENTIFY → CORPUS**

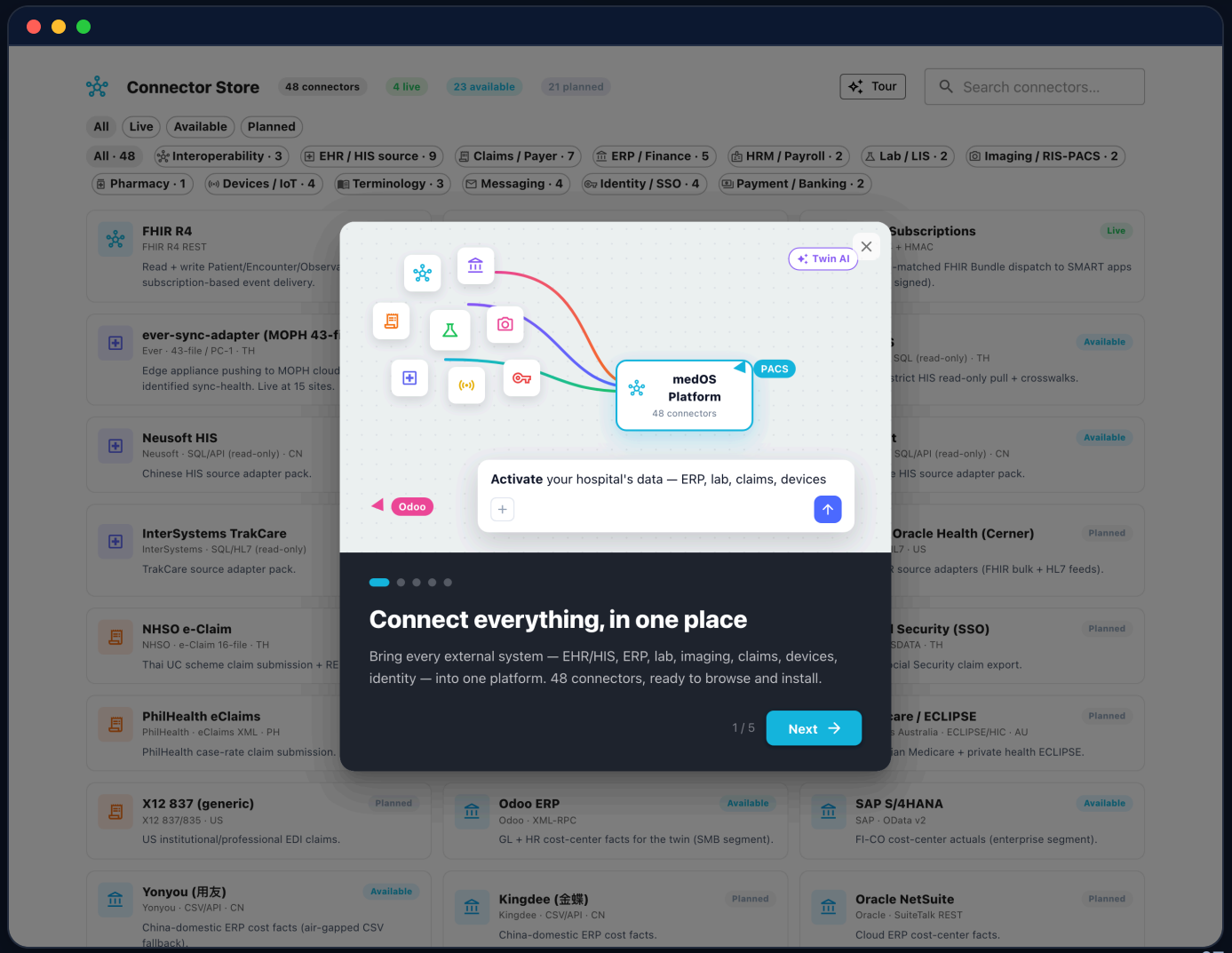
**Strip PHI · chunk · medallion**

Bronze → Silver → Gold embeddings + extracted facts

**RAG**

**Permission-scoped retrieval**

Documents become a first-class source in the Connector Store →



PILLAR 2 · THE UNIQUE PATHS

# What documents carry that the EHR does not.

| SOURCE | FORMAT | THE SIGNAL THE CODED RECORD MISSES |
|---|---|---|
| **M&M / tumor board / grand rounds** | docx · pptx · pdf | Why a case went wrong — and the agreed process change |
| **Ward rounding notes** | notes · voice | The plan, the discharge barriers, the rationale |
| **Committee minutes** (P&T, quality, IC) | docx · pdf | Formulary changes, targets set, policy decisions |
| **Registries / rosters / cost sheets** | xlsx · csv | Semi-structured facts not in the EHR — quality metrics, rates, staffing |
| **Board / ops reports** | pptx · xlsx | Targets, strategy, the questions leadership is asking |

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PILLAR 2 · DOCUMENT INTELLIGENCE

# Three ways your documents feed the twin.

### A · RAG grounds the reasoning

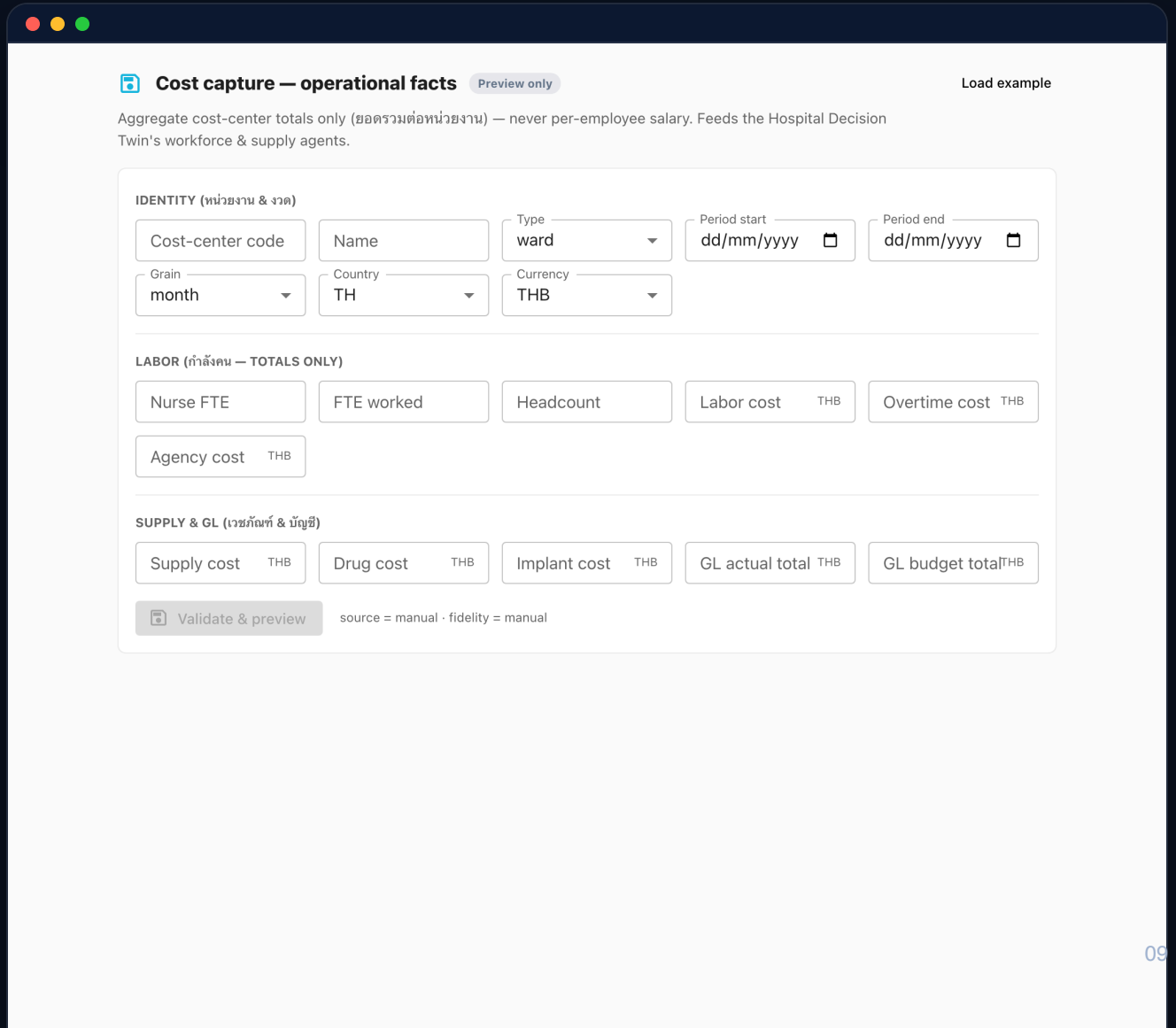
A recommendation can cite "your March M&M flagged sepsis-bundle timing." Not generic.

### B · Spreadsheets → twin metrics

Registries & cost sheets are extracted as tables → schema-mapped facts the workforce / supply / quality agents read.

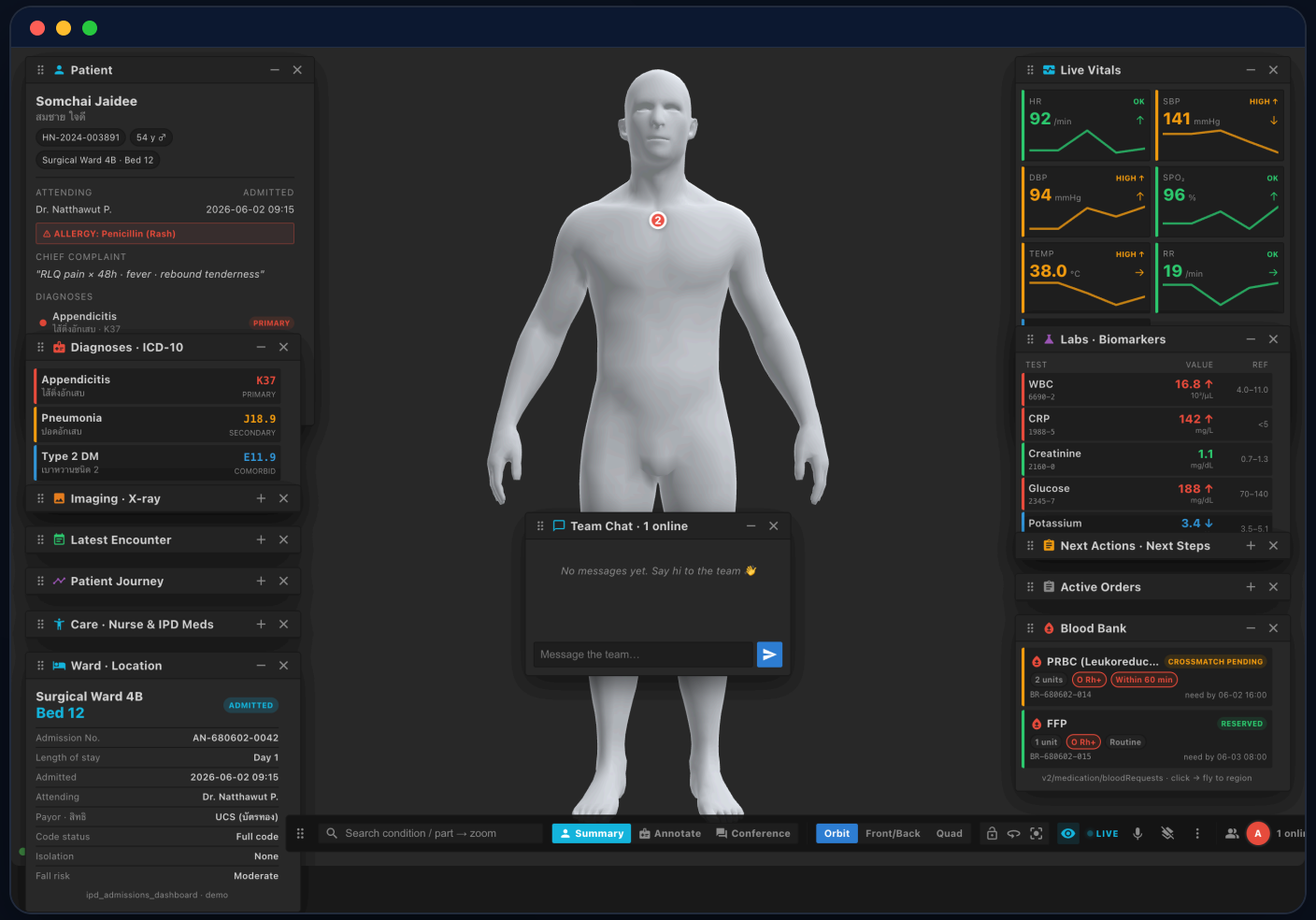
### C · Context → scenario design

Minutes & board reports tell the twin which initiatives leadership is weighing.



HORUS · 3D INTELLIGENCE

# See your hospital in 3D.




**Patient 360** — the 3D patient command surface (live).

The command surface — your team **sees, annotates & decides in space**, not spreadsheets.

### Patient 360

Diagnoses, imaging, labs, vitals & orders pinned to a 3D body — annotate & conference modes, live collaboration.

### 3D Disease Atlas

Population health in space — case dots by home/workplace, severity & ICD-group colors; cluster detection.

### Operational 3D

Incidents, zones & capacity on a 3D map + floor plan — drill from city to ward to bed.

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TRUST BY CONSTRUCTION

# Governance is the product, not a checkbox.

### 🔒 Raw PHI never reaches the twin

Histories & documents stay in the secure, in-region store. Only de-identified, aggregate artifacts cross into calibration & RAG.

### 🛡️ Permission-scoped RAG

Retrieval never surfaces a note to an unauthorized user.

### 🧭 Recommender-mode

Models inform; RAG grounds. A **4-role human sign-off** releases every decision. No autonomous writes.

### 🌍 In-region residency

Per-country stacks; de-identified roll-up only.

### 📋 Consent + access log

Opt-in, audited, named clinical owner + model card per model.

### ✓ Backtest before trust

No forecast is shown as decision support until it reproduces a held-out period.

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THE MOAT

# Why it can't be copied.

Competitor

### Dashboard

Shows what happened. No forecast, no decision.

Competitor

### Generic simulator

Textbook assumptions. Never tested on your reality.

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### Calibrated + contextual

A twin trained on **YOUR** 10M outcomes that reads **YOUR** documents — and compounds with every encounter.

Your data is the moat. A new entrant starts from zero; you start from 10 million.

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ROLLOUT

# Land value in the first phase.

**P0**
**Empirical distributions + backtest**
The credibility chart that sells the sign-off

**P1**
**Risk models**
Readmission / complication / cost → agents

**P2**
**Document Activation + RAG**
Answers grounded in your own docs

**P3**
**Spreadsheet facts**
Registries & cost sheets calibrate agents

**P4**
**Microsim + pathways**
Real case-mix & real bottlenecks

**P5**
**Counterfactuals**
Evidence-grounded P10 / P50 / P90

**P0 ships a backtest** — "reproduces last year's census within X%" — the single chart that earns leadership's trust.

THE HORUS DECISION TWIN

# Not a dashboard.
# Not a generic simulator.

A decision partner grounded in your data, backtested on your history, gated by your people.