

Working with European regions on hydrogen ecosystems



ECRN | European Chemical Regions Network

Mazovia.

Hydrogen in Europe's energy transition: EU partnerships, national ecosystems and the skills pipeline

in collaboration with

H₂

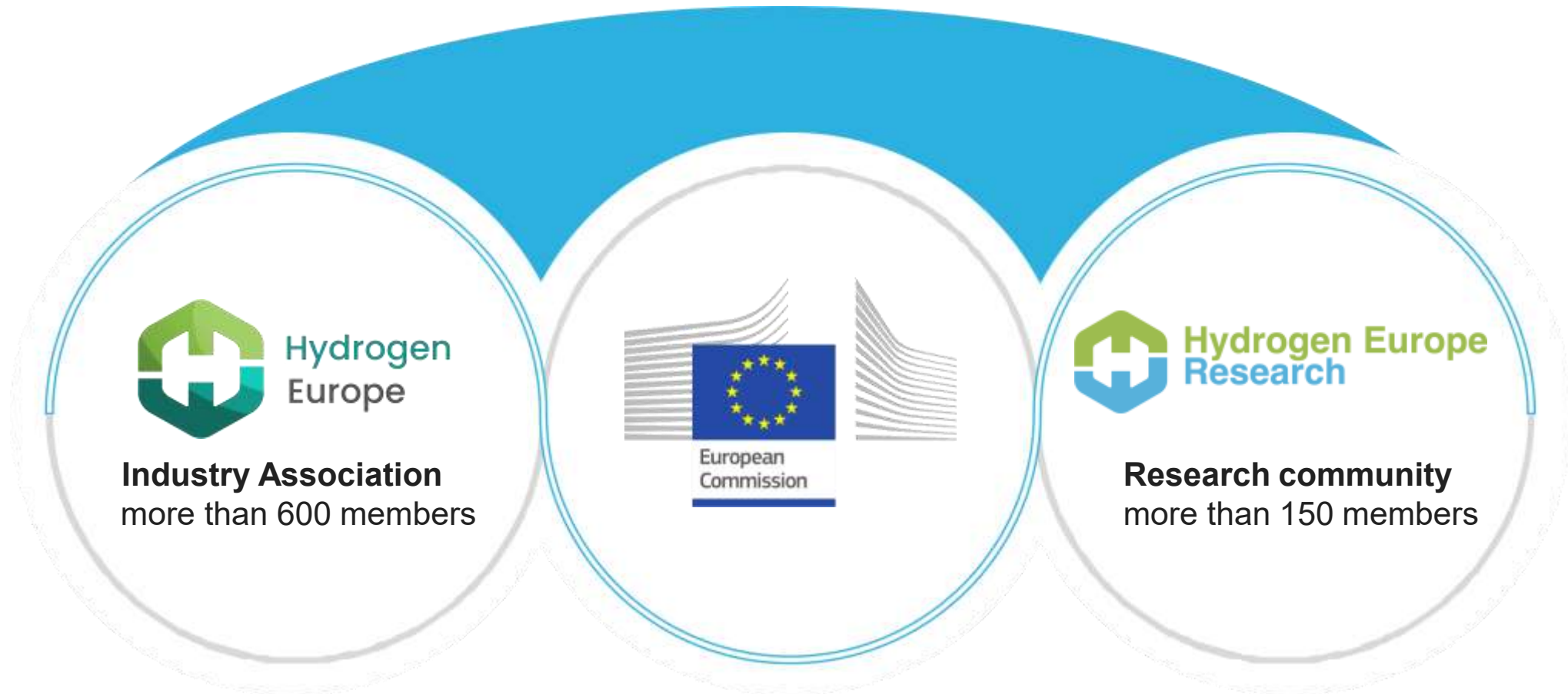
Date: 28 October 2025 from 9:30 to 14:00 CET
Venue: Mazovia Region Office in Brussels, Rue Victor Hugo 199, 1030 Brussels

Inês Moura Martins, *Stakeholders Relationship Officer*



Clean Hydrogen Joint Undertaking

EU Institutional Public-Private Partnership (IPPP)

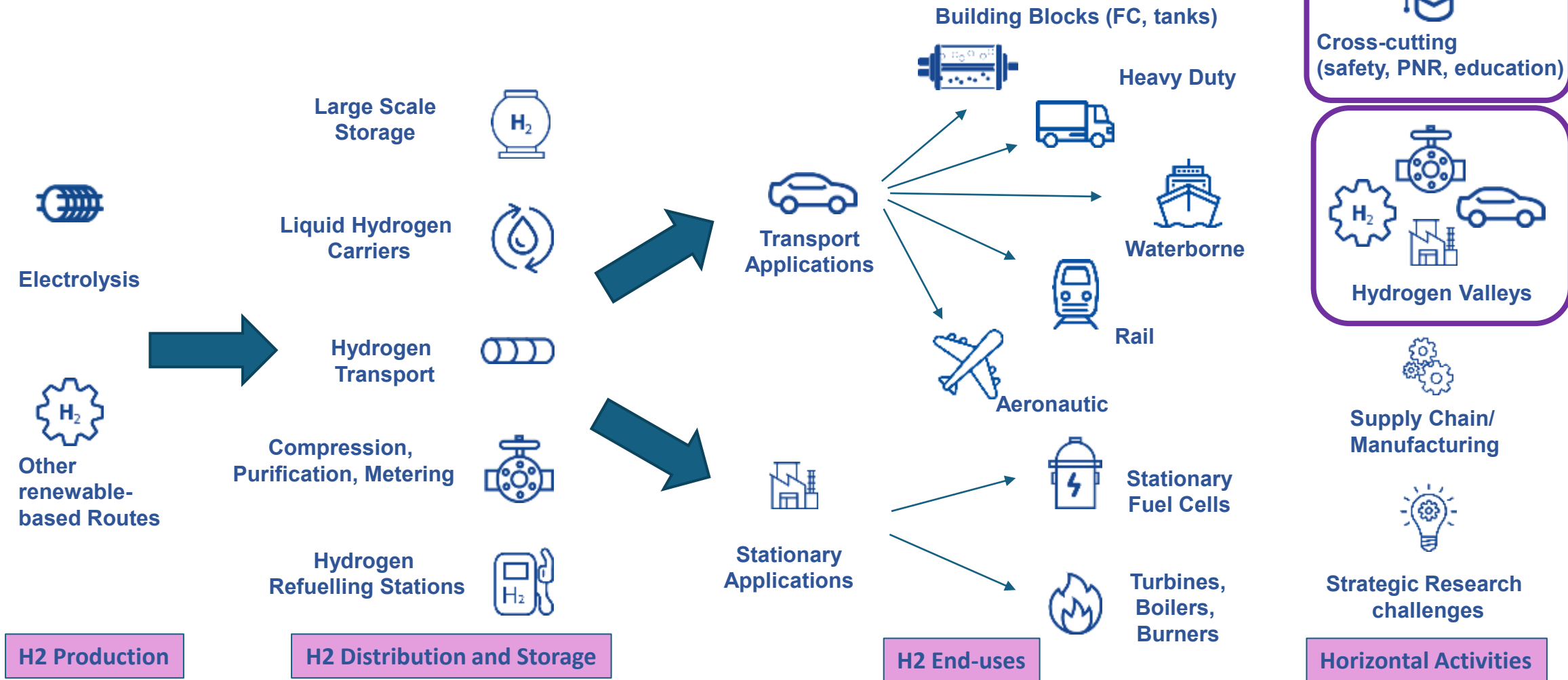


1 billion EURO from Horizon Europe* to implement R&I activities and facilitate the transition to a greener EU society through the development of hydrogen technologies

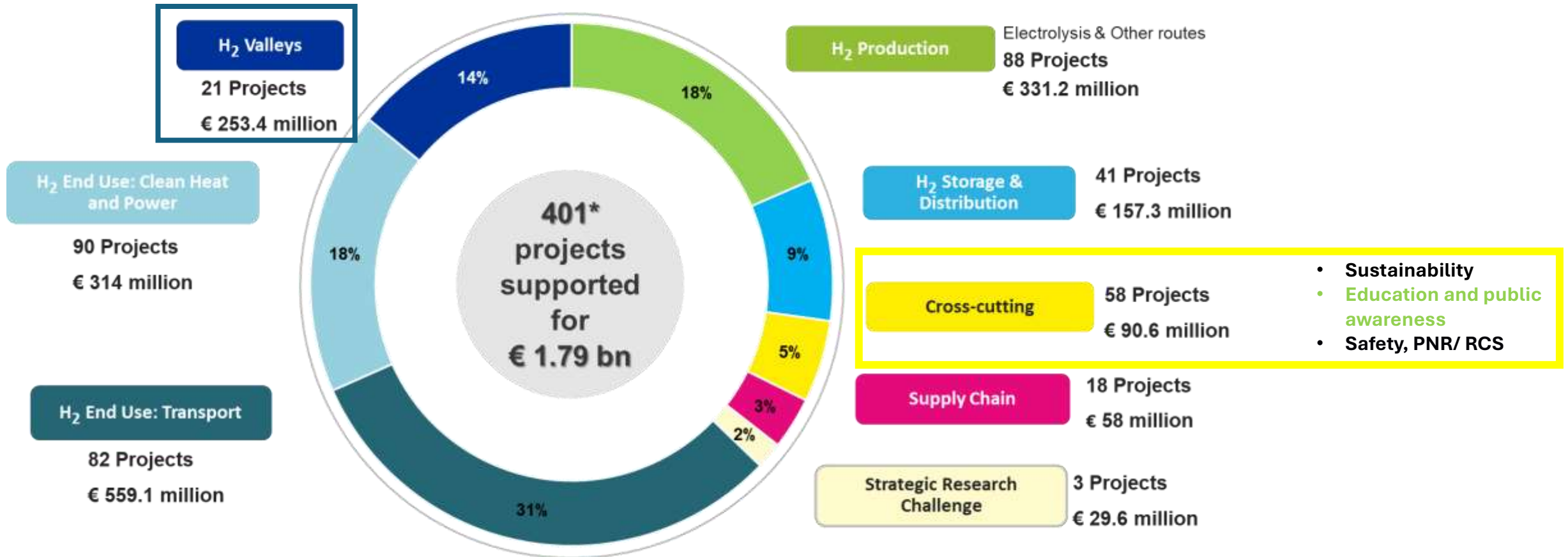
*** additional 200 million EURO for Hydrogen valleys (under RePowerEU)**

Strategic Research & Innovation Agenda³

SRIA (2021 – 2027)



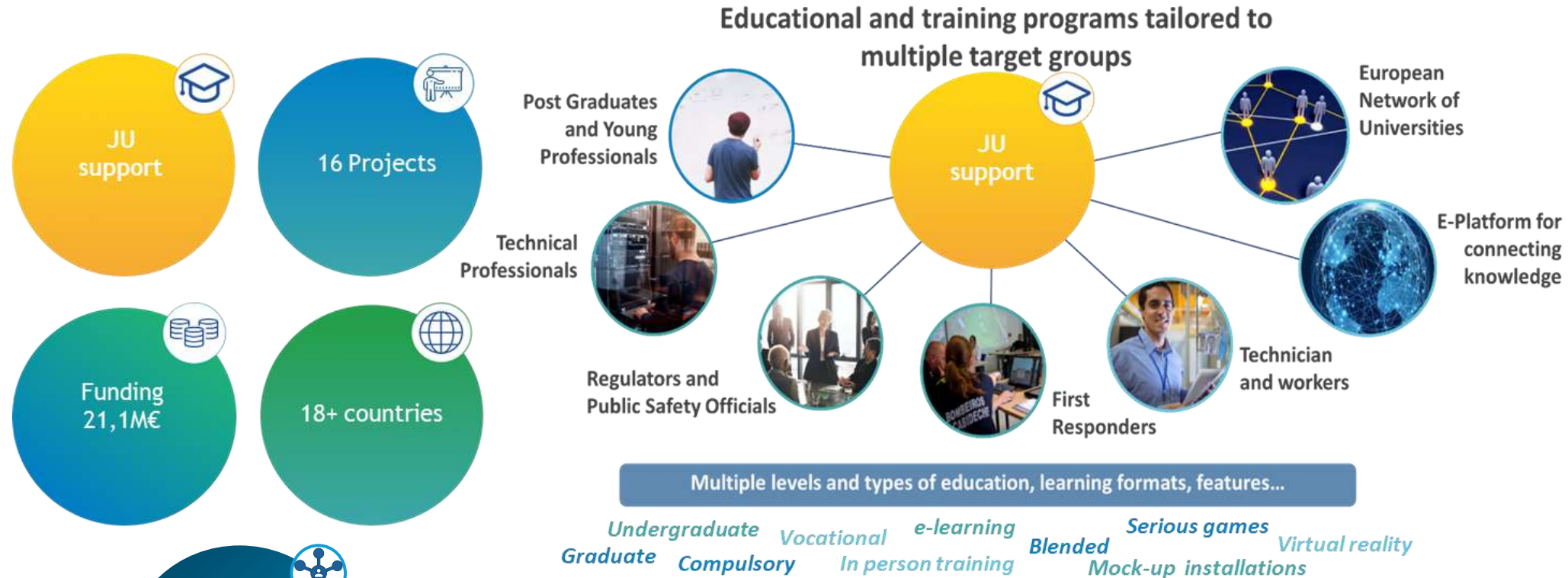
Clean Hydrogen Partnership Activities on Education and Valleys - Projects



* Not all projects from Call 2024 are included as they are still under preparation

Clean Hydrogen Partnership Activities on Education – Projects

- Promoting excellence in education and training and preparing the European workforce while increasing trust



+ Training of
Permitting
Authorities



Knowledge transfer and training of civil servants, safety officials, and permitting staff to improve safety assessment and licensing procedures across Europe

TOPIC CALL 2024
(currently under GAP)

The European Hydrogen Academy will

- Build a network of over 100 universities offering qualifications, specializations, and degrees in hydrogen technologies
- Build a network of over 500 schools integrating hydrogen topics in their science teaching.
- Provide free training materials across European languages to teachers and teachers in order to enable educational staff to deliver the vast body of educational measures necessary.
- Create a network of hands-on, physical training laboratories.
- Offer a portal for prospective trainees to find accurate information about and access the educational programmes available.
- Prepare the European Net-Zero Hydrogen Academy



Implementing R&I , Working with regions Developing and implementing hydrogen projects

(2008 – 2027)
Facilitate transition
to a greener EU
through development
of H2 technologies



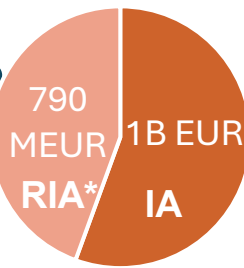
**EU Institutional
Public-Private
Partnership (IPPP)**

EUROPEAN PARTNERSHIP

R&I programme to bring FCH technologies to market readiness

Funding

1.79 BEUR



*Includes 32 MEUR funding for CSA

Number projects

401

298 RIA

103 IA

Regions initiative (2016-2018)

To support cities and regions with an
interest in FCH technologies



Engagement

Report

MOU

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

Hydrogen Valley S3P Platform

Project Development Assistance (2021-onwards)



<https://europa.eu/!McW9JP>

JU Annual Work Plans



<https://europa.eu/!WYcrhy>

Support to
investments: H2
projects including H2
Valleys

Synergies with Managing Authorities



<https://europa.eu/!hkcmdp>

Leveraging funding



Implementing R&I , Working with regions Developing and implementing hydrogen projects

(2008 – 2027)
Facilitate transition
to a greener EU
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development of H2

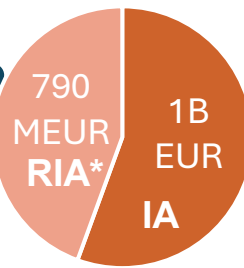


**EU Institutional
Public-Private
Partnership (IPPP)**

EUROPEAN PARTNERSHIP

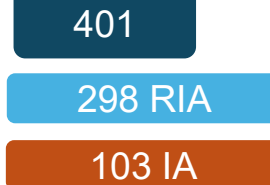
**R&I programme to bring FCH
technologies to market readiness**

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Number projects



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**Hydrogen
Valleys Facility**

**Project Development
Assistance
(2021-2024)**

25 Regions supported
€ 1.4 bn CAPEX
500+ MW Electrolysers
30+ HRS

JU Announces Plans

21 Hydrogen Valleys funded
+250 M€ JU funding
(+5 grants under preparation)

**Synergies with
Managing Authorities**
**Memorandum of
Cooperation
with Managing
Authorities**

Hydrogen Valley S3P Platform

Synergies with national and regional managing authorities⁸

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

State-of-Play

- Assess policy and identify gaps and potential

RESEARCH

Select Managing Authorities

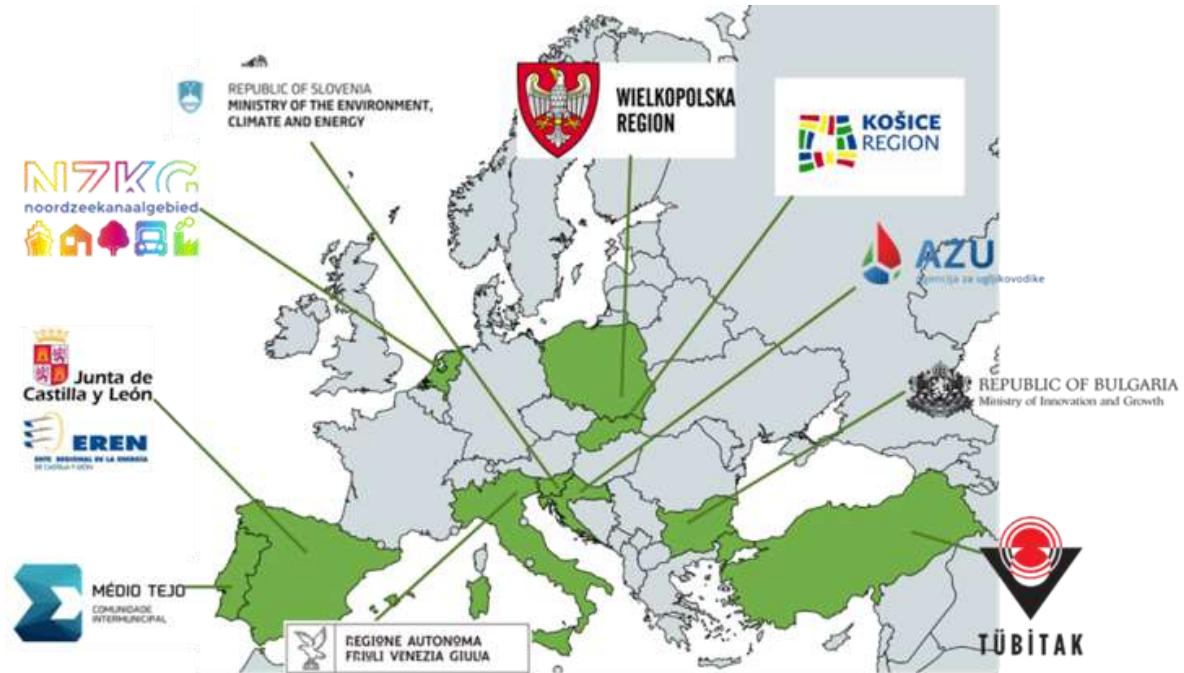
- Call of Expression of Interest (Jun/Jul 2023)
- 10 national and regional authorities selected**

ENGAGE

Memorandum of Cooperation

- Focusing on capacity building, knowledge management and funding
- 3 MoCs signed** in June 2024 (Bulgaria, Croatia and Italy)
- 6 MoCs** signed during the H2 week (18-22 November 2024) **1 MoC** signed end 2024

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)

Repowering the EU with Hydrogen Valleys

March 2023

“Hydrogen Valleys are key for the creation of a European research and innovation area for hydrogen.”

Comm. Mariya Gabriel



STATE OF THE UNION 2020

September 2020

“I want NextGenerationEU to create new European Hydrogen Valleys to modernise our industries, power our vehicles.”

Ursula von der Leyen.

July 2020

European Hydrogen
Strategy

May 2022

REPowerEU Plan

200 MEUR top-up for the Clean Hydrogen partnership to double the number of Hydrogen Valleys

June 2024

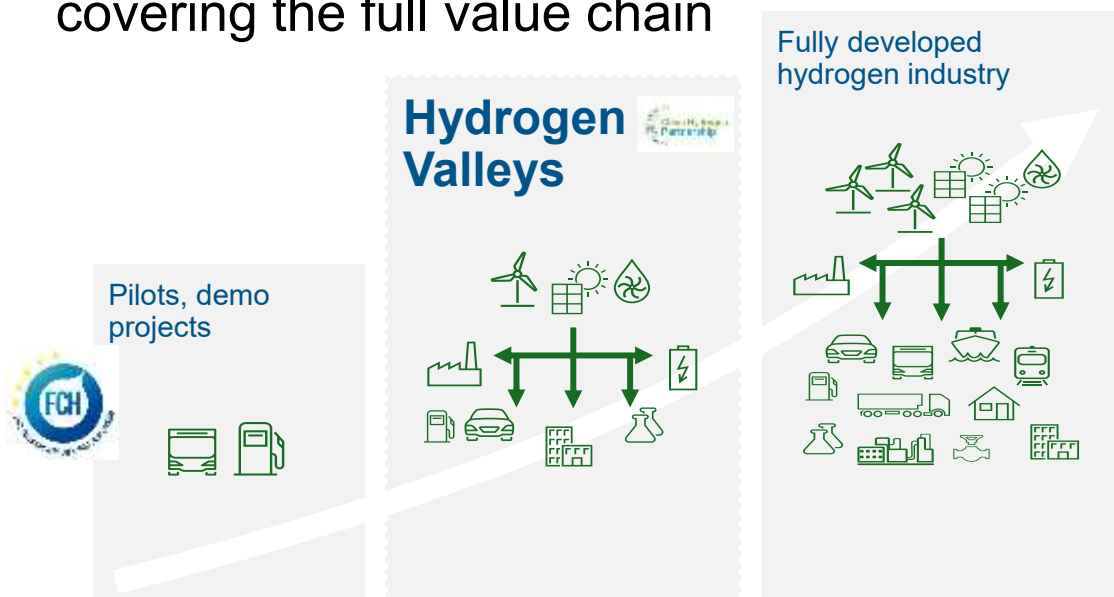
European Hydrogen
Valley Roadmap

*European Commission's inspirational target of **50 Hydrogen Valleys** under construction or operational by 2030 across the entire EU*

“Hydrogen Valleys” are local market makers for clean hydrogen – Integrated infrastructure projects along the whole value chain

Bottom-up contribution to market development

- Next-generation H2 market development
- Integrated (and larger-scale) projects covering the full value chain



What they're made of

- **Large-scale joint investment** (x10 m EUR and up to multi-bn EUR)
- **Full hydrogen value chain coverage**
 - Centralized clean hydrogen production (*de facto* mostly green H2)
 - Shared infrastructure (e.g., pipelines, refueling stations)
 - Multiple end-uses (e.g., petrochemical industry, hydrogen road mobility)
- **Geographically defined scope** (from local, regional to international/cross border)

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



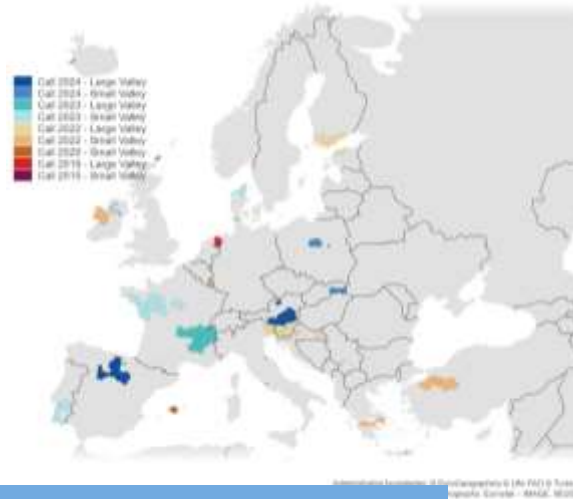
*includes only eligible/admissible proposals

Increased interest in Hydrogen Valleys

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

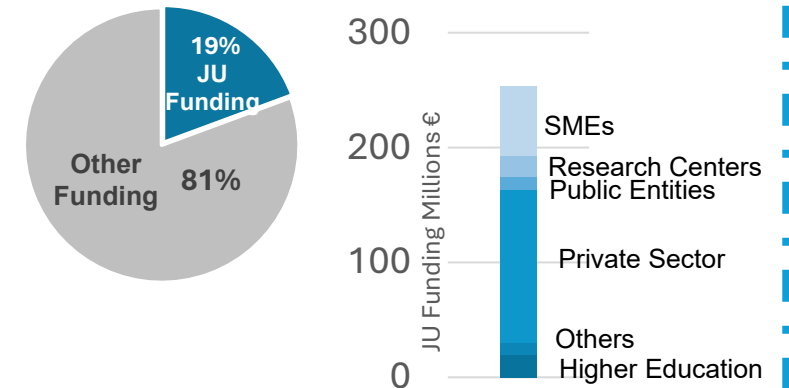
21 Hydrogen Valleys supported to date
19 European countries



+30, 000 tons H2 / year
~ 300 MW equiv*. Electrolyser capacity

Support to date

Total costs: +1,300 M€
JU funding: +250 M€



488 beneficiaries receiving funding from around 40 countries

Hyceland
Iceland

BIG-HIT Orkney
Islands, UK (ended)

- Call 2024 - Large Valley
- Call 2024 - Small Valley
- Call 2023 - Large Valley
- Call 2023 - Small Valley
- Call 2022 - Large Valley
- Call 2022 - Small Valley
- Call 2020 - Small Valley
- Call 2019 - Large Valley
- Call 2015 - Small Valley

HEAVENN
Northern
Netherlands

CONVEY Hirtshals
Port Denmark

BalticSeaH2 Cross-border, Hydrogen
corridor across South Finland & Estonia

HySPARK Mazovian
Region, Poland

EASTGATEH2
V Kosice Region

HI2 Valley Region of Carinthia, Styria,
Upper Austria, Austria

NAHV Cross-border, Hydrogen valley
covering North Italy, Slovenia, and Croatia

ZAHYR Stara Zagora,
Bulgaria

HYSouthMarmara
South Marmara Region,
Türkiye

CRAVE-H2
Crete, Greece

TRIERES
Corinthia, Greece

TH2ICINO Lombardy
region, Italy

GreenHysland
Mallorca, Spain

H2tALENT Alentejo
Region, Portugal

CyLH2Valley Region of
Castilla Y León, Spain

IMAGHyNE Region of
Auvergne-Rhône-Alpes

AdvancedH2Valley
Pays de la Loire region,
France

SH2AMROCK
Galway, Ireland

LuxHyVal
LuxHyVal

21 Hydrogen Valleys supported to date

6 Large-Scale
15 Small-scale

+ additional Hydrogen
Valleys will be
supported as of January
2026



Hydrogen ecosystem

Mazovia Hydrogen Valley

Establish a fully functional hydrogen ecosystem dedicated to airports and surrounding segments by conducting testfield applications, which will be demonstrated at Chopin Airport in Warsaw, Poland.



H₂ Hub - Włocławek

Hydrogen production by electrolysis in line with automotive standards and use of hydrogen in fertilizer production. Hydrogen transported by trailers using hydrogen fuel cell trucks.



Hydrogen fuel cell buses

Launching hydrogen fuel cell buses on the public transport in Warsaw to promote clean urban mobility, reduce emissions and implement hydrogen as a clean alternative to traditional fossil fuels in public transport.



Chopin Airport

A fleet of hydrogen-powered vehicles (e.g. towing tractors) for ground operations improving the airport's transition to low carbon solutions.



Hydrogen Refueling Station

A 24-hour public hydrogen refuelling station located near the airport handling airport vehicles and urban transport as a replicable model for sustainable urban and airport mobility infrastructure.



Co-funded by
the European Union

Hydrogen Valleys Facility

Accelerating the Deployment of Hydrogen Valleys

The H2V Facility addresses the support needs in the market with the aspiration of 50 Hydrogen Valleys operational or under construction in the EU by 2030

The Hydrogen Valleys Facility

State as of 2025



Dedicated support via the **Hydrogen Valleys Facility**

by



Delivery
partners

Roland
Berger



worley

Inycom

As per the 2024 EC
Roadmap for Hydrogen
Valleys



Project Development Assistance Services

With the Project Development Assistance, the Clean Hydrogen Partnership supports Hydrogen Valleys to mature towards feasibility stage & FID

PDA light and PDA plus programmes



Source: Roland Berger

Roland Berger | 11

1st call for applications closed on 29/09/2025

36 PDA applications received from **18** countries,

- 12 EU Member States
- 6 Horizon Europe associated countries



15 PDA beneficiaries from **11** countries

AH2V – Poland
PDA plus



Clean Hydrogen Partnership

Co-funded by the European Union

Call for Applications for Project Development Assistance (PDA)
15 Hydrogen Valleys awarded with PDA support

Synergies with National and Regional Programmes

STEP (Sovereignty) Seal



Purpose

Increase visibility of quality projects available for funding and help **attract alternative and cumulative funding for quality projects**, and simultaneously to provide a potential **project pipeline for regional and national programmes**

46 proposals from Call 2025 (6 IAs topics) awarded with the Seal (inc. Hydrogen Valleys)

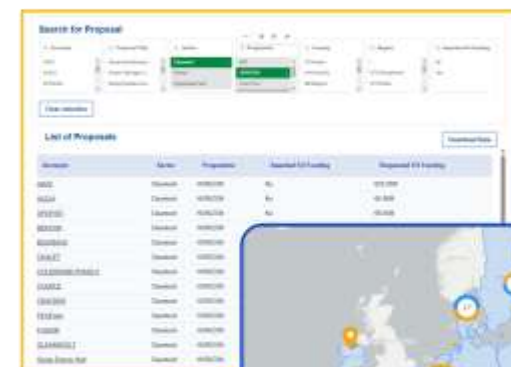
Progress to date

Subject to consent

- Projects included in EC promotional activities e.g. [STEP Seals dashboard](#)
- Information shared with EU and National funding bodies (e.g. managing authorities of cohesion policy) and with [STEP Seal National Contact Points](#) network

STEP

Projects' dashboard & interactive map



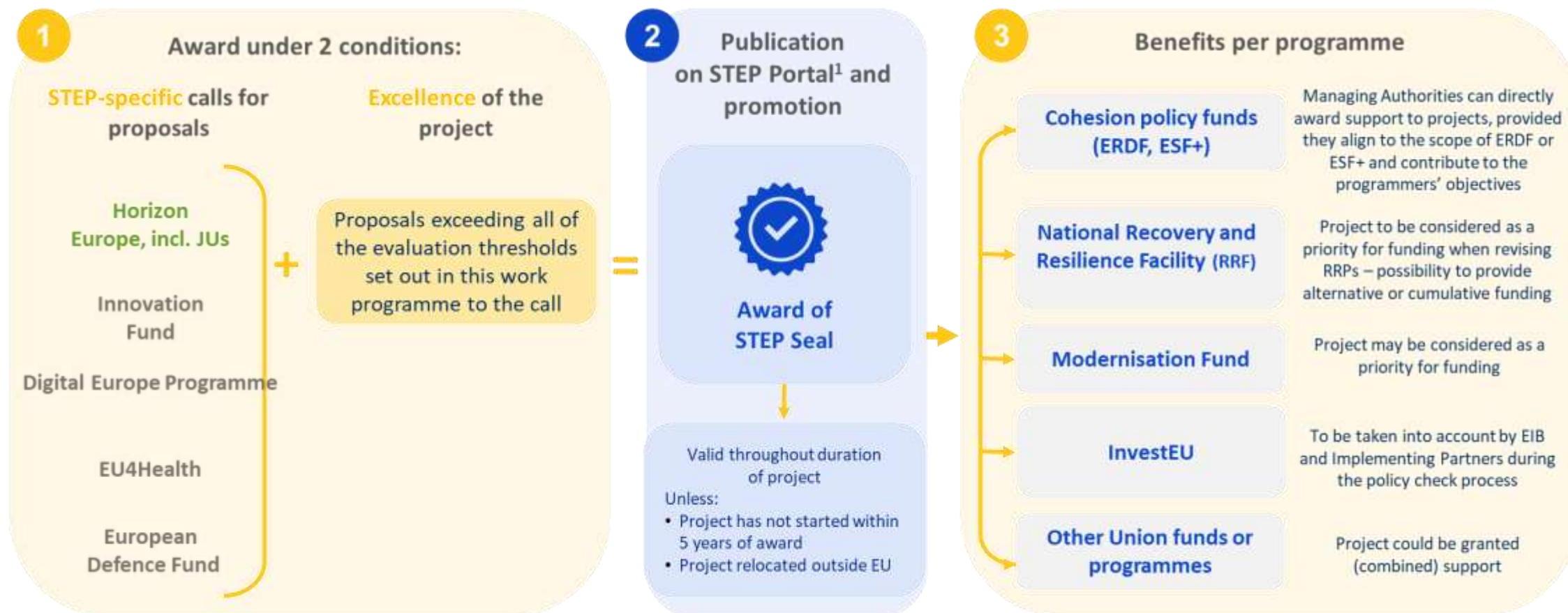
The Commission **publishes and promotes the following information:**

- Project number
- Project acronym
- Project title
- Project abstract
- Project location
- Programme name
- Topic to which you submitted your application
- Legal name and address of the applicant(s)
- Requested EU funding
- Awarded EU funding (Yes/No)

Source of the slide: DG BUDG

Synergies with National and Regional Programmes

STEP (Sovereignty) Seal - Overview



Source: DG BUDG

STEP Seal is an initiative managed by DG BUDG of the EC.

Keep in touch!

info@clean-hydrogen.europa.eu



For further information

www.clean-hydrogen.europa.eu

 Clean Hydrogen Partnership



@CleanHydrogenEU

