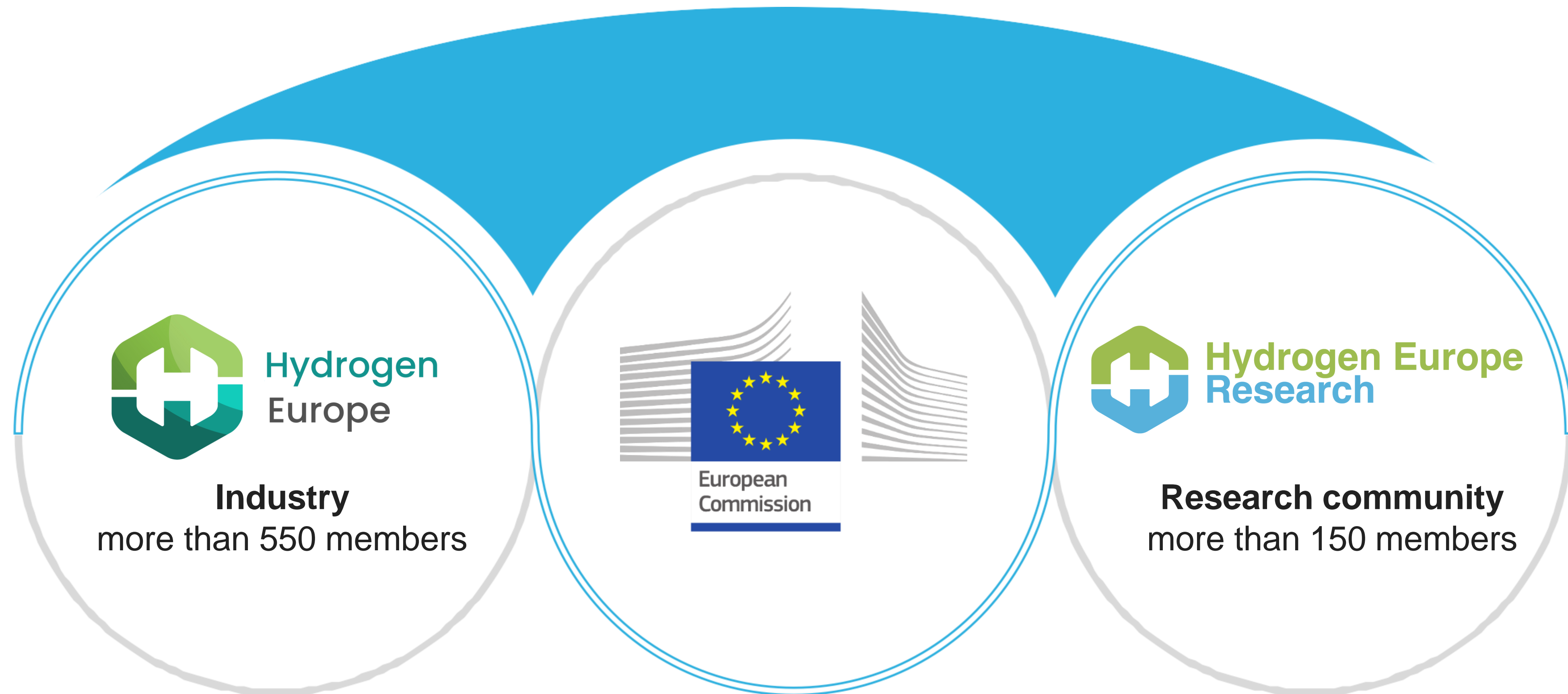


Accelerating Progress – from working with the regions to Hydrogen Valleys

Mirela Atanasiu, *Head of Unit Operations and Communications*



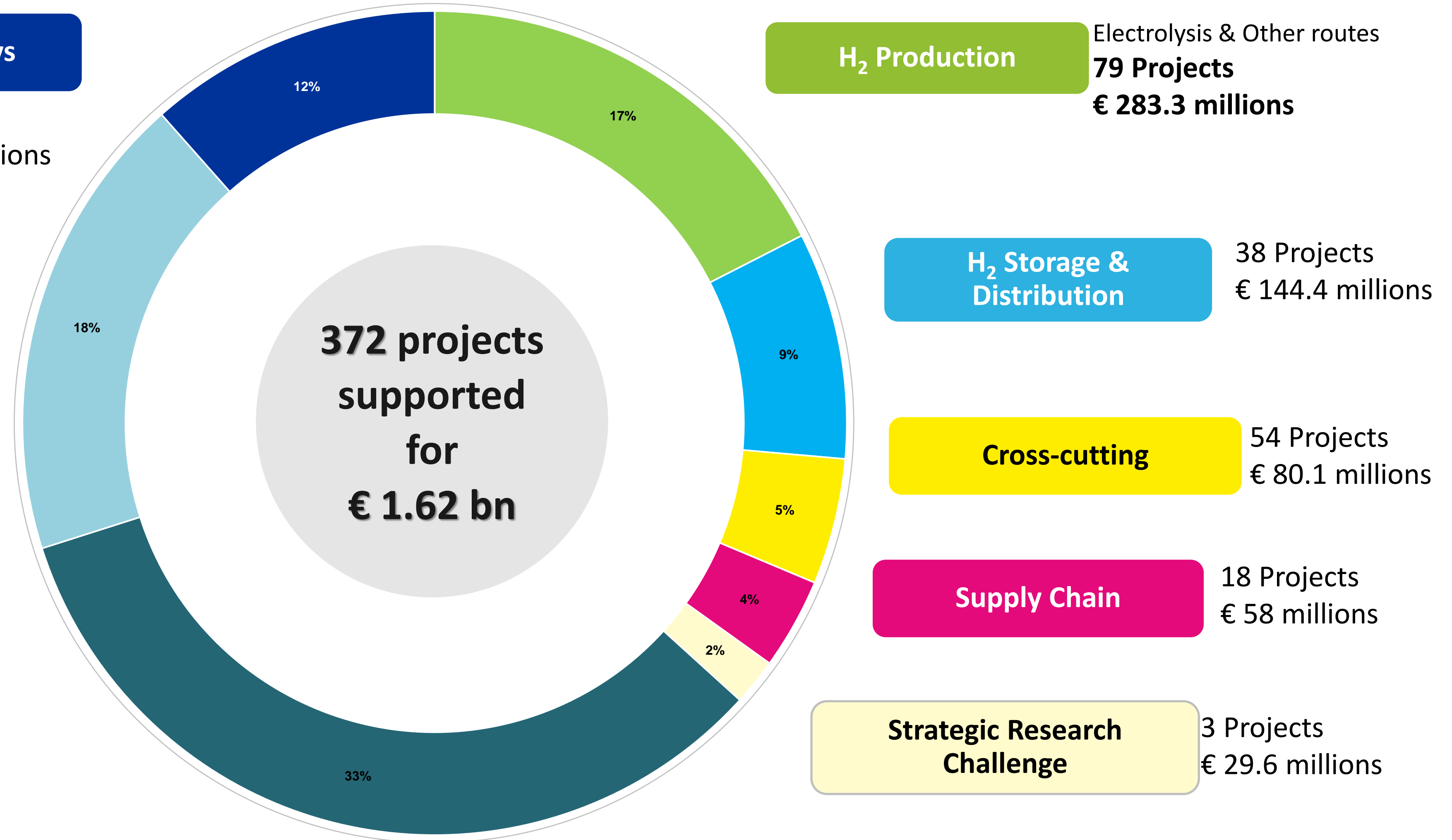
EU Institutional Public-Private Partnership (IPPP)



1 billion EURO from Horizon Europe* to implement R&I activities and facilitate the transition to a greener EU society through the development of hydrogen technologies

*** additional 200 million EURO for Hydrogen valleys (under RePowerEU)**

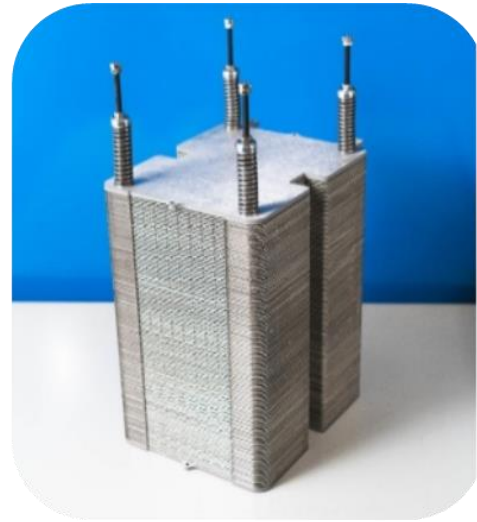
Clean Hydrogen JU Programme incl FCH JU legacy



Covering R&I from low technology readiness levels up to validation/demonstration

A 16 years journey of the JU/partnership

From research to delivering hydrogen solutions in the market: from individual applications to Hydrogen Valleys



Manufacturing



Green H2 production



Buses



ships



Aviation



Research

PoC



Domestic heat and power



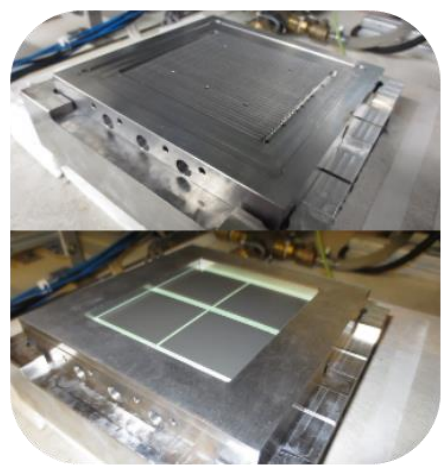
Heat and power for industry



Heavy duty trucks



Logistics machinery



Materials



Gensets



Light duty vehicles

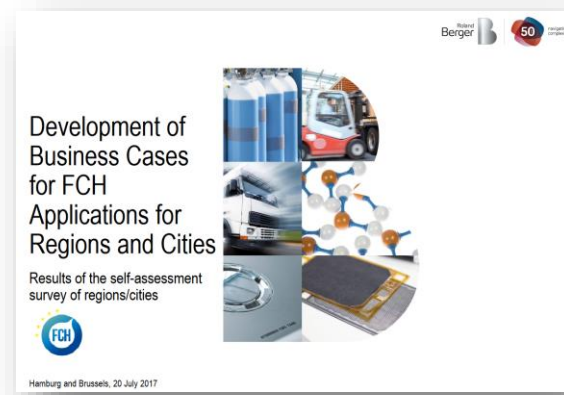


Trains

Working with regions - Raising awareness, developing ideas and implementing hydrogen projects

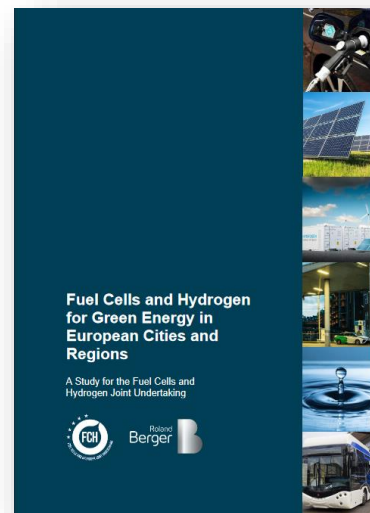
Regions initiative (2016-2018)

To support cities and regions with an interest in FCH technologies



Engagement

- Business cases for FCH applications;
- Mapping of local assets;
- Identification of existing funding;



Report

- FCH applications: status and potential;
- FCH plans and ambitions;
- Way forward;



MOU

- 89 European Regions;
- 22 countries
- 1/4 of Europe's population, surface & GDP;

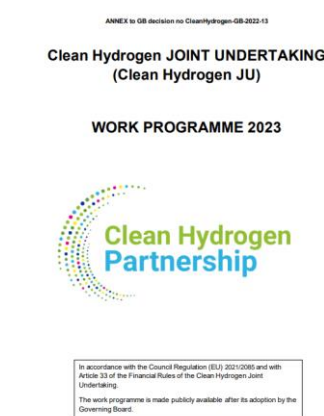
Hydrogen Valley S3P Platform

Project Development Assistance (2021-onwards)



From idea to project plan

JU Annual Work Plans



Support to investments: H2 projects including H2 Valleys

MI2.0 H2V Platform



Global collaboration

Working with regions - Raising awareness, developing ideas and implementing hydrogen projects

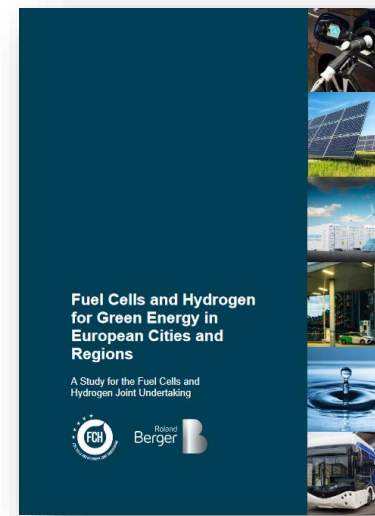
Regions initiative (2016-2018)

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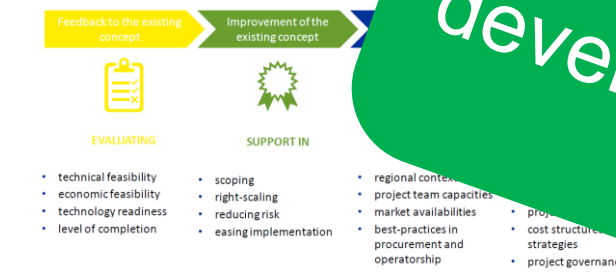


MOU

- 89 European Regions;
- 22 countries
- 1/4 of Europe's population, surface & GDP;

Hydrogen Valley S3P Platform

Project Development Assistance (2021-onwards)



25 Regions across Europe supported in the development of hydrogen projects

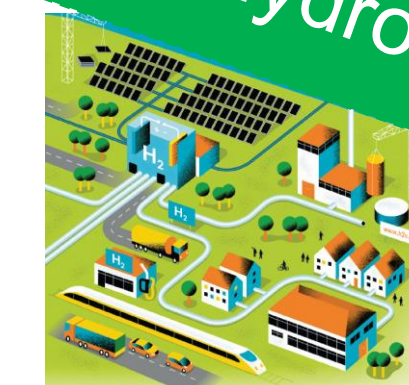


JU Announcements

16 Hydrogen Valleys supported



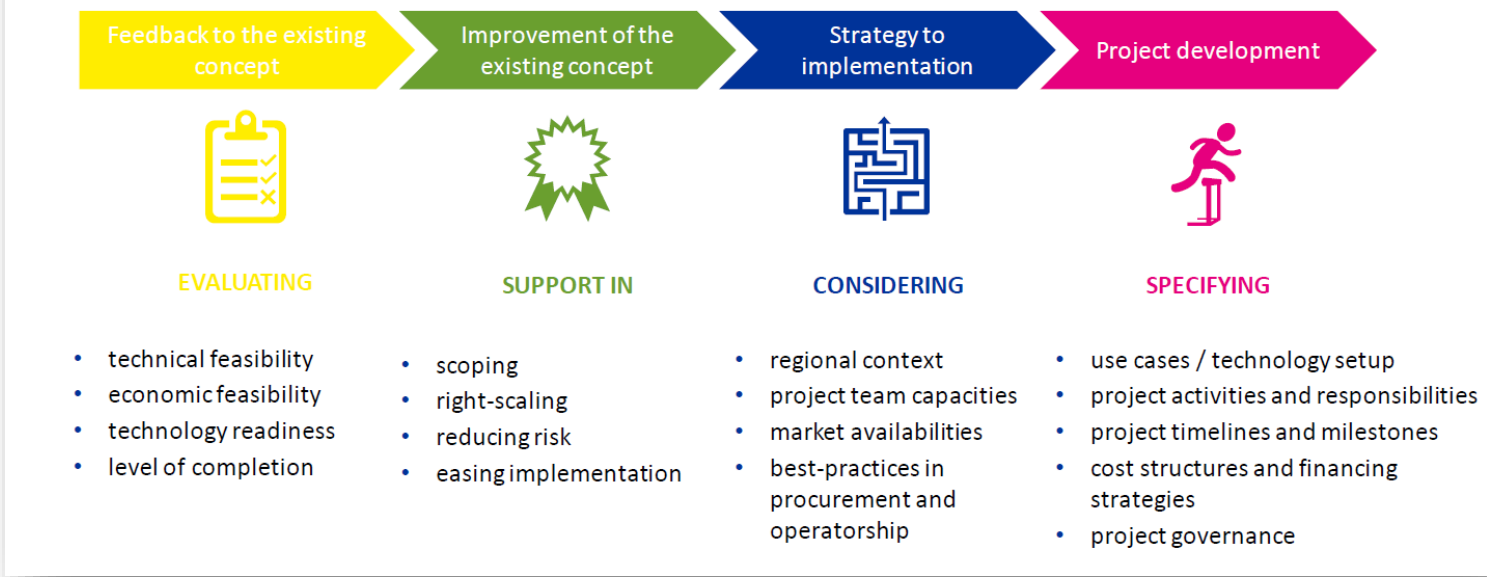
Hydrogen Valley S3P Platform



~100 Hydrogen Valleys worldwide

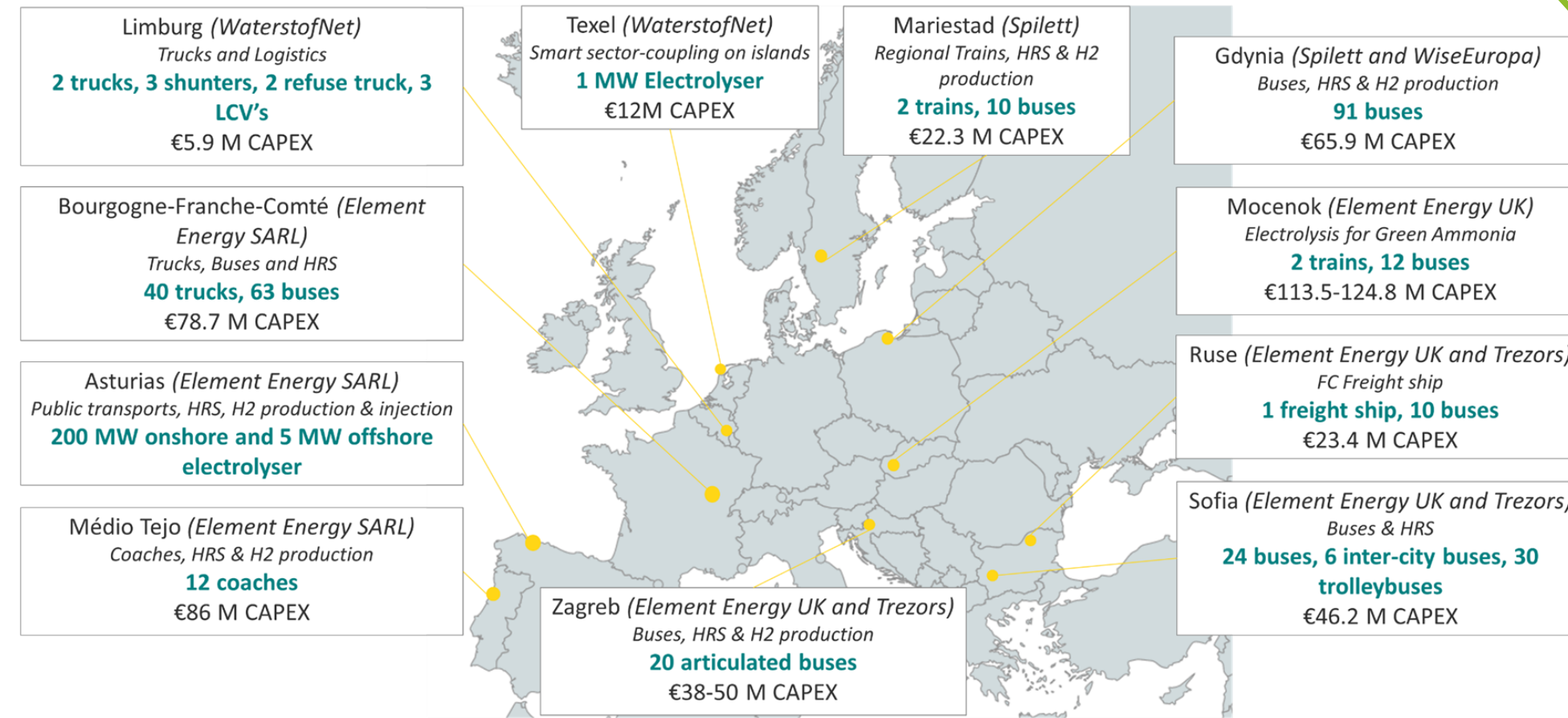


Services provided to the regions

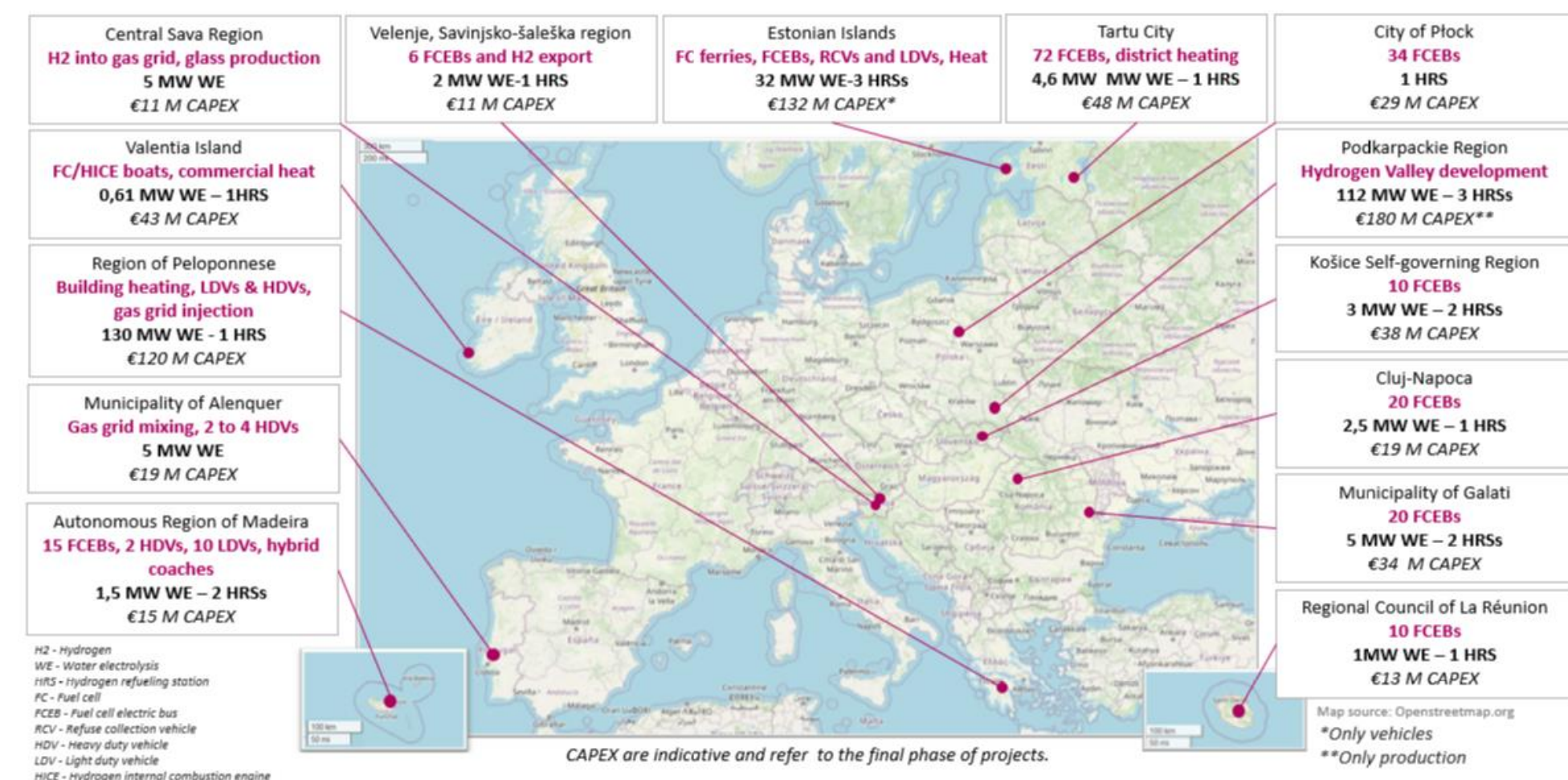


- 1 to 1 sessions with H2 project consultants;
- Development of project plans;
- Connecting regions to industry;
- Advise on proper funding strategies;

PDA I (2020 – 2021) 11 projects



PDA II (2023 – 2024) 14 projects



PDA/ & PDA II Combined figures:

Regions supported
25

CAPEX
€ 1.4 bn

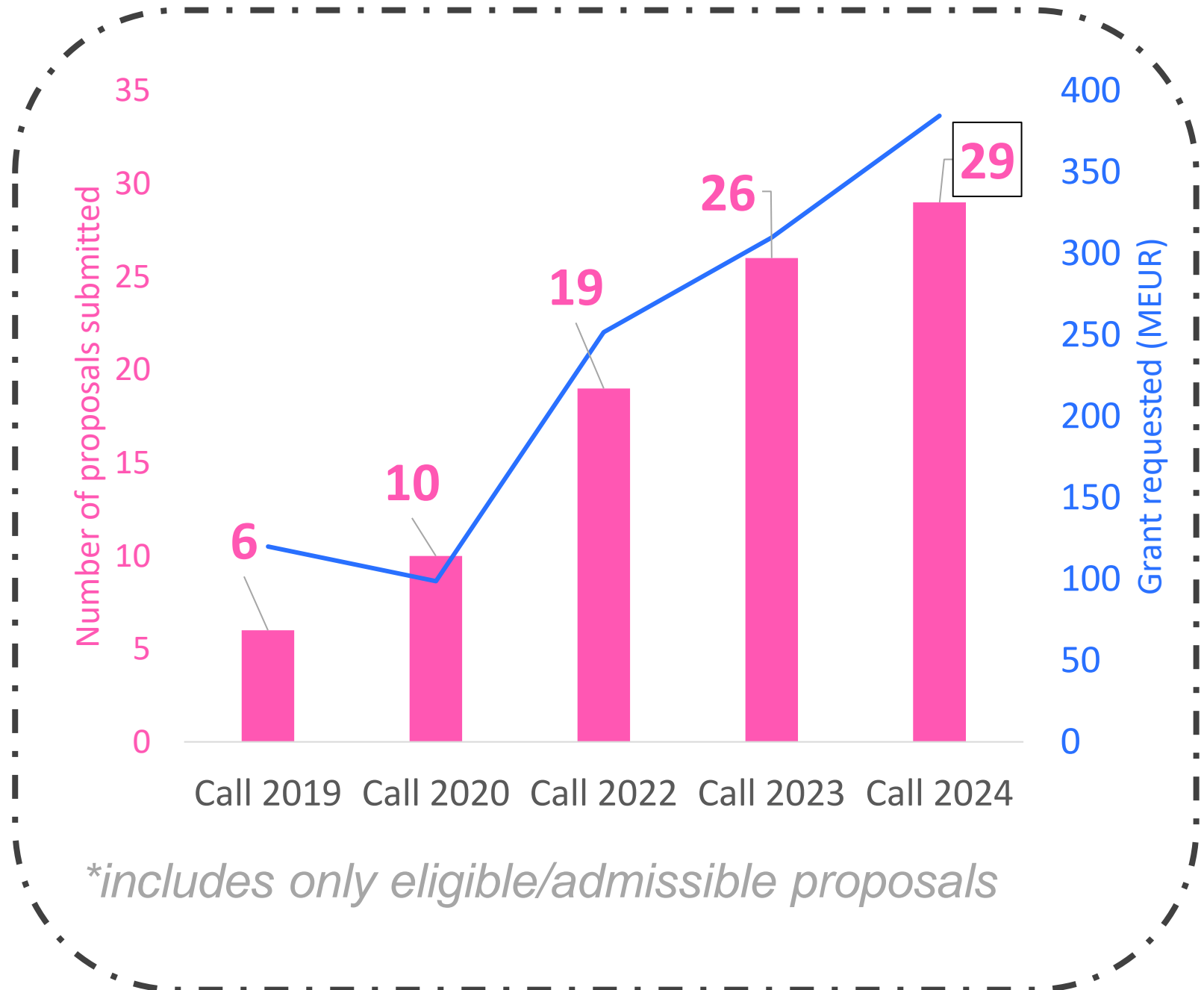
Electrolysers
Over 500 MW

HRS
More than 30

[Final report published](#)

Building on the Hydrogen Territory concept, introduced in the Call 2015 (BIG-HIT), the Clean Hydrogen Partnership has supported the demonstration of Hydrogen Valleys since 2019

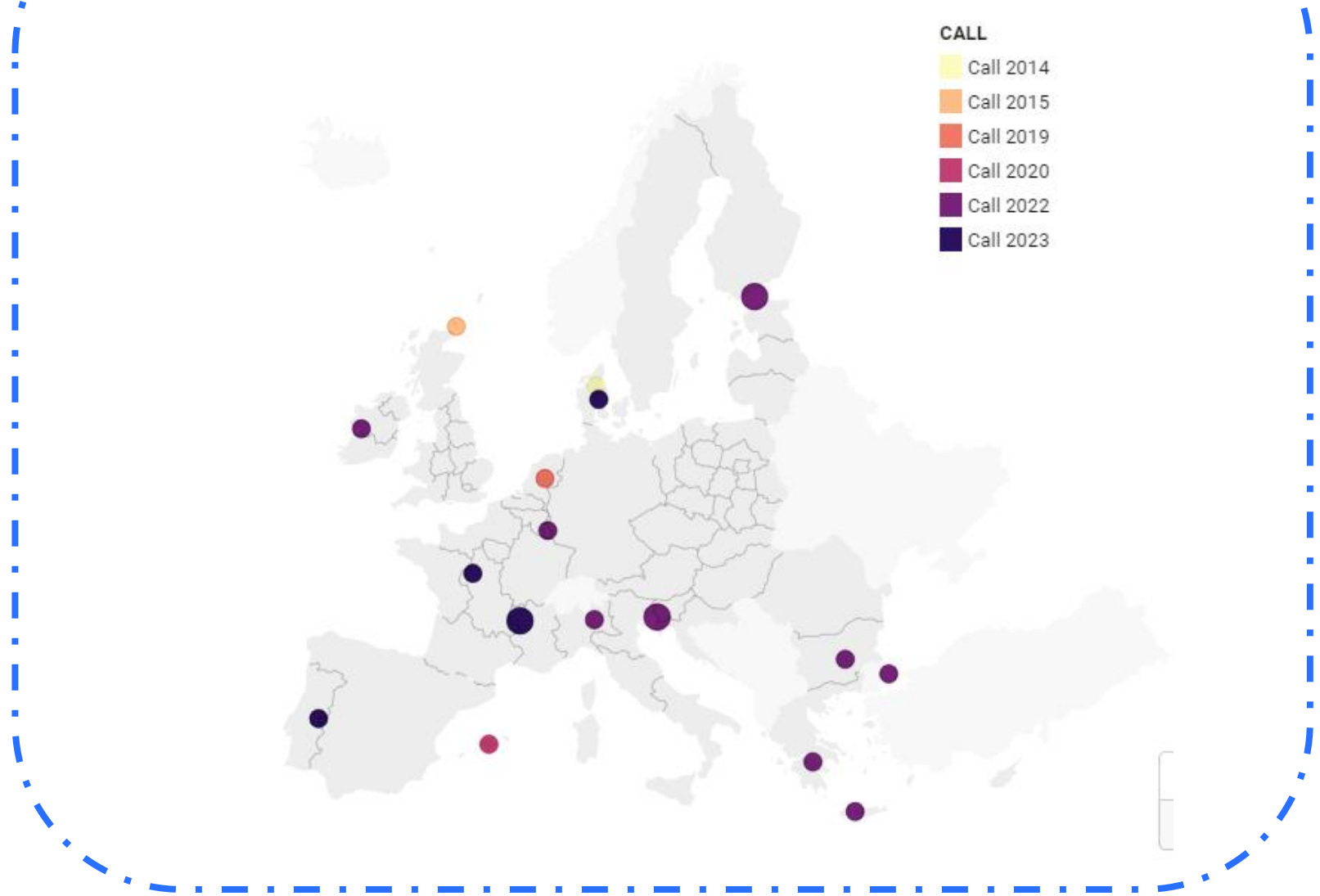
Increased interest in the Clean Hydrogen JU Calls



The appetite to develop Hydrogen Valleys across Europe has increased

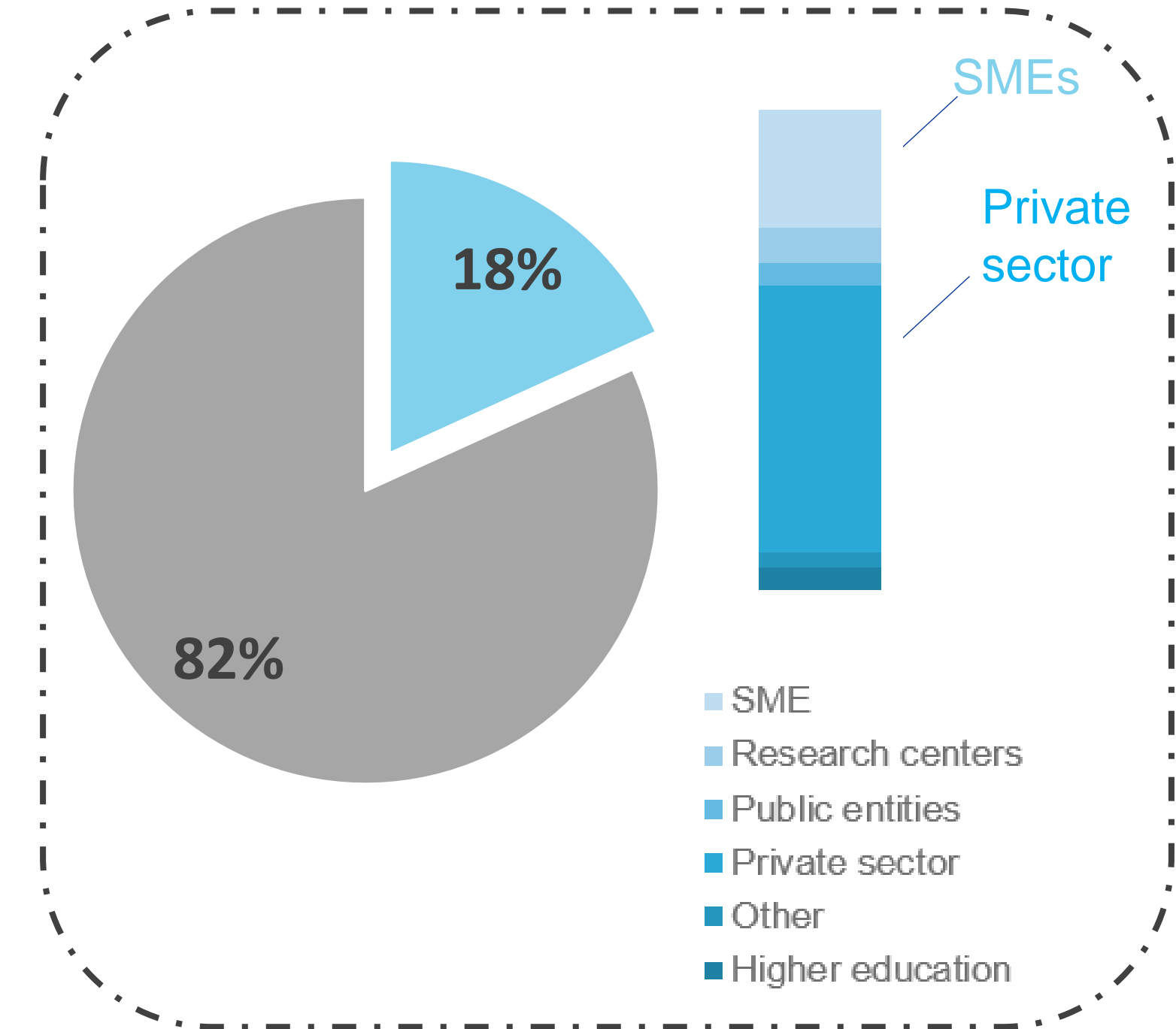
REPowering the EU with Hydrogen Valleys (as of May 2022)

200 M€* top-up, spread across 3 years, to double H2V in EU by 2025



16 Hydrogen Valleys supported to date
15 European countries
>21, 000 tons H2 / year
~ 200 MW equiv*. Electrolyser capacity

Total costs: **1,000 M€**
 JU funding: **187 M€**

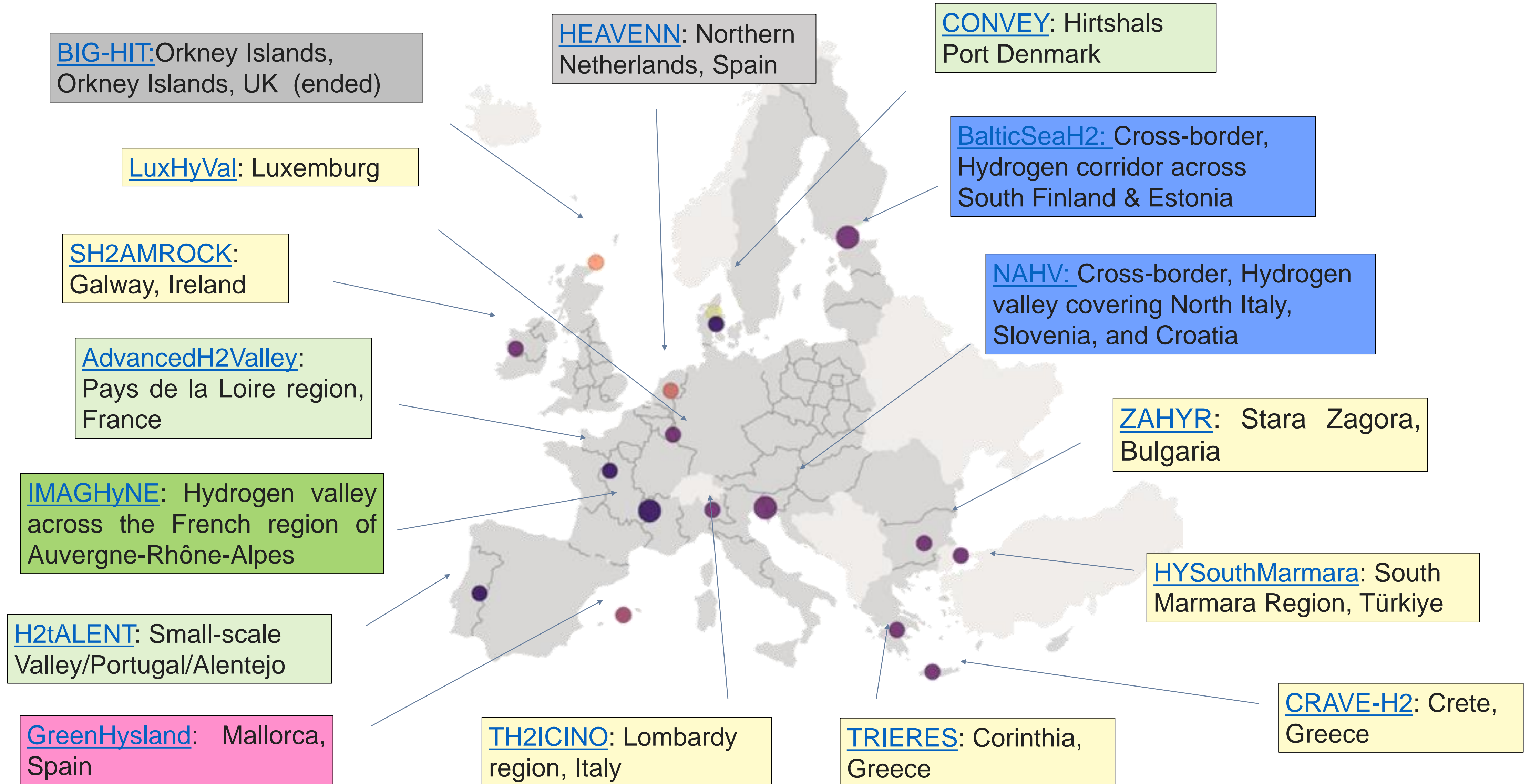


357 beneficiaries from 37 countries

* This is an estimated equivalent electrolyser capacity calculated using the H2 production requirements of the Call topics. The "to be installed" capacity may differ

Hydrogen Valleys supported by the Clean Hydrogen Partnership

Different scales, hydrogen production mainly via electrolysis, diverse end- uses

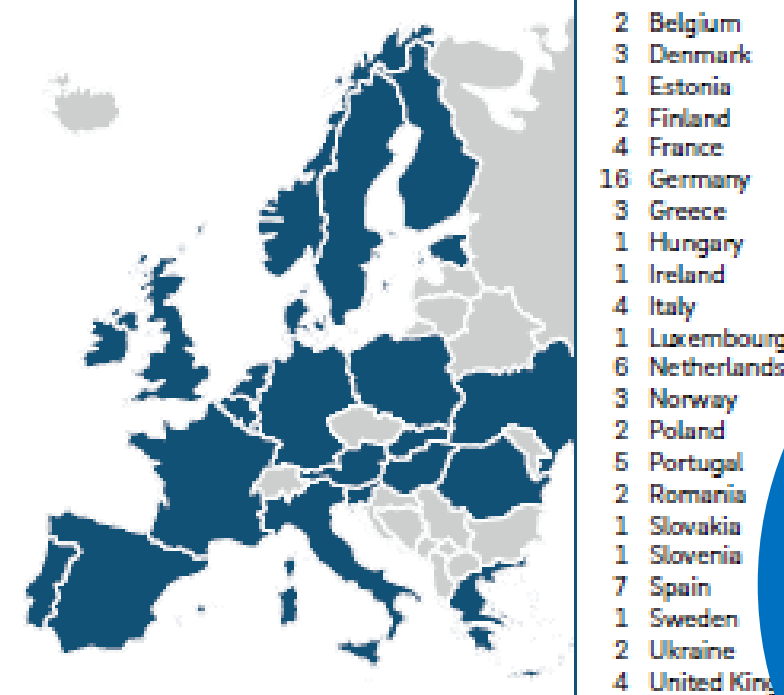


Hydrogen Valleys: concept developed in Europe and now global phenomenon... ~ about 3/4 are yet to take a final investment decision

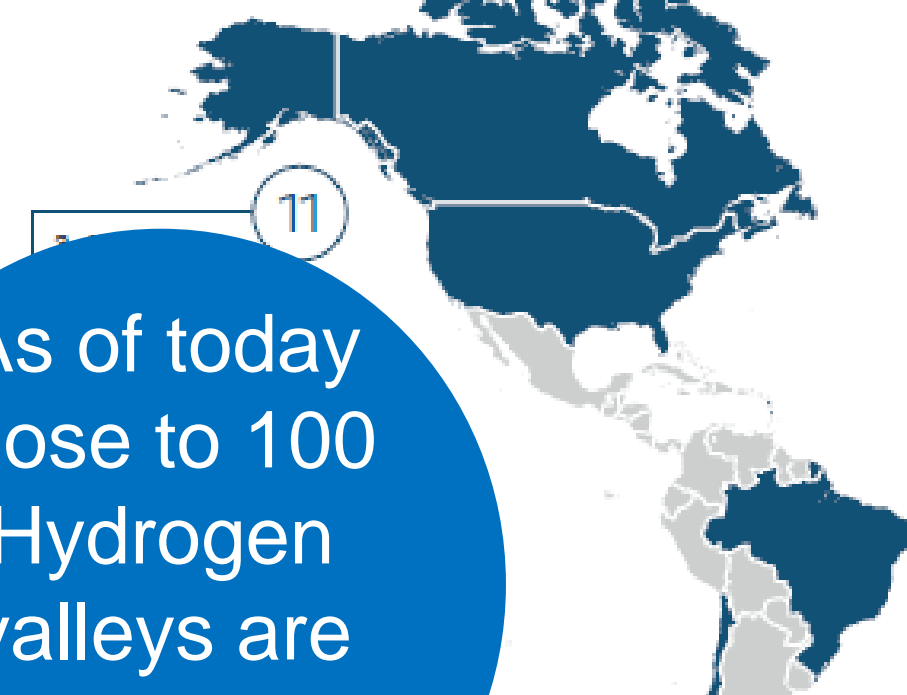
Update report

B: Number of Hydrogen Valleys by geography

EUROPE

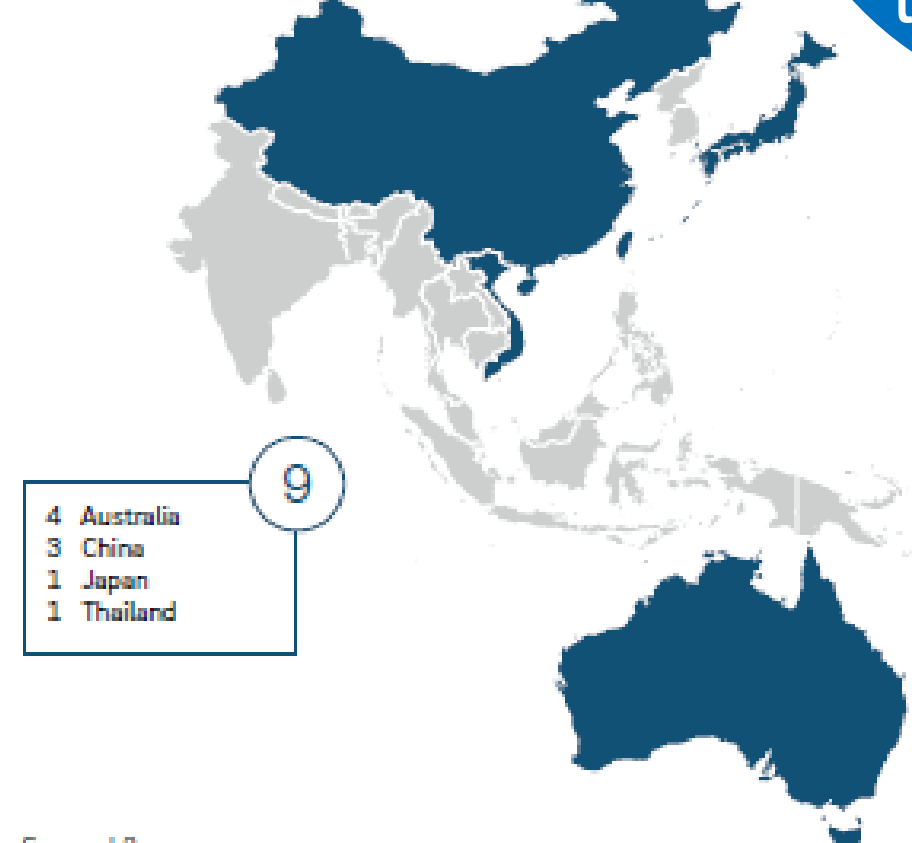


AMERICAS



As of today close to 100 Hydrogen valleys are included in the platform

ASIA-PACIFIC



4

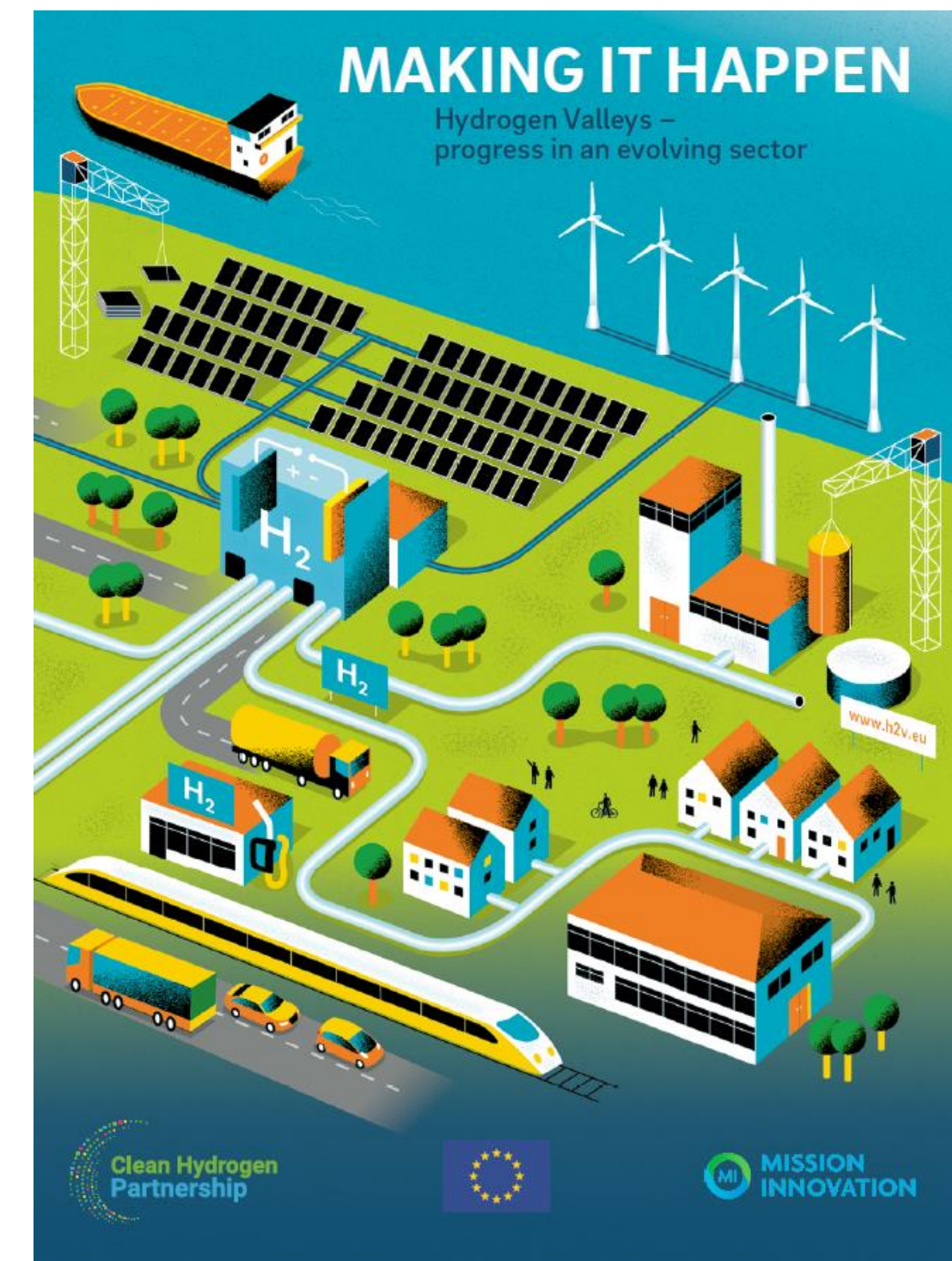
1	Israel
1	Oman
1	Saudi Arabia
1	Turkey

Source: h2v.eu

<https://h2v.eu/>

Hydrogen Valleys Final Report just published

- State of the clean hydrogen sector by analysing empirical evidence from Hydrogen Valleys globally over the last three years.
- Development of the Hydrogen Valley concept and community as well as the necessary framework conditions for its development
- Recent challenges faced by Hydrogen Valleys and the clean hydrogen sector as a whole and seeks to find forward looking solutions



However, still JU action plan for accelerating the deployment of Hydrogen Valleys in the years to come

- **Only a fraction (~25%) of the European Hydrogen Valleys in the H2VP have reached FID**
- The European Commission topped-up the **Clean Hydrogen JU with an extra €200 million with the aim of doubling the number of hydrogen valleys in the EU by 2025** (in support of the ambitions of the RePowerEU plan)
- This funding is insufficient to support all the Hydrogen Valleys projects in the pipeline

Project Development Assistance for Hydrogen Valleys

Increase the number of projects supported by offering project development assistance (less resources intensive) to allow projects to mature towards FID

Synergies

Join efforts and align strategies with national and regional authorities across Europe (and other European instruments such as Innovation Fund, Hydrogen Banks, etc)

+

- **Continue supporting R&I** to improve the technology, improve its performance and reduce costs
- Support to the **demonstration of hydrogen technologies including Hydrogen Valleys** via Call for Proposals
- Provide the necessary training to build **skills and to regional and local administrations**
-

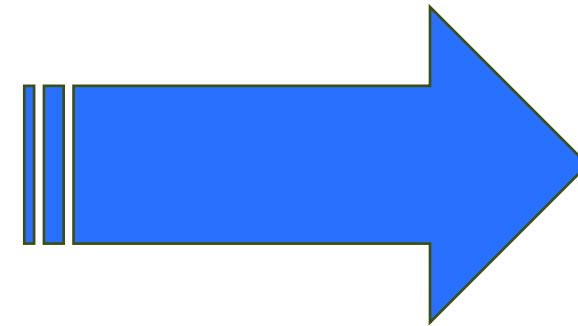
A comprehensive tool to support the deployment of H2 valleys

- **Duration: 2024-2030**
- **Budget: € 12.5 M**
- **3 core tasks**

Project Development Assistance

Capacity Development

Hydrogen Valleys Platform



1.PDA

PDA services to facilitate hydrogen valley projects from initial conception to detailed feasibility, offering tailored support and feedback mechanisms for advancing towards (and reaching) final investment decisions.

2.Capacity Development

This task aims to advance European hydrogen valley projects through knowledge sharing, capacity building, and addressing key project barriers, culminating in public outputs and an annual showcase event.

3.Hydrogen Valleys Platform

Sustain and further develop the global Mission Innovation Hydrogen Valley Platform (H2VP) as a hub for exchanging information and fostering collaboration among hydrogen valley projects worldwide.

Synergies with national and regional managing authorities

Identifying areas of collaboration between the Clean Hydrogen JU JU (EU level) and National and Regional Public Authorities

State-of-Play

- Assess policy
- Identify gaps and potential

RESEARCH

Select Managing Authorities

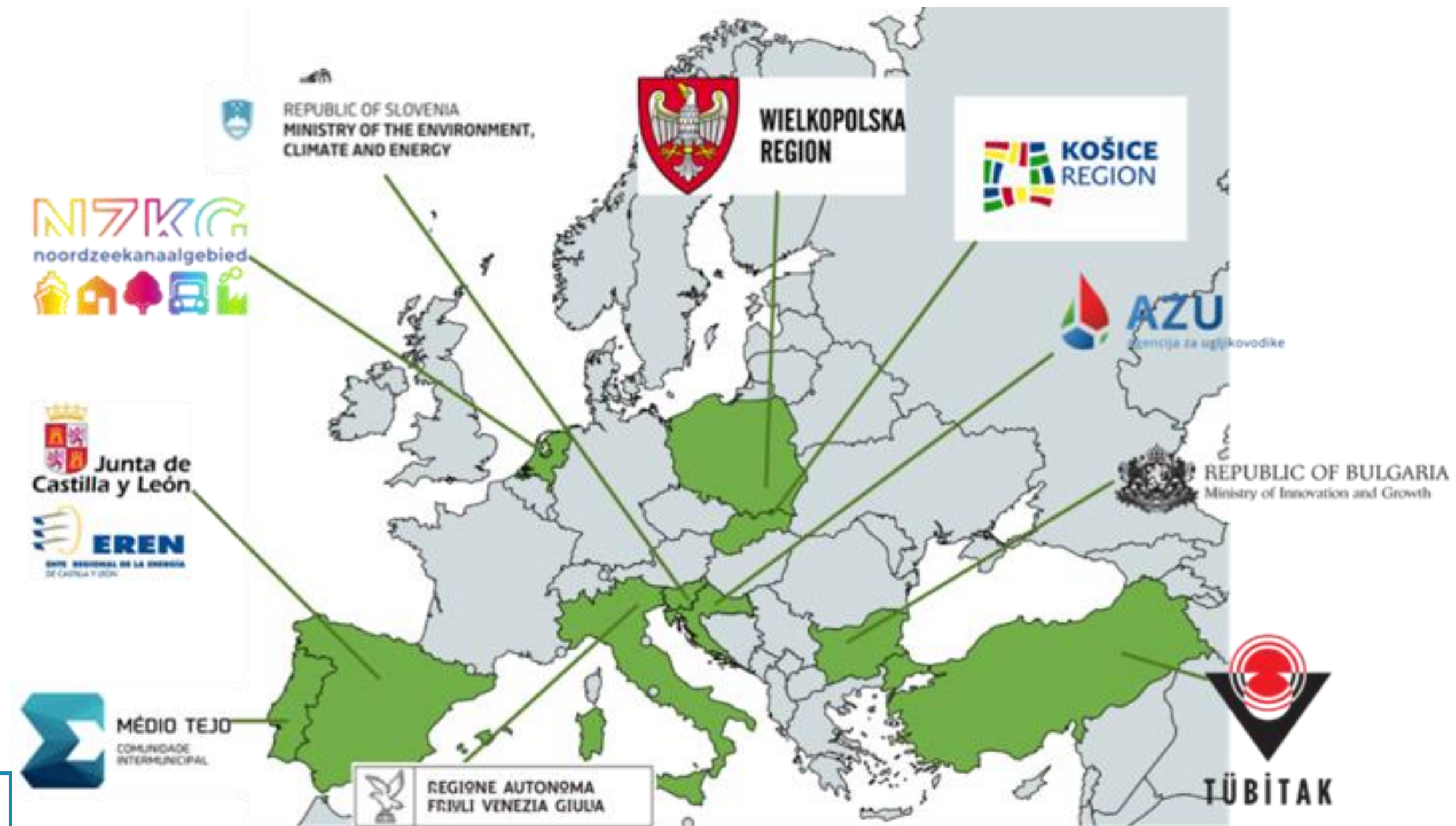
- Call of Expression of Interest (Jun/Jul 2023)

ENGAGE

Memorandum of Cooperation

- Focusing on capacity building, knowledge management and funding opportunities (

OPERATIONALISE



Programme Office North Sea Canal Area (Netherlands)

Wielkopolska Region (Poland)

Friuli Venezia Giulia Region (Italy)

Kosice Region (Slovakia)

Intermunicipal Community of Medio Tejo (Portugal)

Regional Public Body of Energy – Castilla y Leon (Spain)

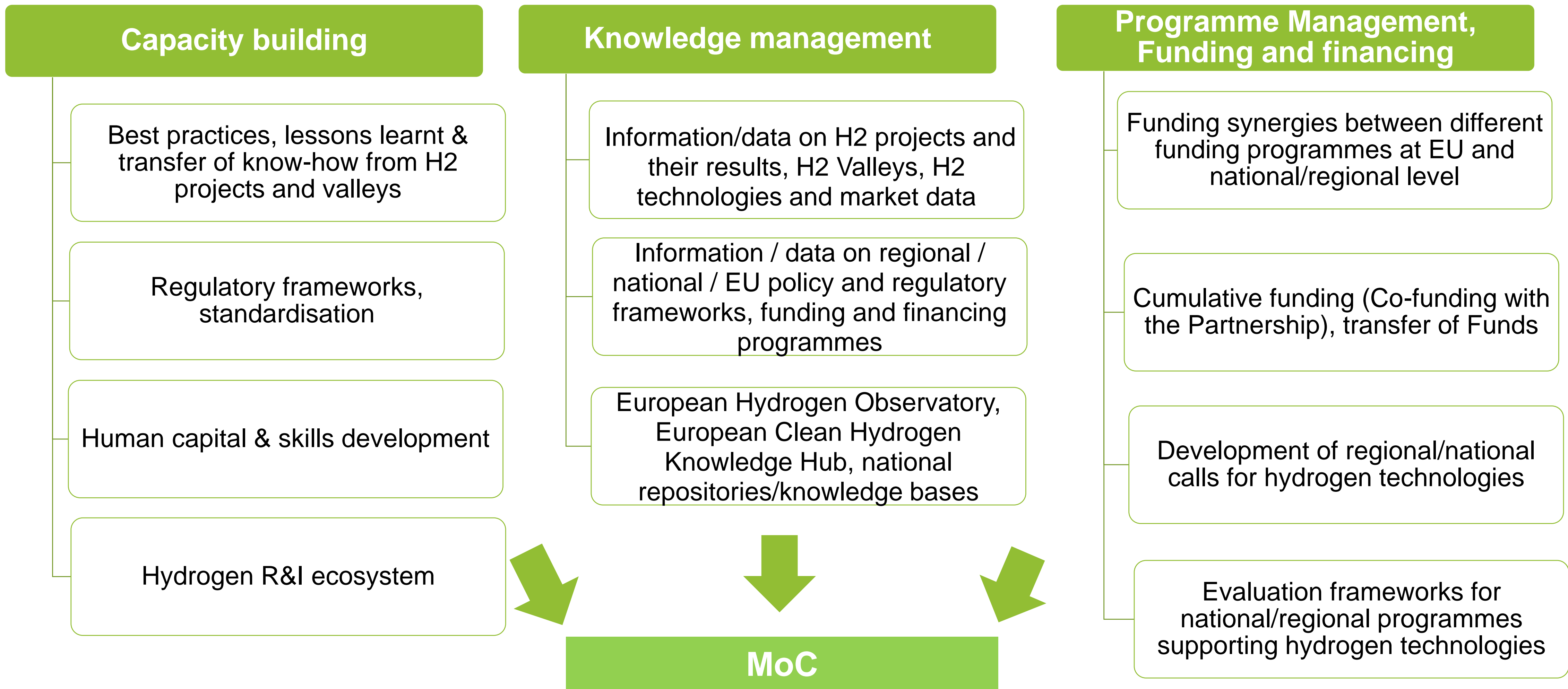
Scientific and Technological Research Council of Türkiye (Türkiye)

Slovenian Ministry of the Environment, Climate and Energy (Slovenia)

Croatian Hydrocarbon Agency (Croatia)

Bulgarian Ministry of Innovation and Growth (Bulgaria)

Focus areas of cooperation included in Memoranda of Cooperation, MoC



3 MoC to be signed today, 3 others ready to sign, 4 being finalised

- Working with regions since 2015
- 25 regions have benefited from Project Development Assistance
- 16 Hydrogen Valleys supported across 15 European countries through grants (and additional public/private investments)
- Working in synergies with (European) Managing Authorities
- Close to 100 Hydrogen Valleys worldwide
- Support to Hydrogen valleys will continue in the years to come: **H2V Facility and grants support**



https://www.clean-hydrogen.europa.eu/media/publications/hydrogen-valleys-progress-evolving-sector-update-report_en



https://www.clean-hydrogen.europa.eu/media/publications/final-report-project-development-assistance-regions-ii-cohesion-countries-outermost-regions-and_en

Keep in touch!



For further information

www.clean-hydrogen.europa.eu

 Clean Hydrogen Partnership



@CleanHydrogenEU

