

Hydrogen Valleys, a success story for Europe and the Nordic Countries

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Clean Hydrogen Joint Undertaking

EU Institutional Public-Private Partnership (IPPP)

Stakeholder
Group

States
Representative
Group



**Industry
Association**
more than 620
members



**Research
community**
more than 160
members

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

2008-2026 Cumulative funding

25 Projects
€ 320 million

H₂ Valleys

16%

H₂ Production

100 Projects
€ 383 million

19%

H₂ End Use: Clean Heat and Power

93 Projects
€ 325 million

16%

H₂ Storage & Distribution

45 Projects
€ 181 million

9%

Cross-cutting

61 Projects
€ 97 million

5%

H₂ End Use: Transport

86 Projects
€ 583 million

29%

Supply Chain

18 Projects
€ 58 million

3%

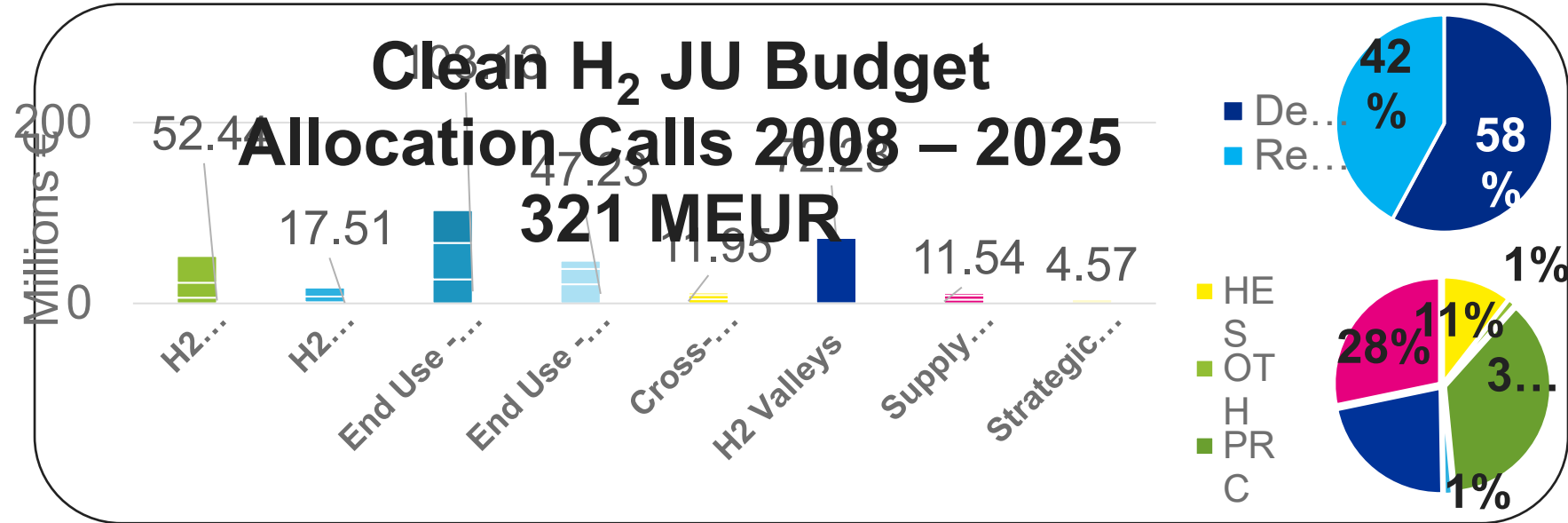
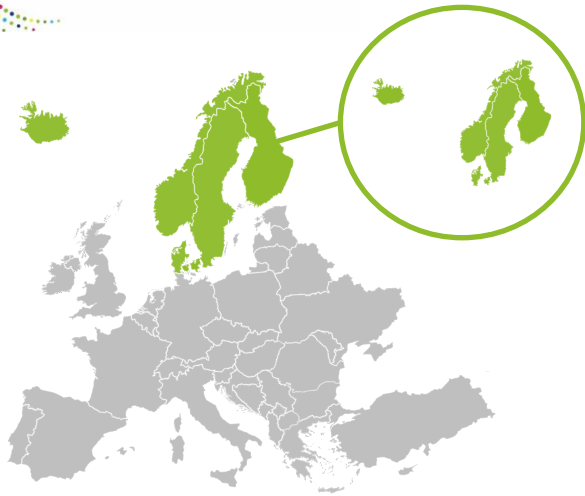
Strategic Research Challenge

3 Projects
€ 29.6 million

1%

431 projects supported for € 1.98 bn





JU funds
320.8 M €

Projects
257

Beneficiaries
251

SMEs
28%

- Top funded Projects:**
- H2Accelerate TRUCKS
 - BalticSeaH₂
 - HiWhyV
 - NORHyWAY
- Top Beneficiaries:**
- VTT, FI – 27.6 M€
 - SINTEF AS, NO – 22 M€
 - DTU, DK – 18.7 M€
 - Powercell, SE – 17.3 M€

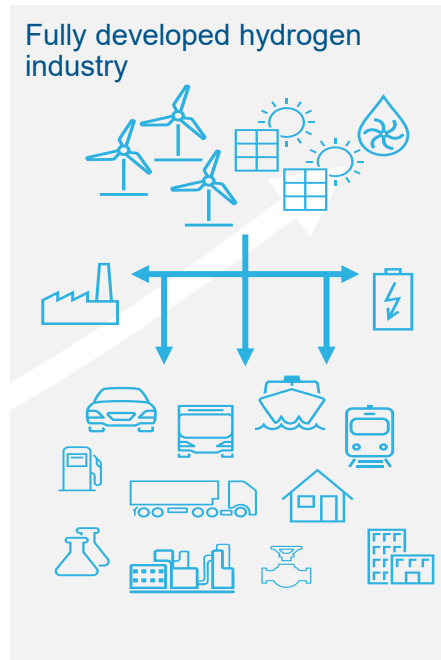
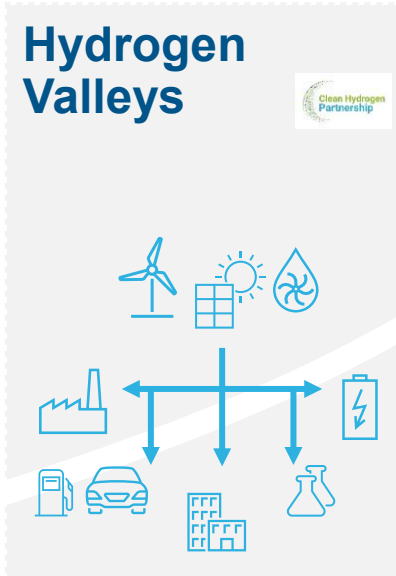
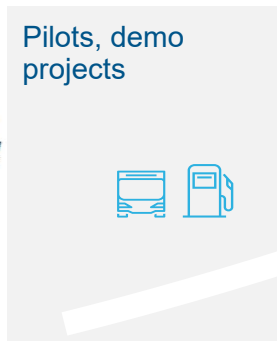
- Project Development Assistance of H₂ Valleys:**
- HyCoast (Region around Bergen, NO) – PDA Light

- H₂ Valleys supported by the JU**
- **BalticSeaH₂** - (Baltic Sea countries, S. Finland, Estonia) – *EU funding: 25 M€ / Total cost: 33.2 M€*
 - **CONVEY** - (N. Denmark) - *EU funding: 9 M€ / Total cost: 22 M€*
 - **HYCELAND** – (Iceland) *EU funding: 9 M€ / Total cost: 62 M€*
 - **HiWhyV** – (Sweden) - *EU funding: 19.8 M€ / Total cost: 24.5 M€*
 - **NORHyWAY** – (Norway) – *EU funding: 17.8 M€ / Total cost: 23.5 M€*

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

Bottom-up contribution to market development

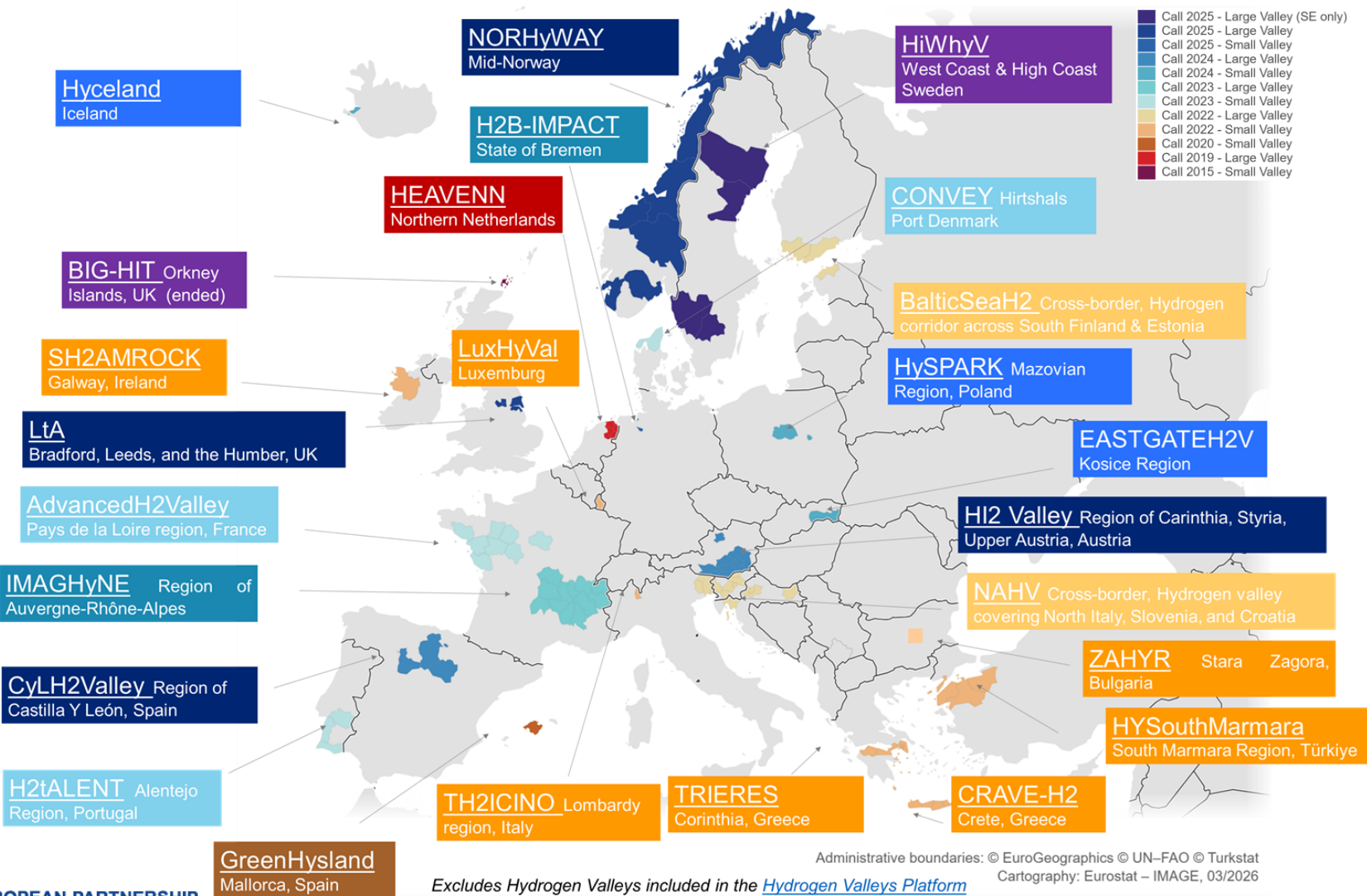
- Next-generation H2 market development
- Integrated (and larger-scale) projects covering the full value chain



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)

Repowering the EU with Hydrogen Valleys Support to pre-FID activities & CAPEX



25 Hydrogen Valleys

Total costs 1,600 M€

Across 22 countries

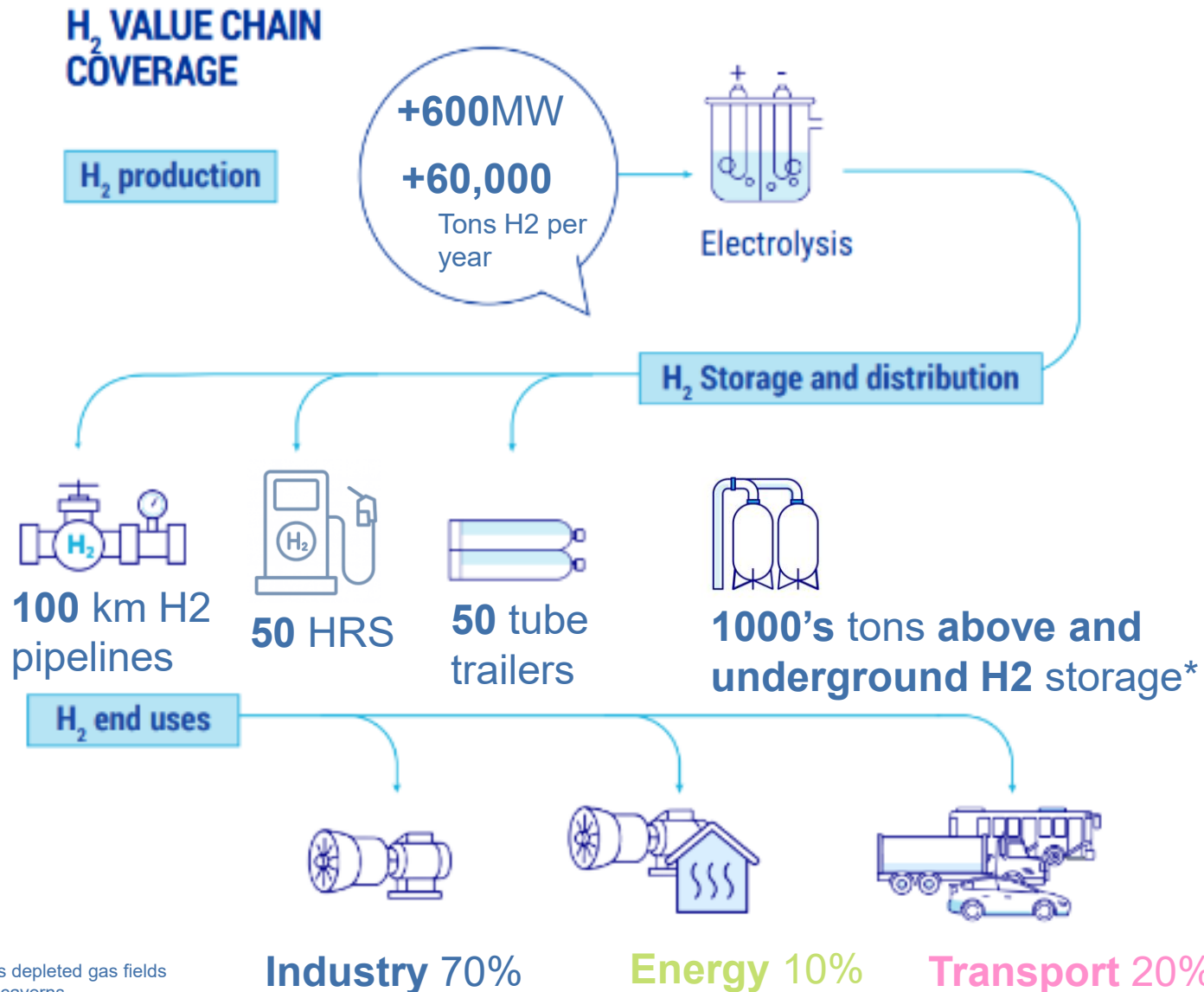
JU funding 320 M€

602 unique partners

133 SMEs with 27% of the funding

Hydrogen Valleys Value Chain Coverage

Indicative plans (exc. Call 2025)



Energy

100 MW fuel cell for heat & power
 Gas/H₂ turbines
H₂ blending gas grid
Heat only (domestic, commercial, industry)

Industry

Ammonia production
Refineries
Steel making
Other chemical industry

Transport

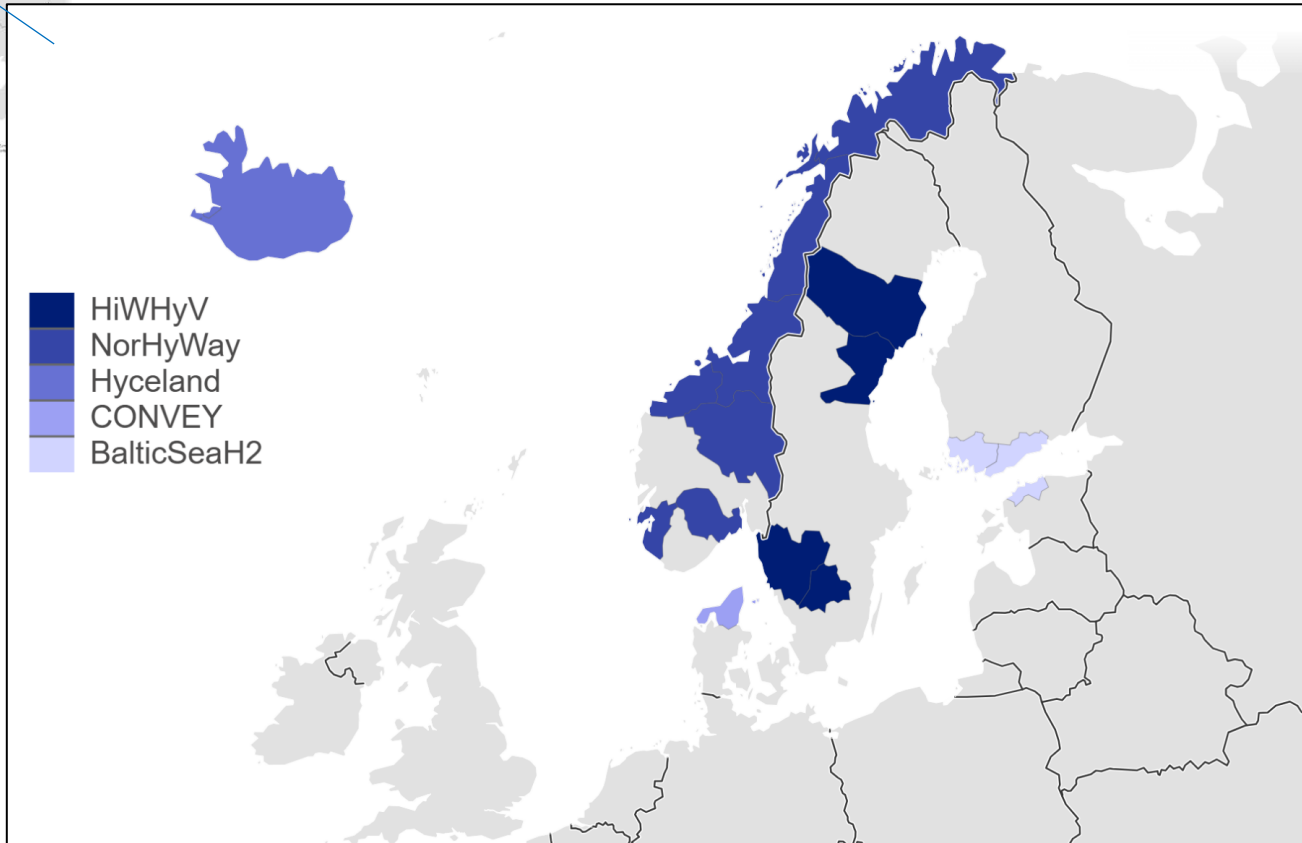
+150 buses
 ~**200** Long-Haul trucks
 ~**7** garbage trucks
 ~**4** vessels
+150 vans
Light duty vehicles (taxis)
 non-road-mobile machinery (forklifts, tractors, etc.),
Others

*Includes depleted gas fields and salt caverns

Repowering the EU with Hydrogen Valleys

Focus on Nordic Countries

Nordic Hydrogen Valleys



5
Nordic Hydrogen Valleys

Total costs*
165 M€

Across 5 Nordic countries

JU funding
81 M€

135 unique partners

47 SMEs with 41 of the funding

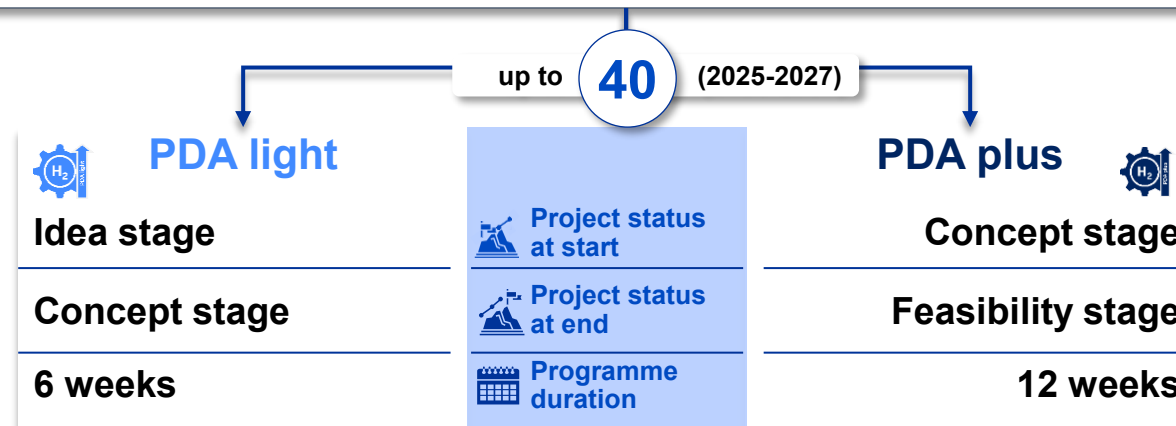
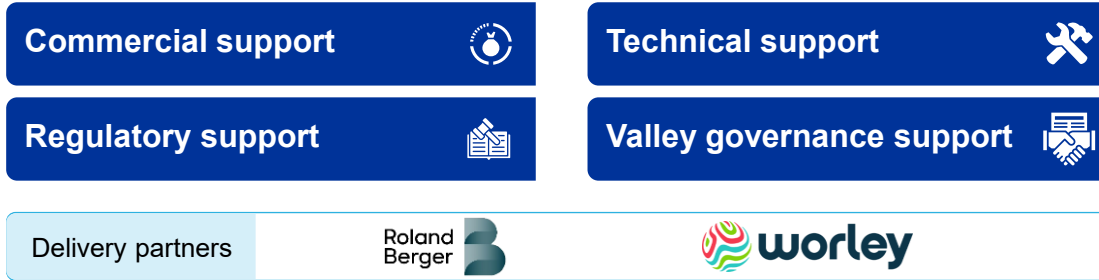
The PDA support by the Clean Hydrogen Partnership aims to advance Hydrogen Valleys across Europe to FID

Project Development Assistance (PDA)



The Clean Hydrogen Partnership offers PDA services to hydrogen projects in the EU and in countries associated to Horizon Europe.

The tailored expert support is delivered by Roland Berger and its technical subcontractor Worley.



Source: Roland Berger

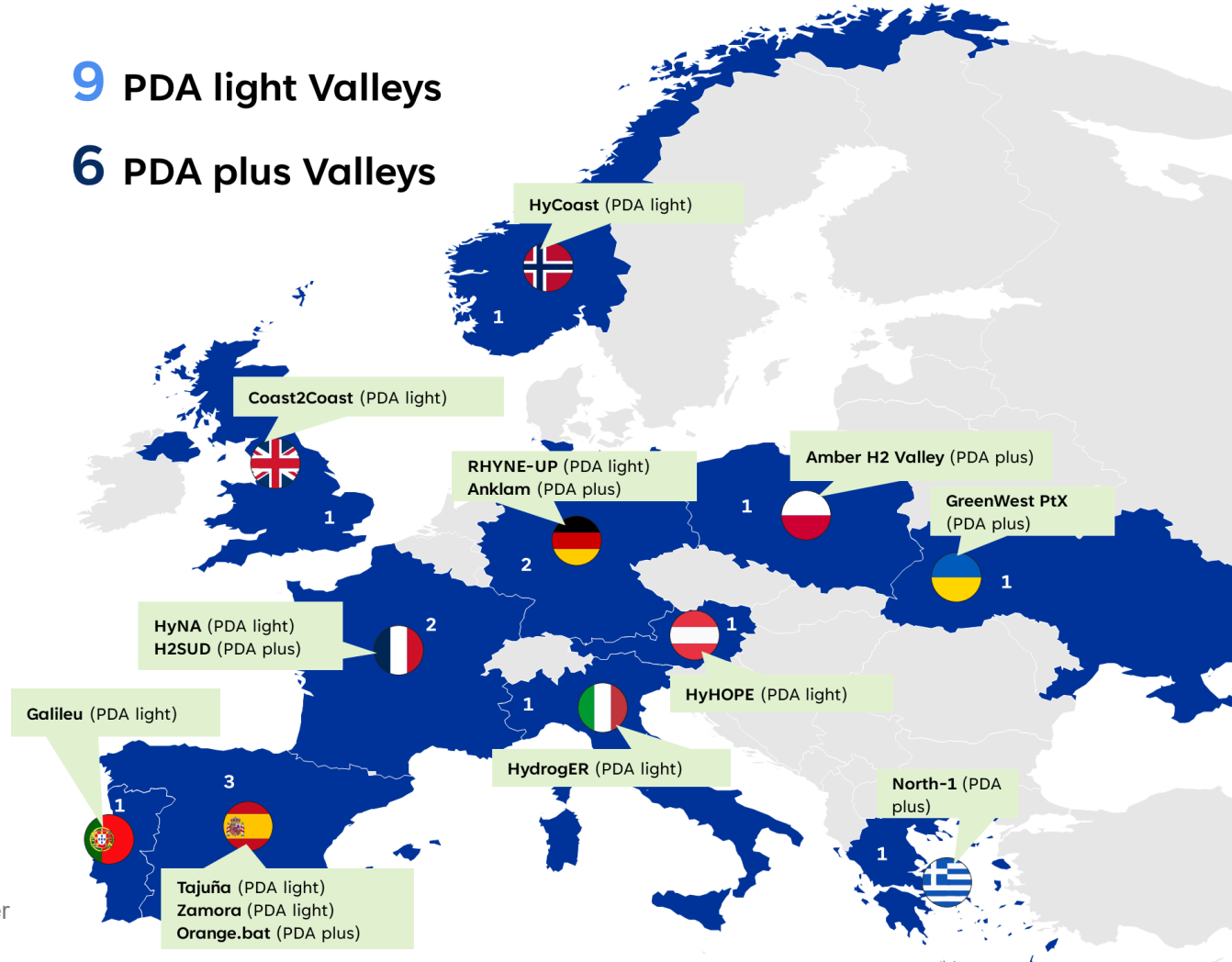


First Call for PDA Applications

15 Hydrogen Valleys from 8 EU Member States & 3 associated countries received PDA support

9 PDA light Valleys

6 PDA plus Valleys



9 PDA light		6 PDA plus	
EU Member States	Associated Countries	EU Member States	Associated Countries
			

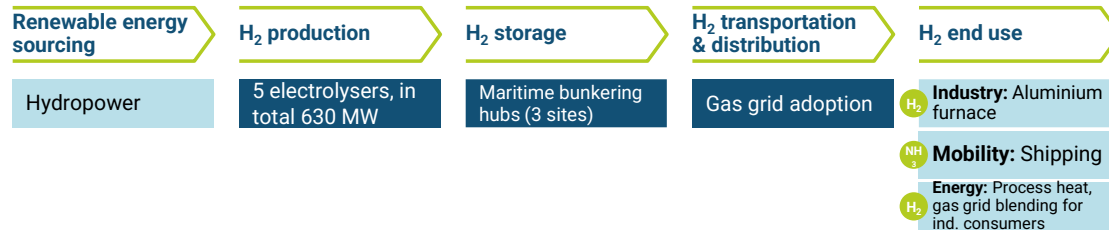
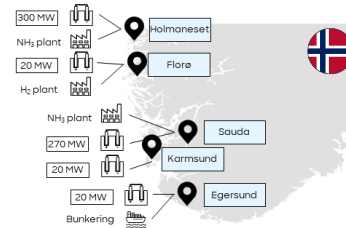
1 PDA Light awarded to Nordic valley – HyCoast from Norway

HyCoast – Region around Bergen, Norway

From idea to concept stage

HyCoast in a nutshell

- **Description:** Fully integrated hydrogen ecosystem, connecting large-scale renewable hydrogen production with a cumulated 630 MW electrolysis. In addition to the H₂ production, the Hydrogen Valley also includes storage, transport and maritime bunkering hubs at 3 sites, with industry (aluminium furnace) and mobility (shipping) as key planned end uses
- **Lead developer:** Energy Transition Norway (consortium organisation)
- **Electrolyser size [MW]:** 630 MW
- **H₂ & derivatives output:** 46 ktpa H₂, 225 ktpa NH₃
- **Timeline:** Different FID and COD milestones with HYDS starts operations in 2028; Valley output surpasses 7 ktpa H₂ by 2028
- **Status:** Concept phase/feasibility stage



■ Covered directly by lead developer ■ Covered by other members of the Hydrogen Valley/third parties

● H₂ Hydrogen ● Me OH Methanol ● NH₃ Ammonia ● e-SAF e-SAF ● e-Naphta e-Naphta

Key areas of PDA support

Commercial

- Local offtake analysis (Willingness-to-pay & demand)
- NH₃ capacity review at EU ports



Technical

- Hydrogen and natural gas mixing concept for one Hydrogen Valley project



Regulatory

- Review local regulation on offshore vessels



Valley govern.

- n/a



Planned next steps in the Hydrogen Valley development

- Consolidation of industry commitment and optimization of consortium size
- Focus on building domestic success stories first, while having a long-term international vision
- Pursuit of funding opportunities in a short- to mid-term timeframe

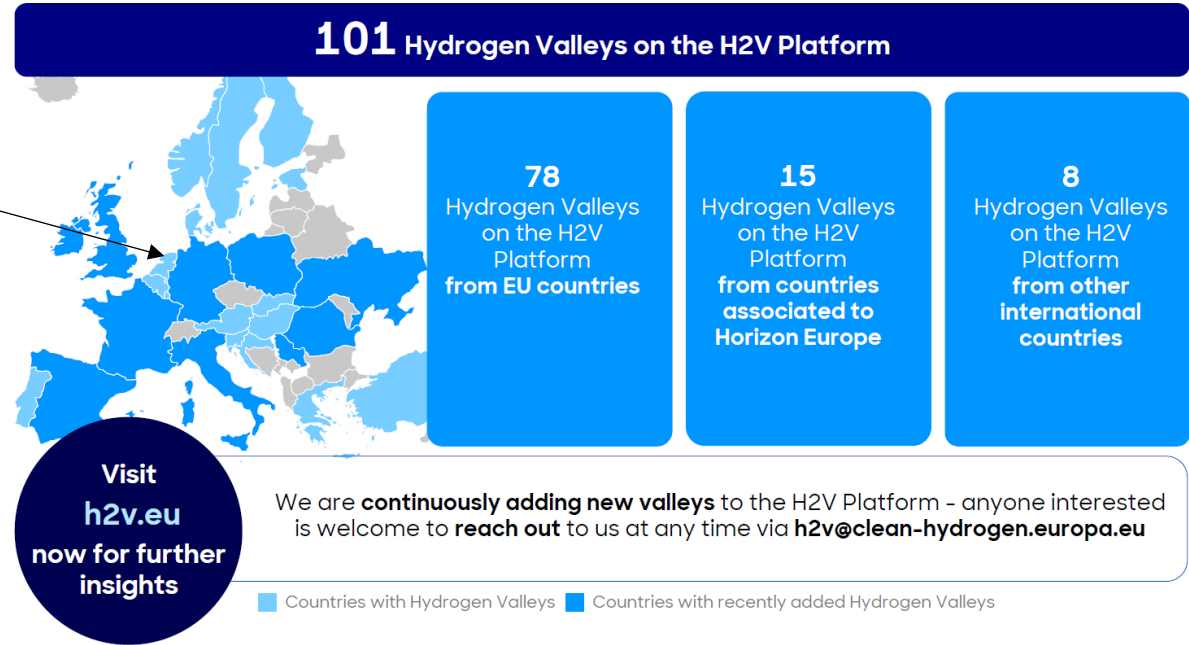
Hydrogen Valleys Platform

For the first time the Hydrogen Valleys Platforms hosts over 100 Valleys, including 78 from the EU

Results of the recent data update of Hydrogen Valleys on the H2V Platform













Featuring 15 Hydrogen Valleys in Nordic countries

1 in operation, 2 under construction, 12 at pre-FID



Status at February 2026

101 Hydrogen Valleys
Thereof, **12** newly onboarded:

-  Hydrogen Valley Anklam
-  H2SUD Vallée
-  HydrogER
-  H2 Nexus Nodes
-  COMPOSTILLA GREEN
-  Transylvania Hydrogen Valley
-  TAJUÑA H2
-  HyNA Hydrogen Valley
-  Coast 2 Coast
-  H2V Rasina Hydrogen Valley
-  H2Milk Wales
-  GreenWest PTX

Source: H2V Platform (h2v.eu), Roland Berger

Roland Berger | 1

EU Hydrogen Valleys Days

4-8 May 2026, Antwerp



- **4 May** – Internal workshop of the H2 Valleys and Managing Authorities
- **5 May** – DG GROW European Clean Hydrogen Alliance Forum
- **6 May** – [public event](#): “*Hydrogen Valleys: An Engine for Competitiveness in the Regions*”, co-organised with DG RTD
 - how Hydrogen Valleys strengthen competitiveness across its regions
 - support the scale-up of hydrogen production and use in line with Europe’s energy and industrial objective
- presence of the pioneering vessel **Energy Observer**
- Planned visits throughout the week



THANK YOU



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

