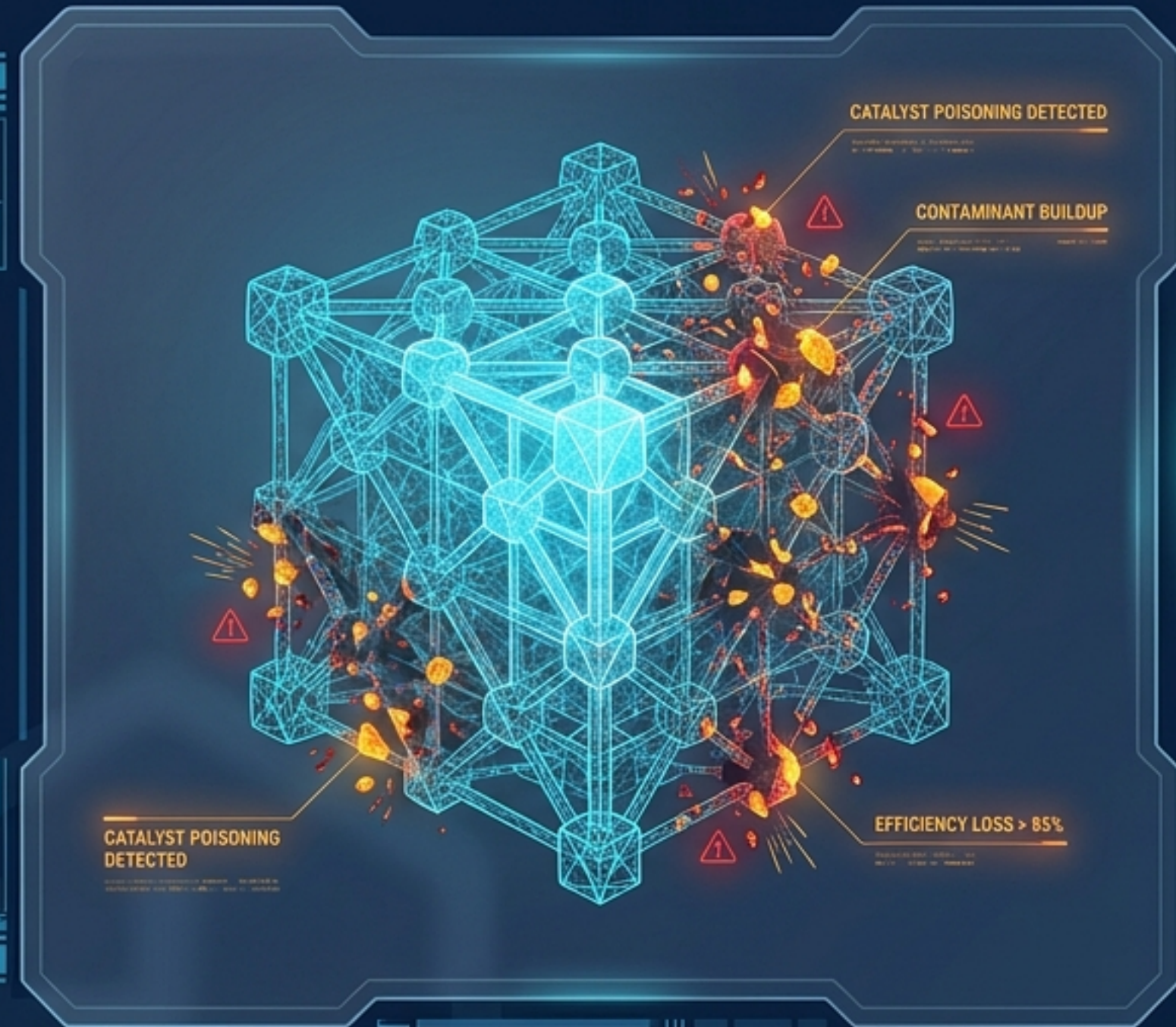




RecognHytion

Bringing laboratory-grade accreditation directly to the nozzle—
slashing downtime and protecting clean mobility assets.

The Fatal Flaw in Green Hydrogen Mobility



H₂

The Standard: Fuel Cell Electric Vehicles (FCEVs) require ultra-pure hydrogen (ISO 14687 Grade D).

PURITY REQUIREMENT: >99.97%

H₂

⚠
CONTAMINANT
SENSITIVITY:
EXTREME

The Risk: Traces of contaminants permanently poison platinum fuel cell catalysts.

CONTAMINANT SENSITIVITY: EXTREME

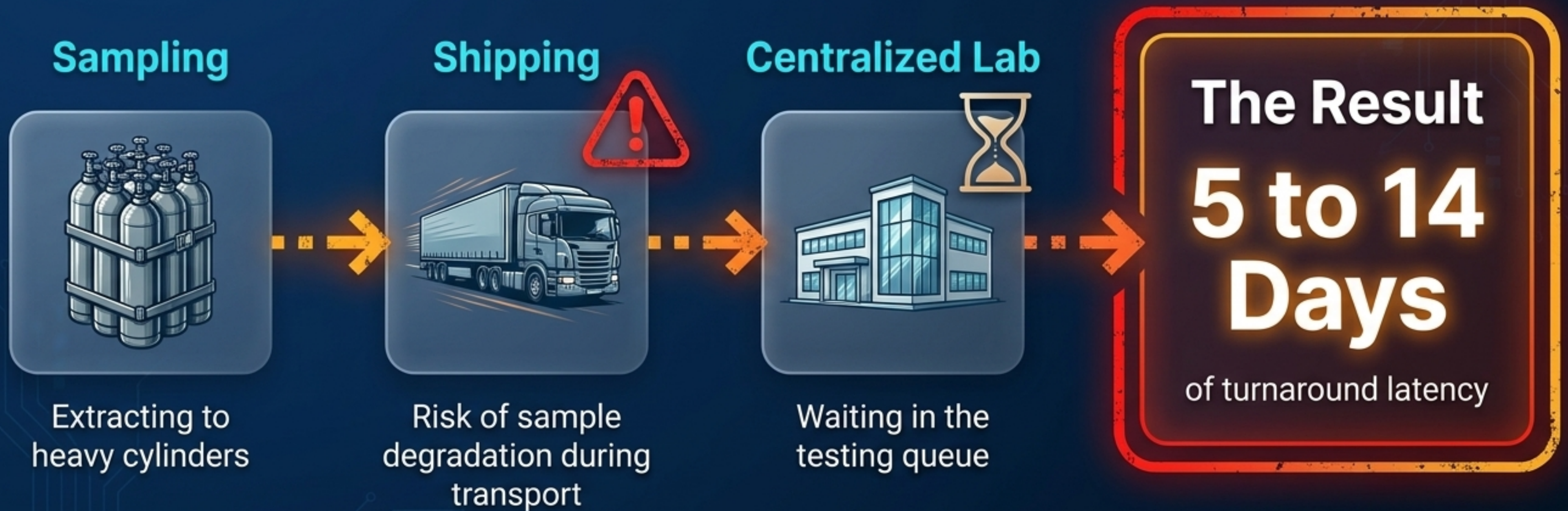
H₂

€ > €40k to €80k
per replacement.

REPLACEMENT FREQUENCY: ACCELERATED

⬇
LIFECYCLE COST
IMPACT: CRITICAL

The Bottleneck: The Off-Site Testing Nightmare



This latency results directly in high station downtime and massive lost revenue.

The QA Paradigm Shift

	Status Quo (Off-Site Lab)	 RecognHyton (On-Site Lab)
Turnaround Time	2 Weeks	Under 4 hours
Transport Risk	High (Degradation) 	✓ Zero (In-situ measurement)
Sampling Integrity	Cylinder Adsorption Errors	Passivated Manifolds (Sulfinert®)
Certification	Delayed Manual Reports	Instant generating ISO/IEC 17025 Accredited CoA

A mobile, field-deployable analytical platform for direct sampling (up to 700 bar) and real-time trace analysis directly at client facilities.

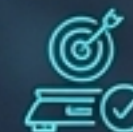
Deep Tech Blueprint: Ruggedized Field Architecture

Safety First



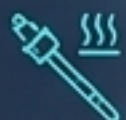
ATEX Zone 2 compliant design with dual pressure relief and automatic shut-off systems.

Validated Precision



Lab-proven limits below ISO 14687 thresholds.

Sampling Fidelity

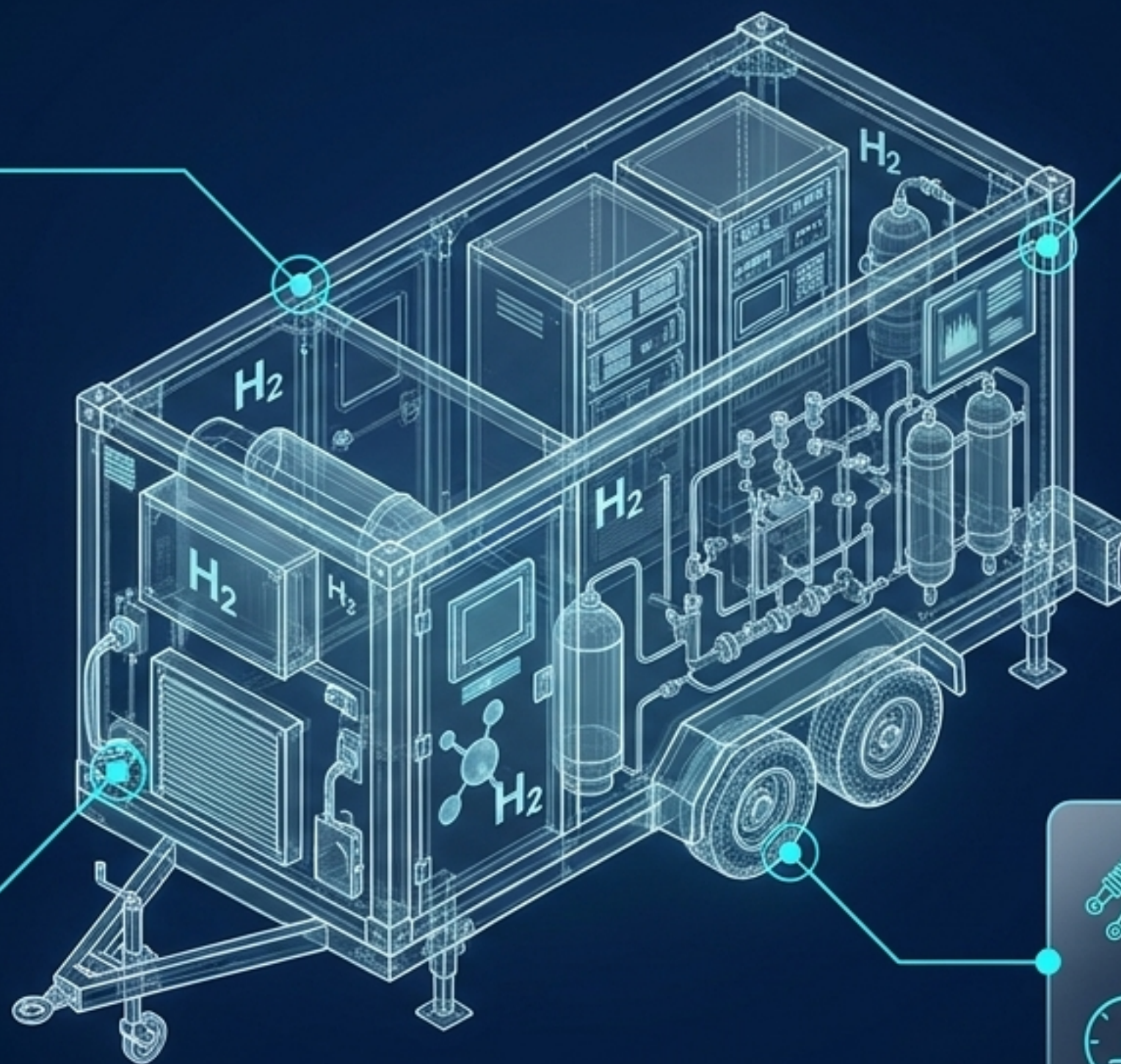


Heated lines and passivated surfaces prevent moisture and sulfur absorption.

Environmental Stability



Shock-absorbing mounts and automated single-point field calibrations compensate for road vibration and thermal shifts.



Strategic & Economic Impact



Refuelling Infrastructure

- H_2 Instant clearance for station commissioning.
- H_2 Saves **€5k–€15k** per audit in avoided downtime.



Fuel Cell Durability

- H_2 Early detection of ppb-level poisons.
- H_2 Prevents costly fleet-wide catalyst destruction.



Supply Chain Logistics

- H_2 Replaces cylinder shipping entirely.
- H_2 Cuts QA operational expenditures by **40%–60%**.

Scalable Service Architecture: The Hub Model



Efficiency

A single mobile unit services a regional cluster of 15 to 25 stations, facilities, and hubs.

IHMIE Partner Alignment

Provides independent metrology to build market trust across regional ecosystems.

The Path to the Global Commercial Benchmark



Vision: Establishing the global benchmark for rapid, accredited on-site hydrogen quality verification.