



Hydrogen Pilot

2025 Action Report & 2026 Planning

February 24, 2026

Co-coordinated by: Slovenia, Lombardy, Malopolska

Current Membership

12 Member regions

Aragon
Asturias
Basque Country

Emilia Romagna
Friuli Venezia Giulia
Lombardy

Lower Saxony
Malopolska
Slovenia

Wales
Wallonia
East Netherlands

Total Number of Clusters / Industrial Associations: 5

Total Number of Technology Infrastructures / Research Centres / Universities: 8

Overview of 2025 Objectives

Strategic Consolidation

- Transitioned from "**broad network-building**" to a "**targeted industrial brokerage model.**"
- Consolidated core membership to **12 highly active regions**, incorporating a robust ecosystem of clusters, private enterprises, and research institutions.

Operational & Political Mapping

- Completed a comprehensive mapping of both regional political and operational contacts to ensure administrative continuity.

Data-Driven Intelligence (The 2025 Survey)

- Utilized a **comprehensive member survey** to move beyond general networking into **Asset Scouting**.
- We have successfully mapped the "**Offers and Needs**" landscape: specifically identifying where upstream production (electrolysis) meets downstream industrial demand (off-take).

Alignment with EU Mandates

- Ensuring member participation directly matches the **technical and investment requirements** of the EU's hydrogen mandates (RED III, Net-Zero Industry Act).

Key Activities in 2025

Targeted Matchmaking

- Executed two major matchmaking sessions for our member regions and clusters
- They presented specialized expertise, directly facilitating the identification of regional complementarities.

Strategic Intelligence: The Member Motivation Survey

- Deployment of a new, in-depth survey to gather granular insights into regional ambitions and constraints.
- Identified the primary hurdle as the mismatch between upstream production (electrolysis) and downstream industrial consumption.

Organizational & Network Strengthening

- Completion of a significant reorganization of the Pilot's management structure.
- Expansion of the R&D ecosystem with two new research centres joining the Pilot.

International Presence & Synergies

- Solidified the Pilot's presence through active participation in the European Hydrogen Valleys Days.
- Initiated cross-pilot synergies with the ADMA Pilot to develop more efficient, materials-based hydrogen solutions.

Key Outputs 2025

Strategic Resubmission: The I3 H2-IVC Proposal (Nov 13, 2025)

- Successfully rebuilt and submitted the Interregional Innovation Investment (I3) proposal, incorporating critical feedback from the previous year's evaluation.
- Transformed the rejection into a strategic opportunity to build a more robust, investment-ready consortium focused on large-scale funding.

A "Turning Point" in Demo Case Evolution

- Successful launch of the **H2LEC Demo Case**, spearheaded by Slovenia and Dr. Zoran Marinšek.
- Introduced a "Smart Systems" dimension to the Pilot's hardware-centric portfolio through the concept of vertically nested energy communities.

Expanding the Strategic Portfolio

- Consolidation of **5 active strategic Demo Cases**, ensuring a diversified pipeline across the hydrogen value chain.
- Shifted the Pilot's focus from individual technologies to integrated energy ecosystems.

Key Outcomes 2025

Bridging the Research-Industry Gap

- Leveraged the **H2ERE Network** digital platform to connect Italian SMEs with specialized research infrastructure across the Vanguard network.

De-risking the SME Transition

- Utilized an **Italian SME "Success Story"** to demystify the Vinnovate instrument.
- Proved Vanguard's value as a practical de-risking tool for SMEs, moving beyond a focus on large-scale players.

Facilitating "Small Valley" Matchmaking

- Successfully connected Slovenian technology providers with industrial off-takers in the **North Adriatic corridor**.
- Transitioned from theoretical mapping to **functional industrial matchmaking** for the H2LEC (Hydrogen Local Energy Community) model.

Key Challenges in 2025

The "Chicken and Egg" Dilemma

- Identified a significant mismatch between localized renewable hydrogen production and consistent industrial off-take demand.

Information Asymmetry in Matchmaking

- Persistent "pre-matchmaking" gaps where regions lack detailed technical data on each other's specific electrolyzer capacities and TRL levels.

Strategic Misalignment of Maturity Levels

- Managing the divergent needs between "lab-scale" research-focused regions and "ready-to-build" infrastructure regions.

The Funding Complexity Barrier

- High entry barriers and perceived complexity for SMEs regarding instruments like VInnovate and the EU Hydrogen Bank.



Q&A on 2025 results

(Regions subscribed to pilots & involved actors and interested regions)



Outlook 2026 – Strategic Vision

Targeted Industrial Implementation

- Transitioning from administrative mapping to the development of **bankable projects**.

Three-Phase Deployment Strategy

- **Phase 1: Precision Alignment** – Solving information gaps.
- **Phase 2: Decentralized Demonstration** – Validating modular ecosystems.
- **Phase 3: Market Scaling** – Moving from TRL 6/7 toward **TRL 9**.

Leveraging EU Instruments

- Positioning the Pilot to influence the **European Hydrogen Bank** and the **Innovation Fund**.

Pilot Level Priorities – Thematic Precision

Thematic Clustering & Working Groups

- Moving into specialized groups, pairing regions by TRL (e.g. matching research with infrastructure).

The Regional H2 Asset Brochure (Q1 2026)

- A technical directory mapping "who has what" (capacities, off-take needs, and TRLs).

Strategic Governance

- Clarifying the '**Vanguard Philosophy**': Membership is defined by **active project co-creation**.

Flagship Milestone

- Organizing the **2026 Hydrogen Pilot Summit** to showcase our investment portfolio.

Demo Case Level

H2LEC Integration (Slovenian Model)

- Led by **Dr. Zoran Marinšek**, focusing on the "Small Hydrogen Valley" blueprint.
- Objective: Achieving **75% regional energy self-supply** via vertically nested energy communities.

Small-Scale "Brokerage"

- Focusing on high-intensity groups (2–3 regions) to drive specific projects to investment readiness.

Lighthouse Project: H2Glass

- Continuing the demonstration of fossil fuel substitution in high-temperature glass manufacturing.

Funding & Advocacy

Funding Priorities

- Executing the **I3 H2-IVC project** and scouting **Clean Hydrogen Partnership** calls.
- Hosting "**Success Clinics**" to bridge the SME knowledge gap for Vinnovate.

Strategic Policy Advocacy

- Drafting a **Position Paper by Q4 2026** to influence EU industrial policy.
Focus Topic: Regulatory barriers for "**Small Valleys**" and the "Green Premium" for SMEs.

Conclusions

From Network to Industrial Engine

- Transitioning the Pilot's core mandate from "**Knowledge Sharing**" to "**Project Co-Creation.**"

The 2026 Strategic Horizon

- Operationalizing the **Regional H2 Asset Brochure** to eliminate market friction.
- Formalizing the "**Small Valley**" model as a replicable EU blueprint.

A Unified Regional Voice

- Culminating in the **2026 Hydrogen Pilot Summit**, showcasing a matured, investment-ready portfolio to European leadership.



Q&A on 2026 planning

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