



HYACINTH

FCH JU → SPI-JTI-FCH.2013.5.3
 HYdrogen ACceptance IN the Transition pHase
 Support & Coordinated Action

*HYACINTH Workshop in Spain
 May 9th, Madrid, Spain.
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Context Analysis: Projects and Policies related to Hydrogen and Fuel Cells



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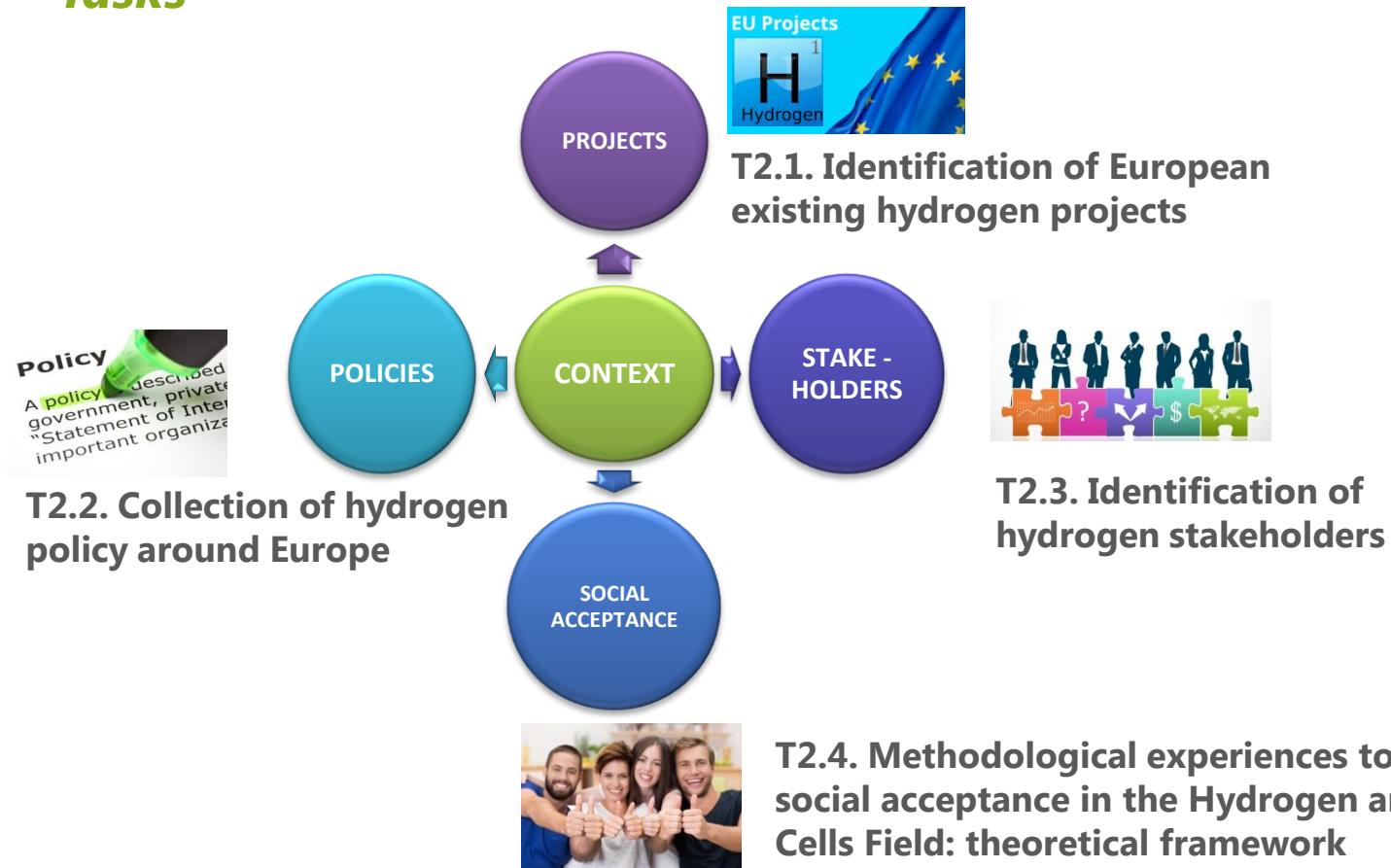
3. WP2 RESULTS. T.2.2. HYDROGEN POLICY

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Deliverables

D2.1 European projects and policies: report on ongoing hydrogen demonstrative projects and hydrogen policy around Europe (PU)

D2.2 List of stakeholders (CO)

D2.3 Report on methodologies and factors (PU)



Available at project's webpage <http://hyacinthproject.eu/results/publications>

Task 2.1. Identification of European existing hydrogen projects

FCH related projects and demonstration activities within the countries involved in the study were compiled and classified to help in understanding the context and identifying potential interviewees and contacts for the dissemination of results.

Projects identification

- European
- National (excl. Norway, Belgium)
- In progress and finished (>2008)

Compiled info:

Type of project (basic research, RTD, Demo), application (H2 economy, mobile and static applications), co-funding body, cost, funding volume, partners involved, coordinator, conclusion date and duration

142 projects

Projects selection

Criteria:

- Demonstration projects
- In progress (except countries with no active projects)
- Mobile Applications

Further info compiled:

Type and number of vehicles and cities involved
Legalización

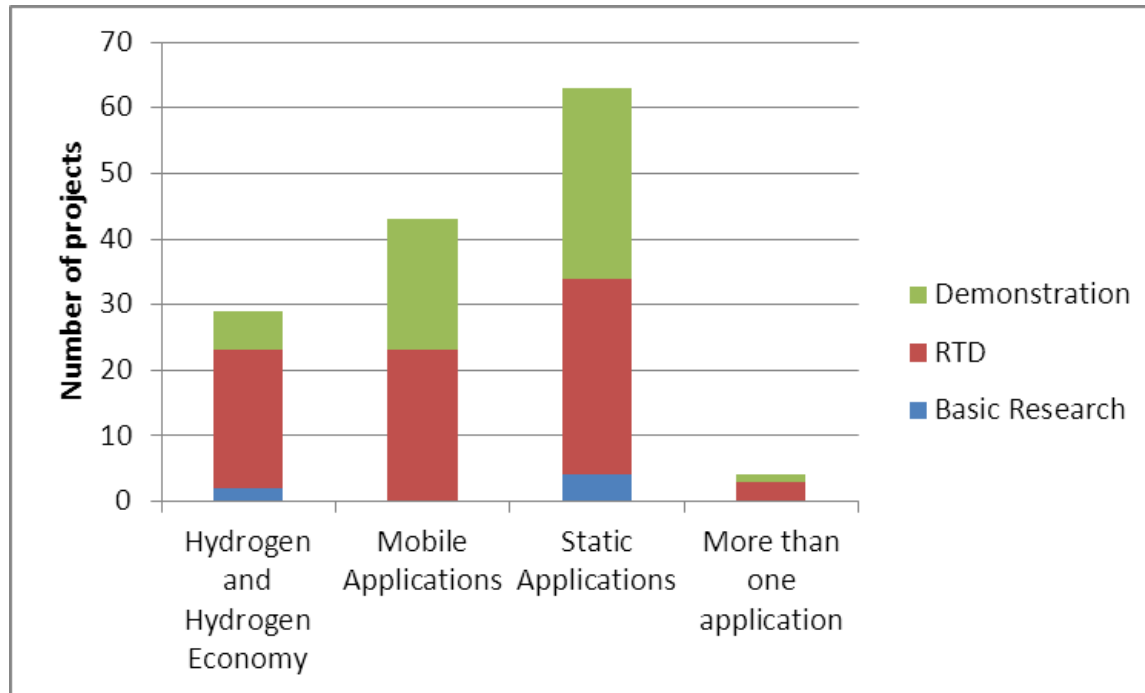
63 Projects (54 on-going and 9 closed)

Task 2.1. Identification of European existing hydrogen projects

- **Countries with partners in the project (+ coordinator's country)**
- **Project acronym**
- **Type of project:**
 - Basic Research
 - Research and Technological development (RTD)
 - Demonstration
 - Supporting Actions
- **Type of application:**
 - Hydrogen and hydrogen economy: H2 production and storage
 - Static applications, stationary energy supply equipment
 - Mobile applications, transport sector +hydrogen refuelling stations
- **Co-funding body**
- **Project cost and volume of funding obtained**
- **Partners involved and its country. Coordinator**
- **Project status:** In progress or closed
- **Conclusion date, Duration**

WP2 RESULTS. T.2.1.

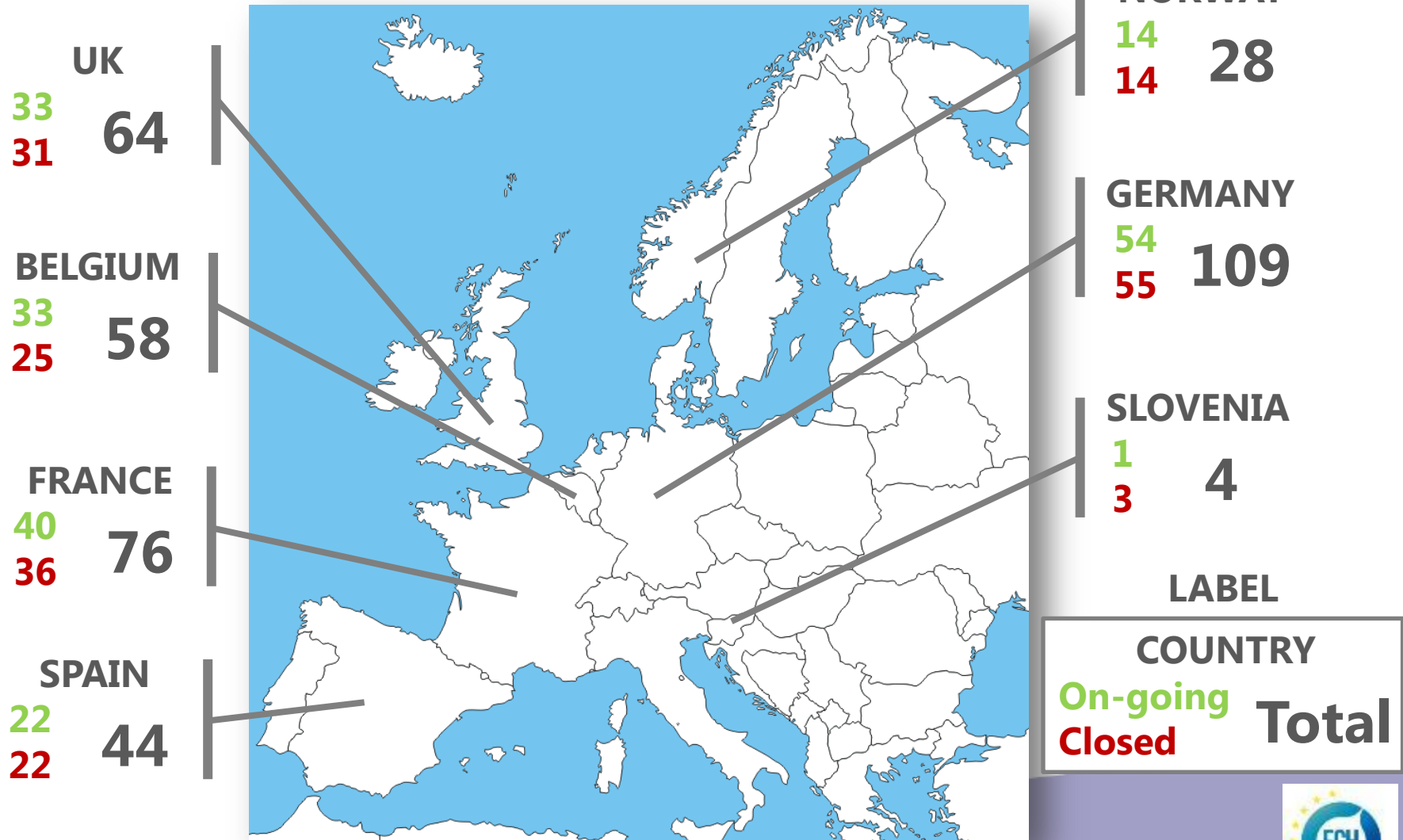
Task 2.1. Identification of European existing hydrogen projects



	Hydrogen and Hydrogen Economy	Mobile Applications	Static Applications	More than one application	TOTAL
Basic Research	2	0	4	0	6
RTD	21	23	30	3	77
Demonstration	6	20	29	1	56
TOTAL	29	43	63	4	139

WP2 RESULTS. T.2.1.

Task 2.1. Identification of European existing hydrogen projects



WP2 RESULTS. T.2.1.

Task 2.1. Identification of European existing hydrogen projects



	Number of units, 2015
FCEVs, Hybrid FCEVs, FC Range extended vehicles	701
FCH Bus/HICE Bus	138
HRS	46
Forklifts	410
APUs for ships and trucks	4

Task 2.2. Collection of hydrogen policy around Europe

- **Compilation of policies, regulations and funding mechanisms in Europe regarding the implementation of FCH technologies**
- **Review of national initiatives or projects in the seven target countries**
 - **Specific mechanisms to support hydrogen and fuel cell applications**
 - Stationary applications (μ CHP)
 - Transport applications
 - Special markets (forklifts or other devices)
 - Specific regional level plans or initiatives
 - **Other mechanisms that could trigger FCH applications** such as Grants/credits for purchasing, grants, tax reductions, ...

Task 2.2. Collection of hydrogen policy around Europe

- Transport applications specific plans and implementation

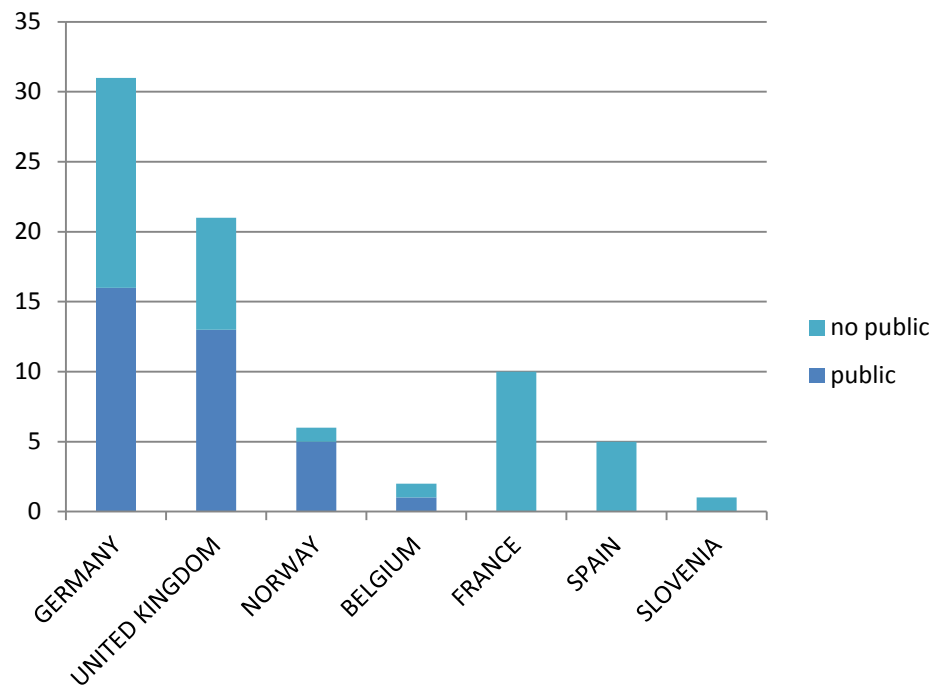
	GERMANY	UNITED KINGDOM	NORWAY	BELGIUM	FRANCE	SPAIN	SLOVENIA
Specific National plan for hydrogen and fuel cell transport applications	✓	X	X	X	X	X	X
Initiative	H2 Mobility	UK H2 Mobility	The Scandinavian Hydrogen Highway Partnership	H2Mobility Belgium	Mobilité Hydrogène France	VEA Strategy and Plan MOVEA	No
Situation	Ongoing	Implementing the project	Ongoing	Vision published in December 2015,	Implementing the plan	Call published without hydrogen	No plan on hydrogen

- **Advanced Hydrogen Support:** Germany, United Kingdom and Norway
- **Medium Hydrogen Support:** Belgium, France and Spain
- **Low Hydrogen Support:** Slovenia

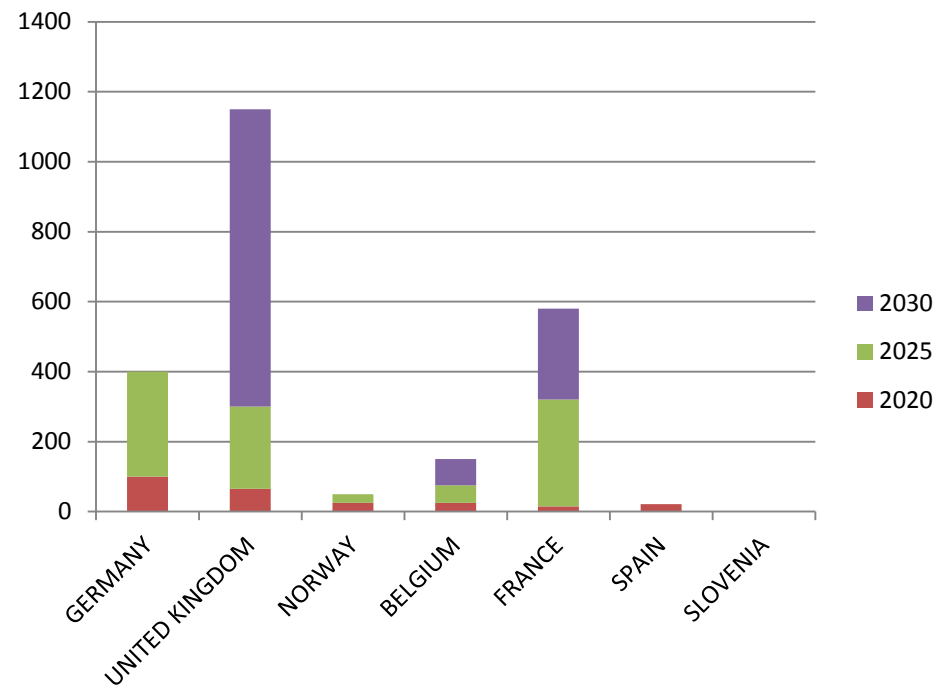
Task 2.2. Collection of hydrogen policy around Europe

- Transport applications specific plans and implementation

Number of HRS currently in operation



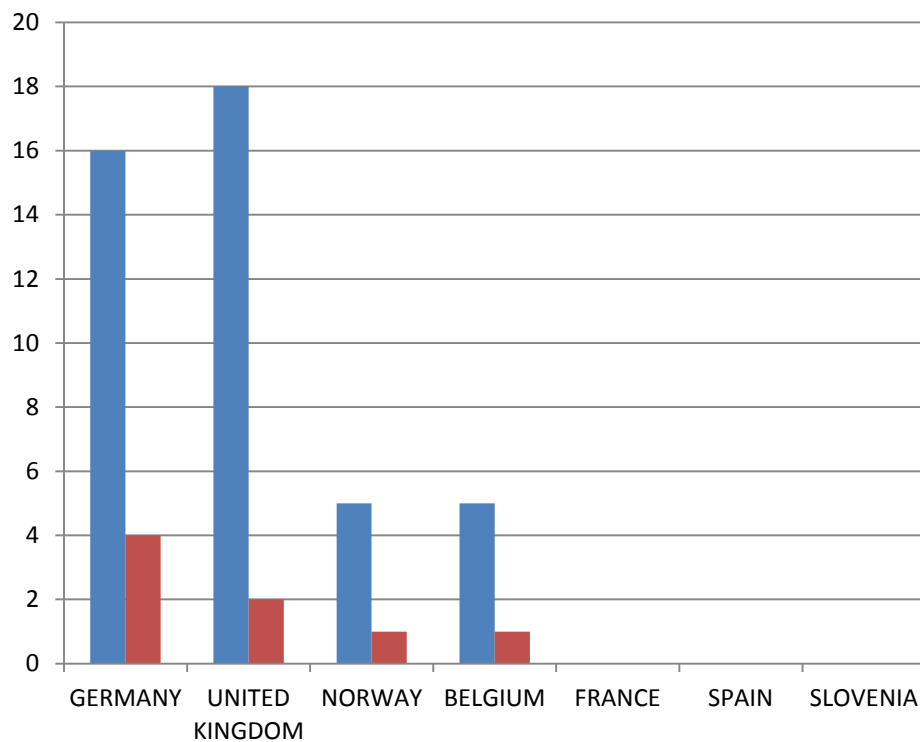
Number of HRS planned & year



Task 2.2. Collection of hydrogen policy around Europe

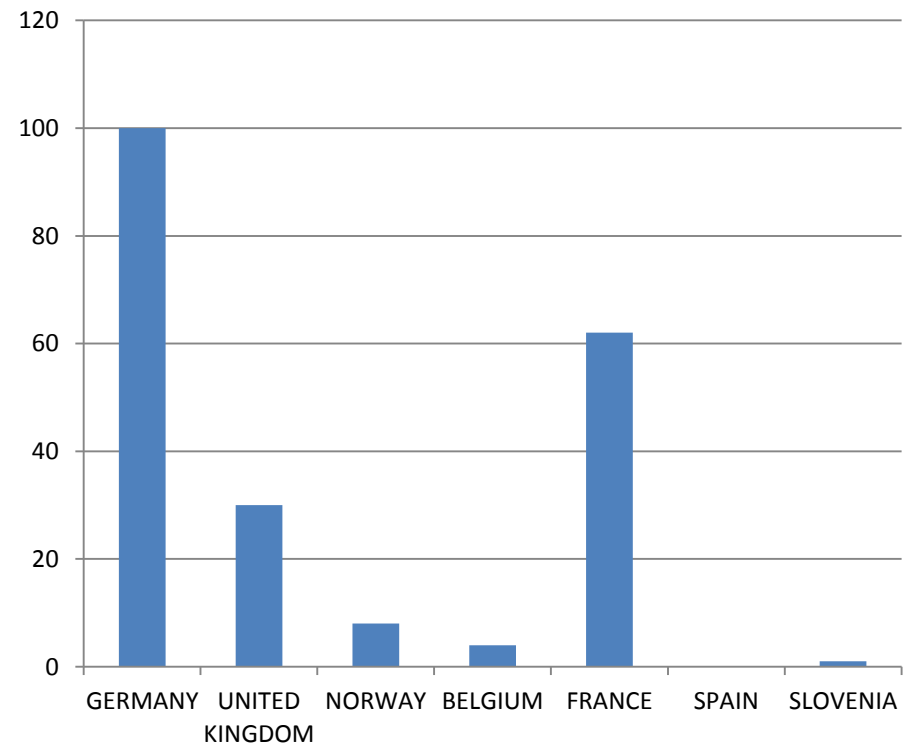
- Transport applications specific plans and implementation

Number of buses in operation



■ Number of busses currently in operation
■ Number of cities currently involved in bus implementation

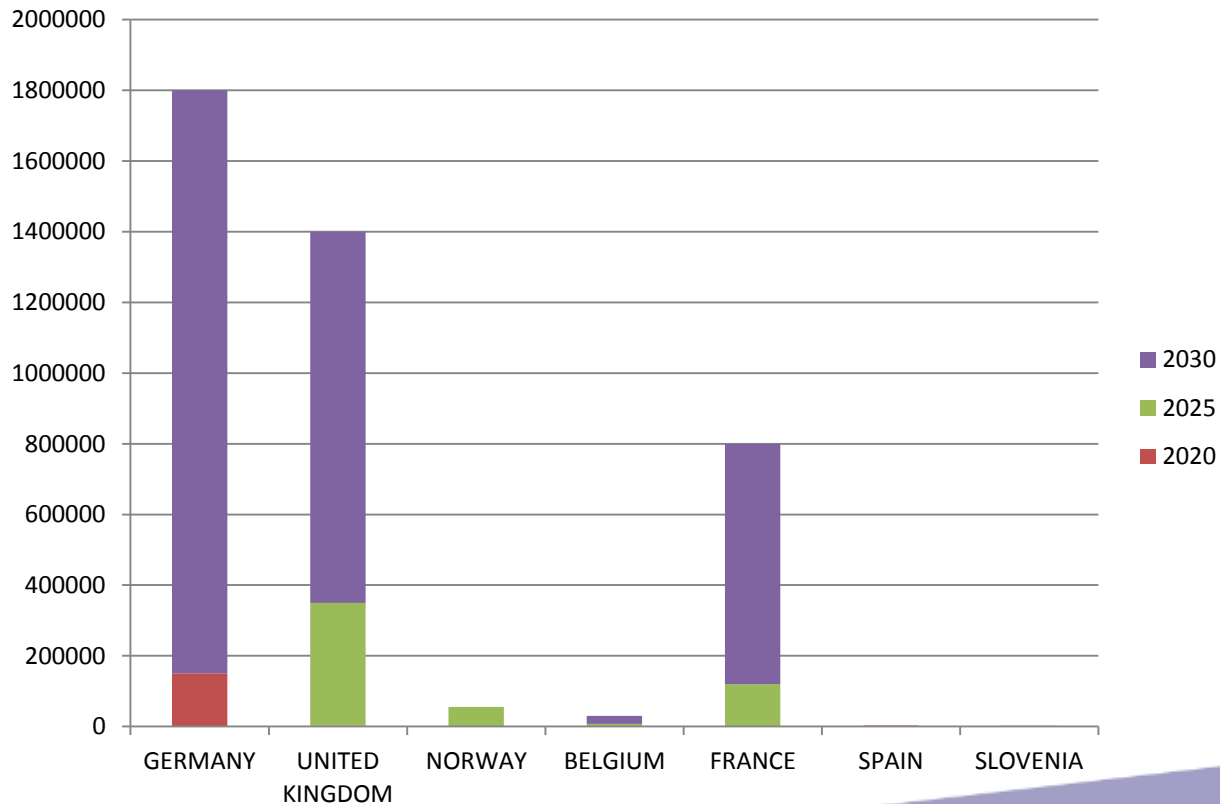
Number of cars in operation



Task 2.2. Collection of hydrogen policy around Europe

- Transport applications specific plans and implementation

Number of cars planned & year



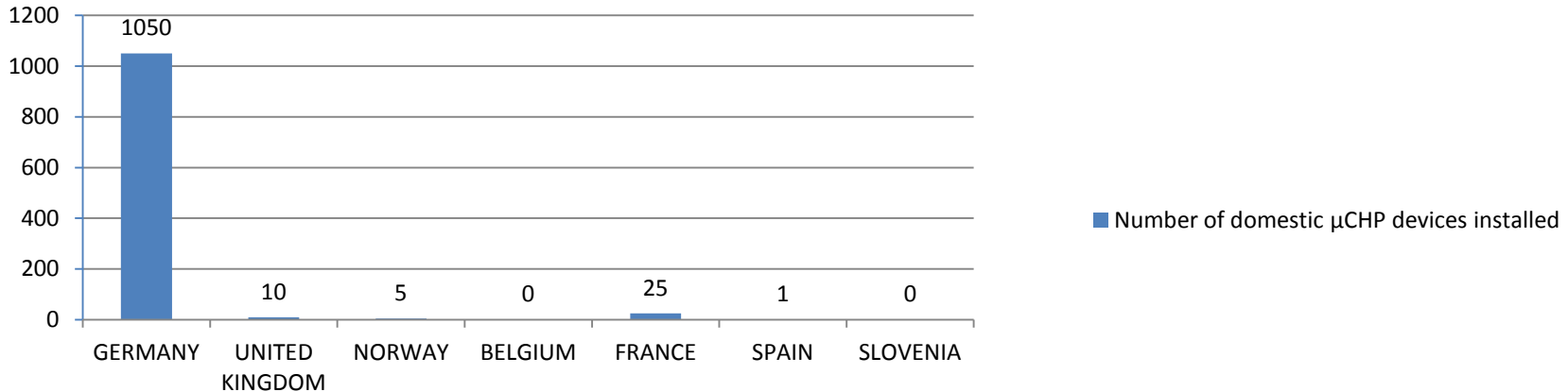
Task 2.2. Collection of hydrogen policy around Europe

- Other mechanisms to favor transport applications

	GERMANY	UNITED KINGDOM	NORWAY	BELGIUM	FRANCE	SPAIN	SLOVENIA
Grants for purchasing vehicles (Y/N & funding)	✓	✓	✓	✓	✓	X	✓
Free parking (Y/N)	✓	✓	✓	✓	✓	✓	X
Free tolls (Y/N)	X	X	✓	X	X	X	X
Free bus line and other similar measures (Y/N)	✓	✓	✓	X	X	✓	X
Tax reduction (for purchase)	X	X	✓	X	X	X	X
Tax reduction (for use) (Y/N)	✓	✓	✓	X	X	✓	✓
Grants/financial aids for HRS construction (Y/N)	X	✓	X	X	X	X	X
Tax reduction for HRS (Y/N)	X	X	✓	X	X	X	X

Task 2.2. Collection of hydrogen policy around Europe

- Stationary applications



- Other mechanisms to favor stationary applications

	GERMANY	UNITED KINGDOM	NORWAY	BELGIUM	FRANCE	SPAIN	SLOVENIA
Grants/credits for purchasing devices (Y/N)	X	X	X	✓	X	X	X
Tax reduction	✓	X	X	✓	X	X	X
Other mechanisms	X	Feed-in tariff	X	Green certificates	Feed-in tariff	X	Feed-in tariff

Task 2.3. Identification of hydrogen stakeholders

- Stakeholders list is compiled, guided by the outputs from D2.1 and based upon their previous experience within hydrogen projects or the industry and their potential to add value to the development process of the SAMT
- In total 455 responses are anticipated from either qualitative interviews (up to 175) or from quantitative surveys (up to 280) from a pool of over 800 stakeholders
- This number and spread of stakeholders is deemed most likely to provide the information necessary to complete the tasks in WP6

Task 2.4. Methodological experiences to measure social acceptance in the Hydrogen and Fuel Cells Field: theoretical framework

- A broad variety of previous research and methodological approaches used on the evaluation of social acceptance of FCH technologies were identified and summarized
- Influencing factors for social acceptance and main dimensions examined in these studies were reviewed
- The review of the literature drives the attention into the need to conduct two different analysis from a social research perspective:
 - Attitudinal elements that directly and indirectly affect FCH technology acceptance and use of consumers (USERS)
 - Expectations and perceptions of actors involved in the advancement of FCH technology and the decision-making process (STAKEHOLDERS)

Regards to T.2.1 and T.2.2

- **A clear relationship between the level of involvement of Governments and Administrations in the development of the hydrogen economy and the type and number of European projects in which each country participates.**
- **Countries with specific plans for the development of these technologies, such as Germany or France, participation in European projects is very high**
- **At the level of development of national projects a similar effect is observed. For example, Spain,**

HYACINTH: Hydrogen Acceptance IN the Transition pHase

Thank you for your attention!

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