



BalticSeaH2

Demonstrating hydrogen economy with the largest cross-border Hydrogen Valley in Europe

The project is supported by the Clean Hydrogen Partnership and its members.





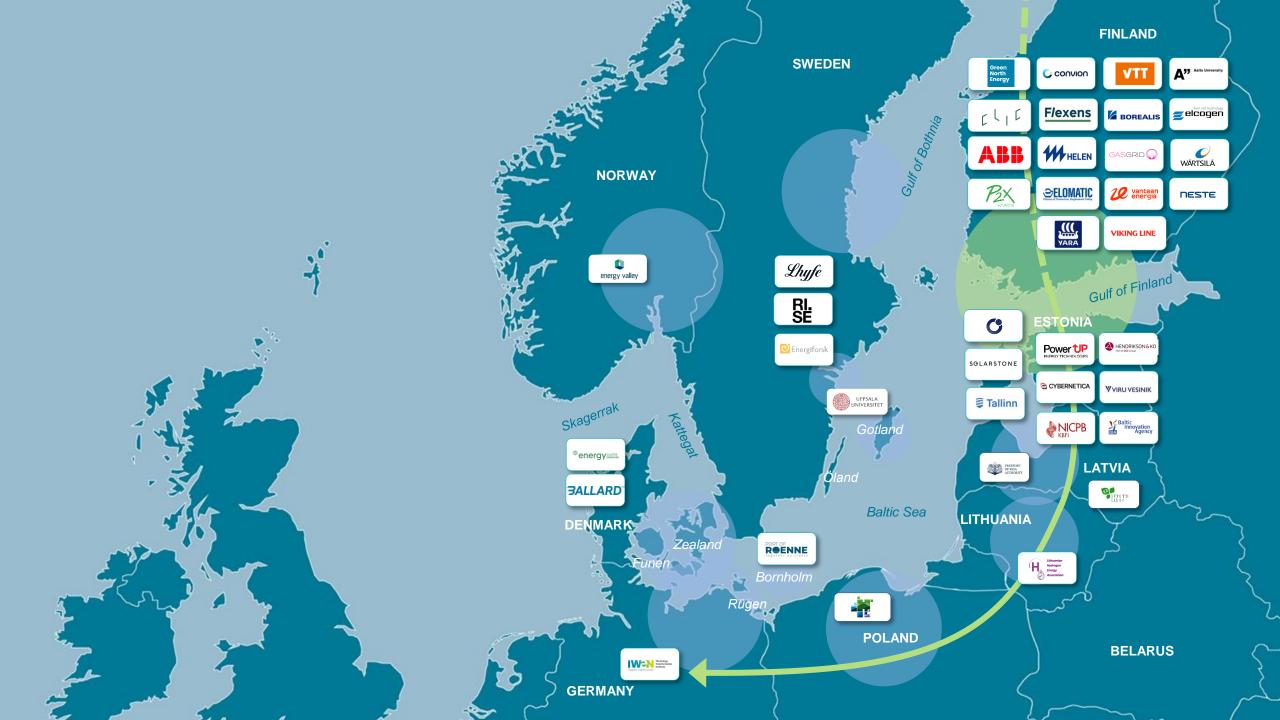
BalticSeaH2 objective



BalticSeaH2 pioneers an innovative initiative, establishing a significant **hydrogen valley** spanning across the Baltic Sea region. Focused on main valley in southern Finland and Estonia, the project aims to revolutionize the energy landscape, fostering self-sufficiency and minimizing carbon emissions in various industries. Results from the main valley will be replicated in other regions of the project.

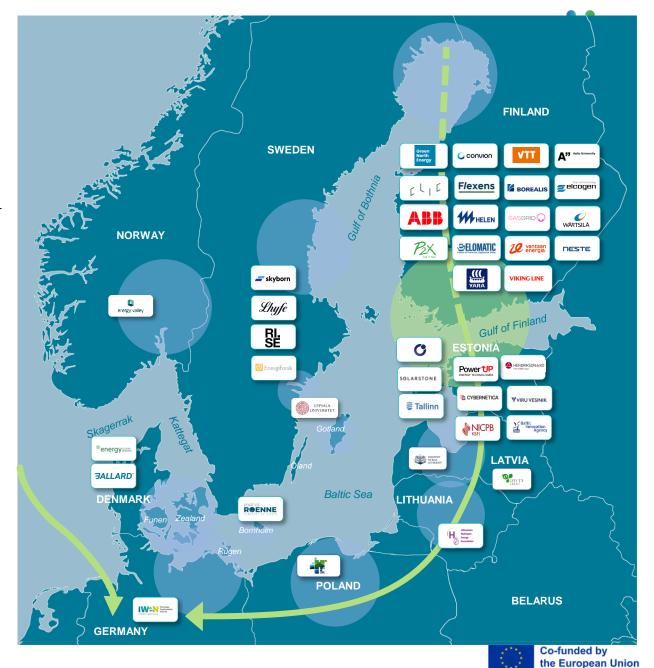
With a consortium of 40 partners from nine Baltic Sea area countries and several different industries, BalticSeaH2 strives to build **an integrated, interregional hydrogen economy on an unprecedented scale in Europe.**





About BalticSeaH2

- 40 partners in 9 countries
- Coordinated by CLIC Innovation and Gasgrid Finland
- Main valley between Finland and Estonia: replication valleys in Norway, Sweden, Denmark, Latvia, Lithuania, Poland and Northern Germany
- Total budget 33 M€, EU funding for 25 M€



BalticSeaH2 Main Valley



Special features:

- Cross-border main Valley Estonia Southern Finland with pipeline connection
- Included end-use sectors in the main Valley:
 - Traffic (direct use and e-fuels)
 - Chemical industry
 - Energy industry (P2X with X=different products)
 - Maritime: usage and hydrogen transport
- 7 connected Valleys via pipeline and maritime connections support build-up of a full Baltic Hydrogen Economy





Hydrogen value chain and infrastructure





Renewable energy production

- Solarstone
- Helen
- Viru Vesinik
- Flexens
- IWEN
- Skyborn Renewables Sweden AB
- Energy Valley Norway
- Energy Cluster Denmark
- Energiforsk
- Estonian Hydrogen Cluster
- Green and Smart Technology Cluster (GreenTechLatvia)



Hydrogen production

- Helen
- P2X Solutions
- Green North Energy
- Vantaa Energy
- PowerUp
- LHYFE



Hydrogen infrastructure and transmission

- Gasgrid
- Flexens
- LHYFE
- Borealis
- Helen
- VTT
- Lithuanian
 Hydrogen Energy
 Association
- Polish Hydrogen Cluster



Fuel cell demos

- Ballard
- ABB
- Helen
- Elcogen
- Convion
- Vantaan Energia
- Solarstone
- Power UP
- VTT



Hydrogen utilization

- Borealis
- Green North Energy
- ABB
- City of Tallin
- Helen
- Vantaa Energy
- P2X Solutions
- Flexens
- Solar Stone
- Power UP
- Viking Line
- YARA
- Neste
- Free Port of Riga
 Port of Ronne
- RISE
- Uppsala University
- Wartsilä



Highly dynamic market model digitalization, modelling and digital twins

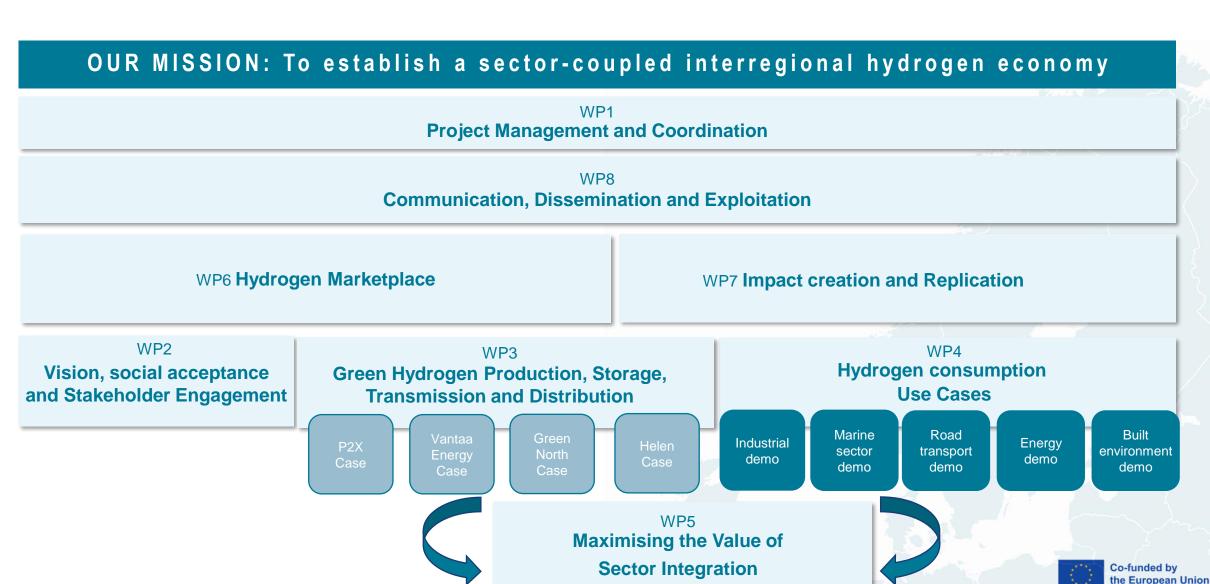
- ABB
- Cybernetica
- Gasgrid
- Helen
- P2X Solutions
- Green North Energy
- Power UP
- VTT
- Aalto
- CLIC Innovation

- Electricity
 markets
- Heat market
- Hydrogen Market
- P2X markets
- Transport sector



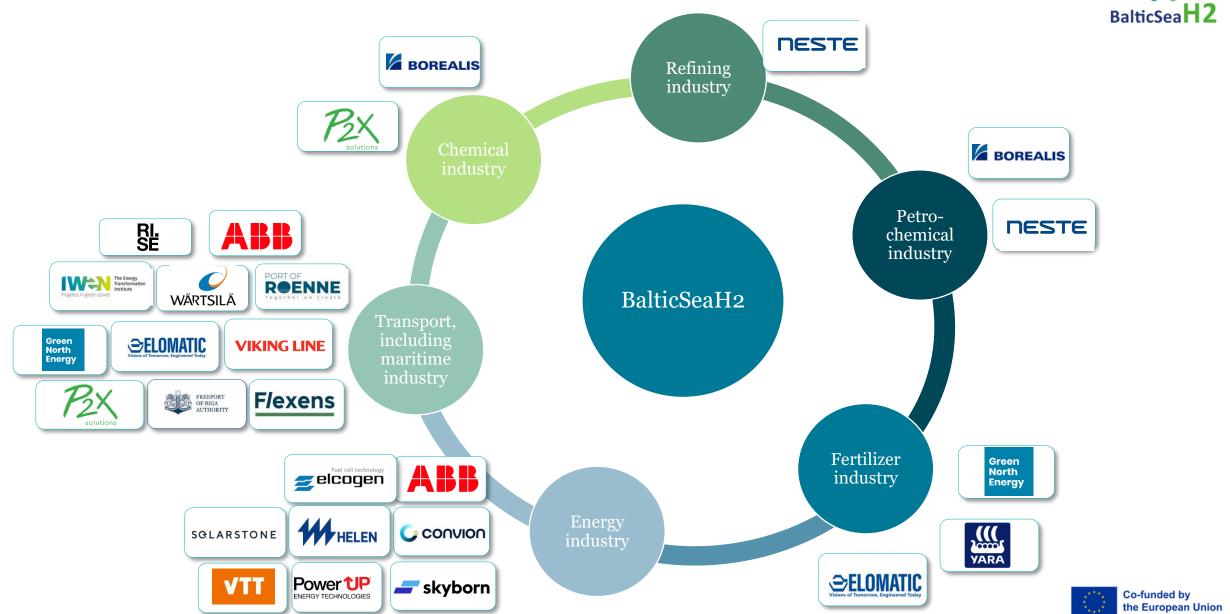
Work Package structure





Use cases and industries involved in BalticSeaH2 .

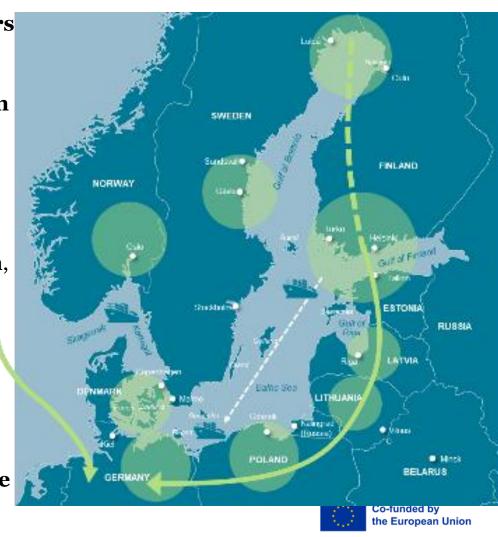




The Lower Silesia Hydrogen Valley participation



- Develop cooperation between the Baltic Hydrogen Valley partners and LSHV members in the field of hydrogen harvesting and hydrogen technology development;
- **2. Creating an industrial base in the LSHV interiors for a blue ocean strategy** by building a sectoral innovation ecosystem model of floating hydrogen generating units for Offshore Wind Energy
- 3. Coordination of activities in the creation of a low-cost hydrogen supply chain providing energy supply in various forms to a large industry
- **4. Co-operation of the interior LSHV companies with the Baltic Hydrogen Valley** in the logistics of non-carbon energy carriers (hydrogen, methanol, ammonia, NSG)
- **5. Preparation of a concept for an energy motorway** based on tube transport, linking the Baltic coast with the tri-border region (Poland, Czech Republic, Germany)
- 6. Utilisation of the Oder waterway and routes S3 and S5, S8 in Poland for the decarbonisation of transport and LSHV communication with the Baltic region
- 7. Development of concepts for cavernous and underground storage facilities for the stabilisation of onshore and offshore energy systems.









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Thank you for your attention!

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