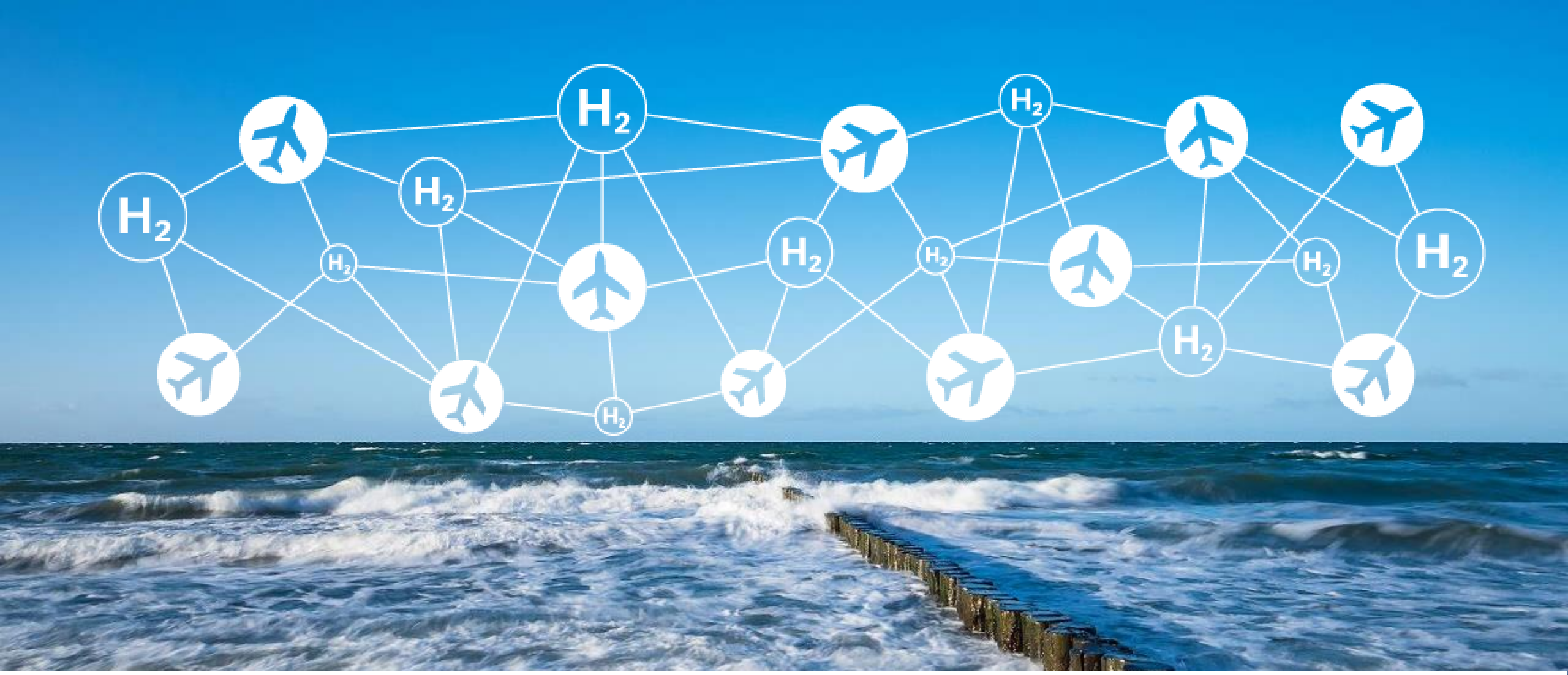

BSR HyAirport project – preparing Baltic Sea Region Airports for Green H2

08.01.2024

Interreg Baltic Sea Region

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SMART GREEN MOBILITY

BSR HyAirport

BSR Hydrogen Air Transport

Preparation of Baltic Sea Region Airports for Green H2

Motivation

- Preparation of Baltic Sea Region Airports for Hydrogen
- Climate-neutral aviation
- Clean mobility
- Improvement of region's accessibility
- Embracing hydrogen technology, project partner airports seek to stabilize their positions and catalyze transformative change in aviation

BSR Hydrogen Air Transport

Preparation of Baltic Sea Region Airports for Green H2

Objectives

- New Business Cases: Establish H2 hubs for novel opportunities and long-term viability
- Hydrogen Catalyst: Shape legal frameworks and technical standards for sector-wide adoption
- Synergistic Infrastructure: Integrate aviation and ground support equipment for sustainable growth
- Pioneer Status: Influence industry transition, bolstering market standing and innovation
- Expanded Network: Utilize hydrogen expertise to enhance regional connectivity and economic vitality
- Local Supply Chains: Strengthen regional value chains for hydrogen infrastructure
- Enhanced Network: Optimize routes and infrastructure for efficient, passenger-centric operations

BSR HyAirport

Project Partnership

Hamburg Airport

FINAVIA

Swedavia Airports

RIX Riga Airport

LITHUANIAN AIRPORTS
VNO KUN PLQ

Latvia University of Life Sciences and Technologies

VÄXJÖ SMÅLAND AIRPORT

Tallinna Lennujaam
Tallinn Airport

PowerCell Group

GulfSTREAM OIL

H2LV

Poznań AIRPORT

Flughafen Sylt

SYLT AIR

Flughafen Lübeck

[1)] Further project partner in Latvia: SIA Gulfstream Oil, Latvia University of Life Sciences and Technologies

BSR HyAirport

Project Partnership operated airports

Hamburg Airport

FINAVIA

Swedavia Airports

RIX Riga Airport

LITHUANIAN AIRPORTS
VNO KUN PLQ

Latvia University of Life Sciences and Technologies

VÄXJÖ SMÅLAND AIRPORT

Tallinna Lennujaam
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Gulf STREAM OIL

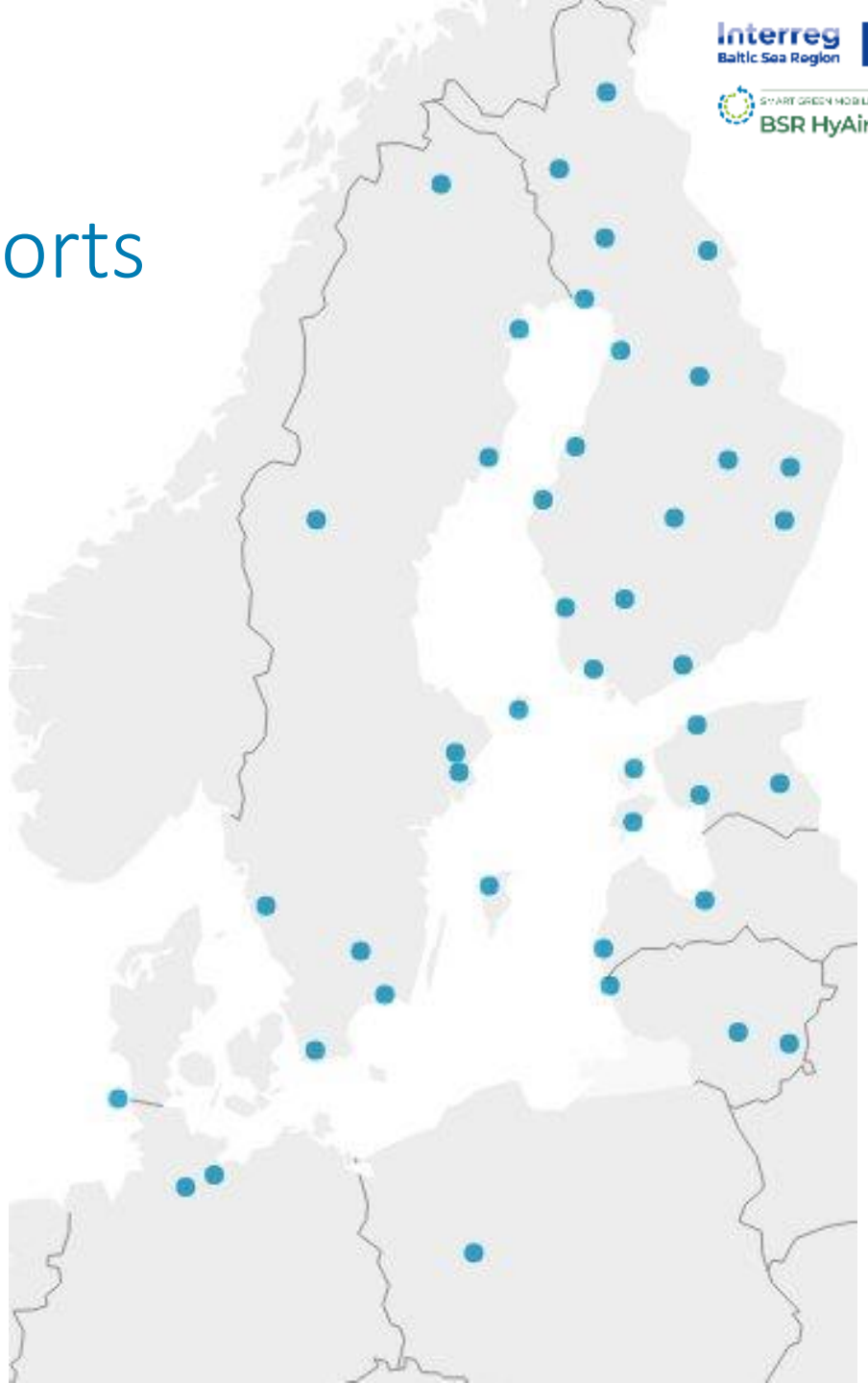
H2LV

POZNAŃ AIRPORT

Flughafen Sylt

SYLT AIR

Flughafen Lübeck



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BSR HyAirport

BSR HyAirport

24 Associated Organisations will support the partnership

No.	Organisation (English)	Organisation (Original)	Country
AO 1	Everfuel A/S	Everfuel A/S	DK
AO 2	Wielkopolska Hydrogen Platform	Wielkopolska Platforma Wodorowa	PL
AO 3	Aviasabiedriba Liepaja Ltd. (Liepaja Airport)	SIA "Aviasabiedrība "Liepāja""	LV
AO 4	Swedish Transport Administration	Trafikverket	SE
AO 5	Airport Regions Council	Airport Regions Council	BE
AO 6	VITERA OY	VITERA OY	FI
AO 7	Ministry of Transport and Communication	Liikenne- ja viestintäministeriö	FI
AO 8	Ministry of Transport Republic of Latvia	Satiksmes ministrija	LV
AO 9	Civil Aviation Agency	Valsts aģentūra "Civilās aviācijas aģentūra"	LV
AO 10	Estonian Aviation Academy	Eesti Lennuakadeemia	EE
AO 11	Estonian Association of Hydrogen Technologies	Eesti Vesinikutehnoloogiate Ühing	EE
AO 12	Non-profit association Estonian Aviation Cluster	MTÜ Eesti Lennundusklaster	EE
AO 13	Estonian Transport Administration	Transpordiamet	EE
AO 14	University of Tartu	Tartu Ülikool	EE
AO 15	Ministry of Economic Affairs, Transport, Employment, Technology and Tourism Schleswig-Holstein	Ministerium für Wirtschaft, Verkehr, Arbeit, Technologie und Tourismus des Landes Schleswig-Holstein	DE
AO 16	Ministry of Environmental Protection and Regional Development	Vides Aizsardzības un Reģionālās Attīstības Ministrija	LV
AO 17	Hamburg Aviation	Hamburg Aviation e.V.	DE
AO 18	ZeroAvia Inc.	ZeroAvia Inc.	Other
AO 19	Estonian Air Navigation Services	Lennuliiklusteeninduse Aktsiaselts	EE
AO 20	Diamond Sky	Diamond Sky OÜ	EE
AO 21	ZAL Center of Applied Aeronautical Research	ZAL Zentrum für Angewandte Luftfahrtforschung GmbH	DE
AO 22	Ministry of Economy and Innovation	Behörde für Wirtschaft und Innovation Hamburg	DE
AO 23	Air Baltic Corporation AS	Air Baltic Corporation AS	LV
AO 24	Regional Jet OÜ	Regional Jet OÜ	EE

Role of Associated Organisations

- Associated organisations (AO) support the project implementation but do not have a budget
- AO will finance project related activities from their own resources
- At the same time, AO do not take up responsibility for major tasks of the project, but have a supportive role. For example, a national ministry providing strategic advice or being a target group of the project
- Major purpose: The project partnership will listen to ideas, suggestions and comments made by AOs and share insight about project activities and (intermediate) results

Project structure

BSR HyAirport

WP 1 Preparing solutions

Elaborating solutions for the use of hydrogen at Baltic Sea Region airports

- WP 1.1 Legal Framework
- WP 1.2 Supply Chain
- WP 1.3 Aircraft Handling
- WP 1.4 Airport Equipment
- WP 1.5 Business Case

WP 2 Piloting and evaluating solutions

Piloting and evaluating concept solutions for use of hydrogen at Baltic Sea Region airports

- WP 2.1 Supply Chain
- WP 2.2 Aircraft Handling
- WP 2.3 Airport Equipment
- WP 2.4 Business Case

WP 3 Transferring solutions

Enabling target groups to get ready for hydrogen powered aircraft / vehicles

- WP 3.1 Communication
- WP 3.2 Durability Plan

Evaluating the economics of GH2 in BSR aviation

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SMART GREEN MOBILITY BSR HyAirport

Work Package 1: Preparing Solutions

WP 1 **Preparing Solutions**
for the use of hydrogen at Baltic Sea Region airports

WP 2 WP 3

- **WP 1.1 Legal Framework –** Identification of relevant legal requirements, needs for amendment, and development of suggestions for legal standards on GH_2 supply at airports
- **WP 1.2 Supply Chain –** Demand analysis and production/supply analysis for GH_2 at Baltic Sea Region airports, analysis on requirements and solutions for the transport and storage of GH_2 to/at airports
- **WP 1.3 Aircraft Handling –** Requirements and solutions for the transport of GH_2 to aircraft and the fuelling process, development of additional standards and safety measures for handling of GH_2 powered aircraft
- **WP 1.4 Airport Equipment –** Use cases and solutions for different uses of GH_2 as a source of energy for airport facilities and airport equipment
- **WP 1.5 Business Case –** Estimation of costs for GH_2 provision at Baltic Sea Region airports, analysis of business cases and possible funding needs for GH_2 supply chains and infrastructure

Piloting and evaluating concept solutions

Work Package 2: Piloting and Evaluating Solutions

WP 2 **Piloting and Evaluating Solutions** for the use of hydrogen at Baltic Sea Region airports WP 3

- **WP 2.1 Supply Chain –** Piloting proposed GH_2 supply chain logistics to selected Baltic Sea Region airports and testing on-site storage solutions for GH_2 at airports
- **WP 2.2 Aircraft Handling –** Testing and evaluating concepts on handling of GH_2 powered aircraft and proposed processes for aircraft refuelling at Baltic Sea Region airports including demonstration flights on routes of scheduled air transport
- **WP 2.3 Airport Equipment –** Piloting and assessing proposed solutions for GH_2 powered ground equipment at Baltic Sea Region airports
- **WP 2.4 Business Case –** Reviewing and amending the business case concepts based on findings of pilots and tests on GH_2 uses at Baltic Sea Region airports

Enabling target groups to get ready

Work Package 3: Transferring Solutions

WP 3 **Transferring Solutions**
for the use of hydrogen at Baltic Sea Region airports

- WP 3.1 Communication – Communicating and transferring ready solutions to target groups both inside and outside of the partnership and encouraging use by target groups
- WP 3.2 Durability Plan – Elaborating further use of project results by project partners and planning of activities to keep solutions functional beyond project duration

Activity implementation

WP 1.1 Legal Framework

Feasibility study on the requirements of the national and international legal framework for the use of hydrogen at airports by Riga airport

Study on legal framework by legal experts (consultants)

Drafting the deliverable Report on proposed amendments of the legal framework for hydrogen use in aviation – work on structure for now

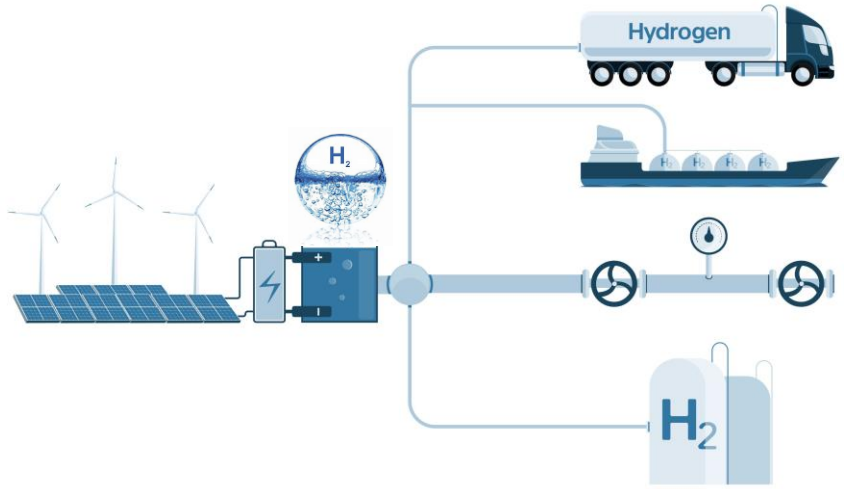
Activity implementation

WP 1.2 Supply chain

Demand analysis

Analysis of production, transport, storage of hydrogen

Production – transport – storage – use



Activity implementation

WP 1.3 Aircraft Handling

Analysing aircraft handling process steps for H2 powered aircraft

Preparing for testing H2 powered flight (landing in Hamburg airport) in cooperation with ZeroAvia

Drafting the deliverable - setting up structure, distributing chapters

Activity implementation

WP 1.4 Airport Equipment

Studies on hydrogen 1A and 1B (support from external experts)

Preparing for hydrogen powered equipment testing at least 2 airports (Riga airport and Helsinki airport):

- Search for suitable equipment to test (trucks, baggage tractors, towers, GPU etc.)
- Arranging renting of the mobile H2 refueling station

Drafting the deliverable

Target groups
Involvement is key

	Target group
1	Infrastructure and public service provider: Airports and other entities involved in the supply of Hydrogen for air transport or other use cases at airports.
2	National public authority Public owner of airports, authorities responsible for air transport / airport operations, authorities responsible for environment protection.
3	Regional public authority Public owner of airports, authorities responsible for air transport / airport operations, authorities responsible for environment protection
4	Interest groups: Environment protection interest groups, airport neighborhood interest groups, interest groups for airport development.
5	SMEs: Technology and energy/hydrogen supplier

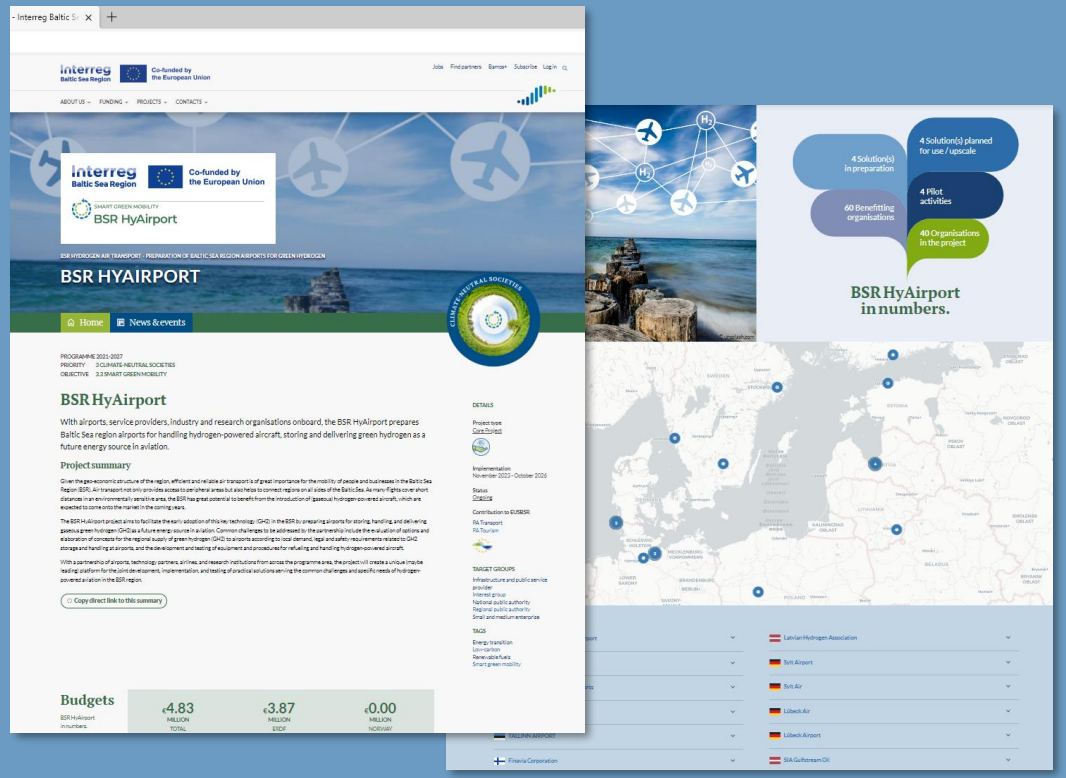
Basic idea:

- “Capacity building”
- Project shall not work isolated

Involvement:

- Meetings
- Workshops
- Conferences
- Press releases / publications
- …

Project website



https://interreg-baltic.eu/project/bsr-hyairport/

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