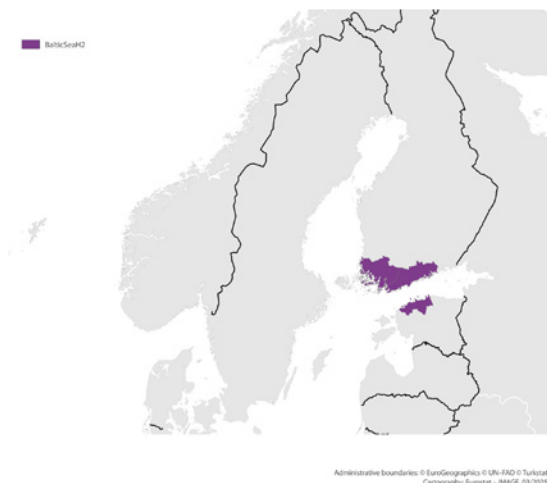


# BalticSeaH2

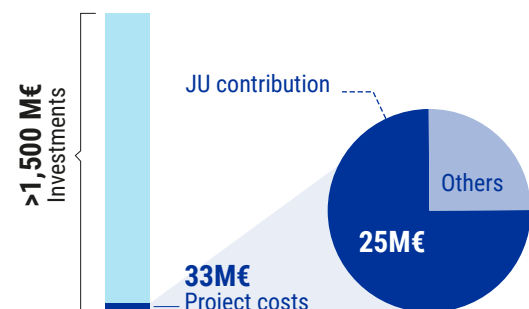
## CROSS-BORDER HYDROGEN VALLEY AROUND THE BALTIC SEA



|                         |                                   |
|-------------------------|-----------------------------------|
| Project ID              | 101112047                         |
| PRR 2025                | Pillar 6 – H <sub>2</sub> Valleys |
| Call Topic              | HORIZON-JTI-CLEANH2-2022-06-01    |
| Coordinator Beneficiary | CLIC INNOVATION OY, FI            |
| Project Period          | 01-06-2023 - 31-05-2028           |
| Location                | Crossborder Finland – Estonia     |

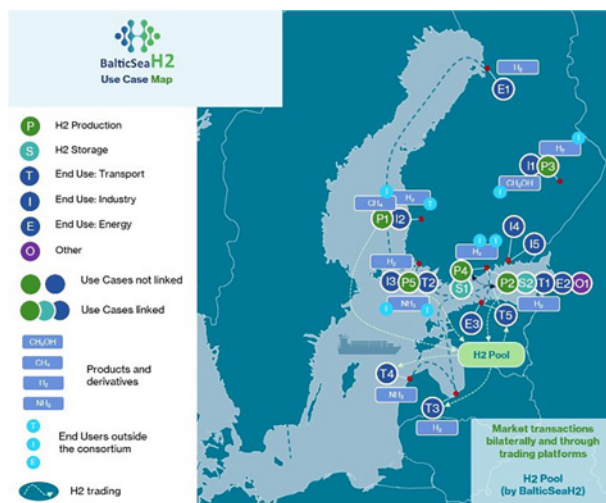
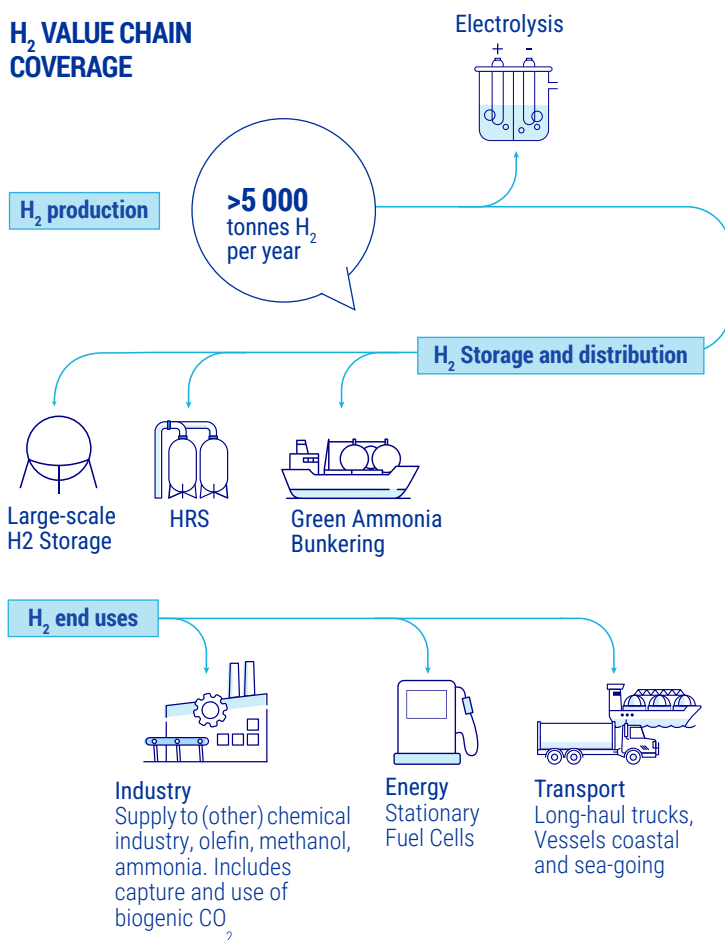


### Finances



<https://balticseah2valley.eu/>

### H<sub>2</sub> VALUE CHAIN COVERAGE



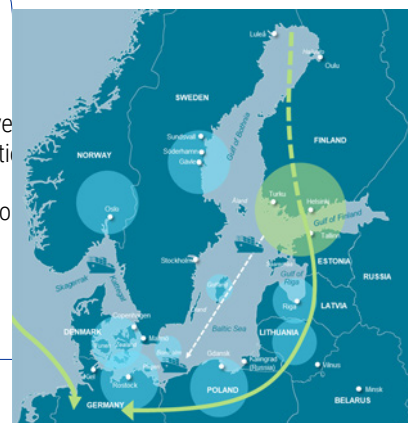
**BalticSeaH<sub>2</sub>** is building the largest cross-border hydrogen valley in Europe, between Finland and Estonia. The goal is to create an integrated hydrogen economy around the Baltic Sea to enable self-sufficiency of energy and minimise carbon emissions from different industries. Combining local areas into a broader valley supports creating a genuinely integrated, interregional hydrogen economy.

## PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

- participation in events creating awareness of the valley's activities.
- development of the use cases and investment cases has started.
- as of February 2025, the valley has started producing green hydrogen

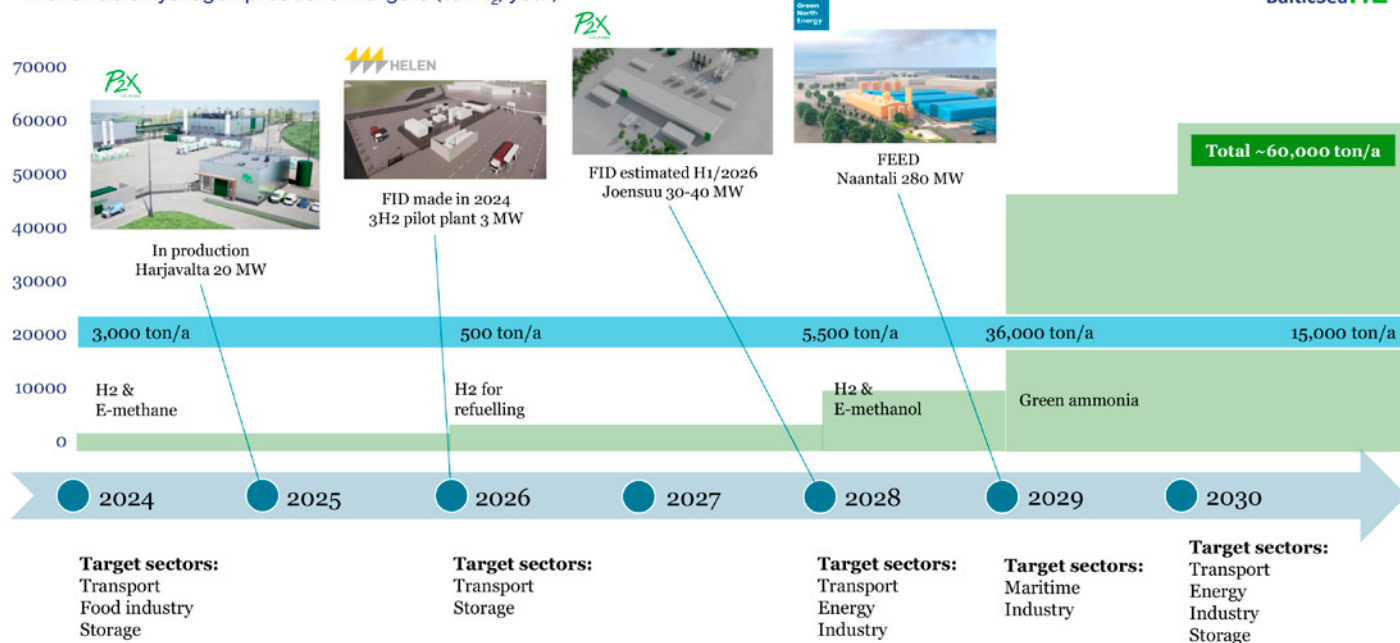
## FUTURE STEPS AND PLANS

- Connected valleys are planned in Sweden, Denmark, Norway, Latvia, Lithuania, Poland and Germany
- Connected valleys are already actively involved in BalticSeaH<sub>2</sub> project activities but a replication toolkit and a best practices handbook are planned, to disseminate knowledge and lessons learned on building a local hydrogen economy featuring the whole hydrogen value chain.



## BalticSeaH<sub>2</sub> Valley implementation plan by 2030

Renewable hydrogen production targets (tonH<sub>2</sub>/year)



**Note:** The plants that are already under construction have received investment financing from the Innovation Fund, IPCEI, RRF, or other funding from the Finnish ministry or the Finnish Climate Fund.

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 PDF ISBN 978-92-9246-431-8 doi:10.2843/715166 EG-05-24-218-EN-N

# CRAVE-H<sub>2</sub>

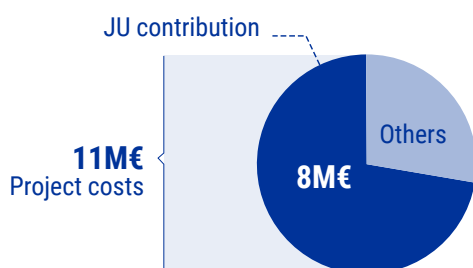
## CRETE AEGEAN H<sub>2</sub> VALLEY

CRAVE H<sub>2</sub>

|                         |                                   |
|-------------------------|-----------------------------------|
| Project ID              | 101112169                         |
| PRR 2025                | Pillar 6 – H <sub>2</sub> Valleys |
| Call Topic              | HORIZON-JTI-CLEANH2-2022-06-02    |
| Coordinator Beneficiary | EUNICE, EL                        |
| Project Period          | 01-06-2023 - 31-05-2028           |
| Location                | Greece                            |

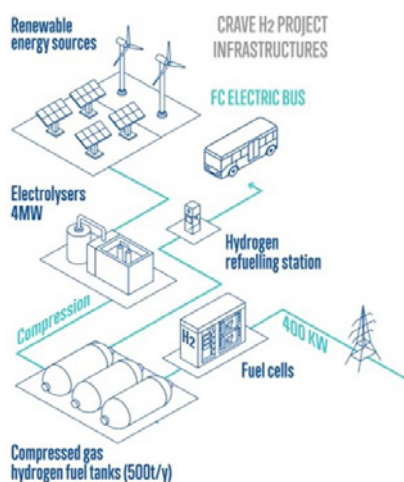
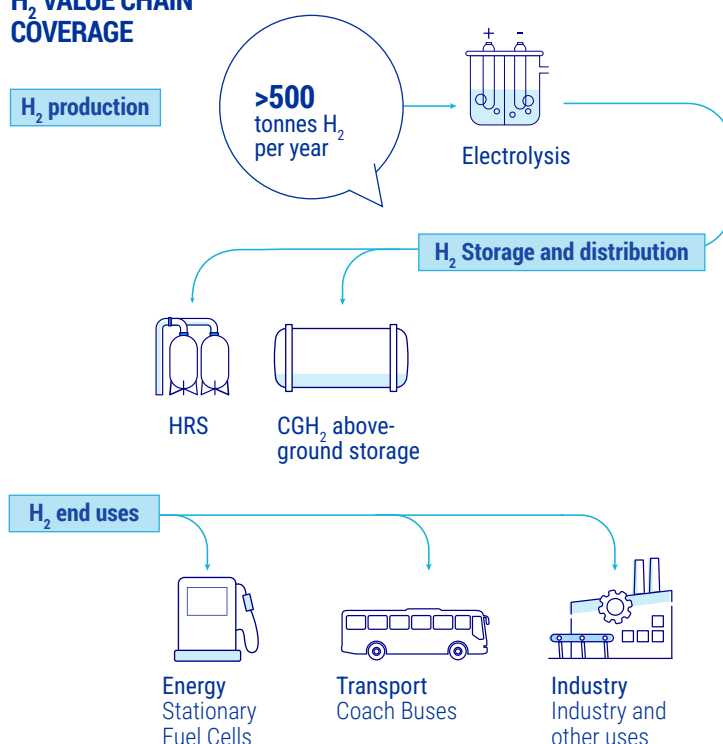


### Finances

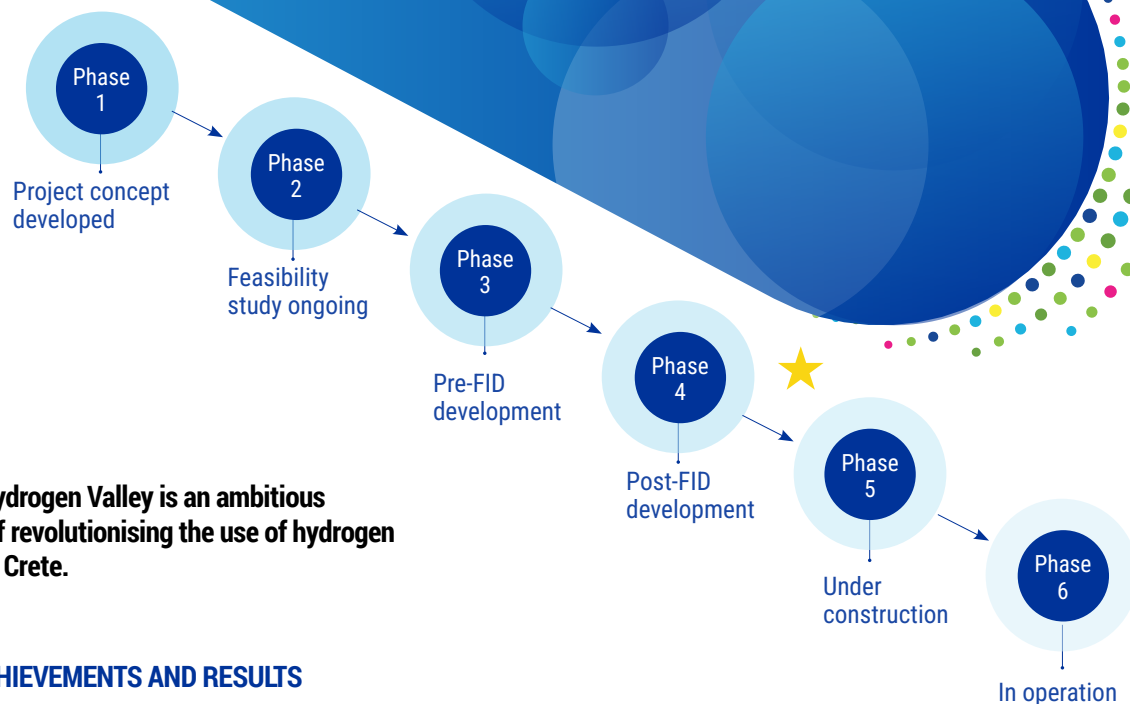


<https://www.crave-h2.eu/>

### H<sub>2</sub> VALUE CHAIN COVERAGE



## PROJECT TIMELINE



**The Cretan-Aegean Hydrogen Valley is an ambitious project with the aim of revolutionising the use of hydrogen on the Greek island of Crete.**

## PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

### H<sub>2</sub> PRODUCTION PLANT

- Safety Plan prepared and submitted.
- Regulatory and licensing frameworks are being addressed.
- Greek authorities were engaged to align hydrogen regulations.

### INFRASTRUCTURE PROGRESS

- Preliminary environmental and infrastructure assessments were conducted.
- Preliminary layout and technical specs for all system components were developed.
- Alternative hydrogen distribution and storage methods were assessed.

### TECHNOLOGIES DEVELOPMENT

- A 4 MW alkaline water electrolyser was designed.
- a hydrogen-powered fuel cell (FC) facility was designed.
- Technical specifications for a hydrogen coach bus were created.
- A hydrogen utilization plan was developed and is continuously updated.

### OTHER

- Built strong relationships with policymakers, local authorities, and energy cooperatives.
- Participation in EU and national hydrogen events.
- Development and maintenance of the Crave-H<sub>2</sub> website and social media.
- Participation in key events like the Conference on Hydrocarbons and the European Hydrogen Valleys Investment Forum 2024, as well as EU and national hydrogen events
- Publishing of 2 peer-reviewed research papers in open-access journals.

### FUTURE STEPS AND PLANS

- Finalise site design and permitting for hydrogen production and storage.
- Construct and install the hydrogen production and storage system.
- Complete permitting for the fuel cell plant.
- Construct and install the stationary FC plant.
- Select and commission a hydrogen FC bus supplier/manufacturer.
- Deliver and commission the hydrogen FC bus.
- Analyse alternative uses of hydrogen (e.g., in power plants, industry, maritime).
- Create and distribute promotional materials (posters, infographics, etc.).
- Produce the first project video.
- Participate in conferences, workshops, and seminars.
- Publish additional project results in scientific journals.
- Organize open discussions with local island residents.

# CONVEY

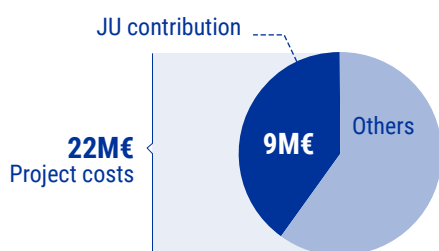
**CONVEY**  
Hydrogen Ecosystem Model in Port of Hirtshals

## nordic hydrOgen eNERgy Valley

|                         |                                   |
|-------------------------|-----------------------------------|
| Project ID              | 101137581                         |
| PRR 2025                | Pillar 6 – H <sub>2</sub> Valleys |
| Call Topic              | HORIZON-JTI-CLEANH2-2023-06-02    |
| Coordinator Beneficiary | NORWEGIAN HYDROGEN AS, NO         |
| Project Period          | 01-03-2024 - 28-02-2029           |
| Location                | Denmark                           |

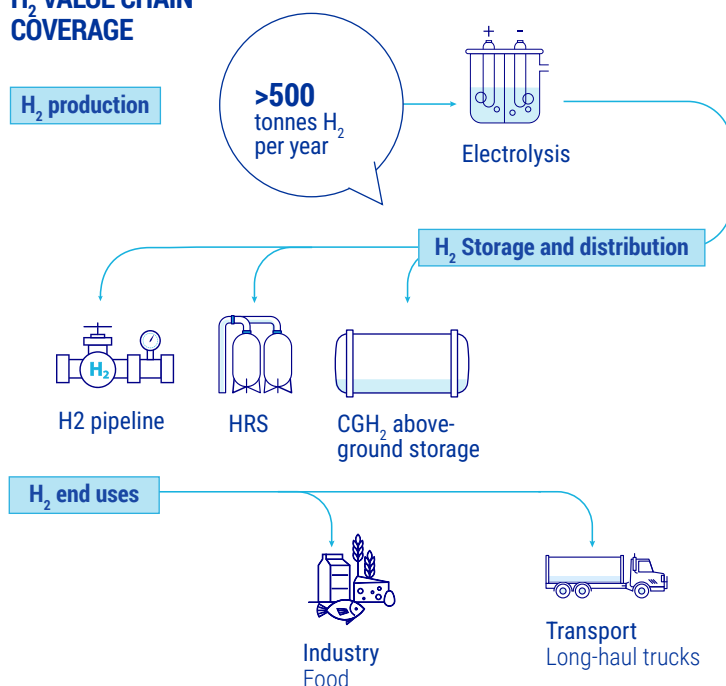


## Finances

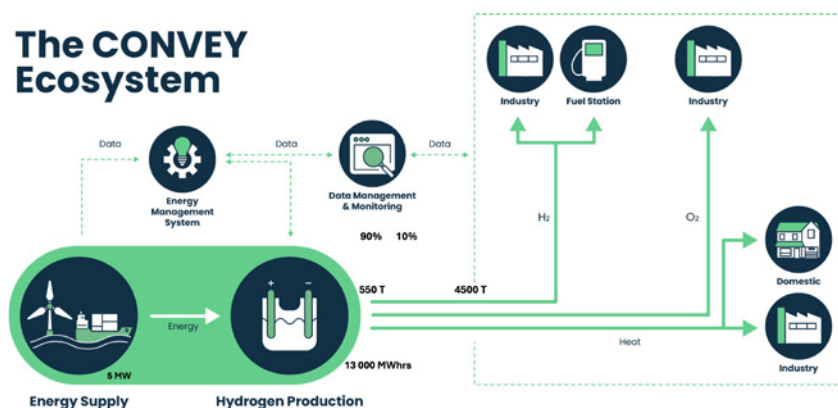


<https://convey.energy/>

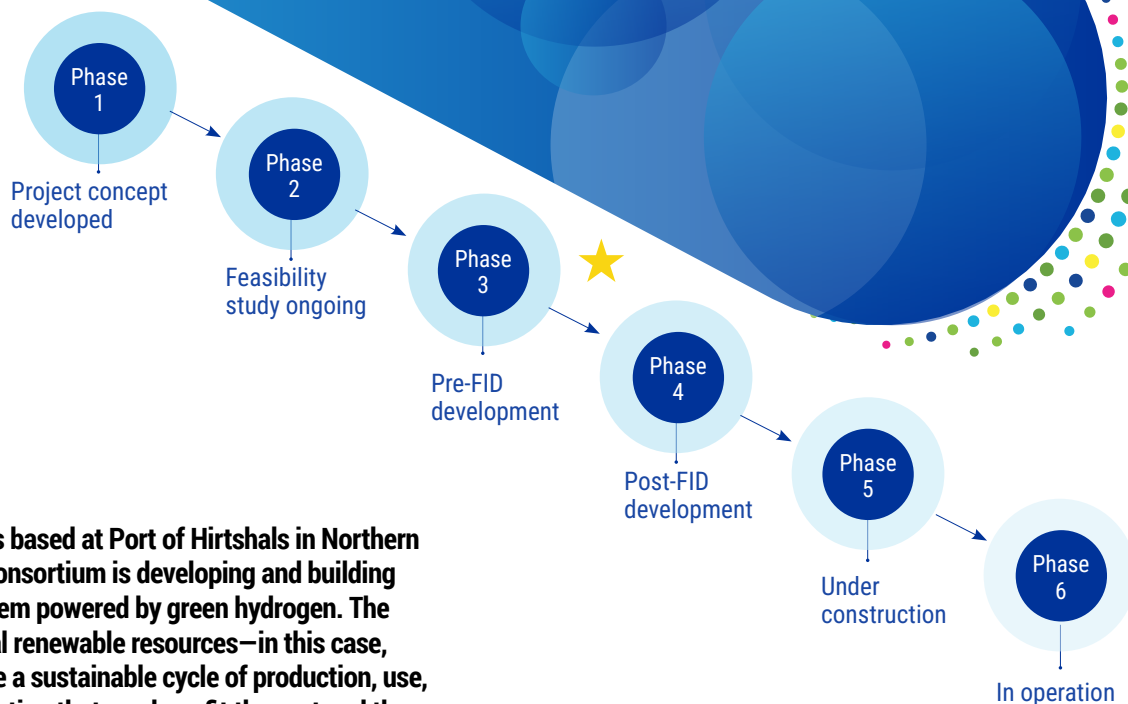
## H<sub>2</sub> VALUE CHAIN COVERAGE



## The CONVEY Ecosystem



## PROJECT TIMELINE



**The CONVEY project is based at Port of Hirtshals in Northern Denmark, where the consortium is developing and building a closed-loop ecosystem powered by green hydrogen. The aim is to leverage local renewable resources—in this case, wind energy—to create a sustainable cycle of production, use, and by-product integration that can benefit the port and the surrounding community.**

## PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

- A techno-economical model for the CONVEY ecosystem was developed and used to assess use cases and guide partners' investments.
- The model serves as the foundation for a future energy management tool, to be developed alongside infrastructure.
- Partners selected technologies for hydrogen and by-product production and usage, supporting engineering and permitting efforts.
- Dissemination and communication activities included stakeholder engagement, networking, a podcast series, newsletter, website, and social media.
- Replication efforts have begun, including identifying other ports where the CONVEY concept could be applied.



## FUTURE STEPS AND PLANS

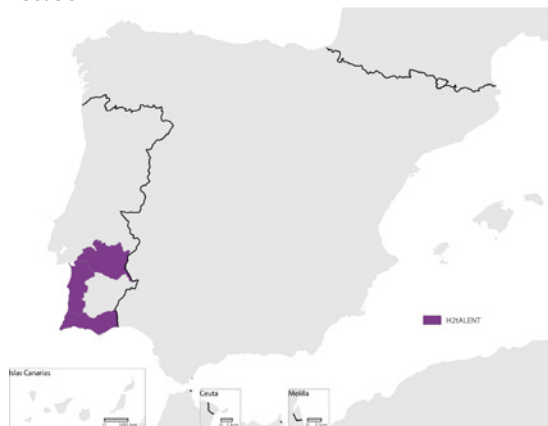
CONVEY is moving towards individual investment decisions on equipment for the Hydrogen Valley. The CONVEY ecosystem will be built, commissioned, and launched over the next two years.

- Progress is being made on:
  - Detailed engineering and permitting.
  - Contracts with customers for hydrogen and by-product offtake.
  - Beginning the construction phase.
- In parallel, the consortium is working on:
  - Business model development.
  - Raising awareness of the green hydrogen ecosystem through communication and dissemination.
  - Strengthening efforts for replication and scale-up.

# H<sub>2</sub>tALENT

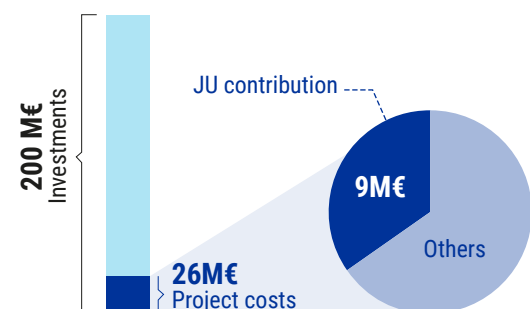
Alentejo Green Hydrogen Valley delivering integrated full-chain sustainable hydrogen ecosystem with technical, economic, social and environmental benefits and superior upscaling/replicability.

|                         |                                   |
|-------------------------|-----------------------------------|
| Project ID              | 101137611                         |
| PRR 2025                | Pillar 6 – H <sub>2</sub> Valleys |
| Call Topic              | HORIZON-JTI-CLEANH2-2023-06-02    |
| Coordinator Beneficiary | UNIVERSIDADE DE EVORA, PT         |
| Project Period          | 01-03-2024 - 28-02-2029           |
| Location                | Portugal                          |



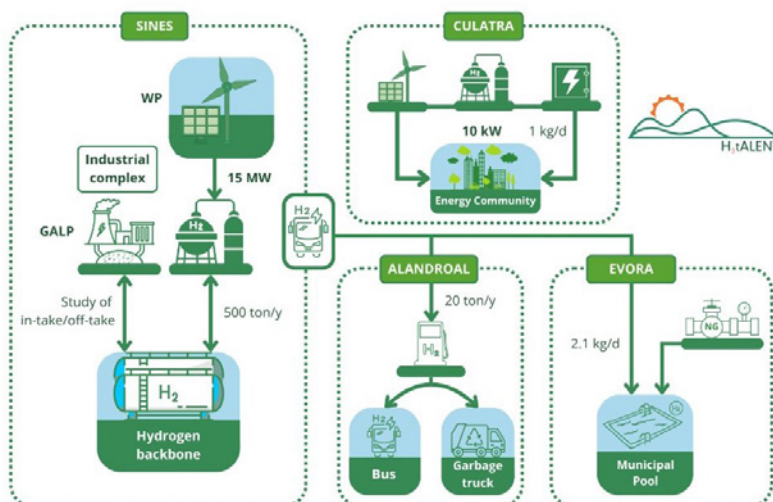
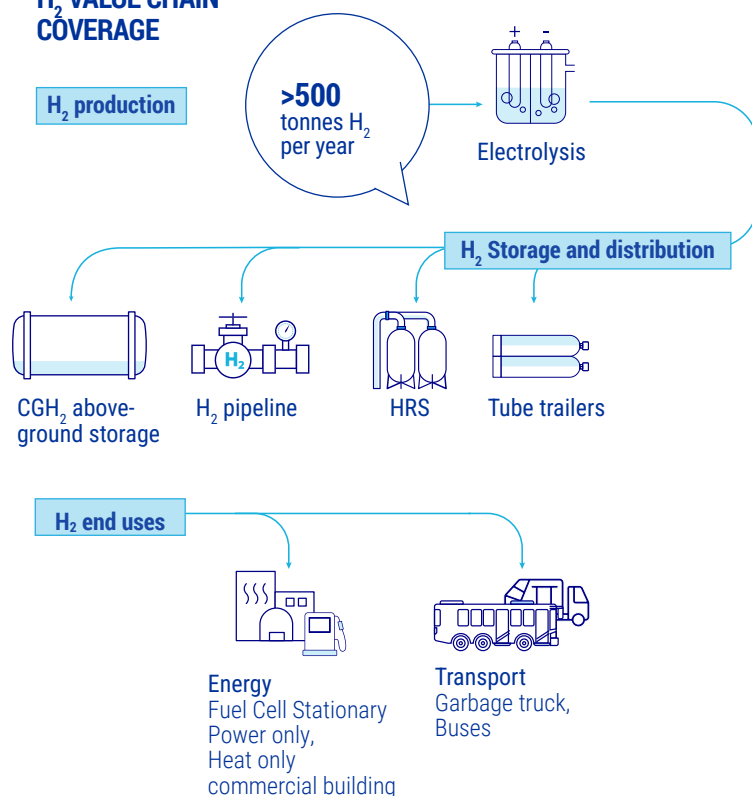
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## Finances

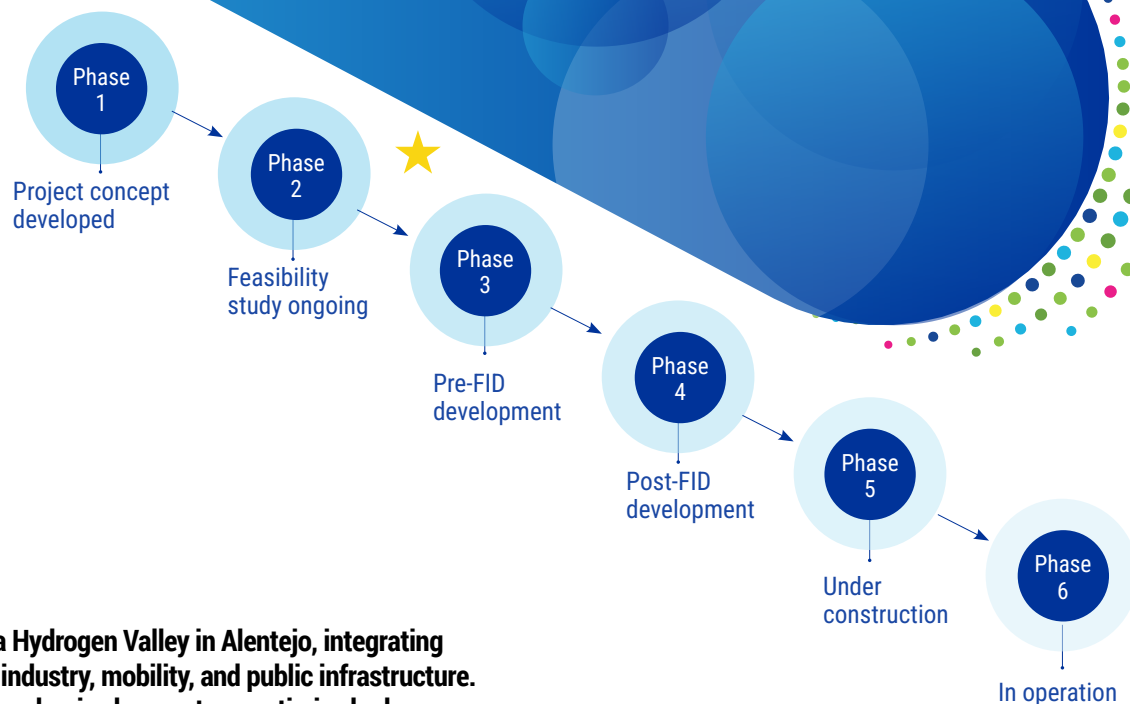


<https://h2talent.eu/>

## H<sub>2</sub> VALUE CHAIN COVERAGE



## PROJECT TIMELINE



**H<sub>2</sub>TALENT is creating a Hydrogen Valley in Alentejo, integrating “green” hydrogen into industry, mobility, and public infrastructure. The project aims to decarbonize key sectors, optimize hydrogen logistics, and establish models for hydrogen adoption in Europe.**

## PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

- The project governance structure to ensure consortium cohesion was established.
- Preliminary hydrogen safety measures were developed.
- The project management and data management plans were submitted.
- Progress was made in the hydrogen logistics and system integration strategies.

## FUTURE STEPS AND PLANS

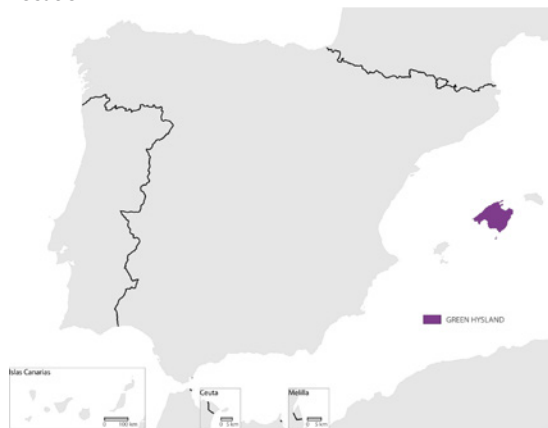
- Implementation of hydrogen demonstrators in Évora, Alandroal and Culatra island, integration with the Sines hydrogen backbone, finalization of regulatory and safety assessments, optimization of hydrogen logistics and expansion of international collaboration for replication in other regions.

# GREEN HYSLAND

## DEPLOYMENT OF A H<sub>2</sub> ECOSYSTEM ON THE ISLAND OF MALLORCA

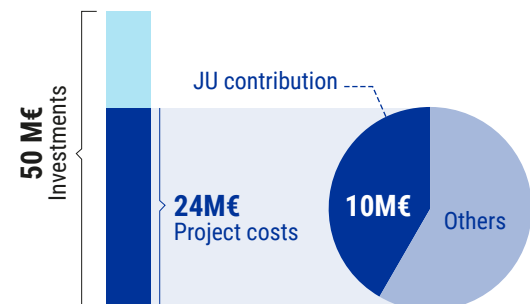


|                                |                                   |
|--------------------------------|-----------------------------------|
| <b>Project ID</b>              | 101007201                         |
| <b>PRR 2025</b>                | Pillar 6 – H <sub>2</sub> Valleys |
| <b>Call Topic</b>              | FCH-03-2-2020                     |
| <b>Coordinator Beneficiary</b> | ENAGAS RENOVABLE SA, ES           |
| <b>Project Period</b>          | 01-01-2021 - 31-12-2025           |
| <b>Location</b>                | Spain                             |



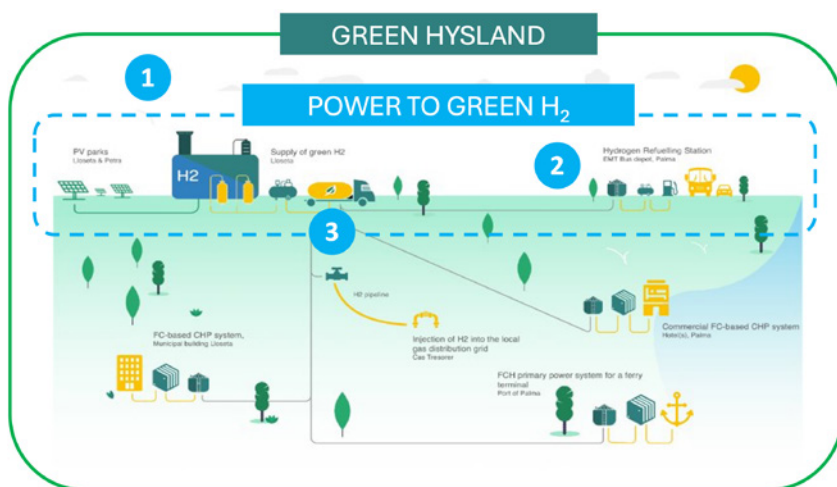
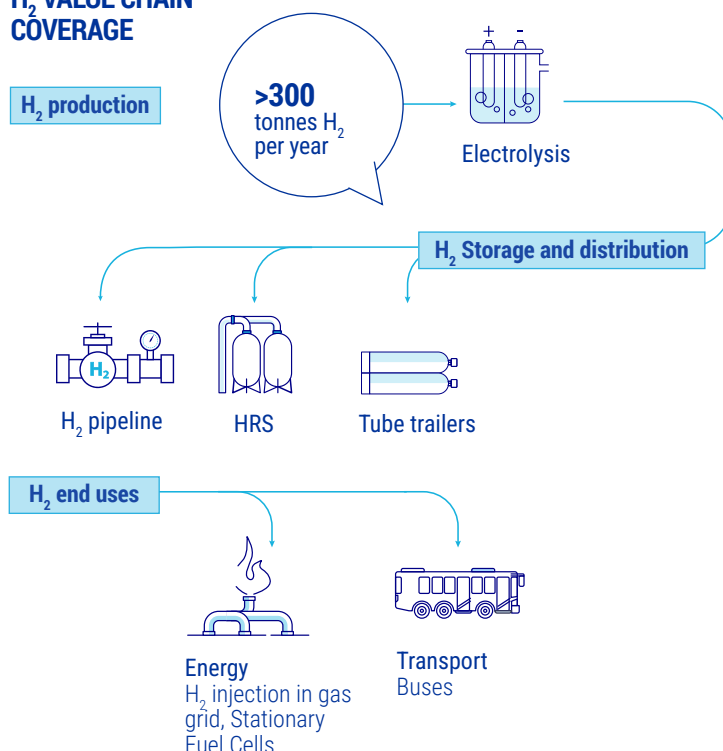
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Cartography: Eurostat - RANG, 03/2025

### Finances

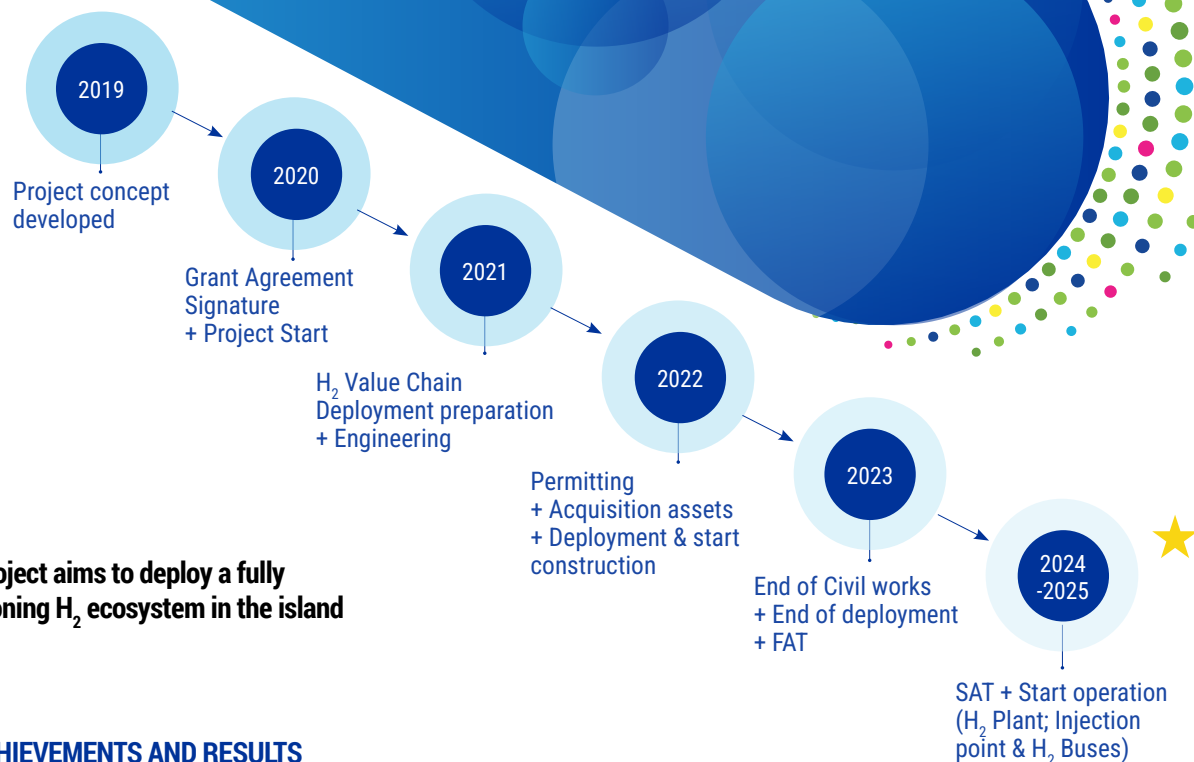


<http://www.greenhysland.eu>

### H<sub>2</sub> VALUE CHAIN COVERAGE



## PROJECT TIMELINE



**The Green Hysland project aims to deploy a fully integrated and functioning H<sub>2</sub> ecosystem in the island of Mallorca, Spain.**

## PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

### H<sub>2</sub> PRODUCTION PLANT

- Site Acceptance Tests (SAT) began in May 2024 and were completed in July 2024.
- Plant resumed operations in September 2024 to finalize the testing phase, successfully producing hydrogen molecules.
- Registered on the "Guarantees of Origin" platform in August 2024. Meanwhile, it has started industrial operation.

### INFRASTRUCTURE PROGRESS

- Civil works for H<sub>2</sub> pipeline and blending station completed. Both are currently operational.
- First hydrogen injection into the grid occurred in September 2024.
- SATs for tube trailers completed; they are now fully operational.

### FUEL CELL (FC) DEVELOPMENTS

- FC tender at Port of Palma awarded in November 2024 (11-month contract); design phase in progress.
- For Palma Hotel Iberostar:
  - FAT (Factory Acceptance Tests) of the FC stack conducted in July 2024.
  - Main stack equipment received in November 2024.
  - Civil works initiated in the first week of November 2024.
- Tourist and local survey data collection completed.
- Full Green Hysland project modeled in PERSEE, ready for simulations, optimization, and evaluation.
- Substantial progress has been made in drafting and researching a roadmap for hydrogen deployment in the Balearic Islands by 2050.

### FUTURE STEPS

- Temporary H<sub>2</sub> portable dispenser for EMT bus depot was deployed in 2024 and EMT buses are now operating.
- Ongoing efforts to resolve the HRS (Hydrogen Refueling Station) situation; alternative solutions under evaluation.
- Fuel Cell at Iberostar Hotel is expected to be operational by end of 2025.
- SAT and training for Fuel Cell at Port of Palma scheduled for autumn 2025.
- Ongoing discussions to find a third party to join the project for vehicle deployment and operation.



# HEAVENN



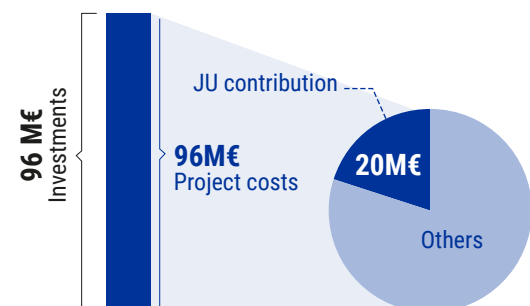
## HYDROGEN ENERGY APPLICATIONS FOR VALLEY ENVIRONMENTS IN NORTHERN NETHERLANDS

|                                |                                    |
|--------------------------------|------------------------------------|
| <b>Project ID</b>              | 875090                             |
| <b>PRR 2025</b>                | Pillar 6 – H <sub>2</sub> Valleys  |
| <b>Call Topic</b>              | FCH-03-1-2019                      |
| <b>Coordinator Beneficiary</b> | STICHTING NEW ENERGY COALITION, NL |
| <b>Project Period</b>          | 01-01-2020 - 31-12-2027            |
| <b>Location</b>                | The Netherlands                    |



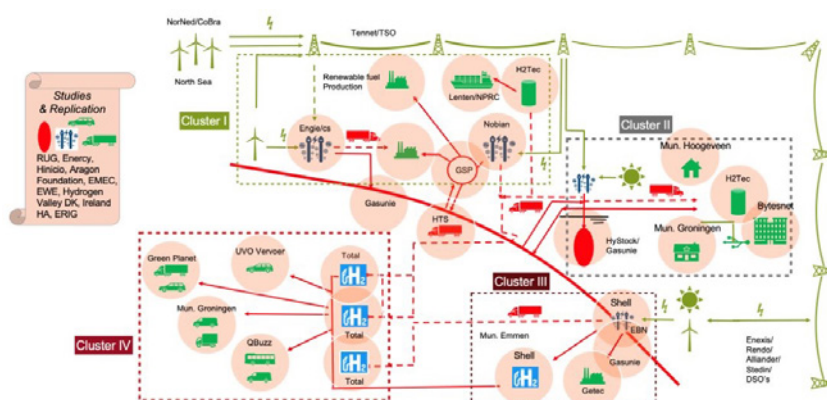
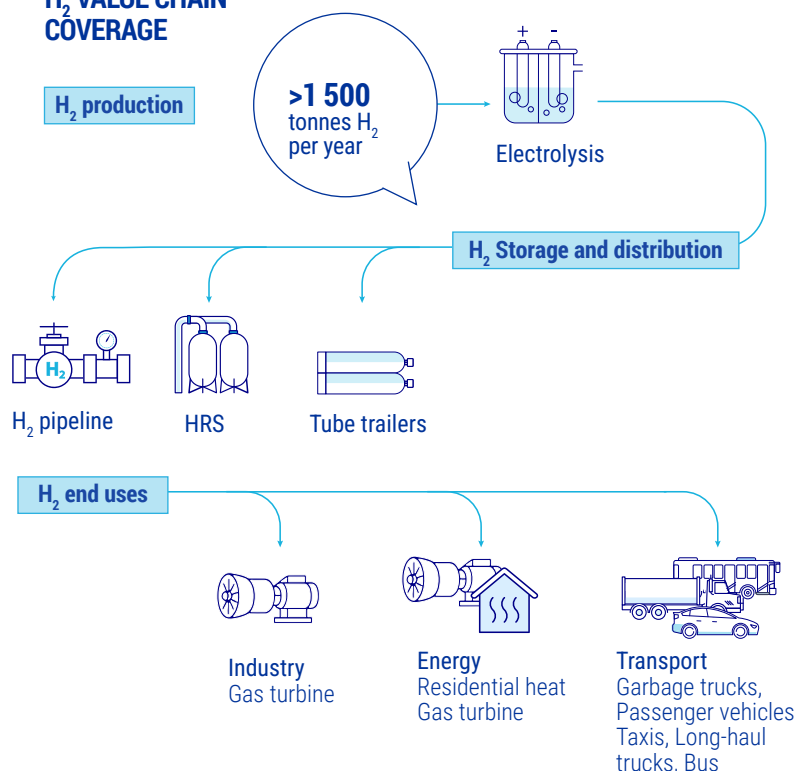
Administrative boundaries: © EuroGeographics © UN-FAO © Turstat  
Cartography: Eurostat - NAGS, 03/2025

### Finances

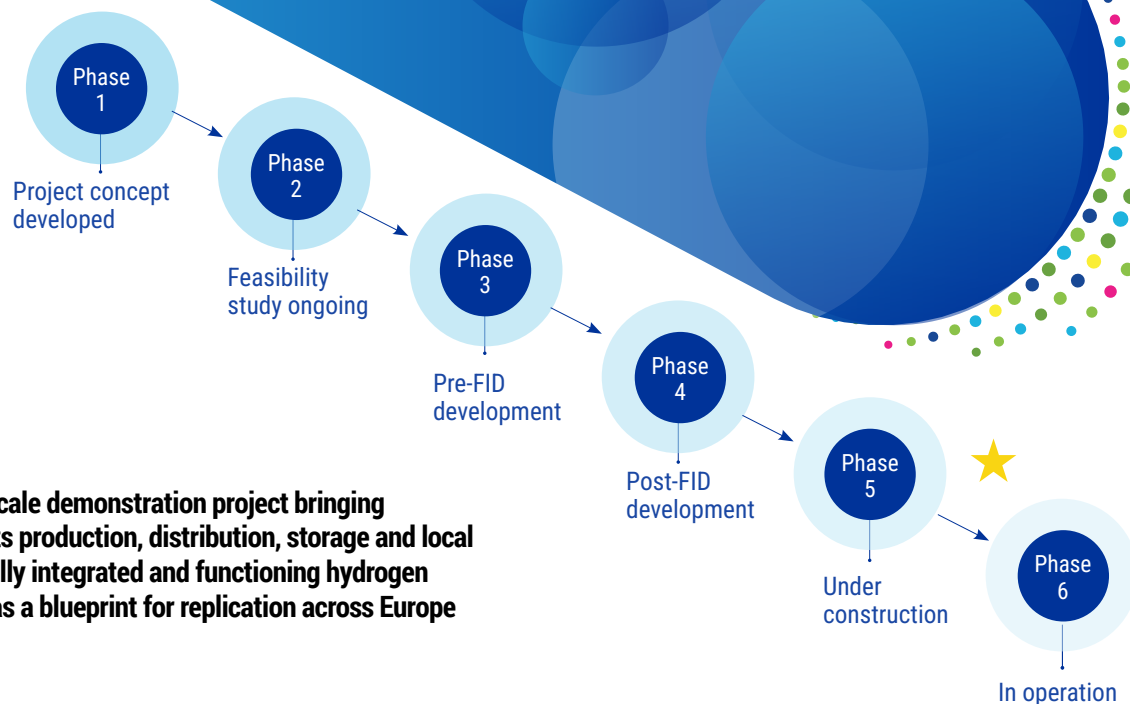


<http://www.heavenn.org>

### H<sub>2</sub> VALUE CHAIN COVERAGE



## PROJECT TIMELINE



**HEAVENN is a large-scale demonstration project bringing together core elements production, distribution, storage and local end use of H<sub>2</sub> into a fully integrated and functioning hydrogen valley that can serve as a blueprint for replication across Europe and beyond.**

## PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

### HYDROGEN APPLICATIONS

- Salt barge hull is currently sailing in the Netherlands using a container swap solution for hydrogen refuelling.
- Vehicles have been ordered or purchased and will be delivered this year.
- In Hoogeveen, construction has started on hydrogen-powered housing.
- The data centre hydrogen project is evaluating the best fuel cell type and size for its energy needs.

### STORAGE AND DISTRIBUTION

- Salt cavern testing is ongoing and is being successful
- First static tests were successfully performed by Gasunie, showing that hydrogen can be safely stored in salt caverns.
- Designs and layout plans for future H<sub>2</sub> caverns are in progress.
- The Hydrogen Refueling Station (HRS) is operational and in use by partner UVO.
- The Emmen EMMHY pipeline is installed and ready to begin using hydrogen.

### MARKETABILITY PROGRESS

- The connections specification study is complete, exploring market scenarios and design scalability; results include a plot plan and capacity-range definition.
- In Eemshaven, efforts are ongoing to matchmake for the pipeline, seeking customers and purchase agreements.
- The HyCC factory is progressing toward a Final Investment Decision (FID).
- The Hydrogen Hub is applying for a final co-financing subsidy and will proceed to FID after approval.

### FUTURE STEPS AND PLANS

- A critical assessment of deliverables is planned.
- Tasks and deliverables will be reassessed and updated due to changes since the grant agreement.
- A few partners are awaiting cofounding; if secured, they plan to accelerate all actions.
- The consortium has been awarded a definitive extension, which aid partners in closing their business case and proceeding to FID.
- Significant effort will be made to connect hydrogen valley projects, focusing on:
  - Sharing experiences and lessons learned;
  - Creating synergies;
  - Mutual strengthening of projects.

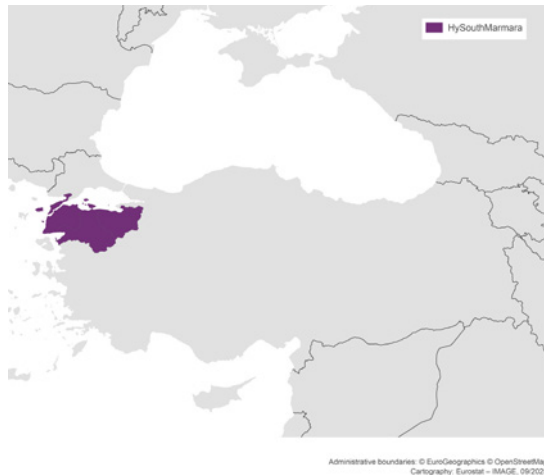


# HYSouthMarmara

## SOUTH MARMARA HYDROGEN SHORE



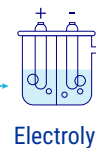
|                         |                                   |
|-------------------------|-----------------------------------|
| Project ID              | 101112054                         |
| PRR 2025                | Pillar 6 – H <sub>2</sub> Valleys |
| Call Topic              | HORIZON-JTI-CLEANH2-2022-06-02    |
| Coordinator Beneficiary | GUNEY MARMARA KALKINMA AJANSI, TR |
| Project Period          | 01-07-2023 - 30-06-2028           |
| Location                | Türkiye                           |



### H<sub>2</sub> VALUE CHAIN COVERAGE

#### H<sub>2</sub> production

>500 tonnes H<sub>2</sub> per year

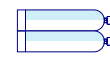


Electrolysis

#### H<sub>2</sub> Storage and distribution

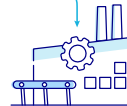


CGH<sub>2</sub> above-ground storage

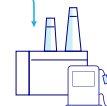


Tube trailers

#### H<sub>2</sub> end uses

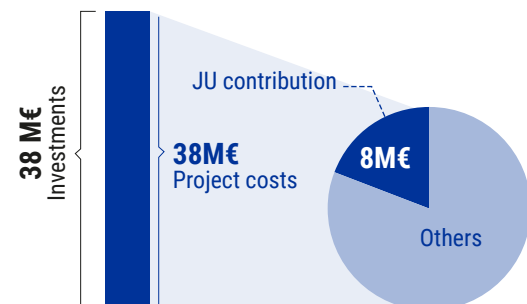


**Industry**  
H<sub>2</sub> for NaBH<sub>4</sub> production,  
H<sub>2</sub> for Hydrogen Peroxide production

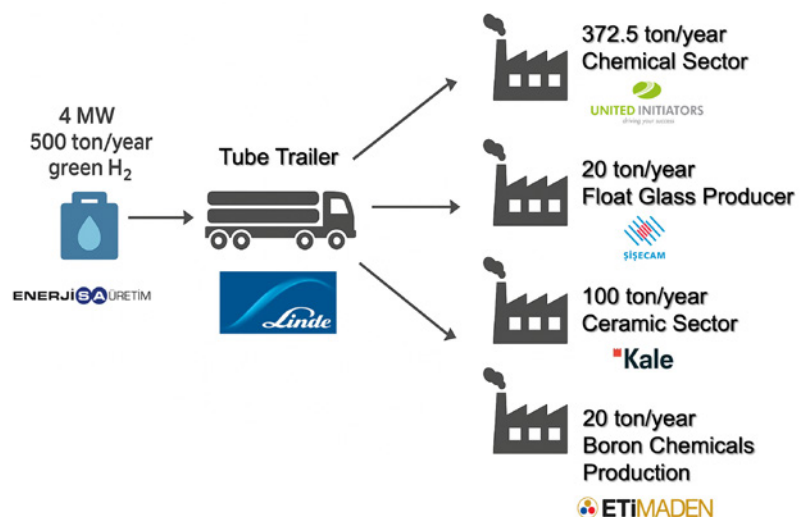


**Energy**  
Stationary Fuel Cells,  
Industrial heat (ceramic, glass making)

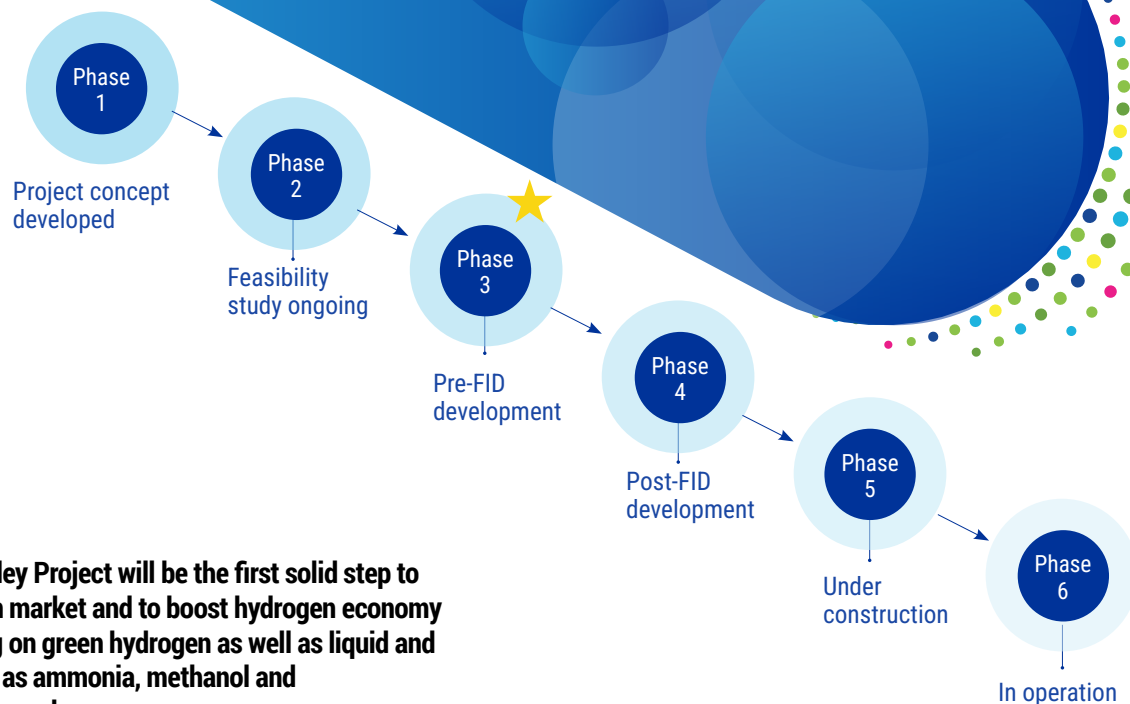
### Finances



<https://hysouthmarmara.org/en>



## PROJECT TIMELINE



**HYSouthMarmara Valley Project will be the first solid step to ramp-up the hydrogen market and to boost hydrogen economy in the region, focusing on green hydrogen as well as liquid and solid derivatives such as ammonia, methanol and boron-hydrogen compounds.**

## PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

- The technical specifications for services related to the *South Marmara Hydrogen Roadmap* has been finalized.
- Contract signed for the tender process conducted by GMKA according to public procurement regulations.
- The Feasibility reports for a 50 000 tonnes/year green methanol plant and a 100 000 tonnes/year green ammonia plant are completed.
- Feasibility report for a 4 MW green hydrogen plant (including storage and transport) is completed.
- Final Investment Decision (FID) phase for work packages 2 and 3 is in progress.
- The technical design and specifications finalized for kiln components is underway:
  - General layout of kiln and pre-kiln.
  - Dampers' number/position and firing zone section insulation details.
  - Module lining drawings and list of refractory/insulating materials.
  - Specifications for rollers, fans, drivers, and electric control board.
- The first phase (tri-methyl metaborate production) of Sodium Borohydride Pilot Plant is completed.
- Stakeholder engagement through meetings and site visits for feedback and collaboration.
- A Hydrogen Valleys Workshop was organized with public, private, and academic participation to discuss green hydrogen's future in Türkiye and the EU.

## FUTURE STEPS AND PLANS

- The *South Marmara Hydrogen Roadmap* is expected to be finalized by end of 2025, laying the groundwork for the region's strategic hydrogen development.
- Development of the Strategic Business Model for South Marmara.
- For work packages 2 and 3, FID will be taken.
- Use of green hydrogen in chemical and glass industries of the regions.
- Construction design of the hybrid kiln will be finalized and construction phase of the kiln will be initiated.
- Efficiency improvement studies for Sodium Borohydride (SBH) will be completed in the laboratory and Eti Maden will move to the phase of procurement of equipments and installation of the facility for SBH plant.
- HYSouthMarmara has implemented a Learn and Teach strategy within the project, which includes site visits to both mature and early-stage valleys. Those site visits, along with in-person meetings, will be conducted in the future.
- The consortium will go on participating in national and international organizations to introduce Türkiye's first Hydrogen Valley Project.

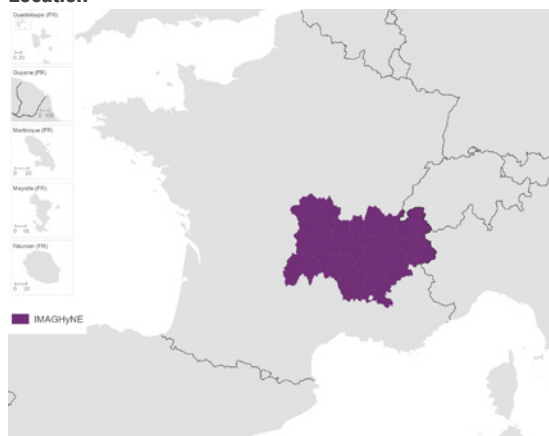
# IMAGHyNE

IMAGHyNE  
Coordinated by Auvergne-Rhône-Alpes

**IMAGHYNE: INVESTMENT TO MAXIMISE THE AMBITION FOR GREEN HYDROGEN IN EUROPE**

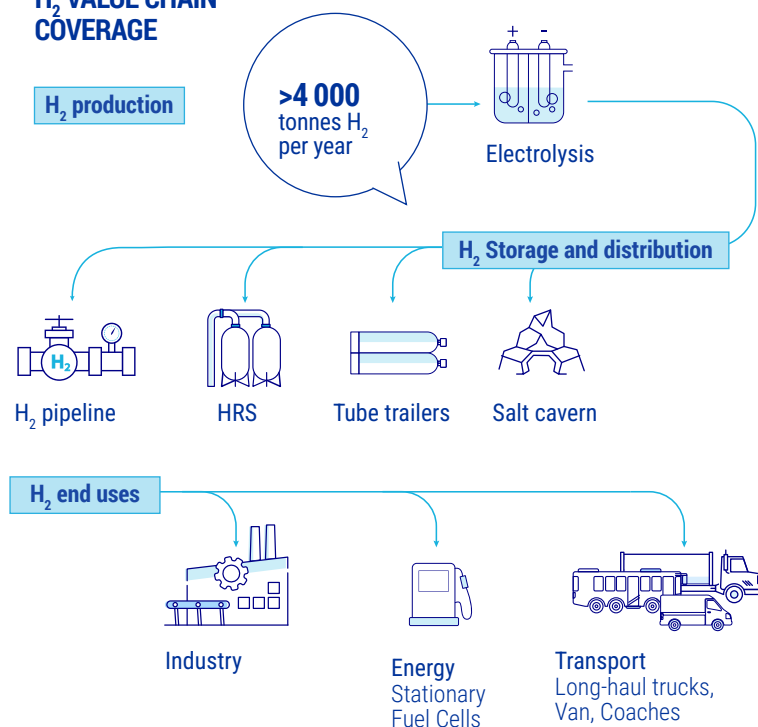
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| <b>Project ID</b>              | 101137586                         |
| <b>PRR 2025</b>                | Pillar 6 – H <sub>2</sub> Valleys |
| <b>Call Topic</b>              | HORIZON-JTI-CLEANH2-2023-06-01    |
| <b>Coordinator Beneficiary</b> | REGION AUVERGNE RHONE ALPES, FR   |
| <b>Project Period</b>          | 01-01-2024 - 31-12-2029           |

**Location** France

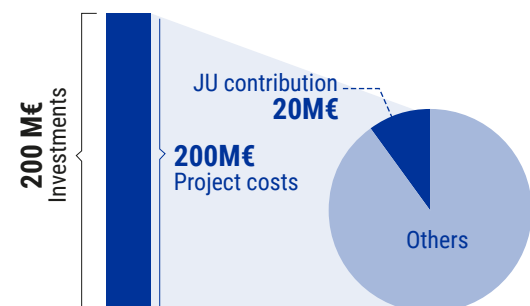


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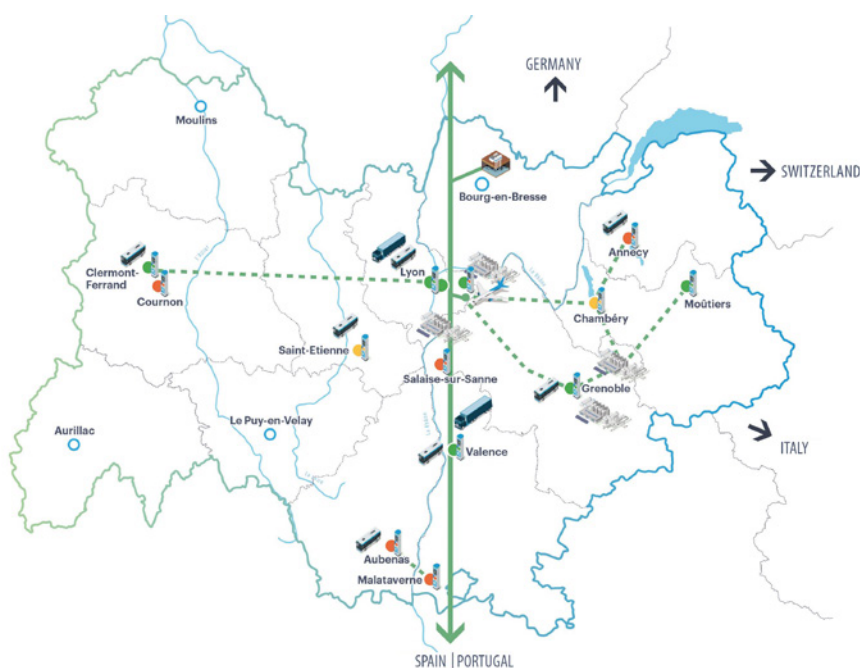
## H<sub>2</sub> VALUE CHAIN COVERAGE



## Finances



[www.imaghyne.eu](http://www.imaghyne.eu)





**IMAGHyNE will pave the way for the deployment of a large-scale renewable hydrogen (H<sub>2</sub>) economy in the Auvergne-Rhône-Alpes region, fully integrated in the energy system and addressing the needs of high emitting sectors.**

## OBJECTIVES

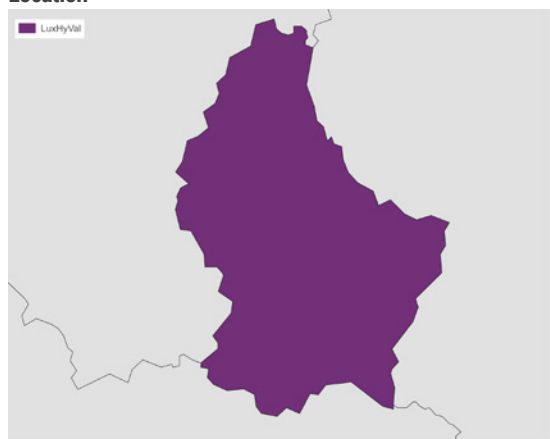
- Strengthen the robustness of the overall energy and hydrogen supply chain by integrating a flexible industrial player in the ecosystem.
- Design an efficient pipeline-based multi-user hydrogen system and provide evidence to help settle on the optimum hydrogen transport and storage technology choice(s) for wider rollouts.
- Prepare for additional large-scale deployment as part of the Valley extension and its replication in Europe and beyond.
- Disseminate and communicate the results of the project to technical and institutional stakeholders, as well as general public to foster a faster adoption of hydrogen technologies at European level.

# LuxHyVal

Luxembourg Hydrogen Valley delivering integrated full-chain sustainable hydrogen ecosystem with technical, economic, social and environmental benefits and superior replicability.

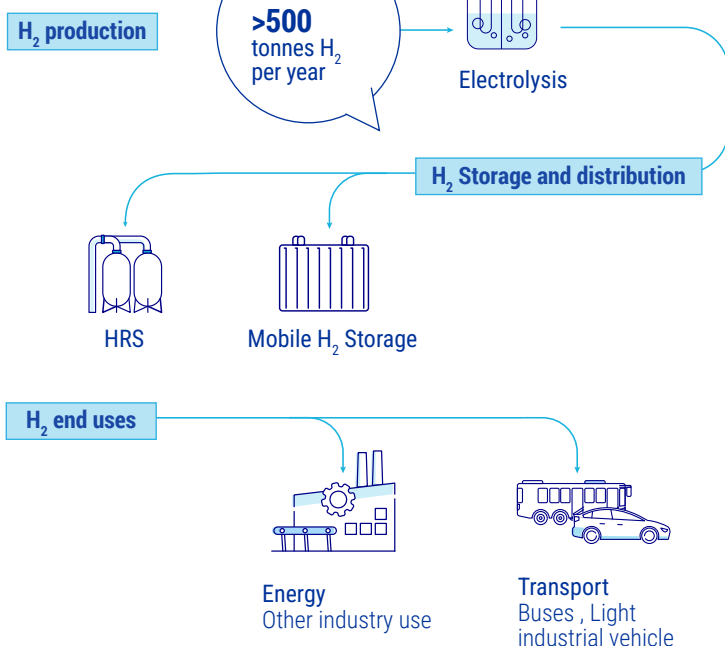
Luxembourg Hydrogen Valley

|                         |                                   |
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| Project ID              | 101111984                         |
| PRR 2025                | Pillar 6 – H <sub>2</sub> Valleys |
| Call Topic              | HORIZON-JTI-CLEANH2-2022-06-02    |
| Coordinator Beneficiary | UNIVERSITE DU LUXEMBOURG, LU      |
| Project Period          | 01-11-2023 - 31-01-2029           |
| Location                | Luxembourg                        |

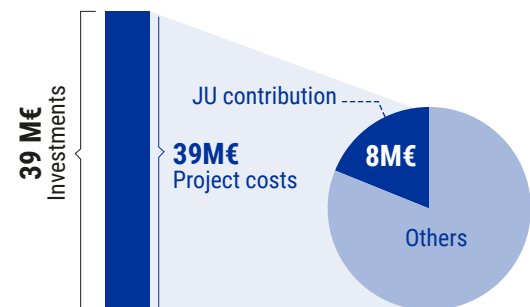


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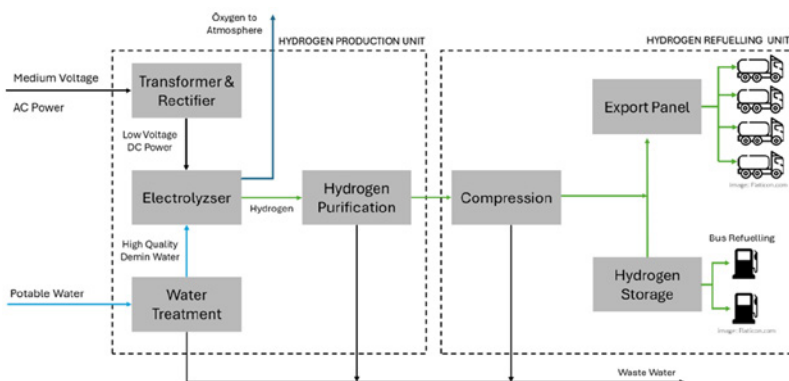
## H<sub>2</sub> VALUE CHAIN COVERAGE



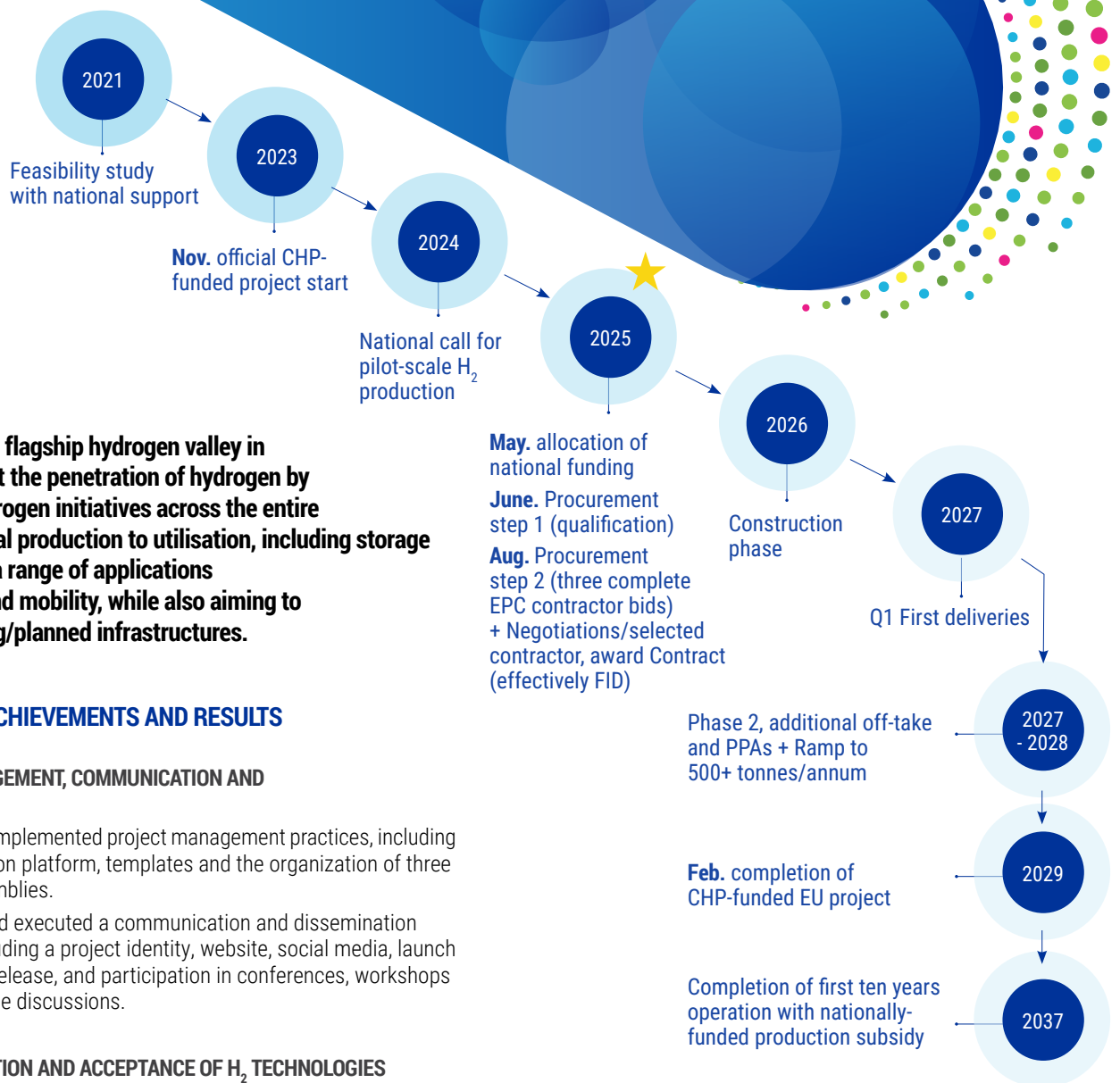
## Finances



<https://luxhyval.eu/>



## PROJECT TIMELINE



**LuxHyVal launches a flagship hydrogen valley in Luxembourg to boost the penetration of hydrogen by deploying green hydrogen initiatives across the entire value chain from local production to utilisation, including storage and distribution for a range of applications targeting industry and mobility, while also aiming to connect with existing/planned infrastructures.**

## PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

### PROJECT MANAGEMENT, COMMUNICATION AND DISSEMINATION

- Tailored and implemented project management practices, including communication platform, templates and the organization of three general assemblies.
- Developed and executed a communication and dissemination strategy, including a project identity, website, social media, launch event, press release, and participation in conferences, workshops and roundtable discussions.

### PUBLIC PERCEPTION AND ACCEPTANCE OF H<sub>2</sub> TECHNOLOGIES

- Ongoing analysis of hydrogen technologies perception and acceptance, to establish baseline understanding and identify gaps in H<sub>2</sub> technology perception:
  - Stakeholder analysis was conducted, and results are being analysed.
  - Social assessment and perception analysis for H<sub>2</sub> technologies are in progress.
  - Methodology for data collection through a national survey in 4 languages (for Luxembourgish residents) has been developed.

### BUSINESS MODELS

- Tailored business models for key products and services are completed, focusing on electrolyser, storage, and HRS (Hydrogen Refuelling Station), CAPEX, OPEX and electricity procurement.

### PLANNING AND DESIGN OF INFRASTRUCTURE

- Detailed technical design and safety plan are under development.

### FUTURE STEPS

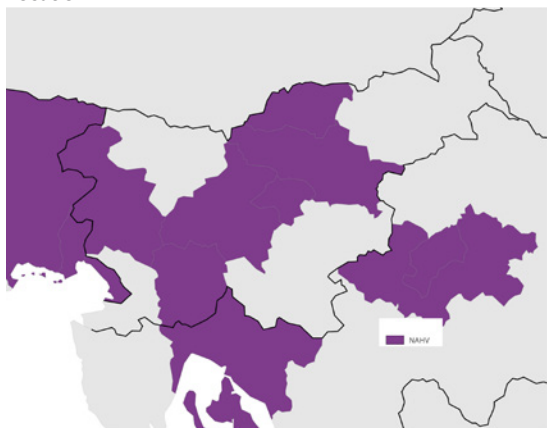
- Continued focus on enhancing project communication and visibility.
- Ongoing work on planning and technical design of the infrastructure.
- Start deployment and commissioning of the plant and related infrastructure.
- Focus on the production, storage, distribution, and use-cases of the system.
- Evaluate the project's life cycle (Project Life Cycle Assessment (LCA)) and overall performance.
- Conduct an assessment to extract lessons learned and areas for improvement.
- Develop a digital twin for optimizing, replicating, and scaling the valley project.
- Continue to work on exploitation of ERs (Energy Resources or related elements).

# NAHV



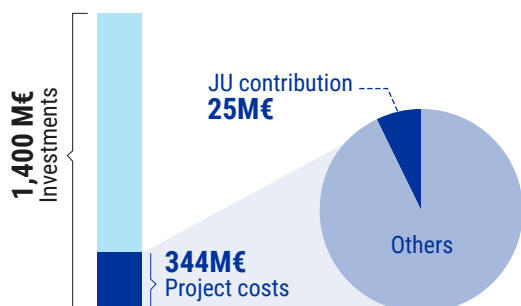
## NORTH ADRIATIC HYDROGEN VALLEY

|                                |                                        |
|--------------------------------|----------------------------------------|
| <b>Project ID</b>              | 101111927                              |
| <b>PRR 2025</b>                | Pillar 6 – H <sub>2</sub> Valleys      |
| <b>Call Topic</b>              | HORIZON-JTI-CLEANH2-2022-06-01         |
| <b>Coordinator Beneficiary</b> | HOLDING SLOVENSKE ELEKTRARNE (HSE), SI |
| <b>Project Period</b>          | 01-09-2023 - 31-08-2029                |
| <b>Location</b>                | Crossborder Italy – Croatia – Slovenia |



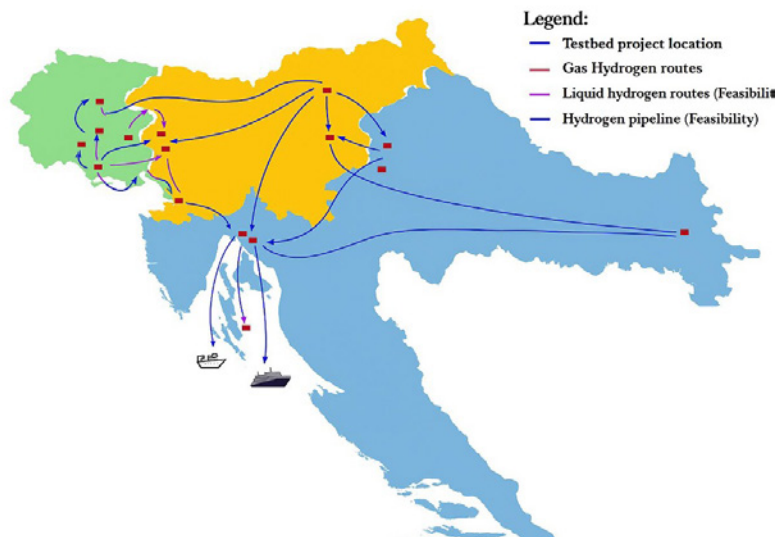
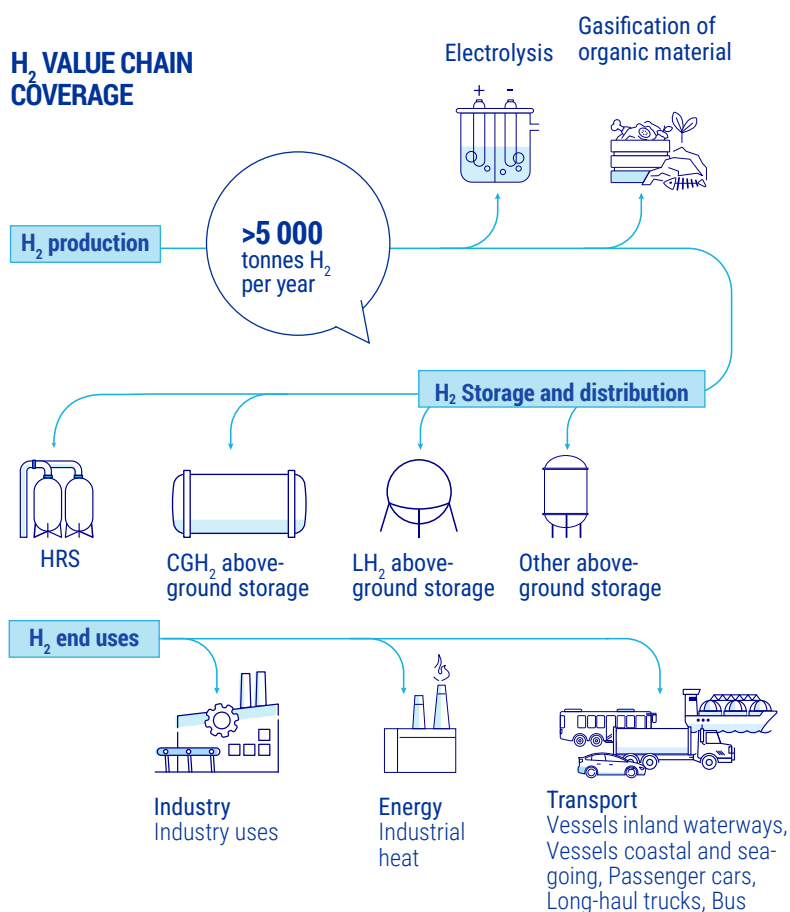
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Cartography: Eurostat - NAGS, 03/2025

### Finances

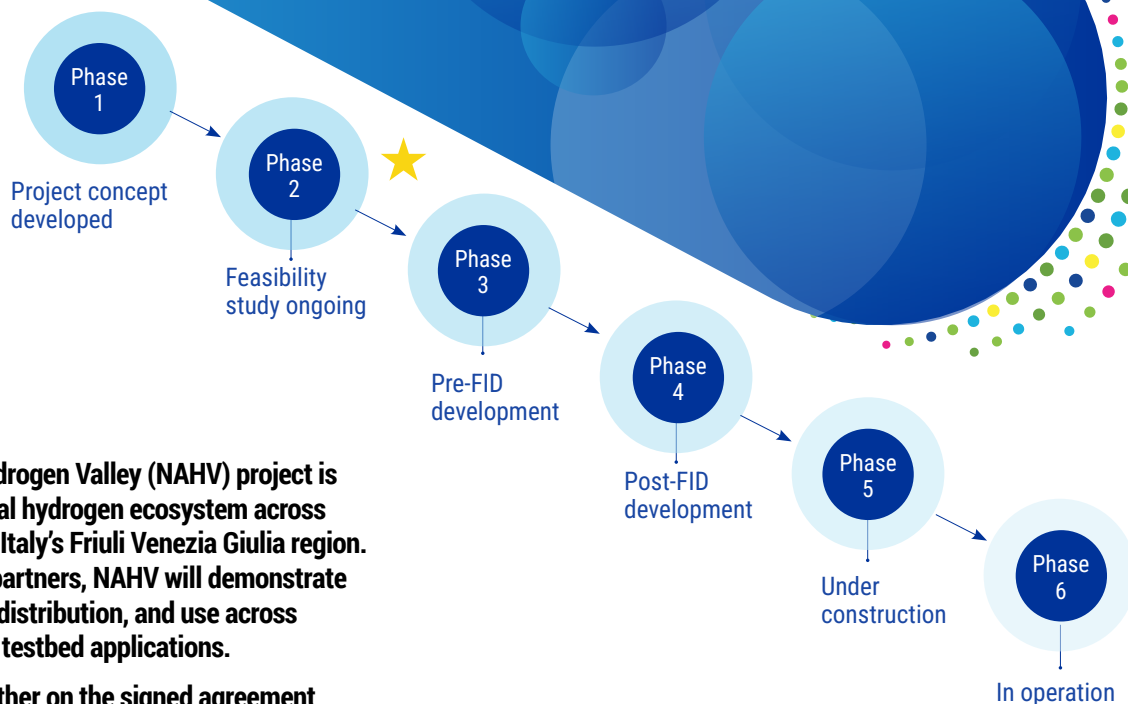


<https://www.nahv.eu/>

### H<sub>2</sub> VALUE CHAIN COVERAGE



## PROJECT TIMELINE



**The North Adriatic Hydrogen Valley (NAHV) project is building a transnational hydrogen ecosystem across Slovenia, Croatia, and Italy's Friuli Venezia Giulia region. Bringing together 37 partners, NAHV will demonstrate hydrogen production, distribution, and use across industries, piloting 17 testbed applications.**

**This project builds further on the signed agreement between the Slovenian State Secretary of the Ministry of Infrastructure, the Croatian State Secretary of the Ministry of Economy and Sustainable Development, and the President of the Friuli Venezia Giulia Autonomous Region, recognizing the relevance of regional cooperation and a cross-border hydrogen valley in boosting energy transition and promoting sectorial integration between transport, hard-to-abate industries, and end users in an integrated ecosystem.**

initiative for logistics and public transport, with an expected annual output of 370 tonnes.

- In Slovenia, the cement industry in Anhovo is utilizing hydrogen to fuel transport trucks, with an estimated production of 50 tonnes per year.
- HSE in Ljubljana has deployed a 3 MW PEM electrolyser with an initial hydrogen production capacity of 300 tonnes per year, with plans to scale up to 30 MW and 3 000 tonnes annually.

## PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

### PROJECT MANAGEMENT AND FINANCING

- The establishment of an Association Internationale Sans But Lucratif (AISBL) under Belgian Law is underway, including preparing the formal documentation, definition of the business plan and organizational model, and determination of financial needs and ways to source for additional funding. The NAHV AISBL will be supported by the 3 involved countries, and it will become the governing body of the NAHV ecosystem, going far beyond the NAHV project.
- A Stakeholders Advisory Forum (SAF), including over 47 organizations from business, academia, civil society, and policy institutions, has been formed to ensure local voices influence the project. This participatory model strengthens transparency, equity, and local engagement.
- 17 pilot projects to demonstrate hydrogen applications across different sectors have been launched. These projects serve as real-world testbeds, helping to increase the technology readiness level of the technologies involved in the project:
  - In Croatia, a hydrogen-powered kiln in Dilj, Vinkovci, is expected to reduce CO<sub>2</sub> emissions by more than 20% and energy consumption by over 10%.
  - In Trieste, Italy, ACEGAS has launched a hydrogen production

### FUTURE STEPS AND PLANS

Future steps will focus on:

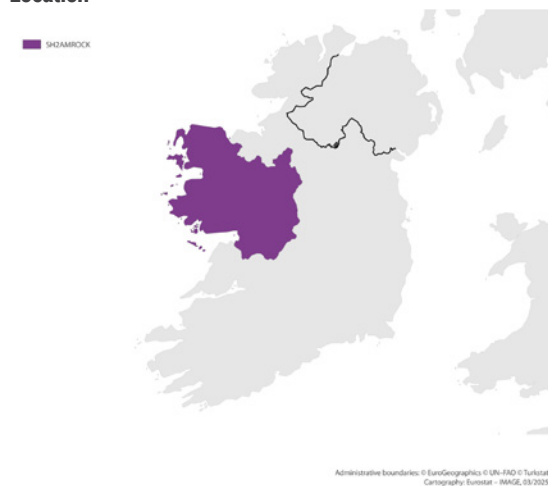
- Scaling up hydrogen production.
- Finalizing regulatory frameworks, by tackling the challenge of regulatory fragmentation in hydrogen policy in the participation countries: the project is piloting regulatory sandboxes, developing certification schemes, and proposing roadmaps for policy alignment.
- Encouraging further private sector investment: The established AISBL will help particular beneficiaries to find missing public funding and/or try to allocate a particular testbed or project task within the territory to allow for further funding.
- Developing and testing a model for mutualization of hydrogen production, distribution and storage that can be replicated in other hydrogen valleys.

# SH<sub>2</sub>AMROCK

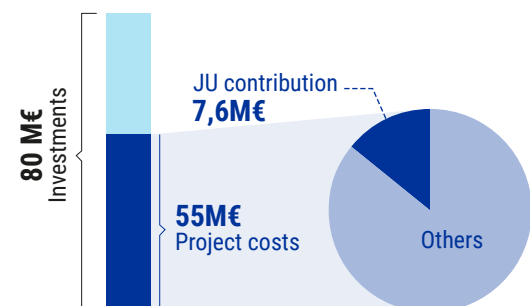
SH<sub>2</sub>AMROCK  
Ireland's Emerald Hydrogen Valley

**SOURCING HYDROGEN FOR ALTERNATIVE  
MOBILITY, REALISING OPPORTUNITIES AND  
CREATING KNOW HOW IN IRELAND**

|                                |                                   |
|--------------------------------|-----------------------------------|
| <b>Project ID</b>              | 101112039                         |
| <b>PRR 2025</b>                | Pillar 6 – H <sub>2</sub> Valleys |
| <b>Call Topic</b>              | HORIZON-JTI-CLEANH2-2022-06-02    |
| <b>Coordinator Beneficiary</b> | UNIVERSITY OF GALWAY, IE          |
| <b>Project Period</b>          | 01-01-2024 - 31-12-2028           |
| <b>Location</b>                | Ireland                           |

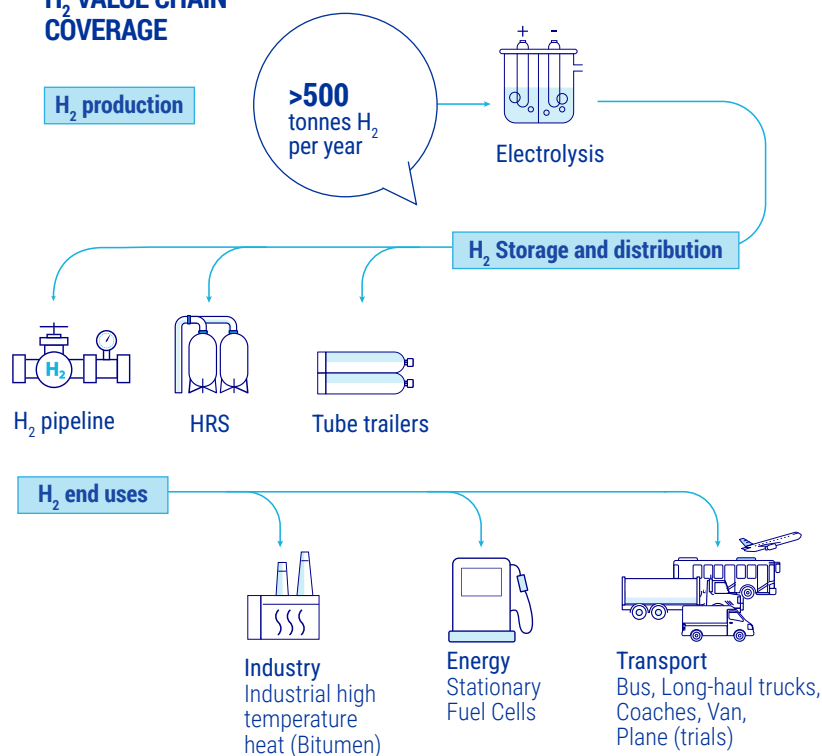


## Finances



<https://www.sh2amrock.eu/>

## H<sub>2</sub> VALUE CHAIN COVERAGE



## PROJECT TIMELINE



**SH<sub>2</sub>AMROCK will deploy green hydrogen across key hard-to-abate sectors across the island of Ireland - including key infrastructure to enable the production, distribution, and use of green hydrogen.**

## PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

### PROJECT MANAGEMENT AND FINANCING

- Project management team set in place and 1<sup>st</sup> General Assembly held in December 2024.
- Efforts have been focused on setting up and organising the project's operational and management structure. The Governance structure has been set up and 11 Steering Committee meetings & 3 General Assembly (GA) meetings held to date.
- Efforts to source additional funding are underway, including with the Irish Department of Environment and Climate Action and Department of Transport and other potential national funders.

### INFRASTRUCTURE PROGRESS:

- Planning permission complete for Hydrogen Production Site.
- Detailed engineering design completes.
- Design concept for use site under development.

# TH<sub>2</sub>ICINO

## Towards H<sub>2</sub>hydrogen Integrated eEconomies In NOrthern Italy



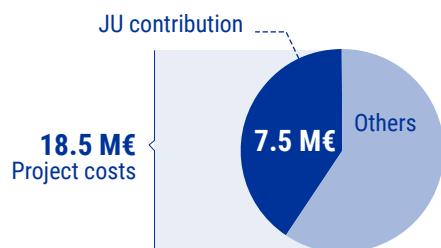
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| <b>Project ID</b>              | 101112098                         |
| <b>PRR 2025</b>                | Pillar 6 – H <sub>2</sub> Valleys |
| <b>Call Topic</b>              | HORIZON-JTI-CLEANH2-2022-06-02    |
| <b>Coordinator Beneficiary</b> | RINA CONSULTING, IT               |
| <b>Project Period</b>          | 01-09-2023 - 31-08-2027           |

**Location** Italy



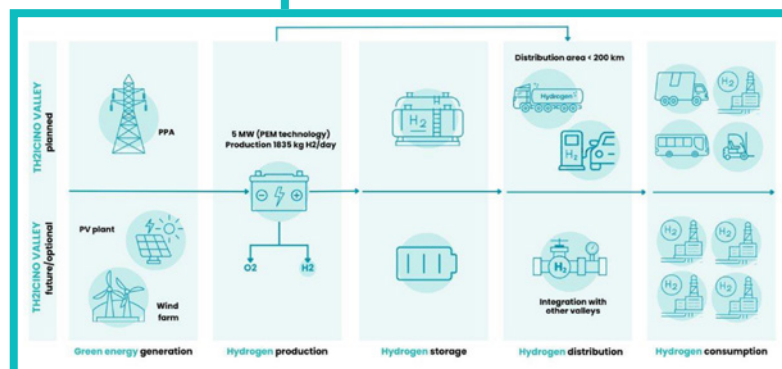
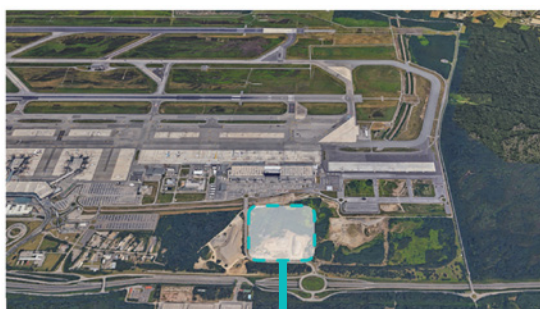
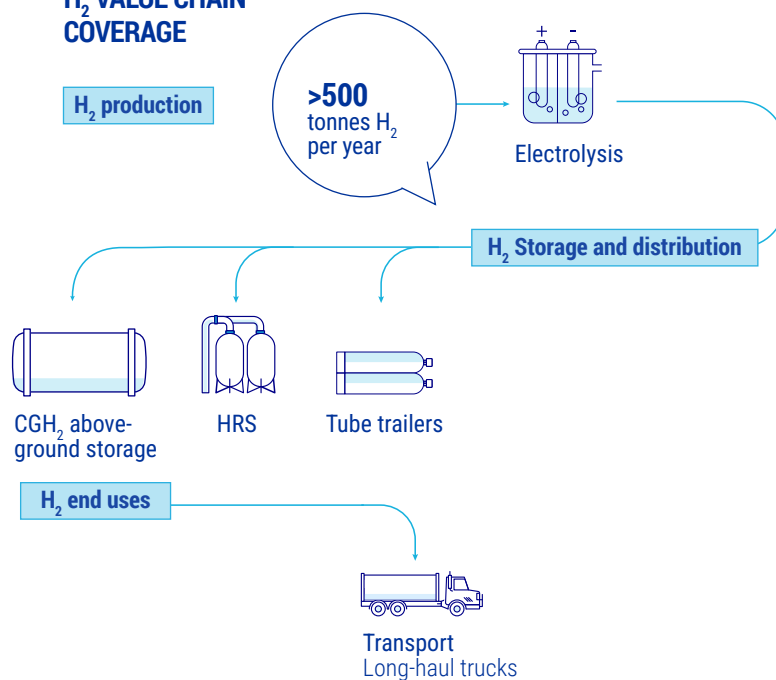
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Cartography: Eurostat - MAGE, 03/2025

### Finances

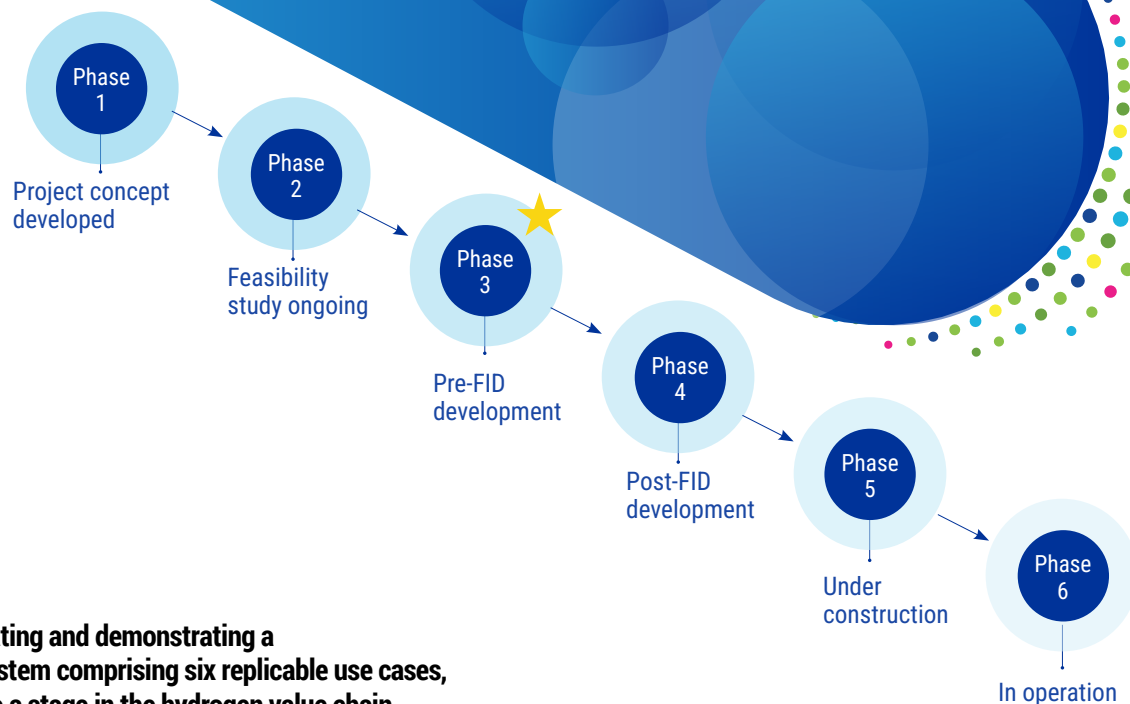


<http://th2icino.eu>

### H<sub>2</sub> VALUE CHAIN COVERAGE



## PROJECT TIMELINE



**TH<sub>2</sub>ICINO aims at creating and demonstrating a comprehensive ecosystem comprising six replicable use cases, each corresponding to a stage in the hydrogen value chain. The project's outcomes will involve the validation and testing of a Master Planning Tool (MPT). The project's primary focus is to establish a hydrogen valley in northern Italy, concentrating on four key areas of the hydrogen value chain: hydrogen production, storage, distribution and consumption.**

## PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

### COMMUNICATION AND DISSEMINATION

- A dissemination and communication strategy has been prepared, to engage stakeholders, raise awareness about hydrogen technologies, and disseminate project updates; materials such as brochures, flyers, social media content and newsletters.

### SAFETY AND RISK ASSESSMENT

- Initial steps have been taken to outline the hydrogen safety planning framework, ensuring adherence to stringent safety standards and protocols throughout the project lifecycle.
- Safety protocols and risk assessment procedures have been developed to mitigate potential hazards associated with hydrogen production, storage, and transportation.

### MODELLING

- The modelling phase for the extended valley has begun, aiming to simulate and optimize various aspects of the hydrogen ecosystem, including production, distribution, and utilization.

## FUTURE STEPS AND PLANS

- Continuing collaboration with off-takers (started March 2024) to refine project strategies and align objectives with off-taker. Engaging with off-takers will enable the refinement of project strategies, alignment of objectives, and validation of technological solutions tailored to meet end-users' needs.

# TRIERES

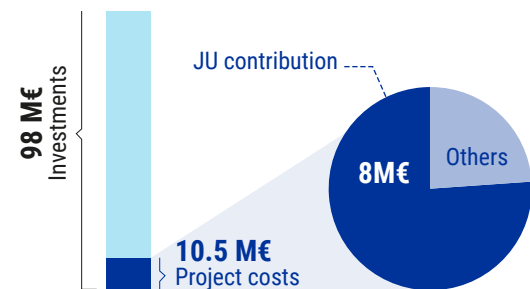


## Towards the development of a hydRogen valley demonstrating applications in an intEgRatEd EcoSystem in Greece

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|-------------------------|-----------------------------------|
| Project ID              | 101112056                         |
| PRR 2025                | Pillar 6 – H <sub>2</sub> Valleys |
| Call Topic              | HORIZON-JTI-CLEANH2-2022-06-02    |
| Coordinator Beneficiary | MOTOR OIL, EL                     |
| Project Period          | 01-07-2023 - 30-04-2028           |
| Location                | Greece                            |

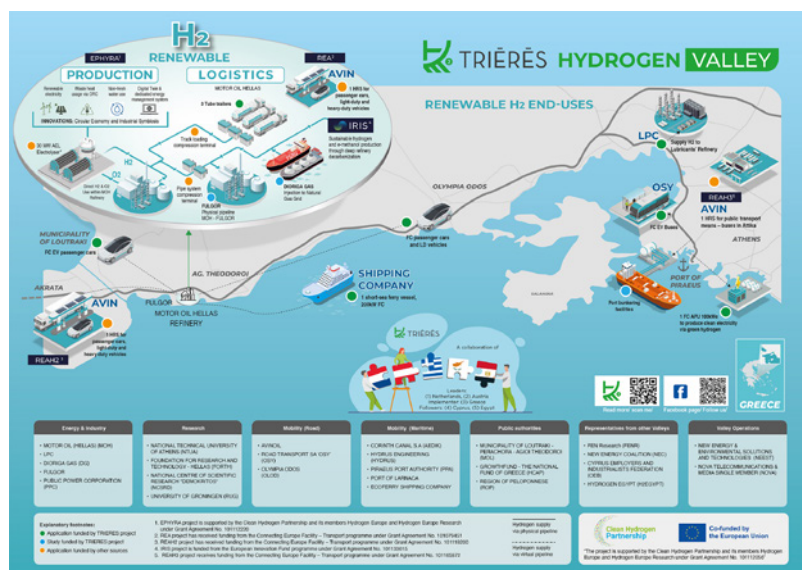
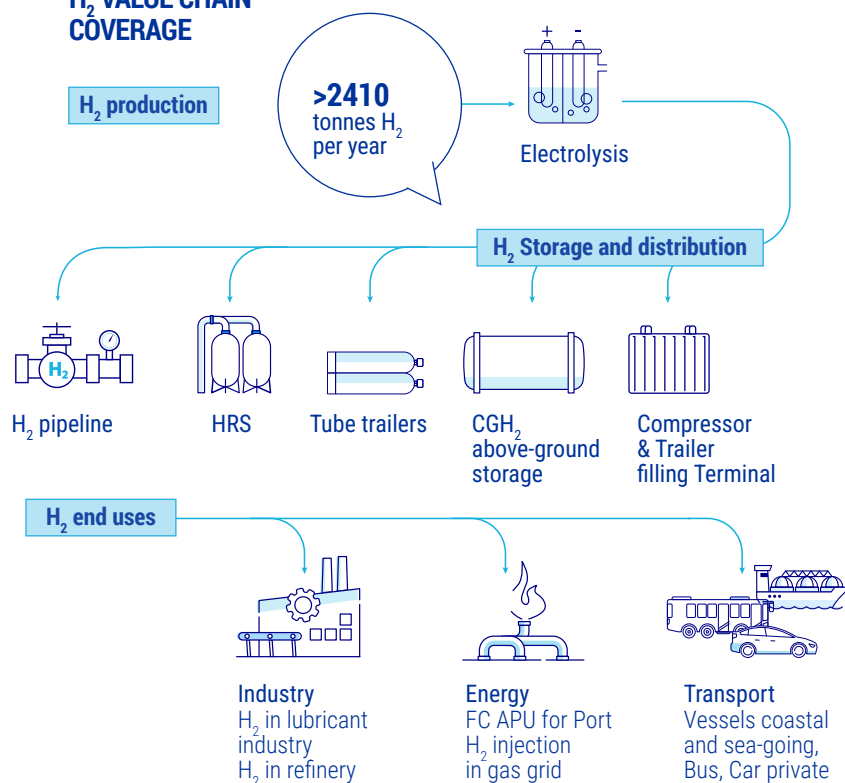


### Finances

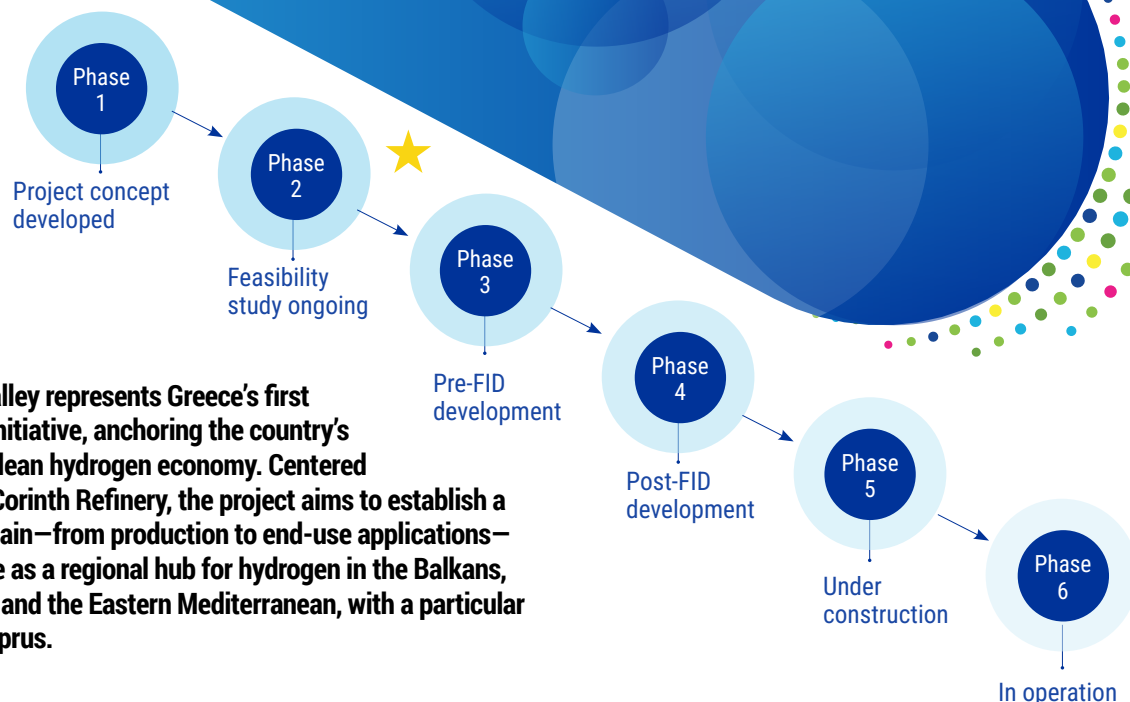


<https://www.trieres-h2.eu/>

### H<sub>2</sub> VALUE CHAIN COVERAGE



## PROJECT TIMELINE



**TRIÉRÈS Hydrogen Valley represents Greece's first integrated hydrogen initiative, anchoring the country's entry into the global clean hydrogen economy. Centered around the Motor Oil Corinth Refinery, the project aims to establish a full hydrogen value chain—from production to end-use applications—and to position Greece as a regional hub for hydrogen in the Balkans, Southeastern Europe, and the Eastern Mediterranean, with a particular focus on Crete and Cyprus.**

## PROGRESS, MAIN ACHIEVEMENTS AND RESULTS

### SAFETY AND SUPPLY

- Preliminary Safety framework for the Corinth Hydrogen Valley completed.
- Green hydrogen supply to be initiated according to schedule.
- Open access publication of a scientific paper on alternative green hydrogen production technologies from biomass.
- HAZOP study for electrolyser and tube trailers completed.
- HAZOP study and QRA for 1st HRS of AVINOIL (subsidiary of Motor Oil) in Agioi Theodoroi completed.

### HYDROGEN LOGISTICS AND DISTRIBUTION

- Four Tube trailers for virtual pipelines acquired (~990 kg H<sub>2</sub> at 380 bar) (3 co-funded by the project and 1 by Motor Oil's own resources).
- Scheduling and distribution optimization underway for road-based hydrogen transport (virtual pipeline).

### INFRASTRUCTURE DEVELOPMENT

- Following a positive FID, the EPHYRA electrolysis unit will be upscaled to 50 MW under the RRF, including ancillary construction works for renewable hydrogen supply and distribution, with first green hydrogen expected to flow in 2026.
- One Hydrogen Refuelling Station (HRS) operational in Agioi Theodoroi Corinth, constructed with co-funding of CEF-Transport; one HRS under preparation of tendering procedure for public buses depot; three more planned.
- One hydrogen car under tender procedure by the Municipality of Loutraki-Perachora-Agioi Theodoroi with possibility now to load fuel from Agioi Theodoroi HRS.
- Technical specs completed for three hydrogen buses (OSY) to be co-funded by the project and 50 more hydrogen-powered buses expected to be funded by secured Modernisation Fund resources.
- Preparation of tender documents/specifications under way for 100kWe FC APU in Port of Piraeus.
- Feasibility studies launched for:

- Hydrogen-powered ferry (short-sea distance case);
- Hydrogen pipeline to FULGOR (pre-feasibility study);
- Hydrogen use in lubricant production (LPC).

### COLLABORATION & KNOWLEDGE SHARING:

- Participation in international forums
- Strengthened ties with Austria's Hydrogen Valley ("WIVA P & G HyWest") through study visit, workshops and reports; Another study visit in North Netherlands Hydrogen Valley ("HEAVENN") by consortium scheduled for October 2025.
- Promotion of hydrogen innovation for regional growth through a high impact workshop focused on Peloponnese case for enhancing mobility and local value chains with over 90 participants in person and more than 60 online attendees from 28 countries, representing EU institutions, industry, academia, and public bodies.
- Fostering knowledge sharing and new skills gained on hydrogen mobility and safety during the co-organisation of the 3rd JIVE Roadshow across Greece and the Balkans.
- Emphasis on cross-border cooperation, including emerging markets like Crete, Cyprus and Egypt.

### OUTREACH & COMMUNICATION:

- Project website launched for public access to updates and findings.
- Variety of social media activated to reach different target groups.
- Scientific publications and conference participations at national and international level to increase TRIÉRÈS' visibility.
- Honored with the prestigious Hydrogen Valley of the Year 2024 award, granted by the Clean Hydrogen Partnership in collaboration with the European Commission, demonstrating its substantial progress in hydrogen technology and highlighting its potential to transform the energy sector.

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