

IH-MIE 2026

H2TRACE Mobility

Trusted AI for Hydrogen Refuelling Infrastructure

CHALLENGE 2 | SINGLE SME | 12 MONTHS

EuroSpatial Innovations OÜ | TRL 6 to TRL 8



Explainable anomaly detection + digital twin + verifiable operational evidence

THE CHALLENGE

Hydrogen refuelling stations combine complex pressure, temperature, compressor, dispenser and maintenance data. Fragmented monitoring and weak traceability can delay fault diagnosis, increase downtime and complicate safety evidence.

THE H2TRACE SOLUTION

A vendor-neutral platform integrating IoT and SCADA data, a lightweight digital twin, explainable AI and blockchain-verifiable records. Sensitive data stays off-chain and qualified operators retain final control.

HOW IT WORKS

01 CONNECT

IoT, SCADA and maintenance data

02 MODEL

Lightweight station digital twin

03 DETECT

Explainable AI alerts and reasons

04 VERIFY

Trusted records and audit evidence

PROJECT TARGETS

95%+

required-field mapping

F1 0.85+

anomaly performance

3

operational scenarios

TRL 8

validated outcome

COOPERATION SOUGHT

EuroSpatial seeks HRS operators, test facilities, hydrogen suppliers and technical experts able to contribute non-confidential scenarios, validation requirements, technical feedback or access to representative test environments. EuroSpatial applies as a single SME and retains full responsibility for implementation.

CORE TEAM Pablo Perez | Oscar Castillo | Fernando Castillo | Javiera Puebla

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AI for safer hydrogen mobility