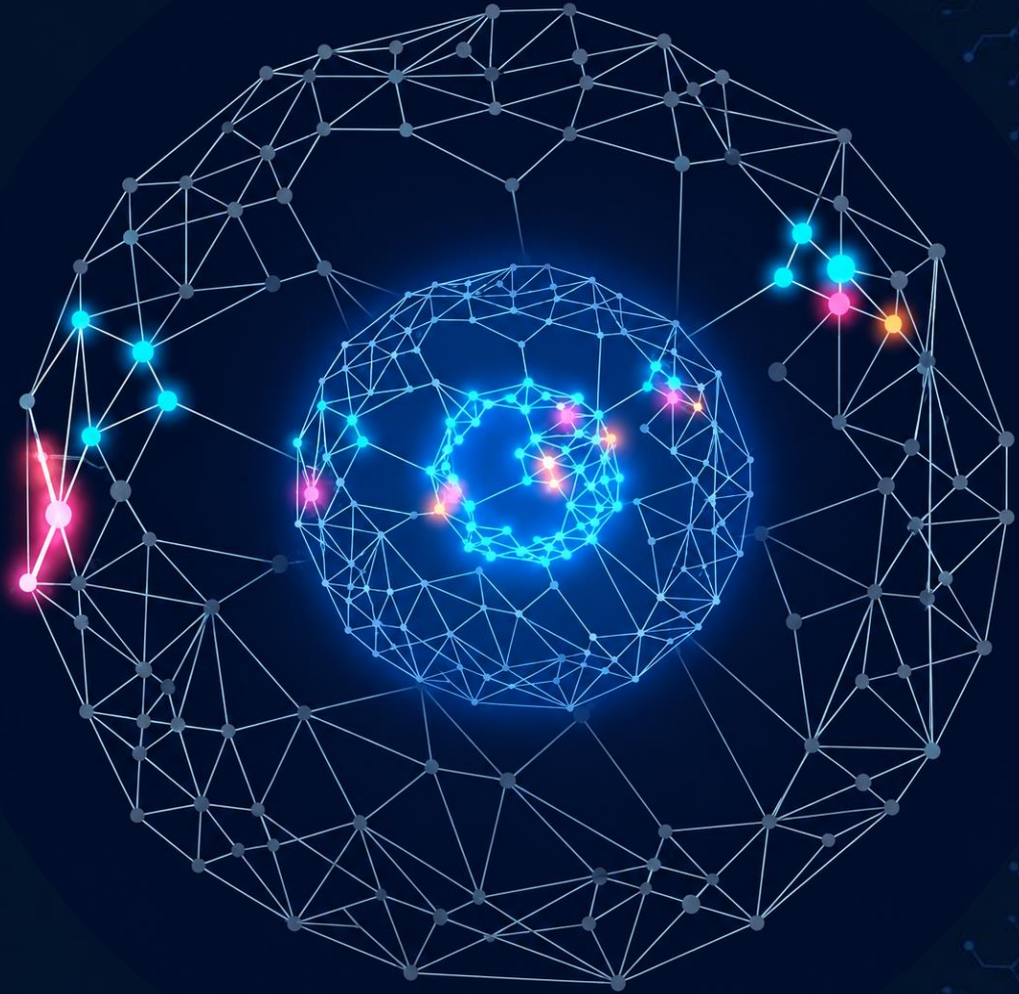




NŌKA BIO

BUILDING BIOLOGICAL GENERAL INTELLIGENCE

The **AI world model for biology** that reasons about, models, & predicts performance of living systems through the laws of biology, not statistical guesswork.



What we believe at Nōka Bio

Biology is the last great system we can't model.

Engineering, weather, language. All fell to computation. **Biology is next.**

A prediction you can't explain is one you can't trust.

Black box models estimate; we **model the mechanism.**

Model life through its own laws, not statistical mimicry.

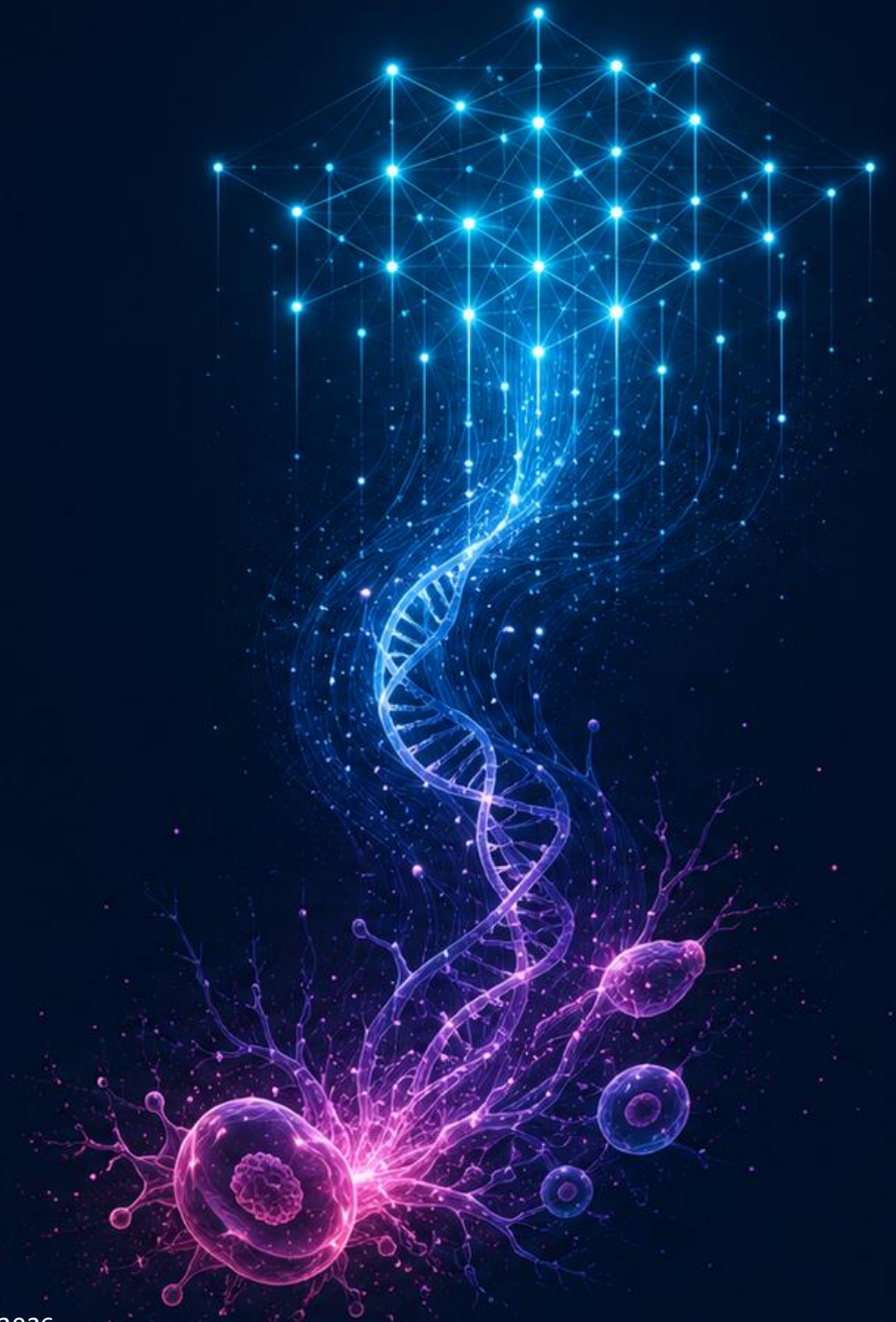
Unlock high-fidelity biology at the **speed of software.**

One engine underpins every living system.

The model that saves a salmon harvest can also **model human disease.**

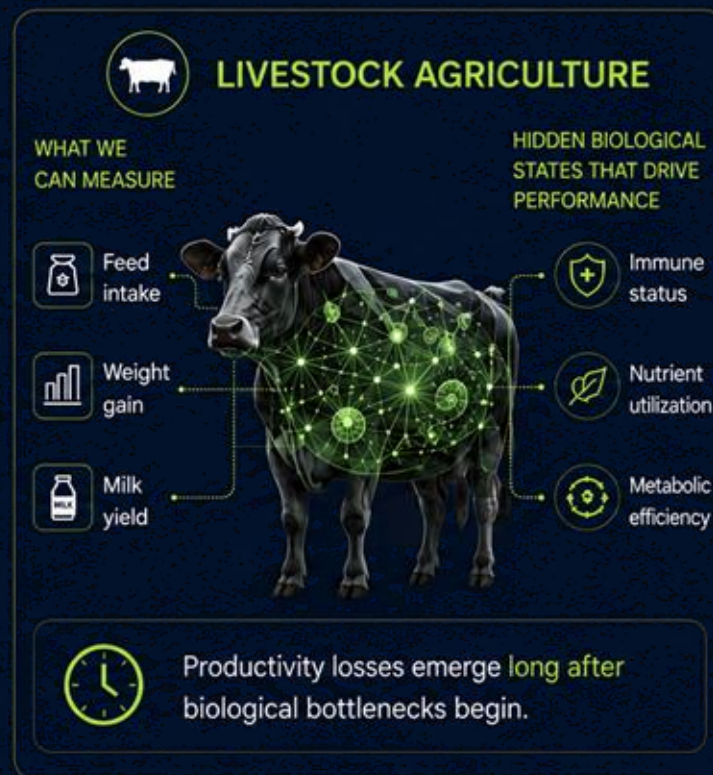
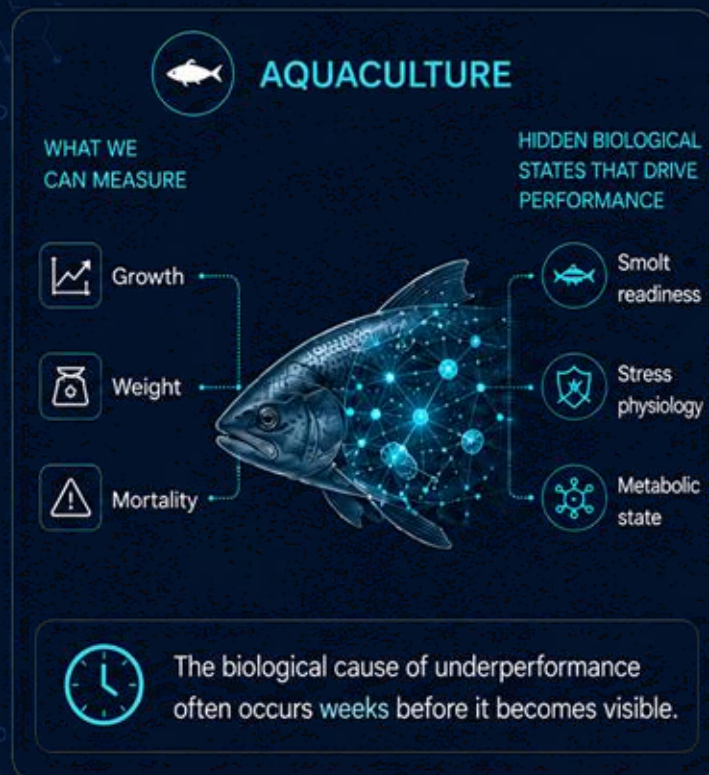
Performance and protection are one capability.

The power to optimize life is the **power to defend it.**



Biology is the last great system we can't model

By the time outcomes can be measured, it is often **too late** to change them.



Biology remains a black box, forcing **reactive decisions** and expensive trial-and-error.

These hidden biological states create \$230B+ in losses annually

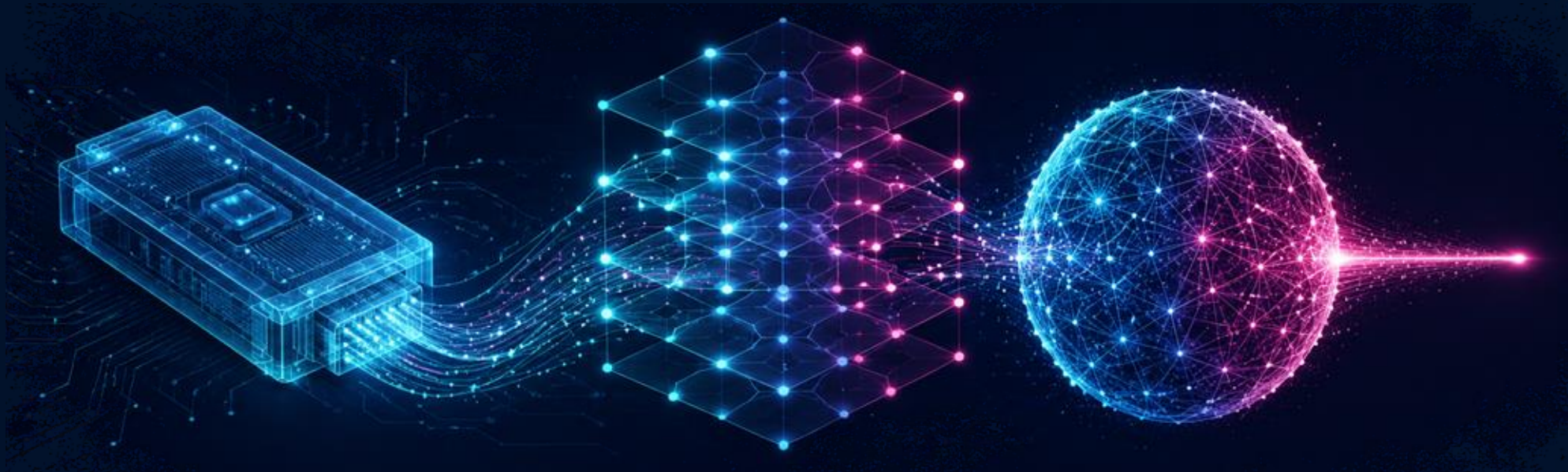
The inability to **observe & predict** biological state impacts **every sector of the \$1.3T bioeconomy**

 AQUACULTURE	 LIVESTOCK AGRICULTURE	 BIOMANUFACTURING
 \$3.1B Poor Smoltification Reduced survival and delayed market readiness	 \$15B+ Disease & Health Events Respiratory disease, mastitis, enteric disease	 \$50B+ Scale-Up Failures Lab success that cannot be reproduced in production
 \$5.5B Production Losses Mortality, disease, and slow growth	 \$10B+ Feed Inefficiency Suboptimal nutrient conversion drives higher costs	 \$20B+ Yield Losses Metabolic bottlenecks limit achievable yields
 33–40% Value Loss/kg from Early Maturation Early maturation reduces quality premiums	 \$5B+ Reproductive Losses Poor fertility and calving outcomes reduce productivity	 \$10B+ Batch Failures Quality deviations and process instability

Across the bioeconomy, hidden biological state drives **hundreds of billions** in preventable losses and missed productivity gains.

A closed loop from biological state to **virtual cell** to decision

Proprietary hardware captures biology no one else sees; mechanism produces decisions no one else can make.



01

Capture

Real-time gene expression snapshots via the Arbiter RNA Chip, built on Bruker's multiplex platform.

02

Structure

Every snapshot linked into Nōka's proprietary Knowledge Graph for interpretation.

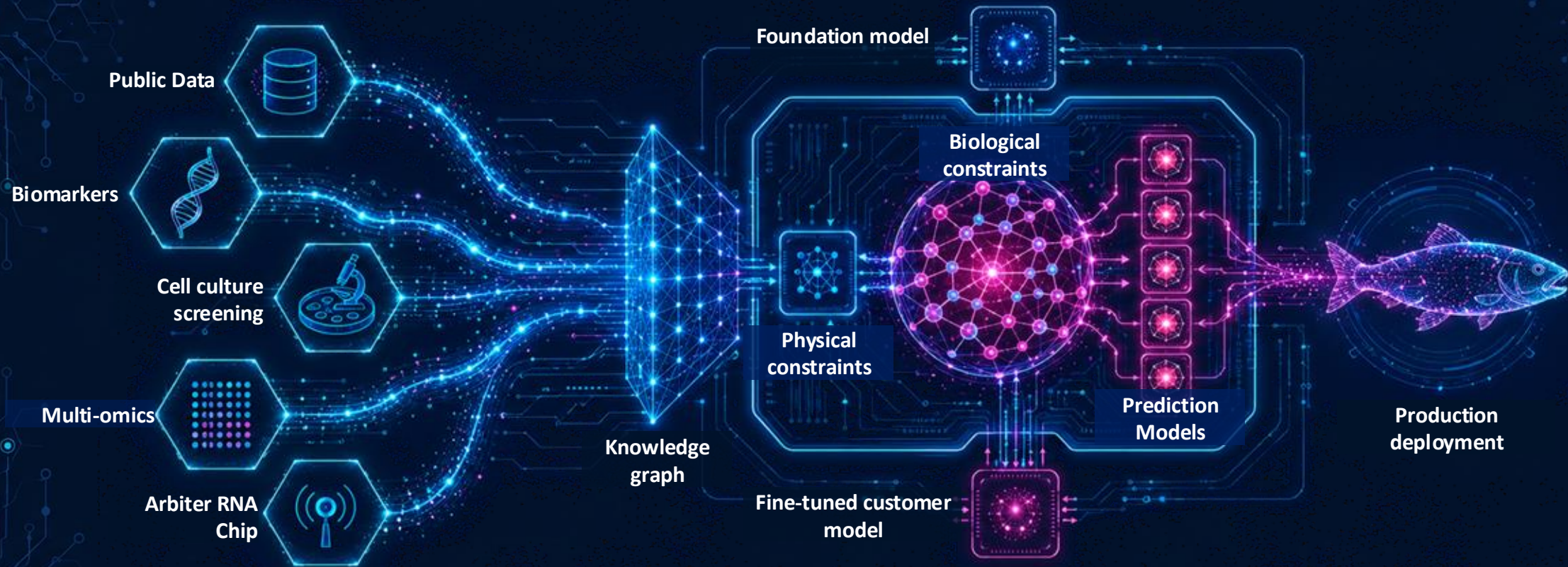
03

Reason

ALKEMYST estimates biological state & optimizes with "clear box" mechanistic explainability — not a black box.

We unlock high-fidelity biological modeling at the speed of software

Mechanistic models were slow, data-hungry & context-blind. We fixed that by replacing transformers.



01

No hallucination

Physics & biological constraints keep every prediction grounded.

02

Reasons over time

Predicts how biology changes over time; transformers can't.

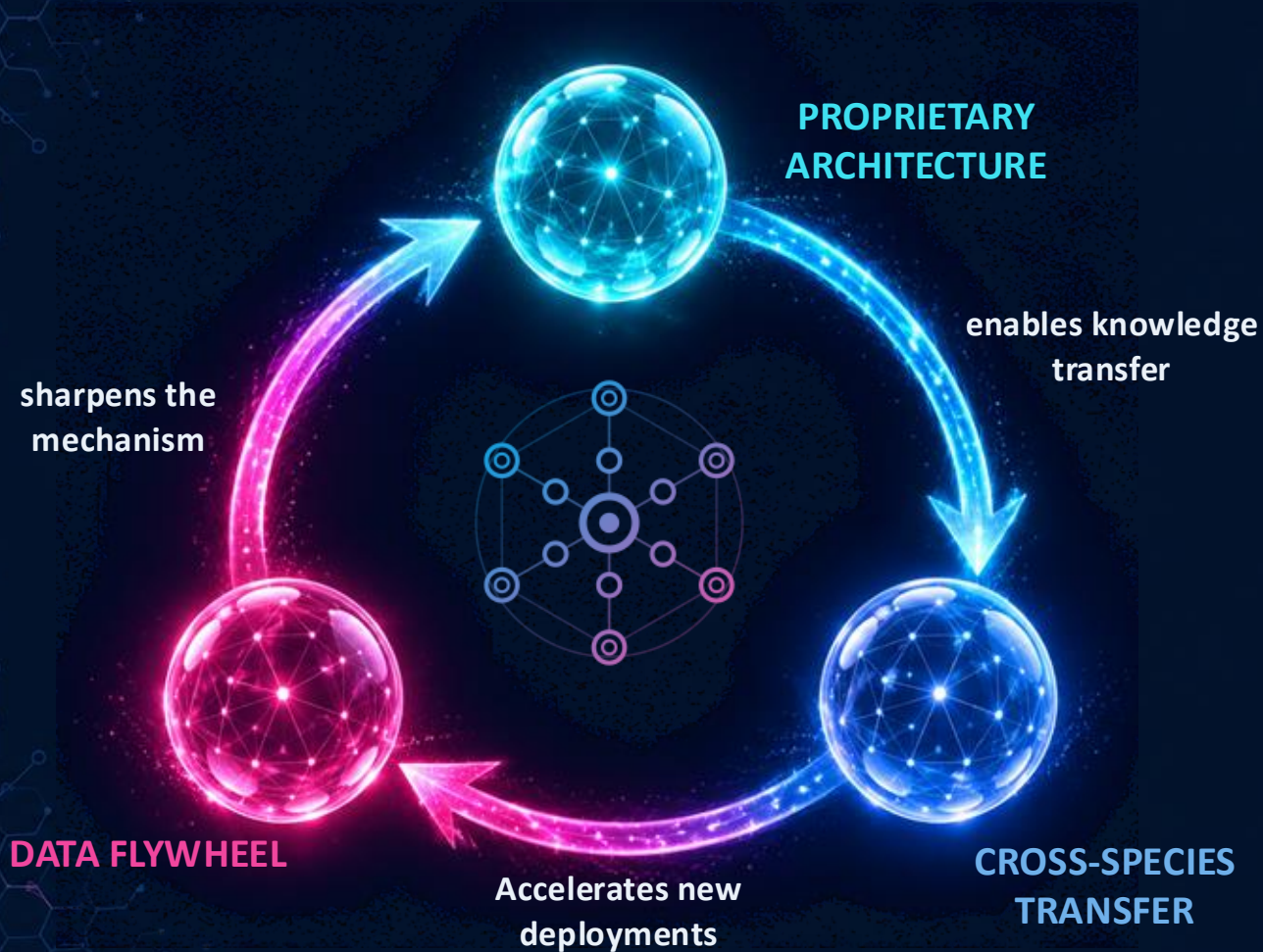
03

Causal & auditable

Every prediction traces to a mechanism, not a black box.

Mechanism is the moat

Built on mechanism. Fed by proprietary data ingestion tools. Deepened by every customer.



Proprietary model architecture

Anchored to biological & physical laws, so predictions trace to **mechanistic cause**, not **correlations** like transformer-based models.

Cross-species knowledge transfer

Proven >95% accuracy from **<20 samples**, vs. **30M–3.5B data points** for competitors. New species in **weeks**, not years.

Production data flywheel

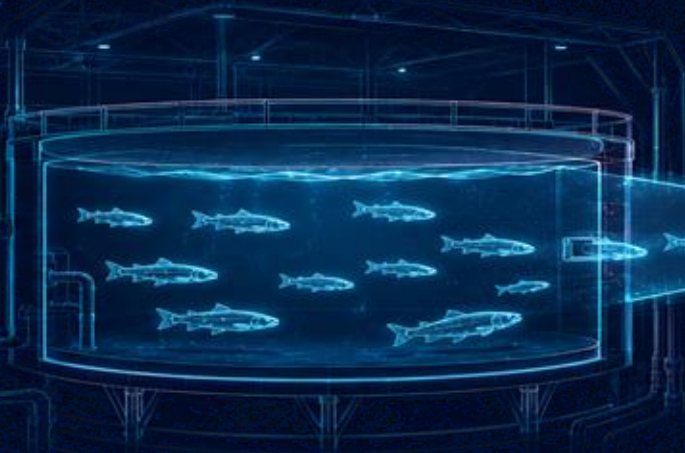
Captured via our **Arbiter RNA Chip** at a cost & speed competitors can't match: **real outcomes** plus unpublished **negative data**.

We start where the bleeding is worst: **\$3.1B lost** in salmon smoltification

A hidden biological transition decides cycle productivity, and no one can see it failing until it's over.

FRESHWATER TANK

Healthy parr — fully recoverable



⚠ THE BLIND WINDOW

No signal until it's already too late.

OPEN-WATER PEN

Loss appears days after it began



Weeks before transfer

1→2
SMOLTIFICATION BEGINS

TRANSFER DAY

3→4
STRESS LOCKS IN

Weeks after

ON TRACK, biology still recoverable

TOO LATE, failure already locked in

\$1.12M / 1,000T

lost to smoltification failure

17–20%

average sea-phase mortality*

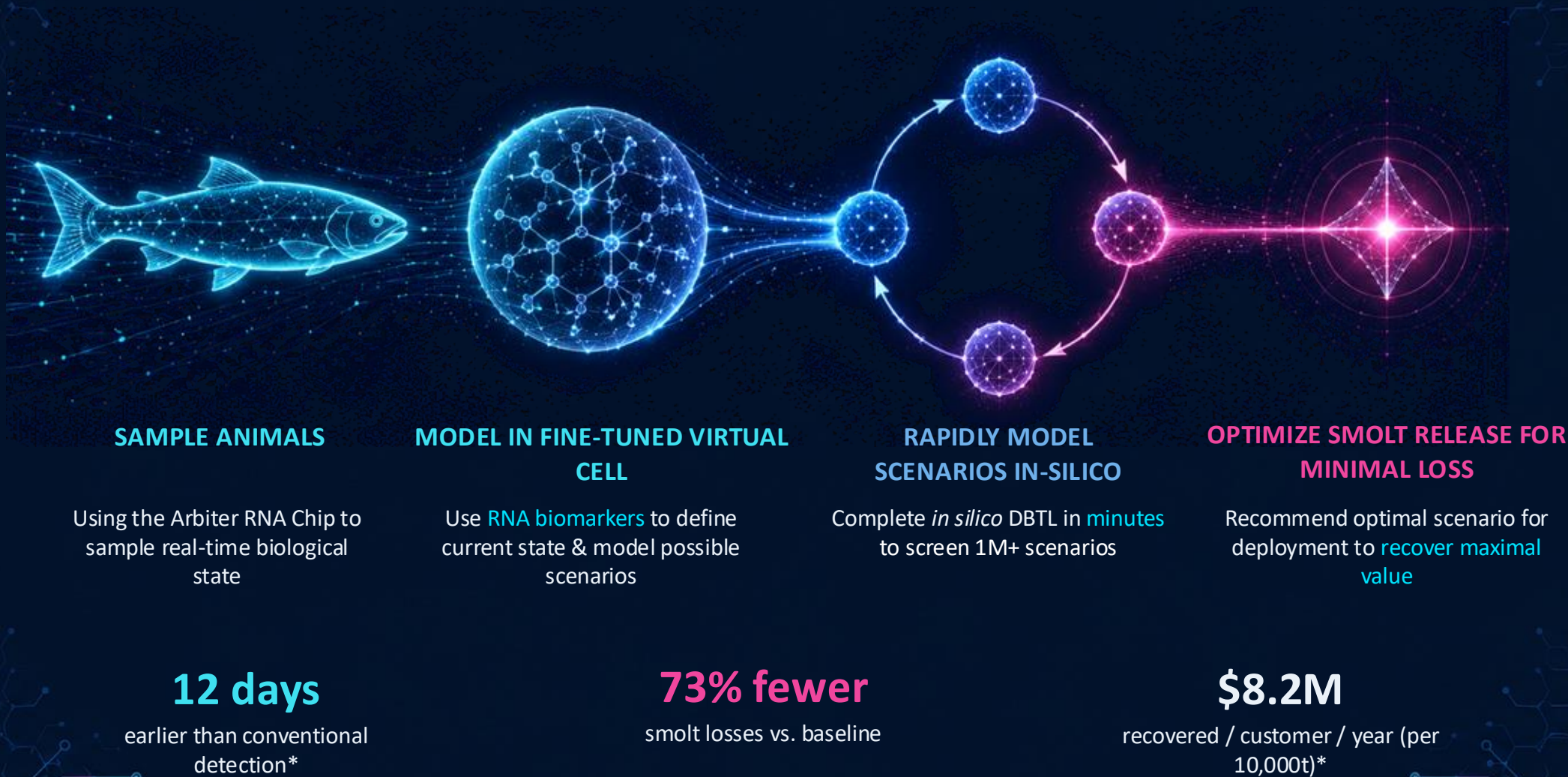
\$3.1B

at stake across global Atlantic salmon

*Norwegian Veterinary Institute, Fish Health Report 2023 (16.7%); Salmon Scotland, 2024 mortality data (17.7%).

We catch the failure **12 days early**, recovering **\$8M/cycle** for customers

This is why Nōka is aquaculture 1st: dense biological data, a fast flywheel & rapid proof of value.



\$8.2M derived: 73% reduction applied to the \$1.12M/1,000t smoltification-loss baseline, scaled to a 10,000t customer.

High-upside 'Biological Performance-as-a-Service' revenue model

A baseline software subscription, plus performance and hardware-consumables royalties on the value our models create.

RECURRING REVENUE

Foundation License

Annual recurring fee for the **core GBI world model**, platform tools, and base analytics.

85%+ margin

- Predictable ARR, high retention
- Sticky platform, real switching costs

+

PERFORMANCE UPSIDE

Optimization Royalty

Performance fee on the **realized yield improvements** our models drive on-farm, plus a **consumables royalty** on every Arbiter RNA Chip read run on-site.

95%+ pure profit

- Incentives aligned with customer success
- Uncapped upside as the models improve

Start with subscription for **predictable revenue**

Expand on performance for **aligned upside**

Value captured upfront, **margin compounds** over time

Strong early momentum: 6 paying customers & 15+ active conversations

\$18M+ ARR

PIPELINE
30+ prospects

**IN CONTRACT
NEGOTIATION**
15+ companies

\$180K
PAYING
6 paying customers

AQUACULTURE













FERMENTATION

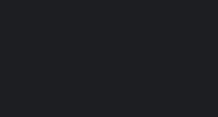
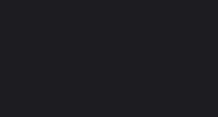












The team with the critical capabilities to scale Biological Intelligence

And that has **lived this problem for 10+ years** across multiple domains

Translate deep science into
platforms and products



Mihir Pershad

Co-Founder

- 10+ yrs biotech venture creation; 6 ventures; \$28M raised; 2 companies scaled to profitability; 1 exit
- Deep expertise in aquaculture, molecular biology & comp bio commercialization
- Track record in non-dilutive funding & translating tech to market



Sell into traditional industries that
struggle with tech adoption



Rohan Thakur

Co-Founder

- 20+ years in enterprise strategy & sales in food majors
- Built APAC business at Leprino Foods (world's #1 global mozzarella company)
- Deep global networks with global food & fermentation majors



Modeling biological systems from first
principles



Dr. Shivansh Singhal

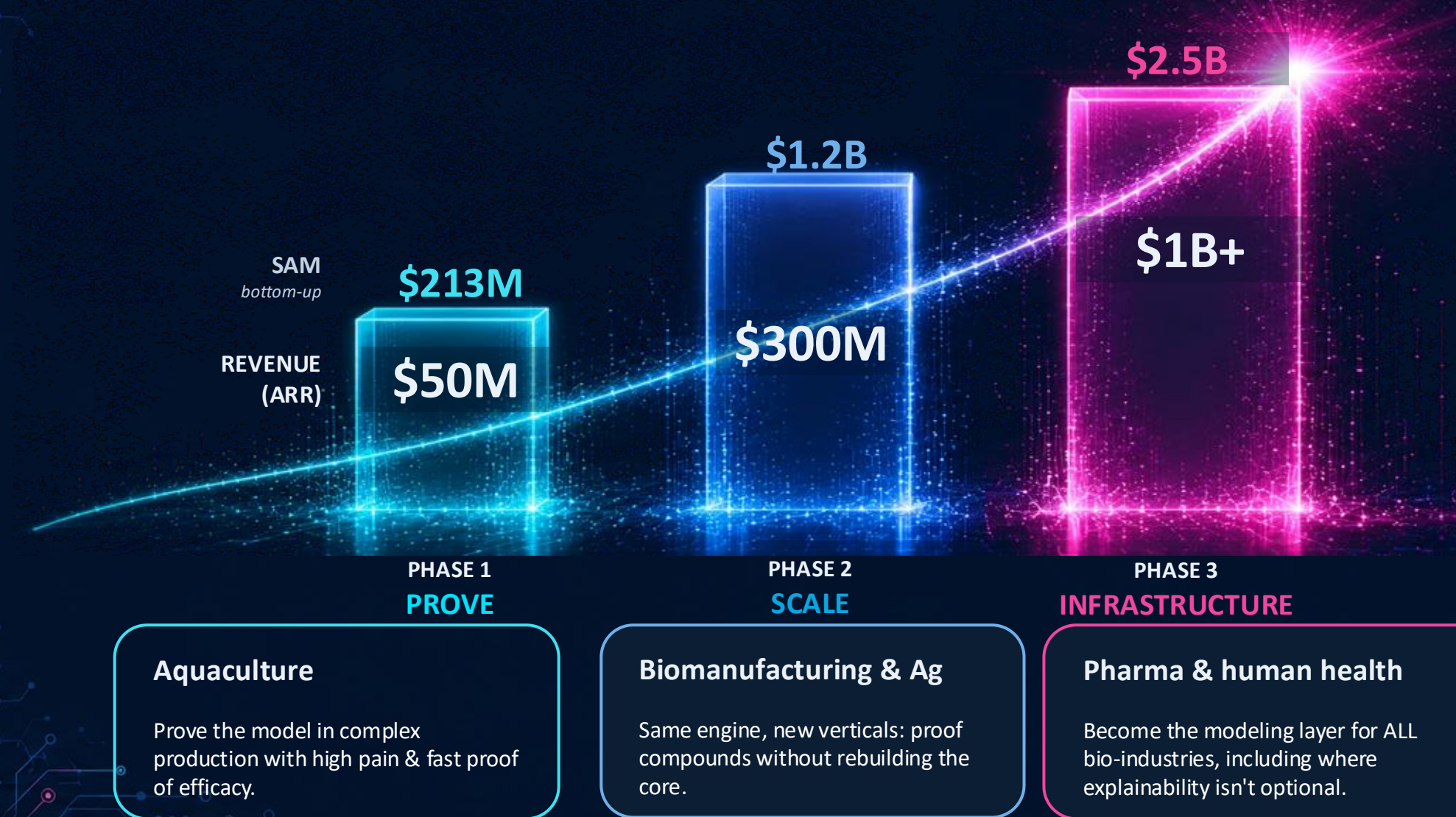
Founding ML Engineer

- PhD in Genetics and Evolutionary Bio w/ specialty in non-model animal GEMs
- Computational genomics expert with publications in PNAS & American Naturalist
- AIR2 in GATE (#2 of 1M candidates); Top 0.01% (5th in India) in AIR5 - JRF Scholar

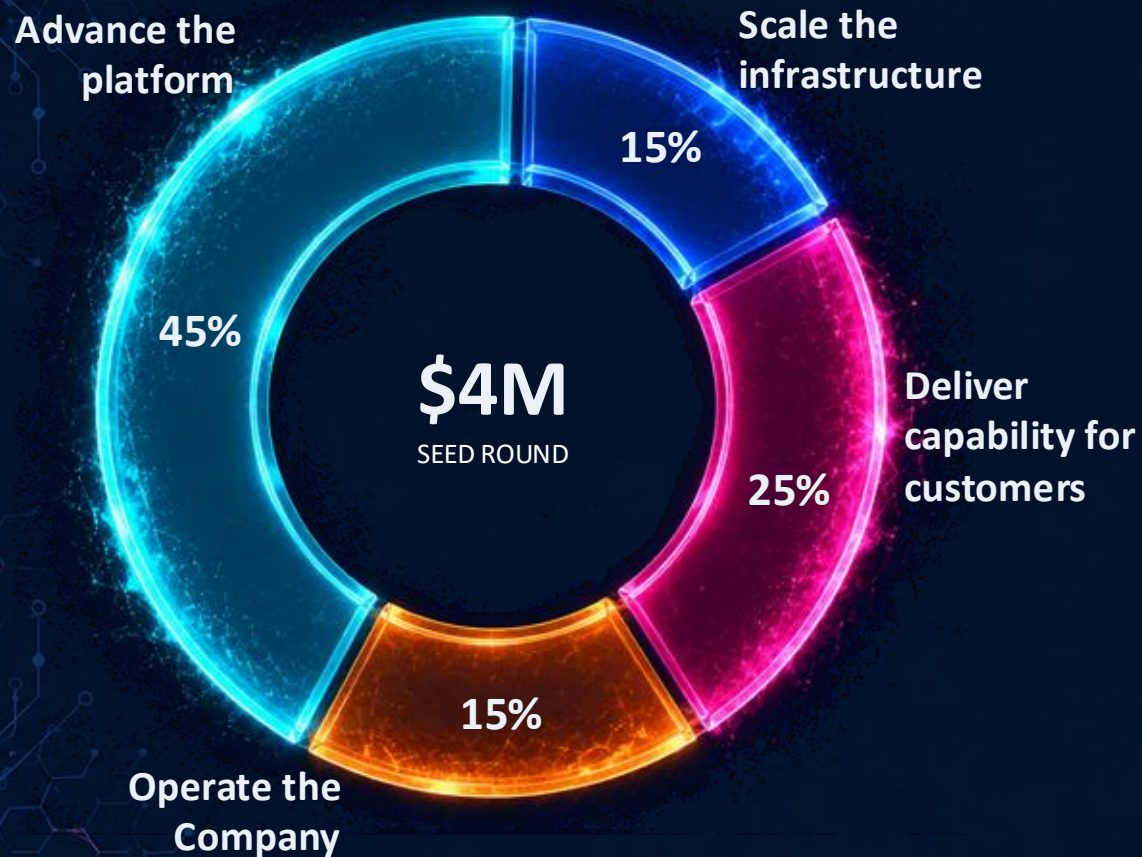


The roadmap to embedding ALKEMYST as biological infrastructure

Building toward **\$1B+ ARR** while unlocking **\$206B** in annual recoverable value across a \$1.3T bio-economy.



Raising \$4M seed to deliver repeatable sales engine & prove broad platform relevance across bio-industries.



1 Advance the general biological intelligence platform & hardware

2 Build a repeatable sales engine across aquaculture segment

3 Prove land and expand revenue model within early customers

4 Prove translation of ALKEMYST platform to 2nd bio-based industry

The goal: a multi-module, multi-species platform with meaningful, growing ARR, poised to scale General Biological Intelligence across the bio-economy.