

Supporting European R&I in Hydrogen: the role of the Clean Hydrogen Partnership

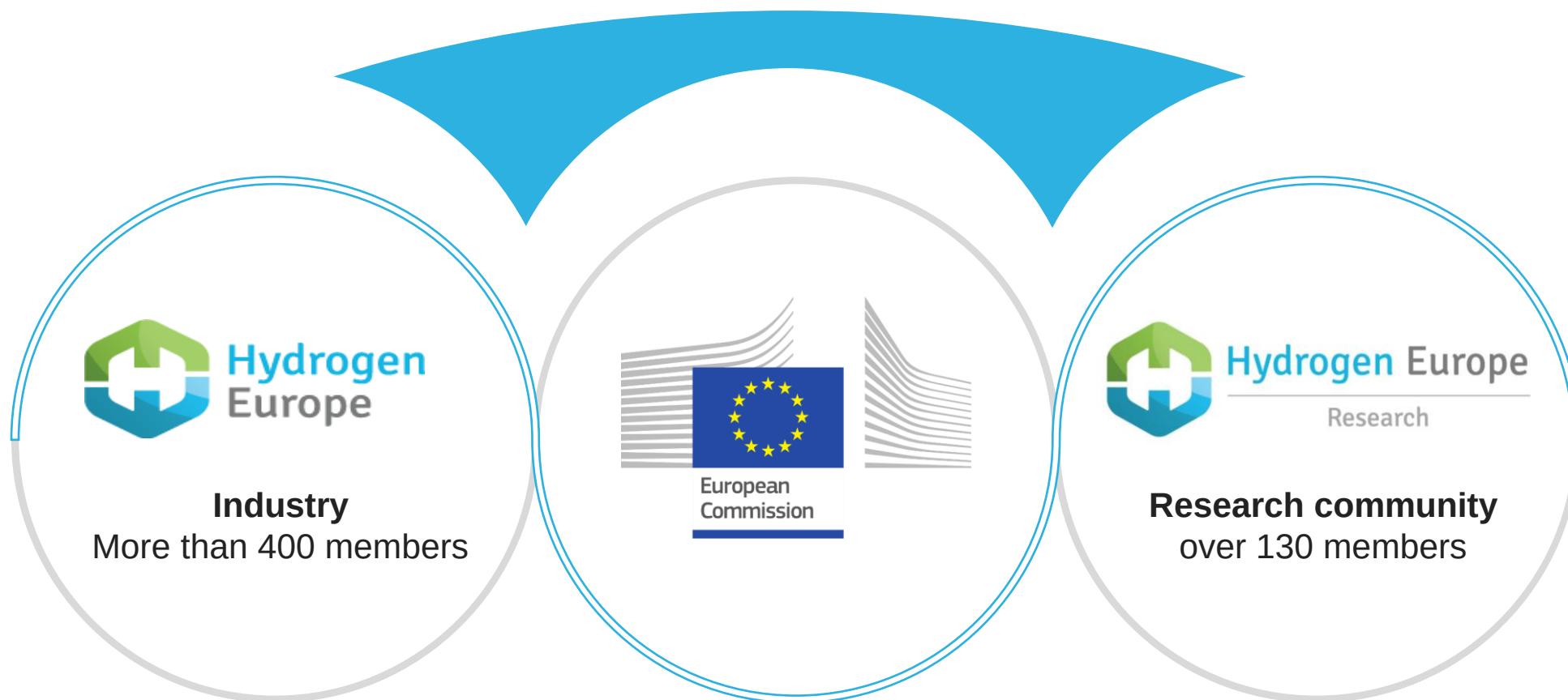
Dr. N. Lymperopoulos
Project Officer

Hydrogen & Green Gases Forum
Athens, 23rd June 2023



Clean Hydrogen Joint Undertaking

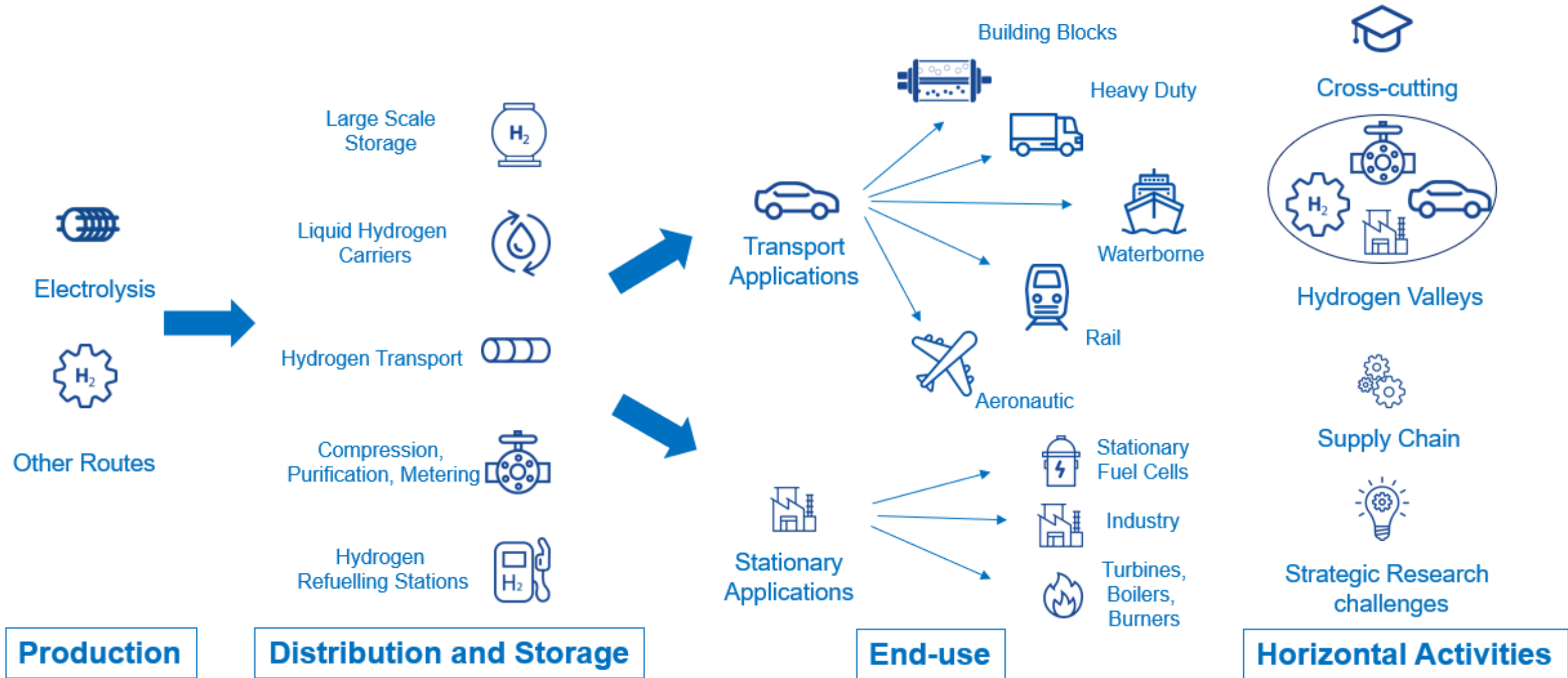
EU Institutional Public-Private Partnership (IPPP) **2021-2027**



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

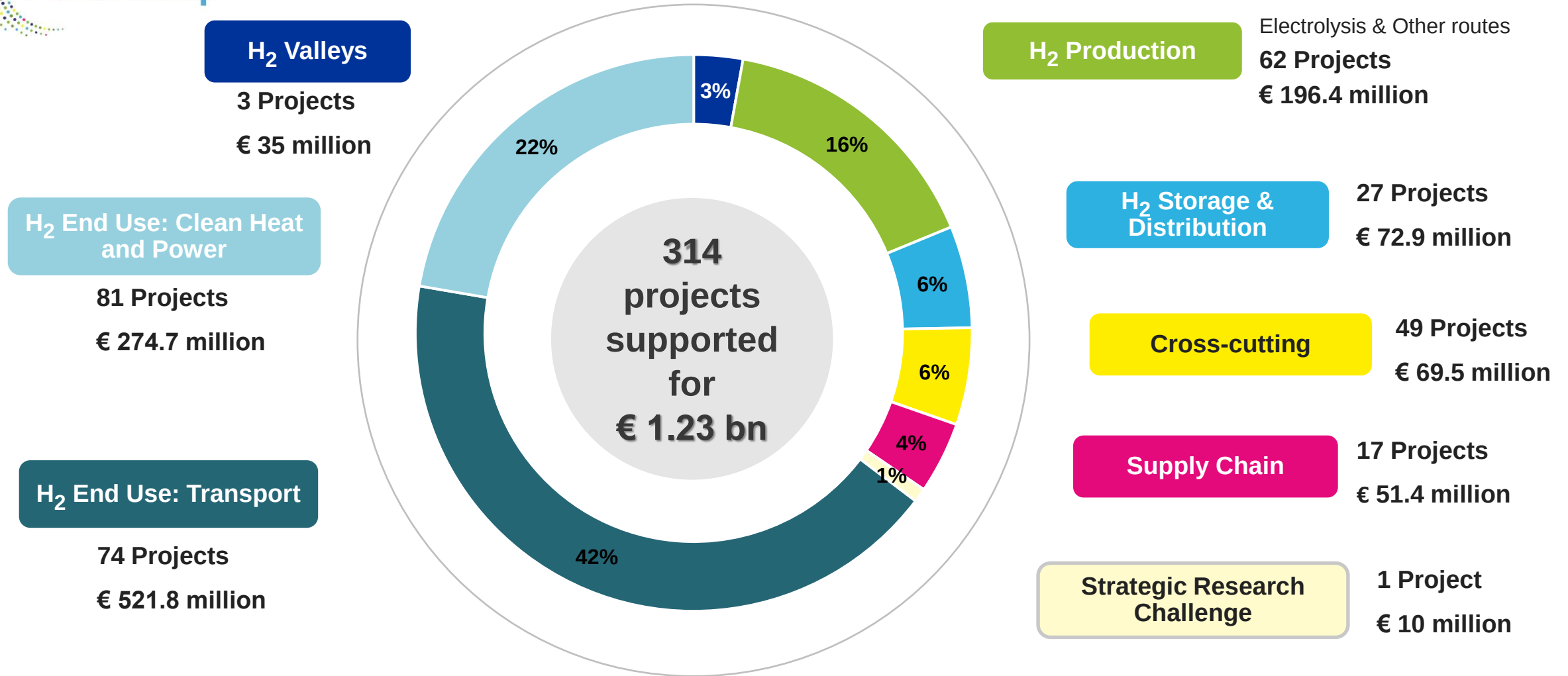
*** additional 200 million EURO for Hydrogen valleys (under RePowerEU)**

Clean Hydrogen JU Strategic Research and Innovation Agenda 2021 – 2027



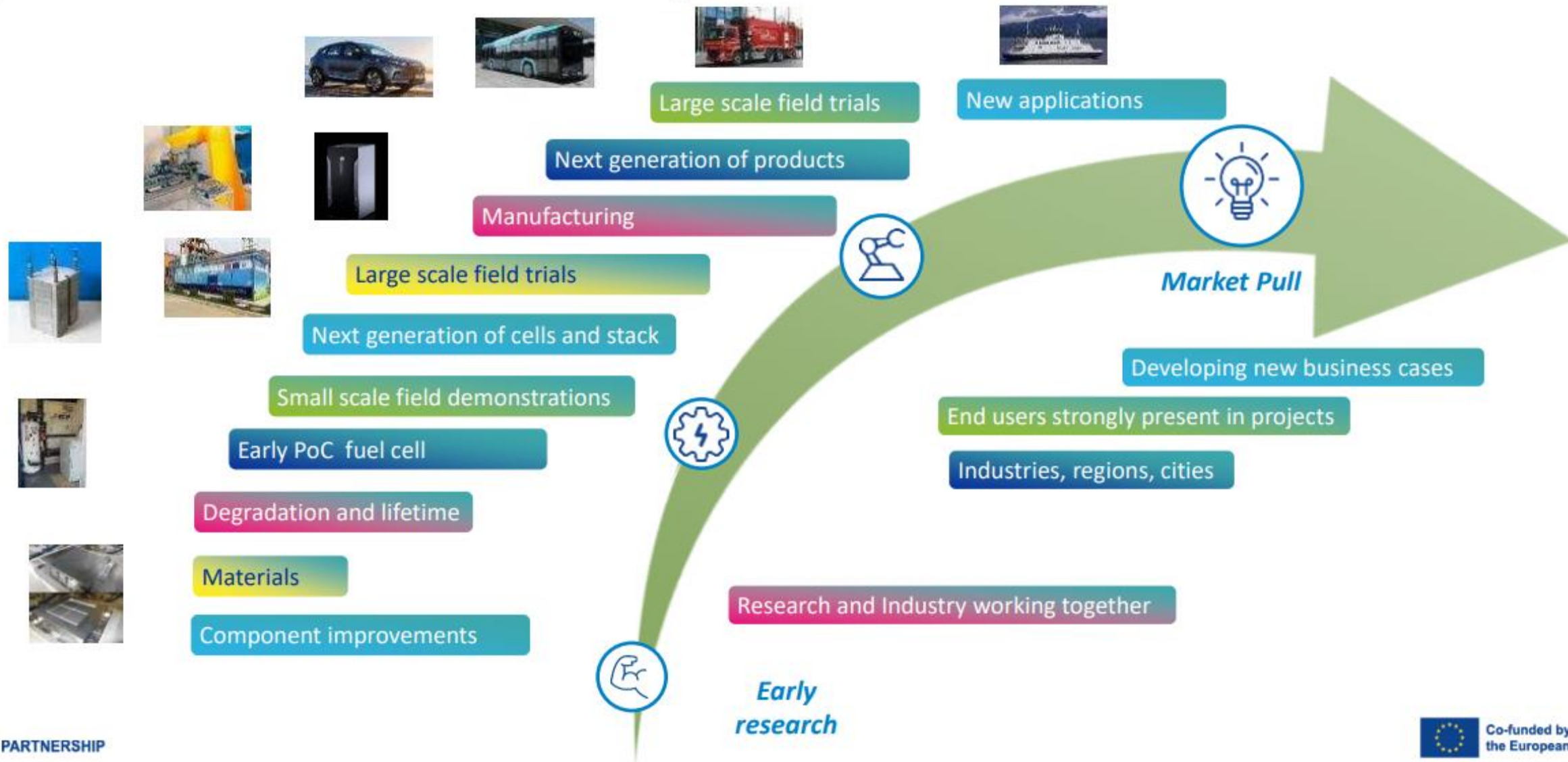
Clean Hydrogen JU Programme (2008-2022)

4



15 years journey of the Joint Undertaking

From research to delivering solutions in the market



LT Electrolysis Demonstration projects

- In 11 years electrolyser capacity increased 500× and funding per MW installed reduced 100×

Project: Don Quichote
Place: Belgium
Date: 2011
Electrolyser: Hydrogenics
Funding: 5.0 m€



Project: Haeolus
Place: Norway
Date: 2017
Electrolyser: Hydrogenics
Funding: 5.0 m€



Project: H2future
Place: Austria
Date: 2016
Electrolyser: Siemens
Funding: 12 m€



Project: Djewels
Place: The Netherlands
Date: 2018
Electrolyser: McPhy
Funding: 11 m€



0.15 MW

1.2 MW

2.5 MW

3.2 MW

6.0 MW

10 MW

20 MW

25 MW

Project: Hybalance
Place: Denmark
Date: 2014
Electrolyser: Hydrogenics
Funding: 8.0 m€



Project: Demo4grid
Place: Austria
Date: 2016
Electrolyser: IHT
Funding: 2.9 m€



Project: Refhyne
Place: Germany
Date: 2017
Electrolyser: ITM
Funding: 10 m€



Project: EPHYRA
Place: Greece
Date: 2023
Electrolyser: TBA
Funding: 17.7 m€

EPH
YRA → TRIE
RES

PEMEL

AEL

FC buses deployment in CleanH2 JU projects

A chronological perspective

2009 CH₂IC
#26 BUSES

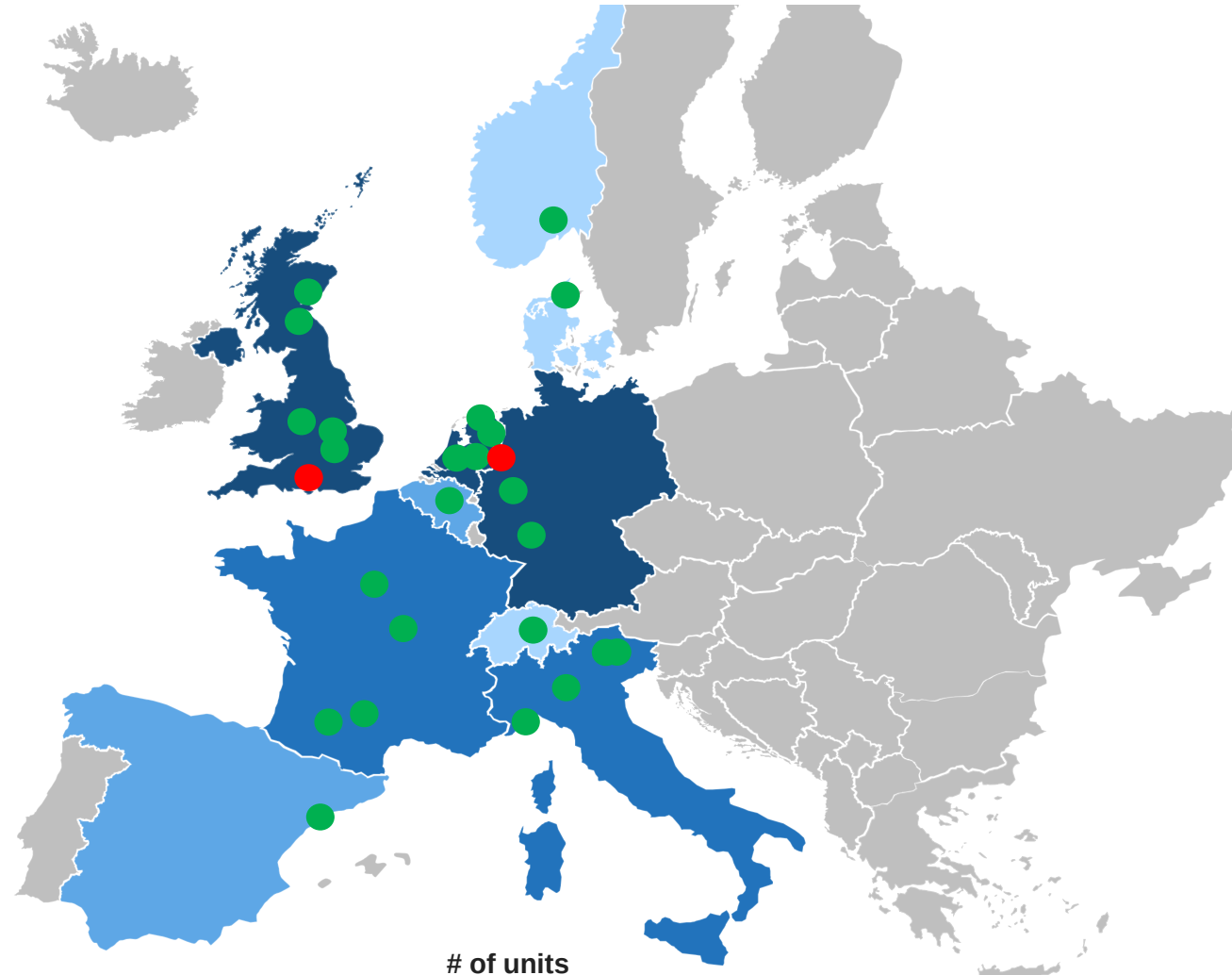
2010 HIGHVLOCITY
#14 BUSES

2011 HyTransit
#6 BUSES

2013 BEmotion
#21 BUSES

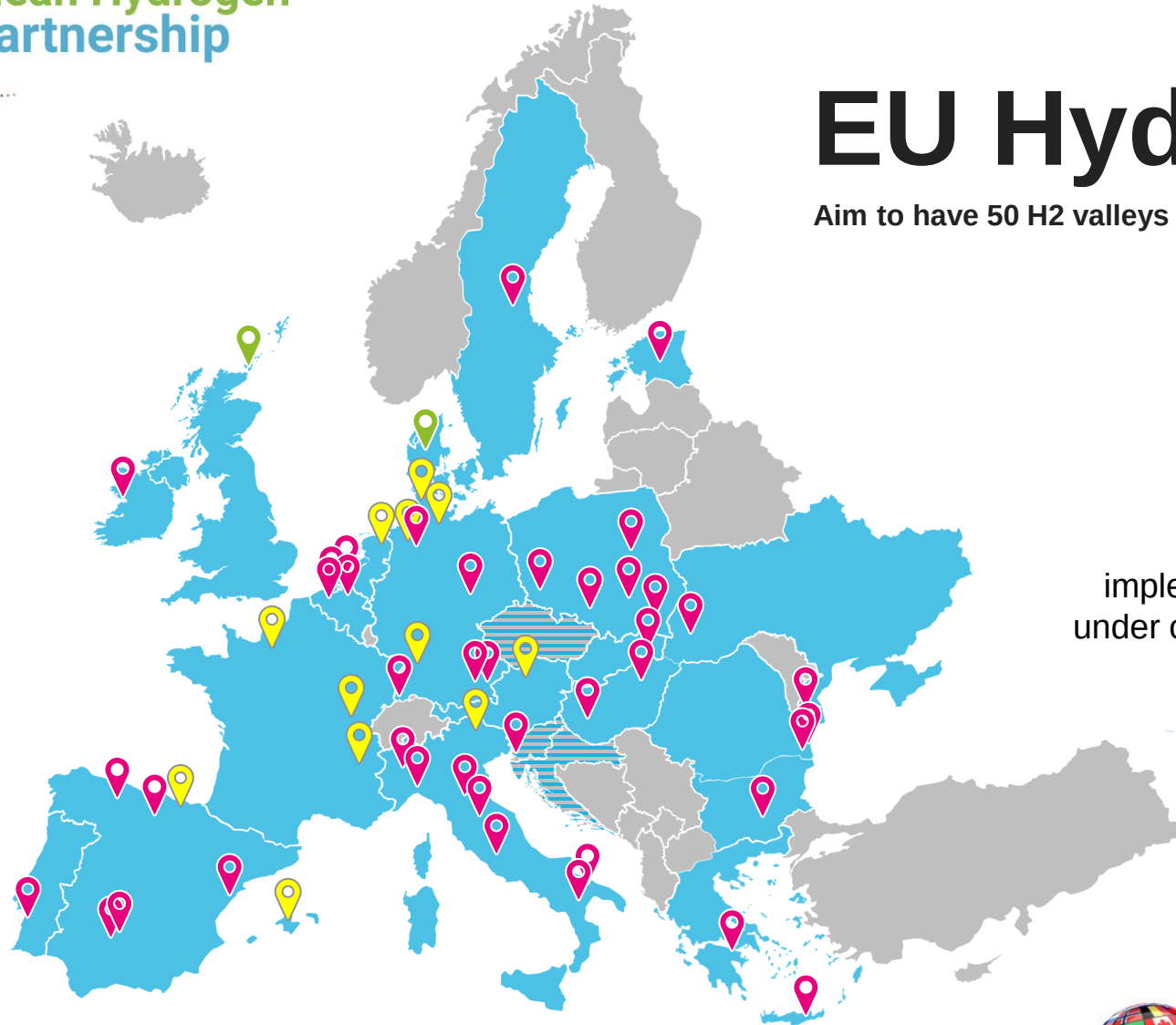
2016 JIVE
#142 BUSES

2017 JIVE 2
#152 BUSES

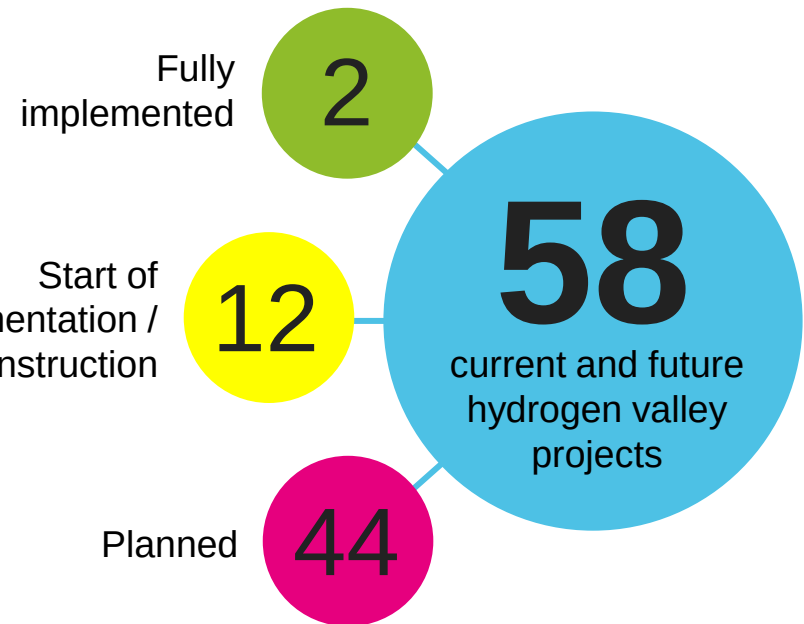


EU Hydrogen Valleys

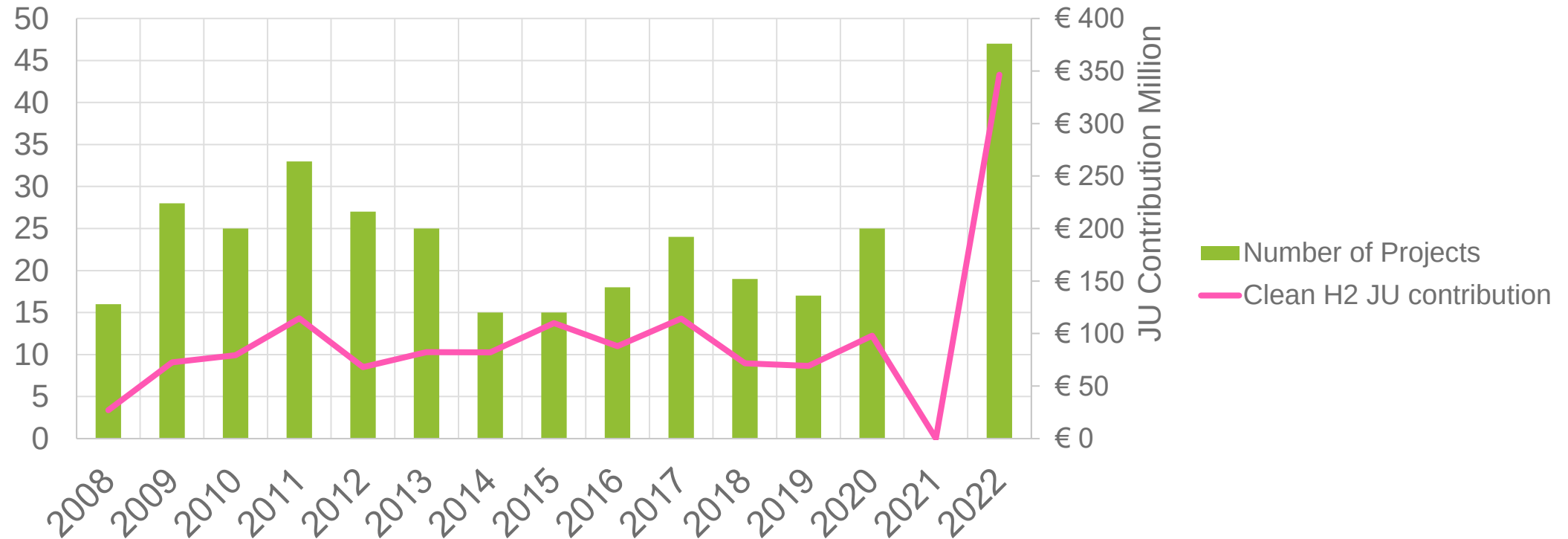
Aim to have 50 H2 valleys by 2025 under construction in Europe



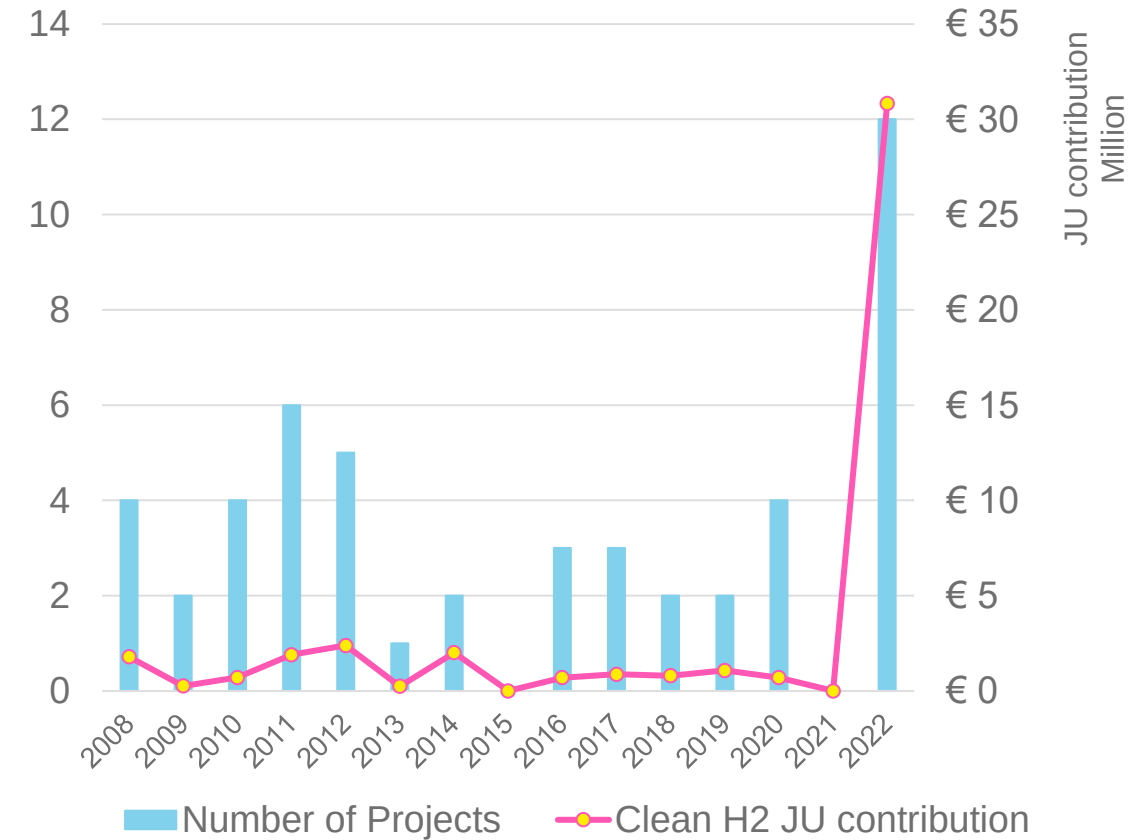
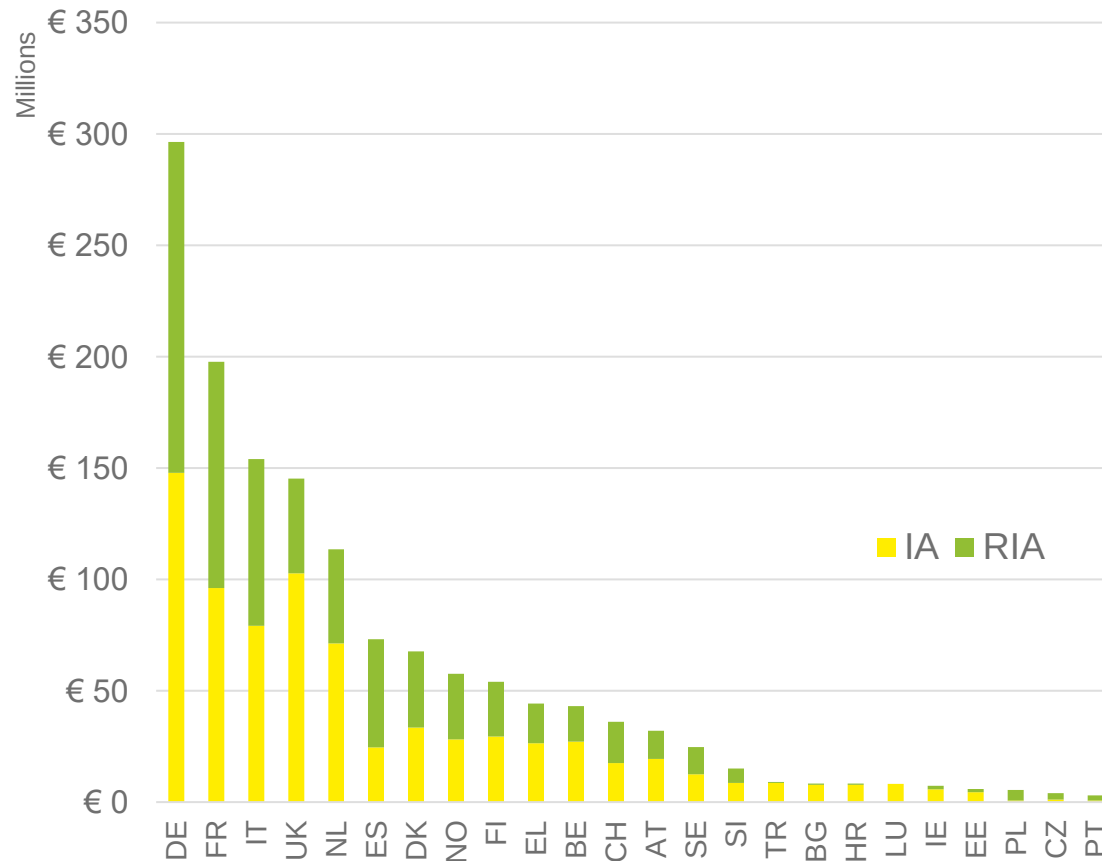
● Hydrogen valley located
● Member of the crossborder hydrogen valley
● No hydrogen valley located



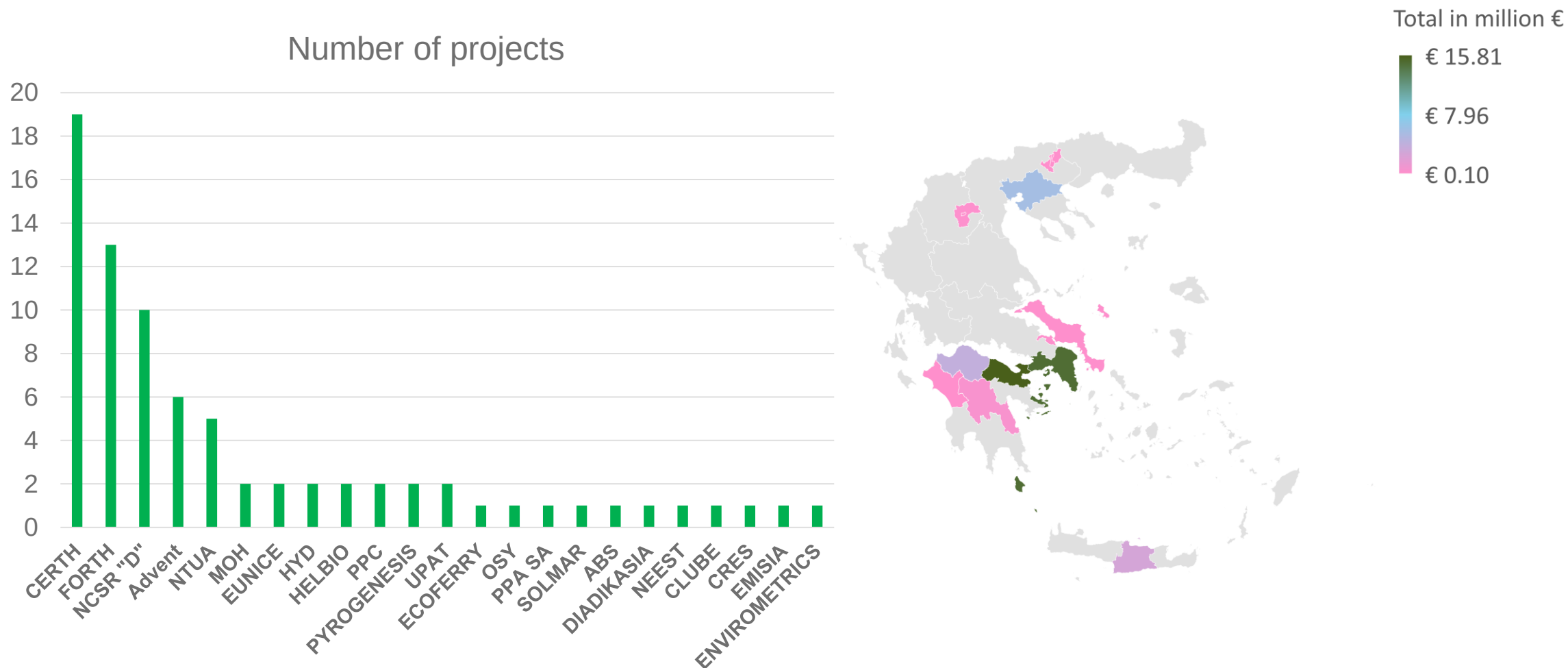
JU funding & No. of Projects



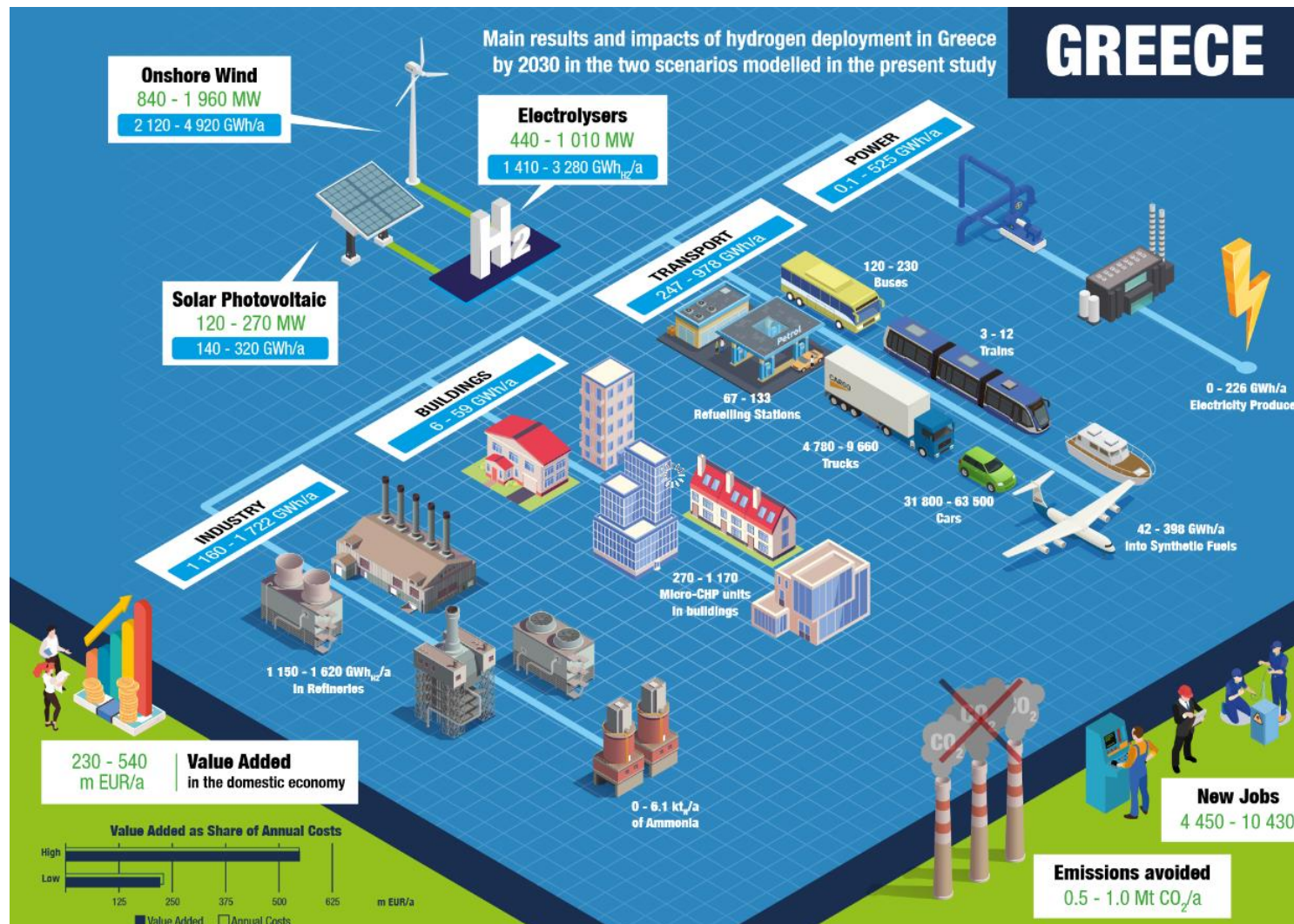
JU funding per MS (L) and to Greece (R)



48 Greek beneficiaries in JU projects



JU 2020 Study on H₂ in NECPs



Thank you!

Nikolaos LYMPEROPOULOS
Project Officer

Nikolaos.lymperopoulos@clean-hydrogen.europa.eu

For further information

<https://www.clean-hydrogen.europa.eu/>

