

TH₂ICINO

Towards Hydrogen Integrated Economies in Northern Italy

Varese, Italy

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RINA Consulting

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RESEARCH DAYS

15-16 NOVEMBER



Co-funded by
the European Union

Project Overview

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Call year:
2022

Call topic: Small-scale H2V
HORIZON-JTI-
CLEANH2-2022-
06-02

Project dates:
[September 2023- August 2027]

Total project budget:
[18506850 €]

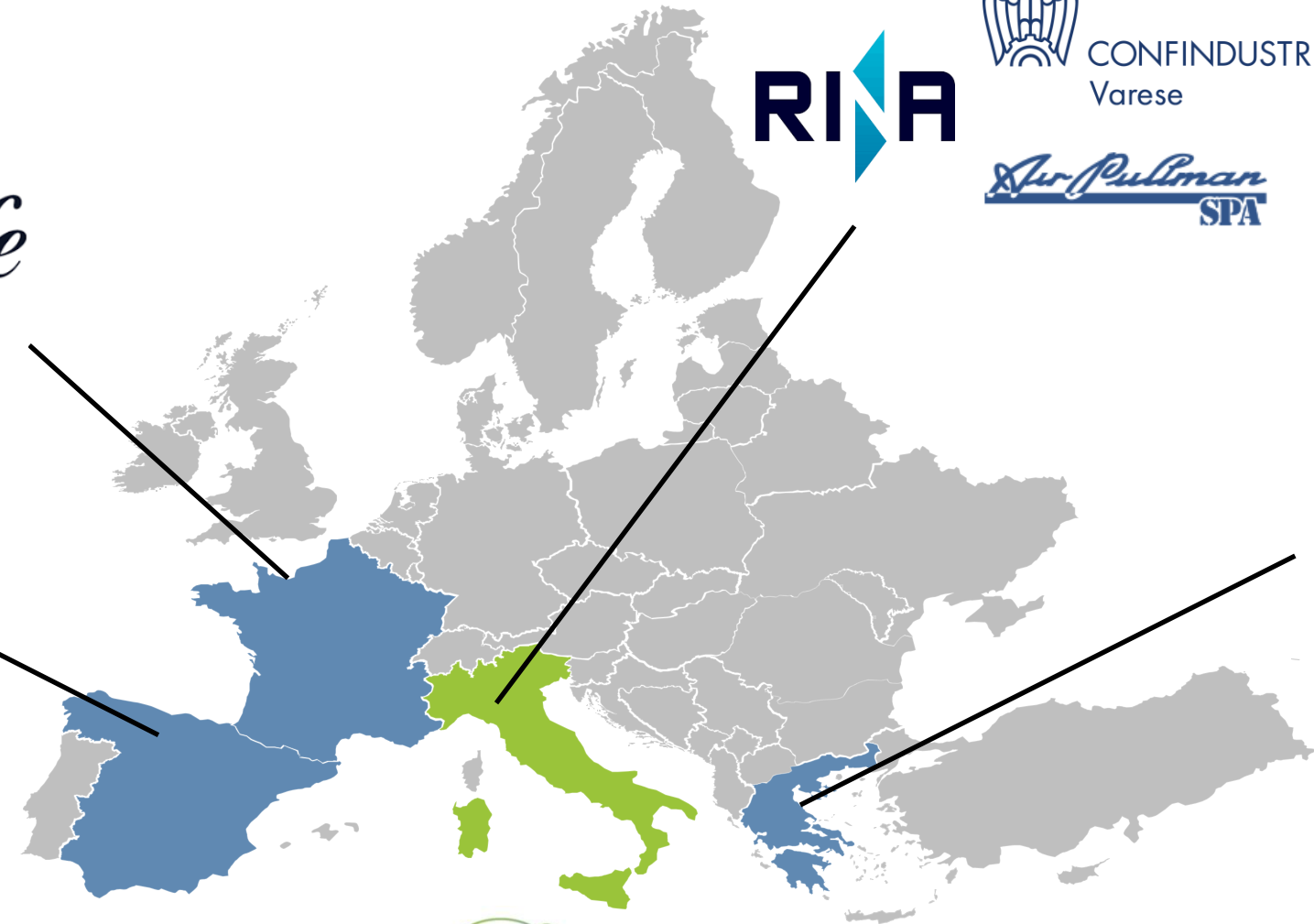
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% stage of implementation
01/11/2023: [4 %]

Clean Hydrogen Partnership max. contribution: [7446920 €]
Other financial contribution: [11059930 €]

Partners and location of the Hydrogen Valley

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CONFINDUSTRIA
Varese



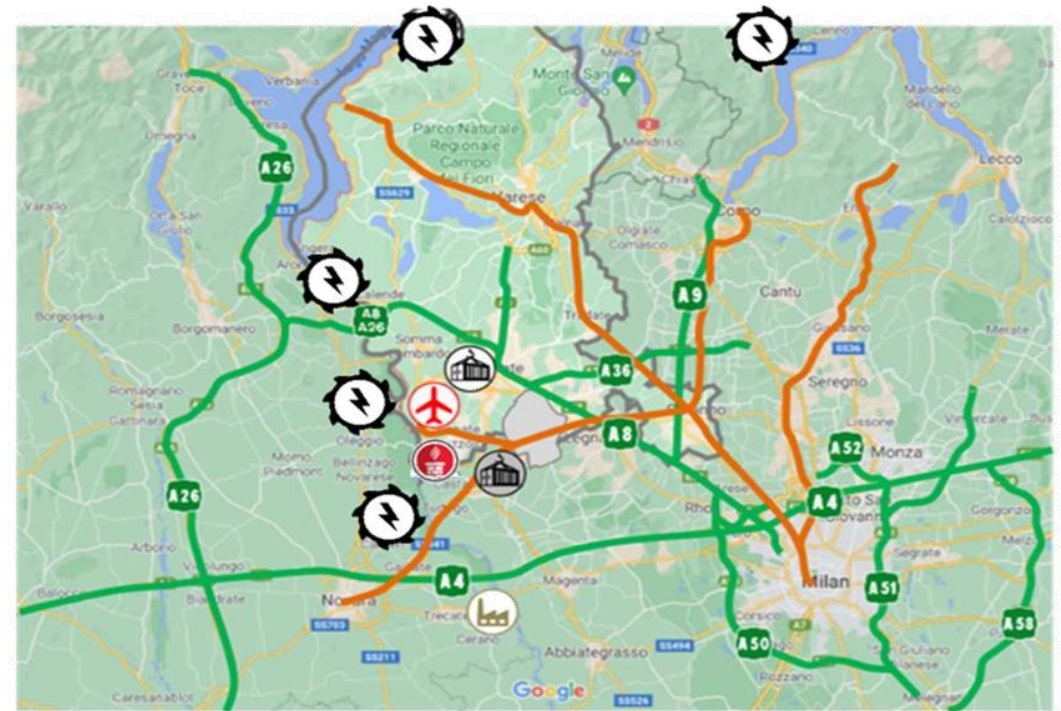
Città di
Busto Arsizio



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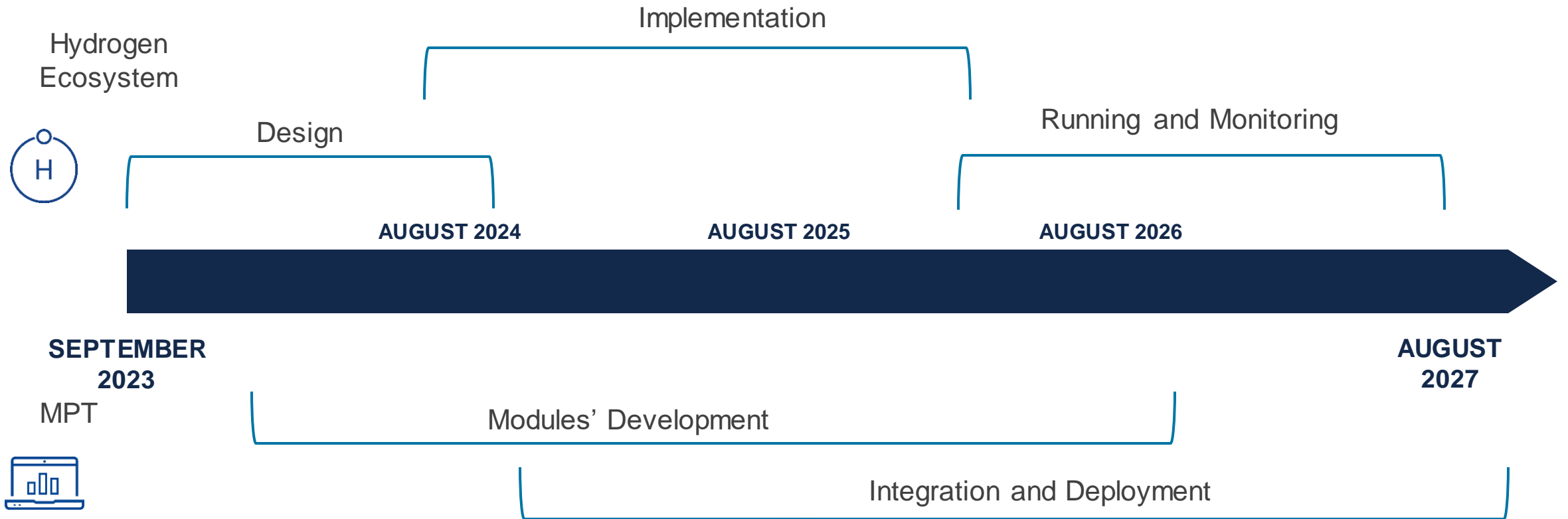
Overall Hydrogen Valley Concept

- Airport-centered Hydrogen Valley:
Malpensa airport
- 5MW PEM Electrolyzer
- Transport via Truck
- Integration with the HRS available in the territory
- Mobility and Energy, considering some ground applications in airport context
- Master Planning Tool (MPT) to be used for expansion and replication within Italy and the EU



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Project Timeline

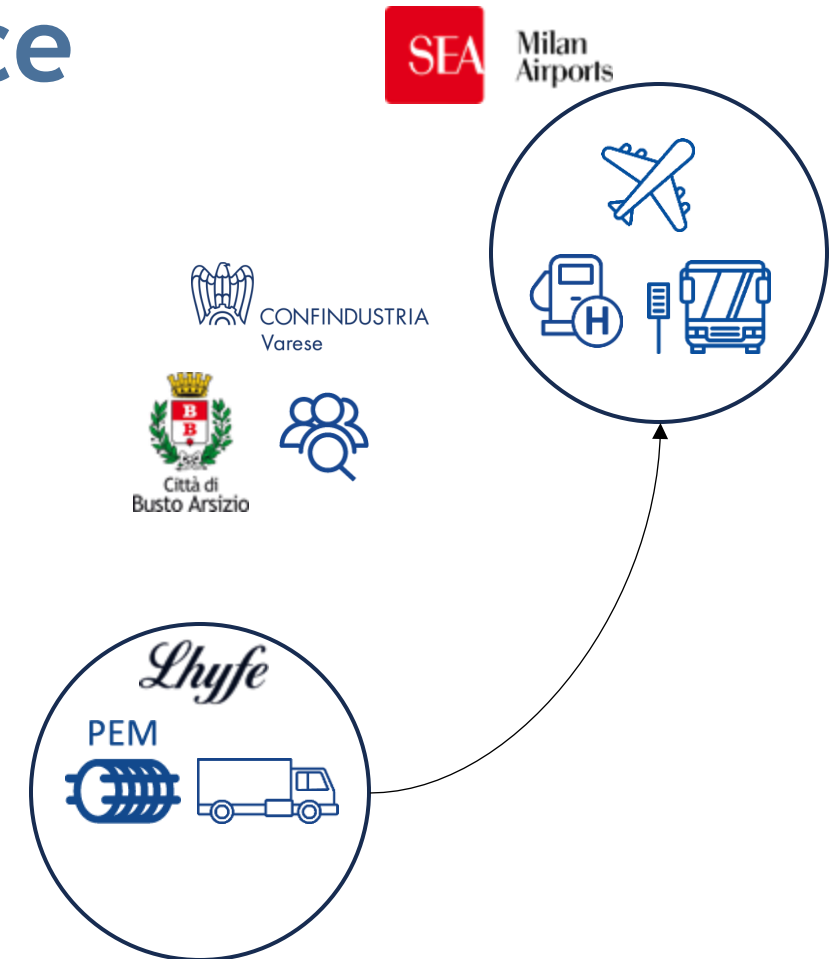


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Project governance

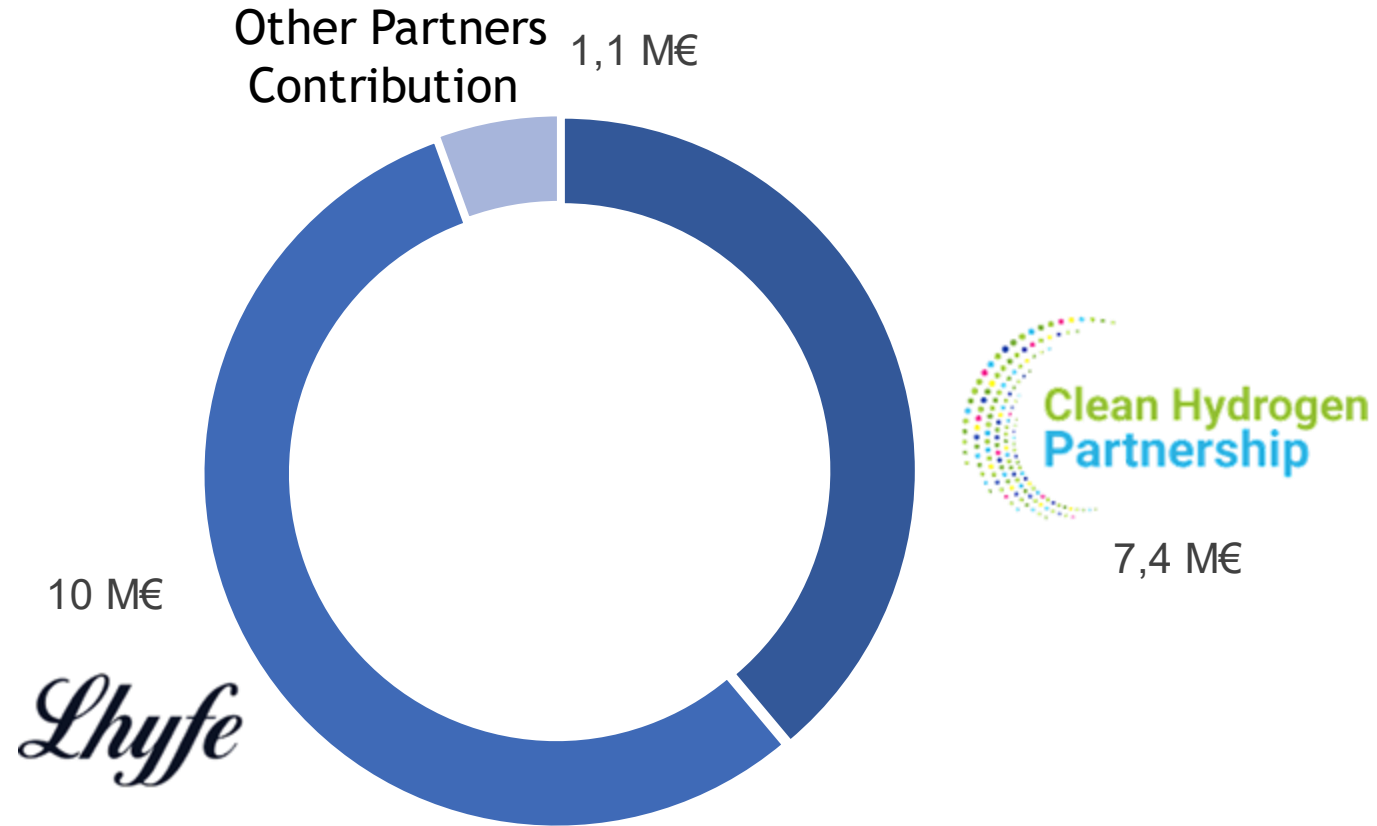
The governance of the valley include a partners and interested parties:

- City of Busto Arsizio (IT) orchestrates and promotes the territory for new hydrogen projects and have facilitate the discussion between stakeholder and off-taker.
- Confindustria Varese is a territorial association of industrials
- LHYFE (FR) will build, own and operate, the production plant and deliver hydrogen to the customers.
- SEA will test hydrogen solutions in the airport context.



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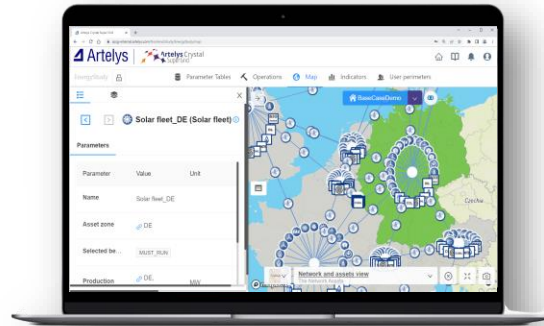
Project financing and funding



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Replication activities

The Master Planning Tool (MPT) will be built on top of Artelys Crystal Super Grid (ACSG), a solution dedicated to the modelling and simulation of energy systems at different geographical scales, which allows to carry out techno-economic analyses related to numerous issues such as security of supply, market design, the impacts of energy/climate policies or cost-benefit analyses of production, transport, and storage infrastructure projects.



A user-friendly collaborative platform



Web-based platform



User-friendly interface

A multi-energy modelling solution dedicated to interconnected systems

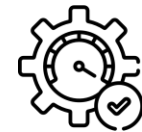


Bottom-up representation

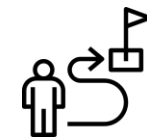


Multi-energy approach

State-of-the-art optimisation techniques



Optimisation models

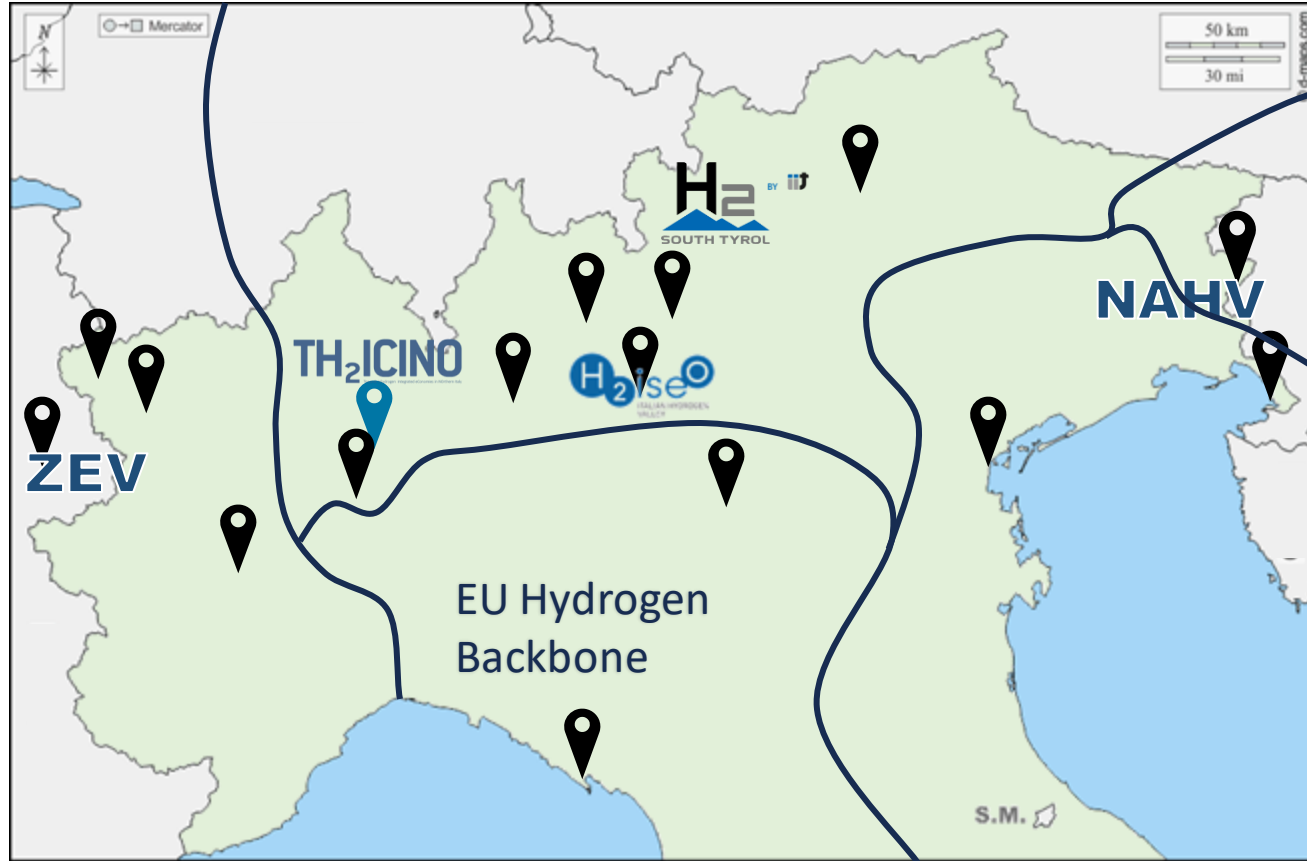


Advanced capacity expansion features



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Replication activities



STAZIONI DI RIFORMIMENTO IDROGENO APPROVATE



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Synergies With Other Projects And Programmes

Interactions with projects funded under EU programmes

- **OLGA : hOListic Green Airport** (Horizon 2020) : Develop a hydrogen hub at Malpensa Airport, with a 700kW electrolyzer and a HRS. TH2ICINO leverages on this primary infrastructure at the airport for landside refuelling operations.



Interactions with projects funded under National programmes

- **Stazioni di Rifornimento PNRR (NextGenerationEU)**: recently funded HRS for heavy-duty mobility at Malpensa Airport. (External Stakeholder)





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Training and Skills

Developing skills and training people to handle hydrogen in an airport context is essential for the successful deployment of TH2ICINO. Airport personnel need to be trained on a variety of topics, including **Hydrogen use in Airport**, which also lacks from a clear regulatory framework.

- **Hydrogen safety:** This includes understanding the properties of hydrogen, the hazards associated with hydrogen handling, and the safety procedures that need to be followed.
 - **Hydrogen refueling operations:** This includes understanding the different types of hydrogen refueling equipment and how to safely refuel hydrogen-powered vehicles.
 - **Hydrogen maintenance and repair:** This includes understanding the different components of hydrogen systems and how to maintain and repair them safely.
- **TH2ICINO** is showcasing **retrofitting** of special vehicles used in the airport. Towards the end of the project, a series of webinars will be held with the Tech providers aimed at developing the base skills needed for hydrogen retrofitting for locals interested in performed or provide the service.

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Communication and dissemination



HYDROGEN VALLEY MALPENSA

Data: 18 settembre 2023 | Ora: 16.00 | Luogo: Museo del Volo di Volandia, Somma Lombardo (VA)

Modera **Barbara Gasperini**, giornalista e autrice televisiva

16.00 - 16.30 Registrazione e accoglienza dei partecipanti

16.30 - 16.40 Saluti del Ministro delle Infrastrutture e dei Trasporti, Sen. **Matteo Salvini**

16.40 - 17.00 Il progetto TH2ICINO

Alessandra Cuneo | Innovation For Power Generation and Hydrogen Manager, RINA

17.00 - 18.15 Prima tavola rotonda - "Catalizzatori di cambiamento: TH2ICINO e la trasformazione a un ecosistema dell'idrogeno"

Emanuele Antonelli | Sindaco, Comune di Busto Arsizio

Andrea Bombardi | Carbon Reduction Excellence Executive Vice President, RINA

Armando Brunini | CEO, SEA Milan Airports

***Attilio Fontana** | Presidente, Regione Lombardia

Roberto Grassi | Presidente, Confindustria Varese

Isabella Tovaglieri | Deputato al Parlamento, UE

18.15 - 19.15 Seconda tavola rotonda - "TH2ICINO: un ponte verso la sostenibilità energetica in Italia e oltre"

Arianna Censi | Assessore alla Mobilità, Comune di Milano

Viviana Cigolotti | Board Member, Hydrogen Europe Research

Philippe Desorme | Vice President Sales & Business Development, LH2FE

Andrea Gibelli | Presidente, PNM Group

Lorenzo Lagorio | Country Manager, EasyJet

Alessio Quaranta | Direttore Generale, ENAC

19.15 - 19.30 Conclusioni e ringraziamenti

19.30 - 20.30 Visita Museo del Volo di Volandia

20.30 Cena



*In attesa di conferma





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