



FUEL CELLS AND HYDROGEN
JOINT UNDERTAKING

Overview of Initiative with Regions and Cities

CARLOS NAVAS

Programme Review Days

14 November 2018

Strong support from industry

76 industrial partners participating



The FCH JU's Regions and Cities Initiative aims at driving FCH market development in Europe based on a broad stakeholder coalition



Project coalition and rationale



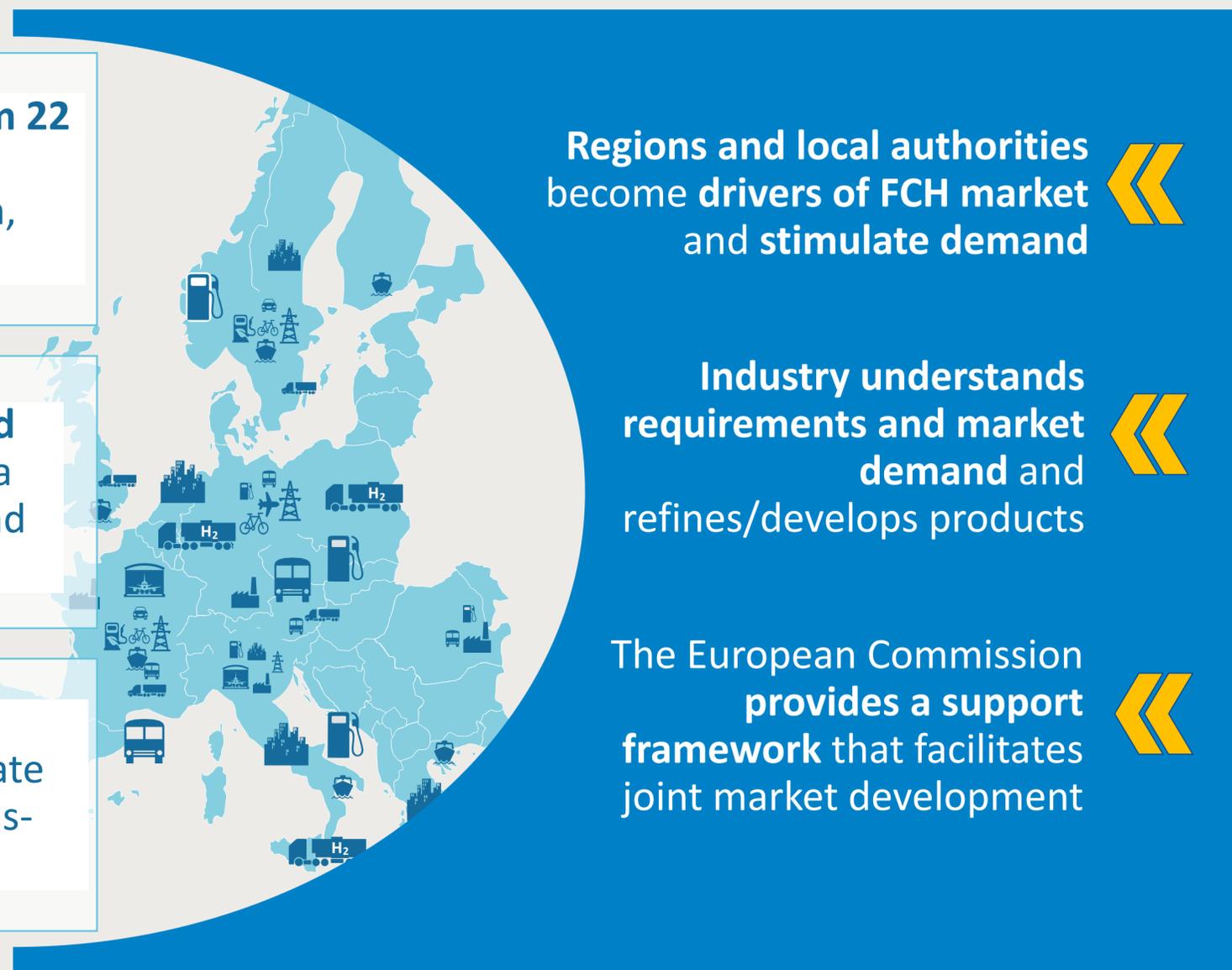
91 European cities and regions from 22 countries representing approx. one quarter of European population, surface area and GDP



76 companies from the fuel cell and hydrogen (FCH) industry providing a broad range of relevant products and solutions



The Fuel Cells and Hydrogen Joint Undertaking – A unique public-private partnership of the European Commission, Industry and Research



FCH = Fuel cells and hydrogen

OBJECTIVES OF THE STUDY

Main objective is to enable European regions and cities to become key drivers of FCH market development



Support regions in assessing various FCH applications



Support the participating regions/cities to engage their stakeholders



Develop roadmaps and concepts for the months after the study, prepare and implement deployment projects from 2018



Identify and maximize the use of regional and Europe-wide funding/financing options



Strong interest in future FCH deployments in European regions and cities, and a need for continued support



Key findings from joint work in the initiative



Strong future role of FCH



Ambitious plans for future FCH deployments – Associated investments of ~ EUR 1.8 bn; a large part of these projects are very likely to be implemented and have already reached advanced development stages



Substantial long-term market potential – Participants expect the FCH market in Europe to accelerate substantially after 2025



Need for continued support – Continued support framework is necessary that facilitates individual project developments as well as collaboration and exchange within the project coalition



Regions and cities plan to deploy a range of FCH applications mainly from the transport sector – Significant uptake after 2025



Summary of deployment plans per application

Applications	Next implementation projects	Long-term outlook	
	Total 2018-2022	Until 2025	Until 2030
Trains	86	189	161
Buses	879	1,003	1,659
Heavy-duty trucks	70	274	9,110
Cars	2,474	17,405	191,585
Vans	955	1,565	21,140
Garbage trucks	230	144	206
Sweepers	37	2	5
Construction mobile equipment/ tools	15		
Material handling/ forklifts	239	80	70
Bikes	138	115	50
Scooters	13		
Ships/ ferries/ boats	18	8	57
Port operations equipment	6	2	23
CHP	2,049	10,102	50,161

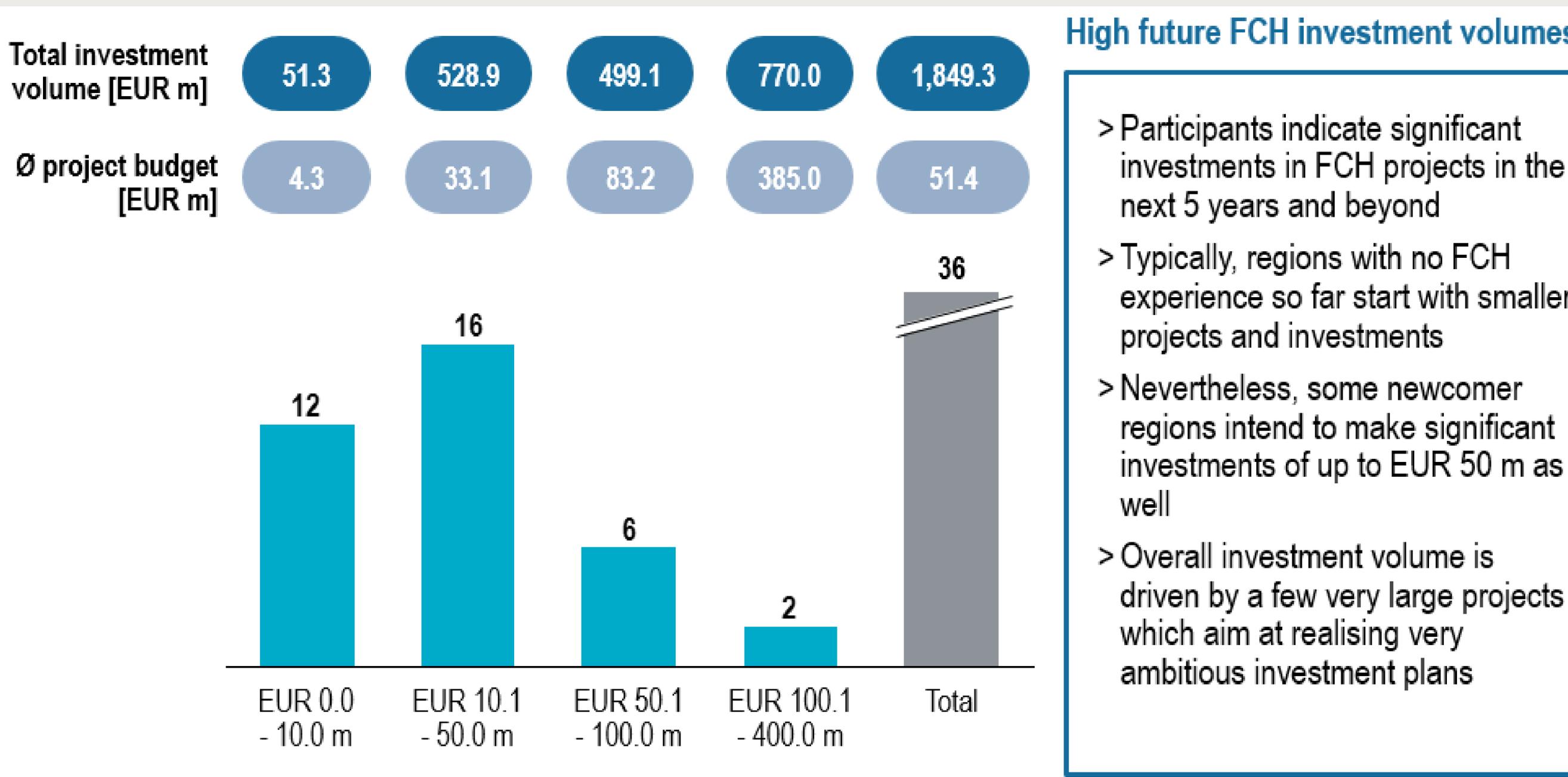
Hydrogen production and related infrastructure were also assessed



Planned deployments result in total investments of >EUR 1.8bn in the next 5 years – Majority small to medium sized projects



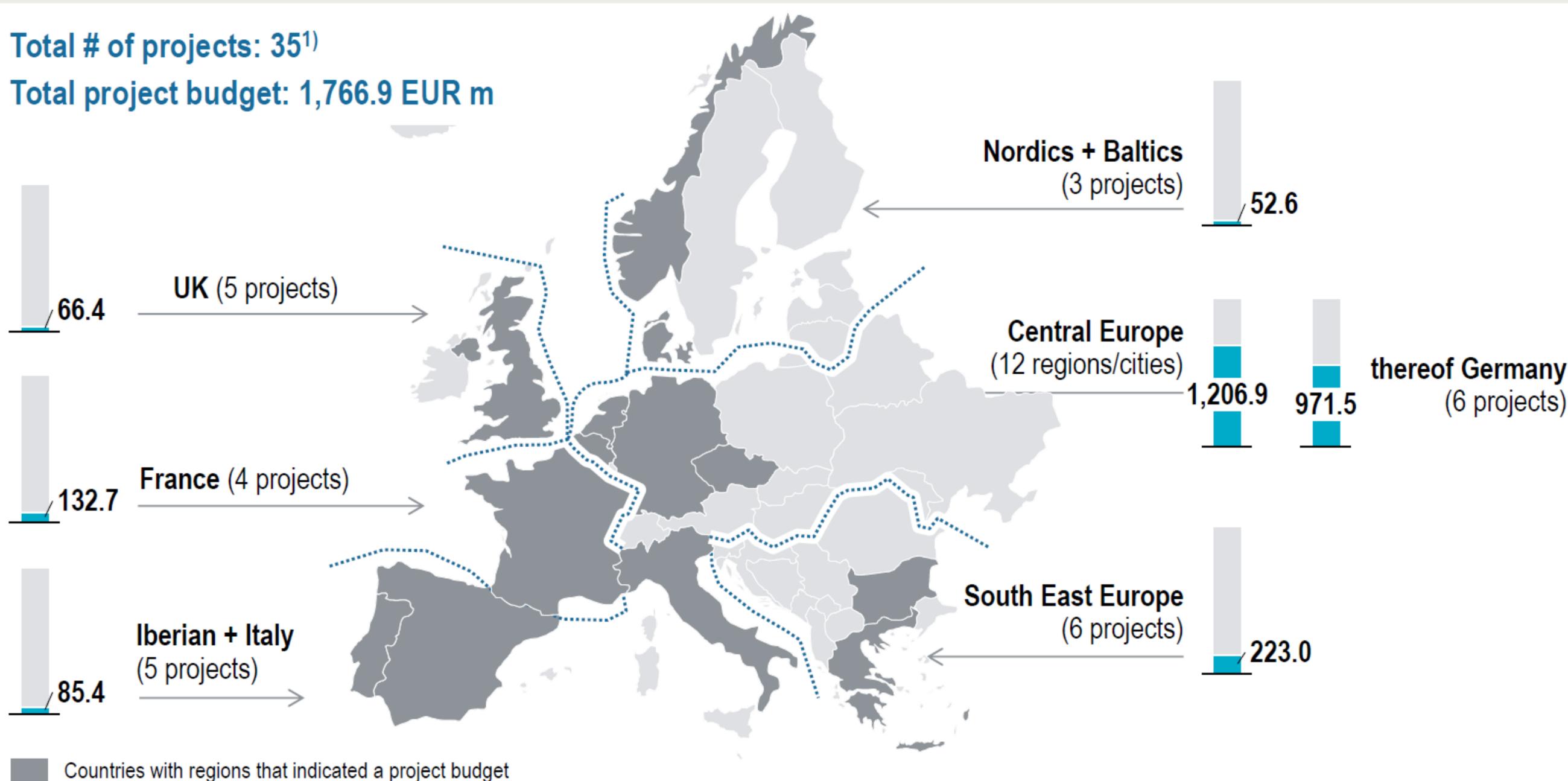
Envisaged investment volumes for next implementation projects



Indicated investments are spread over 35 projects covering 41 regions in 13 countries – Large majority is to be realised in Germany



Total next implementation project budget per country cluster [EUR m]



1) Number of projects with an indicated budget covering 41 locations in total



Majority of participants see the implementation likelihood of their projects as "certain"/"very likely" triggering significant investments

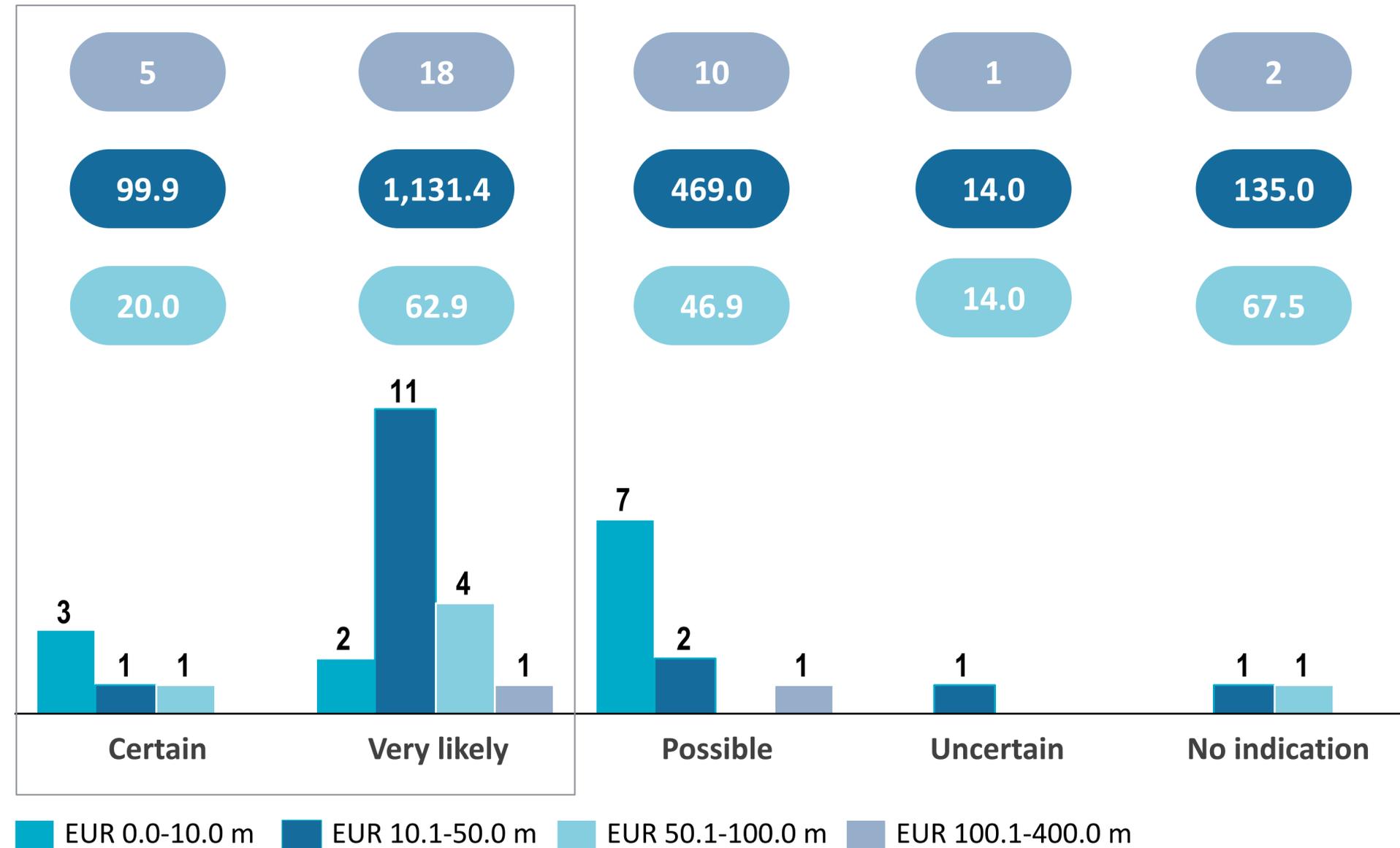


Envisaged investment volumes according to project implementation likelihood [#]

Total no. of projects per category [#]¹⁾

Total investment volume of all projects [EUR m]

Ø Project budget [EUR m]



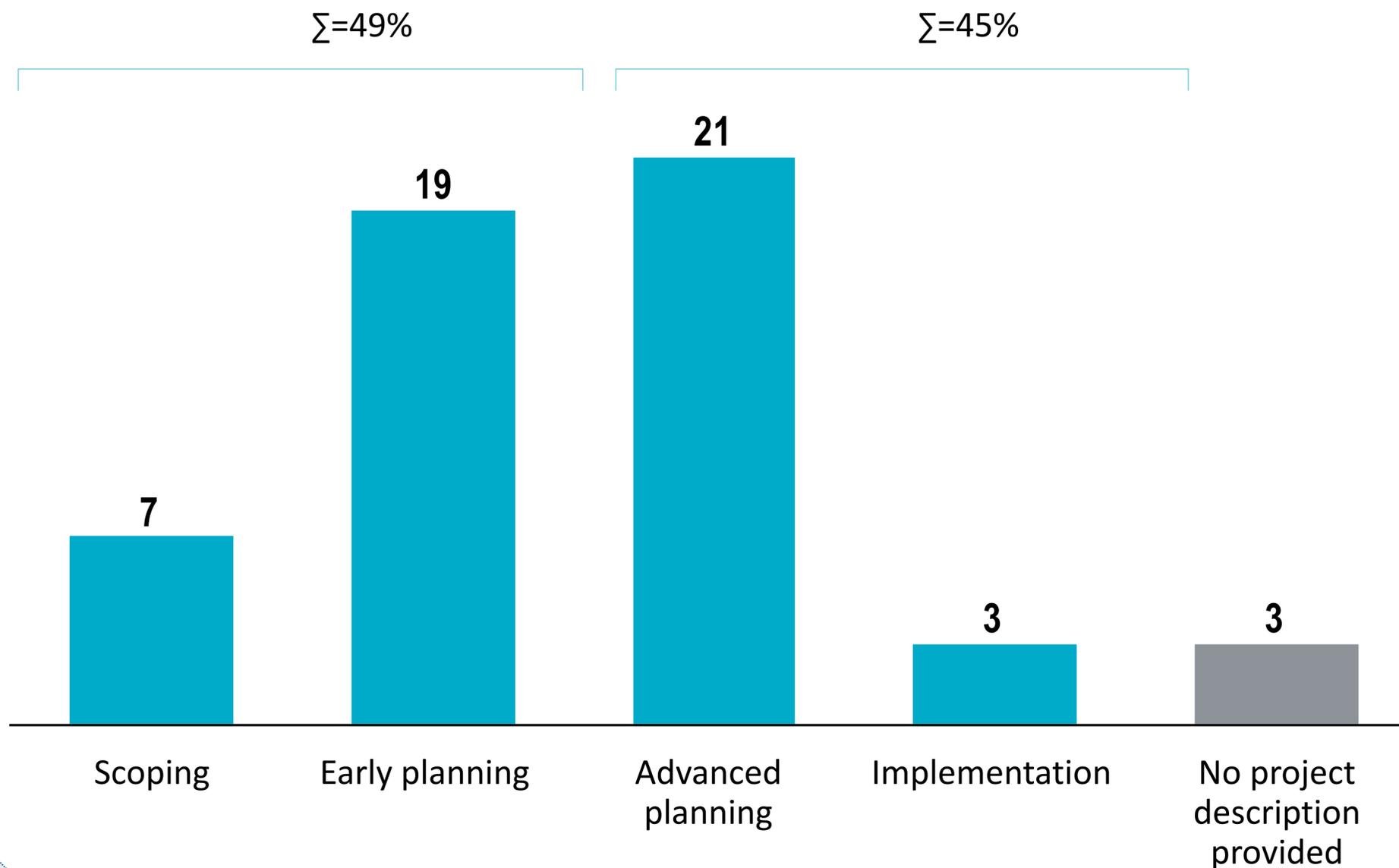
1) Number of projects with an indicated budget covering 42 regions in total



Half of the regions are still in an early development stage for their next FCH deployment projects, the other half is more advanced



Status of project implementation (n = 53) [#]1)



Need for further project development

- > The majority of project participants indicate that they are planning to realise FCH deployment projects in the next 5 years and beyond
- > Nevertheless, these project plans show very different levels of concreteness and implementation statuses
- > Substantial project development work will need to be undertaken by the participants in the near future to bring their plans to implementation



1) Status indicated for each region participating in the survey, not per individual projects

Participants outlined a strong need for continuing the joint work in the initiative on a number of different topics

Support needs – General cross-cutting support activities



1

Initiate intensified dialogue with industry on further market development needs

2

Facilitate knowledge dissemination

3

Undertake marketing/ communication activities

4

Engage in FCH policy development



Participants are specifically looking for concrete project development support for realising their planned FCH projects



Support needs – FCH project development support

5

Support individual project concept development



6

Support getting access to funding

7

Support realising cooperation projects and joint procurement



Study Conclusions: Proposed Specific Actions for Coalition Members

Scope and workstreams of a continued FCH project support framework



1 H₂ Valley Support

- >Prepare and bring to financing stage fully integrated valley projects to start implementation from 2019 onwards
- >Provide individual support for each valley

2 FCH Project Implementation Support

- >Prepare demo projects (for 1-2 appl.)
- >Support detailed business cases, project organisation, joint procurement etc.
- >Potentially, help to launch large-scale pan-European projects on selected applications

3 Joint Platform Work

- >Networking, exchange, information sharing (e.g. in regular meetings)
- >Outreach, communication and visibility (e.g. through communication campaign, letter of intent)
- >Development of general concepts and tools (e.g. business cases, cost assessment, funding/financing)
- >Technology discussions and dialogue with industry





FUEL CELLS AND HYDROGEN JOINT UNDERTAKING

Carlos Navas

Strategy and Market Development Manager
Carlos.Navas@fch.europa.eu

For further information

www.fch.europa.eu
www.hydrogeneurope.eu
www.nerghy.eu



@fch_ju



Fch-ju@fch.europa.eu



FCH JU