

The background image shows an industrial facility at night, featuring large storage tanks, pipes, and electrical infrastructure. Overlaid on this scene are various physics simulation visualizations: a tall vertical tank with a colorful (red, orange, yellow, green, blue) cross-section representing internal flow or temperature; a horizontal tank in the foreground with a similar colorful cross-section; and blue streamlines and wave patterns emanating from various points, suggesting fluid dynamics or electromagnetic field simulations. The overall aesthetic is high-tech and scientific.

KYAMOS

Physics World Models

Toward the 'holy grail' of multiphysics AI
A physics foundation for next-generation AGI

Dr. Antonis Papadakis
Founder and CEO

Target raise: €2,000,000

Industrial physics has a speed gap

THE PROBLEM

HIGH-FIDELITY CAE

**Physical detail
that engineers trust**

Minutes to days per scenario
Specialist setup and interpretation
Too slow for continuous operation

GENERIC AI

**Fast answers
without enough
physics**

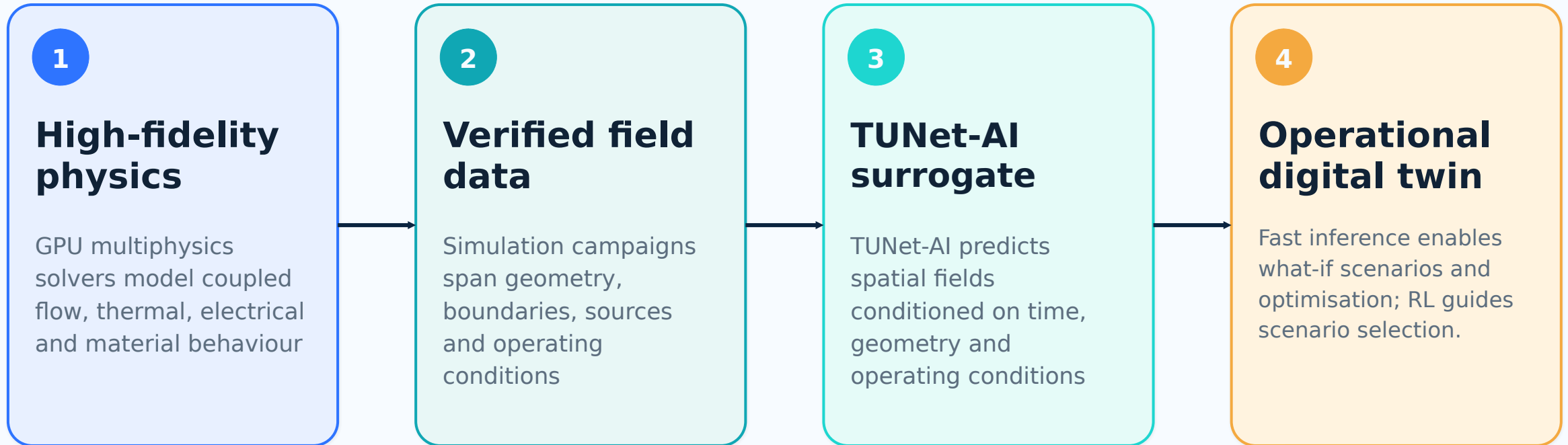
Depends on historical examples
Can fail outside observed conditions
Often ignores geometry and boundaries



THE MISSING LAYER

**Fast field prediction that remains conditioned on geometry,
boundaries, operating state and physical scale**

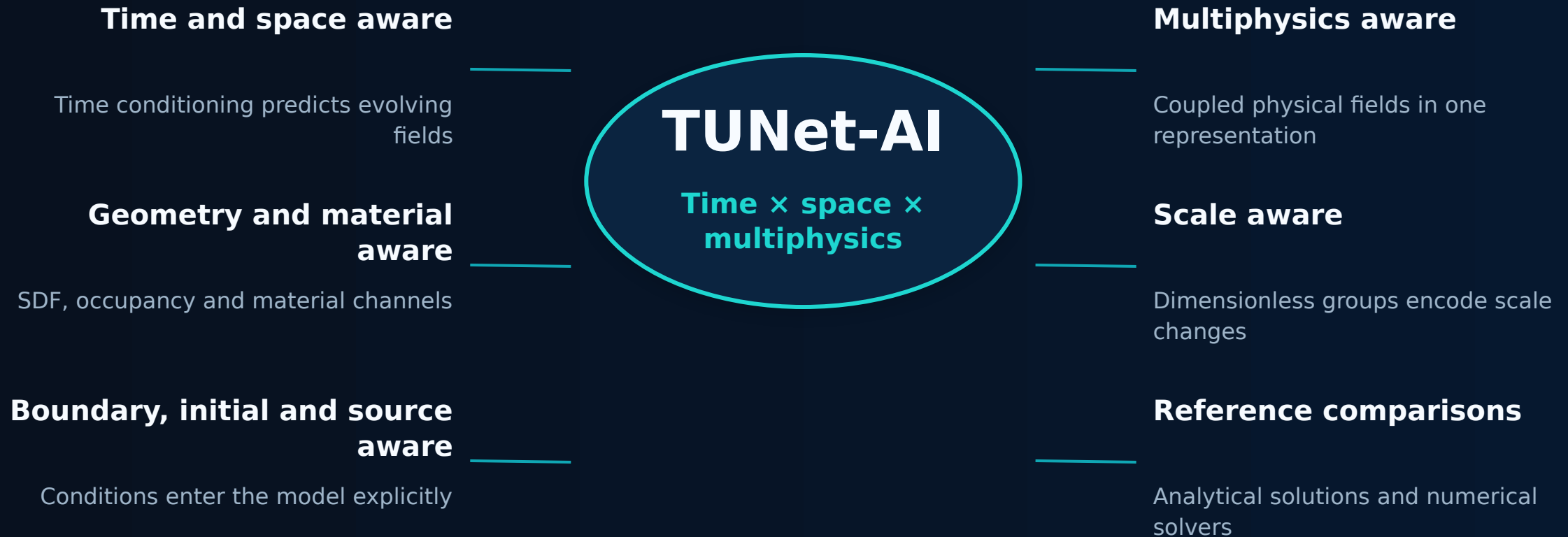
Physics becomes operational intelligence



The numerical solver creates the reference truth set and remains available for verification and fallback.

The 'holy grail' of multiphysics AI

TUNet-AI combines physical context with fast field prediction.



99.8%

company-reported agreement in a selected shock-tube case against the analytical solution

21,900×

company-reported speedup in that test versus the numerical physics solver

World physics models: a pathway toward AGI

RESEARCH ROADMAP

The long-term thesis: general physical intelligence requires transferable prediction, action and verification.

TODAY / IMPLEMENTED

Physics + fast surrogates

- High-fidelity CFD / multiphysics solvers
- TUNet-AI conditioned field inference
- CUDA / distributed GPU execution

Evidence: selected internal benchmark; validation remains case-dependent

NEXT / ACTIVE R&D

Coupled world physics models

- Shared state across coupled phenomena
- RL-guided data and scenario selection
- Agentic orchestration + solver checks

Goal: physically consistent counterfactuals across domains

LONG HORIZON / HYPOTHESIS

Physical reasoning toward AGI

- Generalize beyond training conditions
- Reason about interventions and causes
- Predict consequences of actions

AGI is a research objective, not an achieved capability

The “holy grail”: physically aware AI that predicts coupled processes, tests actions and learns from verification.

This is KYAMOS’s proposed research direction; it is not a claim that AGI or a universal physical model exists today.

GPU/HPC stack: NVIDIA acceleration in practice

TECHNOLOGY STACK

Existing infrastructure spans CUDA physics, multi-node execution, AI model training and inference.

GPU COMPUTE

NVIDIA accelerated cluster

- Tesla V100 GPU resources
- Multi-node scientific computing
- CUDA / C++ numerical solvers

DISTRIBUTED SYSTEMS

High-speed communication

- InfiniBand interconnect
- CUDA-aware MPI execution
- GPUDirect RDMA pathways

PHYSICS + AI

End-to-end workflows

- CFD / multiphysics reference solvers
- TUNet-AI training and inference
- Verification, RL and agentic R&D

PLANNED NVIDIA SOFTWARE

PhysicsNeMo • NVIDIA NIM • NeMo Agent Toolkit

Existing implementation details are company-reported. End-to-end scaling and benchmark performance require independent verification.

One engine, multiple high-value markets

The common platform stays constant. Domain physics, data connectors and deployment modules adapt to each asset class.



Conceptual illustration

Technology and company credentials

€2.3M

competitive R&D
funding

14

competitive projects

11

employees

~80

GPU dies with
InfiniBand

Founded in Cyprus

13 July 2018

European experience

EU and ESA activities

**Innovation
Certificate**

Certified Innovative SME
Cyprus

AI and HPC stack

TUNet-AI, CUDA, CUDA-aware
MPI and InfiniBand

Competitive R&D funding built the capability. The target seed round supports productisation and repeatable sales.

49 documented IP portfolio entries

11 categories spanning proprietary software, engineering models and know-how

10

Physics technologies

9 existing / evolving, 1 in development

5

GPU/HPC components

Existing numerical and execution software

5

Platform software assets

Existing / evolving GUI and solver tools

5

AI technology entries

4 existing / evolving, 1 in development

7

Digital-twin entries

Existing systems and development programmes

5

Agentic engineering

Prototype / development stage

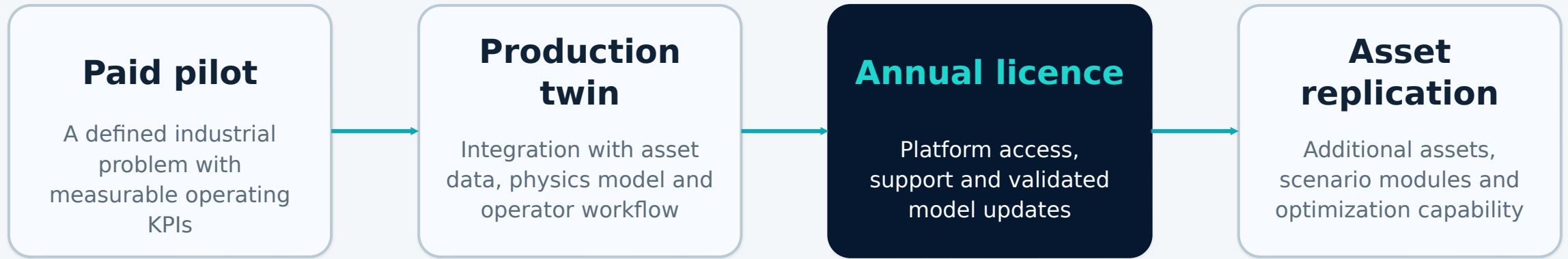
12 further entries

3 data/model assets, 4 know-how areas, 2 document tools,
1 business-software asset and 2 brand entries

Protection: software copyright, confidential know-how and model/data rights

Source: September 2026 management register. Counts include development-stage entries and brand candidates. Ownership and project rights require verification. No granted patent is asserted.

Commercial model and route to market



GO-TO-MARKET

Direct enterprise sales

Utilities and industrial operators

Strategic channels

OEMs and engineering companies

Reference deployments

Validated pilots become sector proof

Initial market: critical energy and industrial infrastructure

€2M Seed

Target round for platform productisation and international sales

PROPOSED USE OF FUNDS



NEXT-STAGE PROOF

Standardized platform

Common physics, AI, validation and interface layers

Recurring licences

Reference deployments converted into annual contracts

International pipeline

Industrial partners and repeatable sector offerings

Dr. Antonis Papadakis Founder and CEO

kyamosmultiphysics.com Nicosia, Cyprus

Cyprus innovation and IP incentives

INVESTOR APPENDIX

Innovation Certificate

KYAMOS holds a Certificate of Innovative SME

Qualifying investments may enable Cyprus income-tax deductions for eligible investors.

Separate rules apply to individuals and corporate investors.

Cyprus IP Box

80% deduction

on qualifying IP profits, including eligible copyrighted software

Potential 3% effective corporation tax

15% standard rate × 20% taxable share, when the R&D nexus is fully satisfied.

Relief depends on eligibility, certificate validity and qualifying R&D/IP activity. Investor incentive currently runs to 31 Dec 2026.
Sources: KYAMOS About; PwC Cyprus tax summaries (4 Aug 2026); KPMG 2026 tax reform. Full links in speaker notes.