



Introduction to portfolio of Cross-cutting Programme Review Days 2015

Alberto Garcia - Project Manager
“Cross-cutting Activity Area”



<http://www.fch.europa.eu/>

PLENARY SESSION ON PRE-NORMATIVE, SAFETY ISSUES, EDUCATION, TRAINING, SOCIO-ECONOMIC AND BENCHMARKING

12:55 – 13:10 Introduction to Cross-Cutting portfolio: Alberto Garcia
(Alcide de Gasperi Room, 2nd floor)

13:10 – 13:15 Q&A

Panel 6 - Cross-cutting: Pre-normative research, safety issues, education, training, socio-economic and benchmarking

Moderators: Alberto Garcia and Jari J. Kiviaho

Panel - Pre-normative research and safety issues

13:15 – 13:30 STACKTEST

13:30 – 13:45 MATHRYCE

13:45 – 14:00 SUSANA

14:00 – 14:10 Q&A

Panel - Socio-economic and benchmarking

14:10 – 14:25 CERTIFHY

14:25 – 14:40 HYACINTH

14:40 – 14:50 Q&A

Panel - Education and training

14:50 – 15:05 HYRESPONSE

15:05 – 15:20 KNOWHY

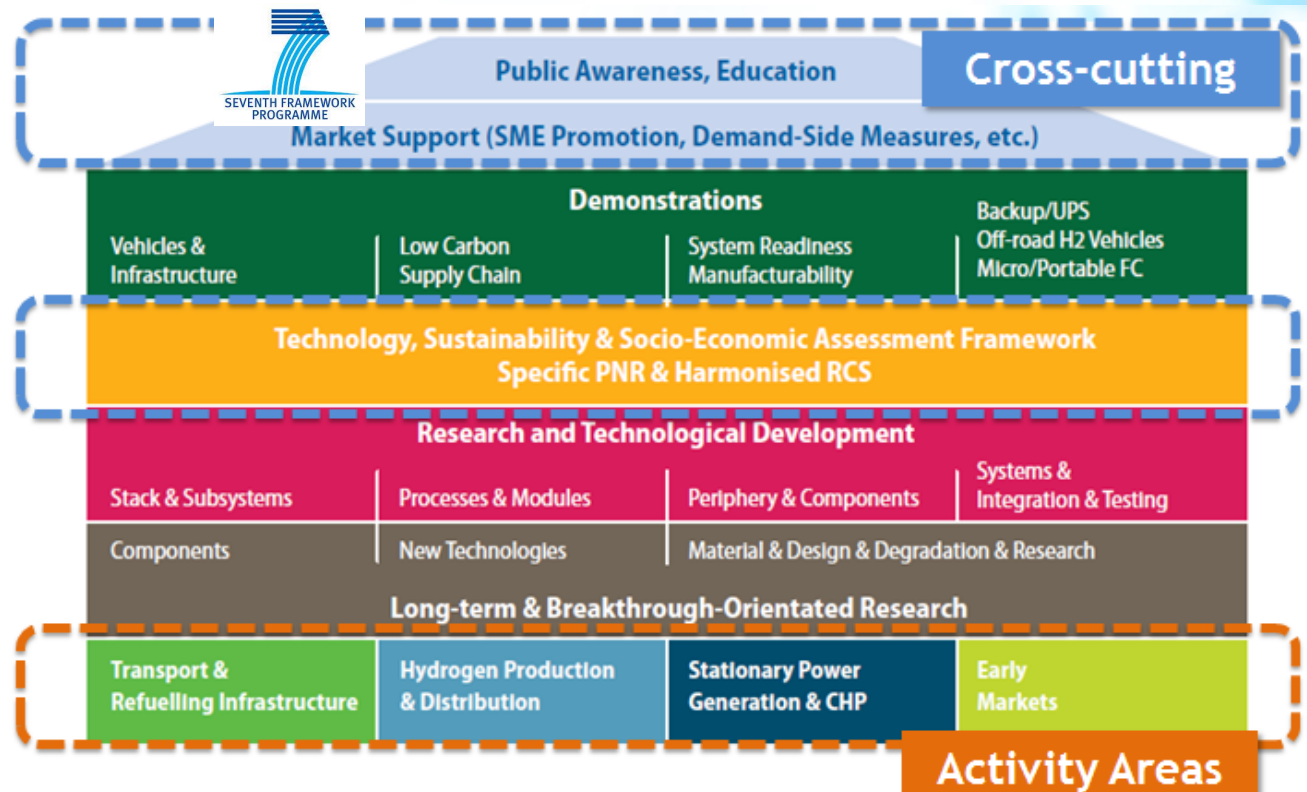
15:20 – 15:30 Q&A

15:30 – 16:00 Coffee Break and Networking

Cross-cutting Activity Area Overview

Cross-cutting Activity Area supports and enables the rest of the application areas within the FCH JU, with the aim at facilitating the transition to market of FCH Technologies.

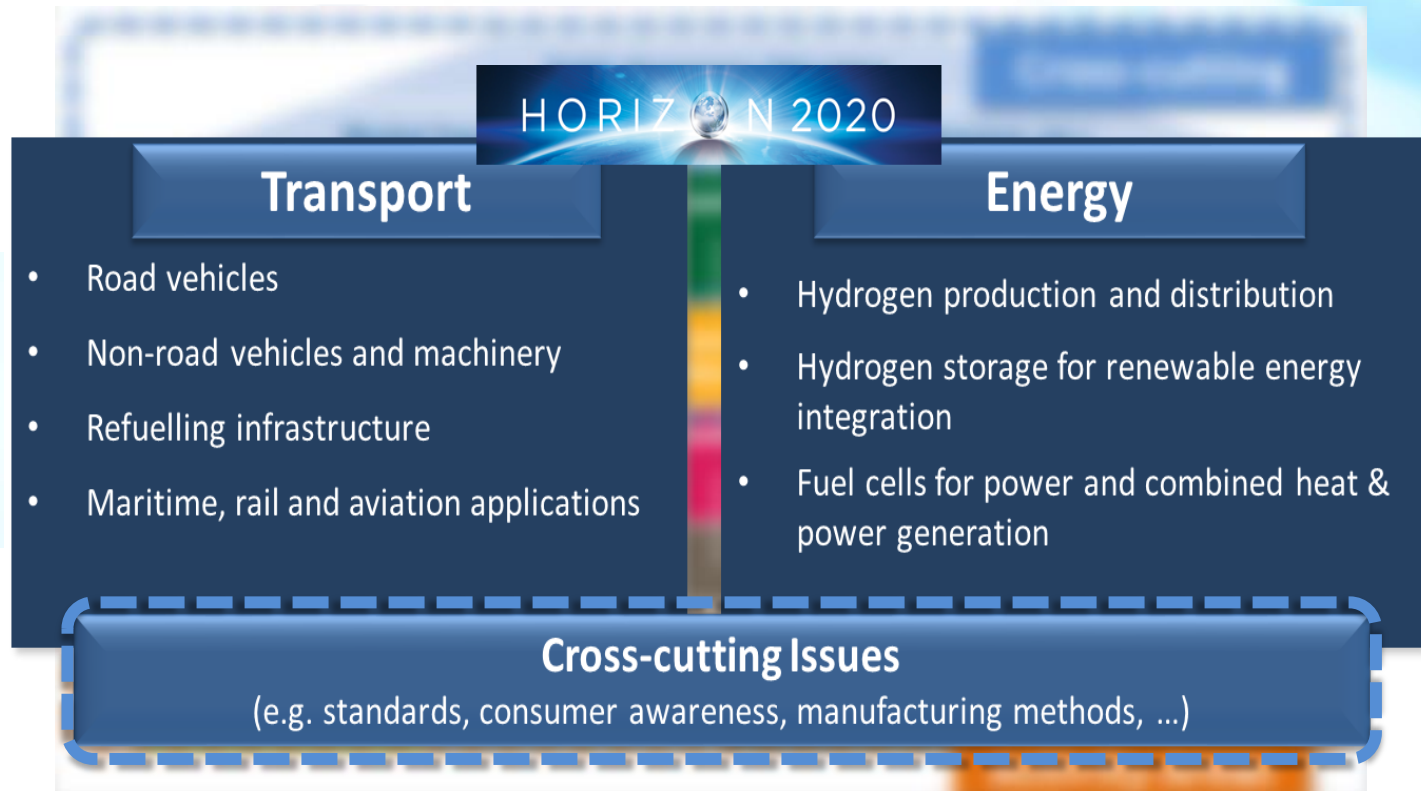
Activities started under...



Cross-cutting Activity Area Overview

Cross-cutting Activity Area **supports and enables** the rest of the application areas within the FCH JU, with the aim at **facilitating the transition to market of FCH Technologies.**

Activities started under FP7...which continue under H2020.



Cross-cutting Activity Area Overview

Cross-cutting Activity Area main goals and targets are set out in...

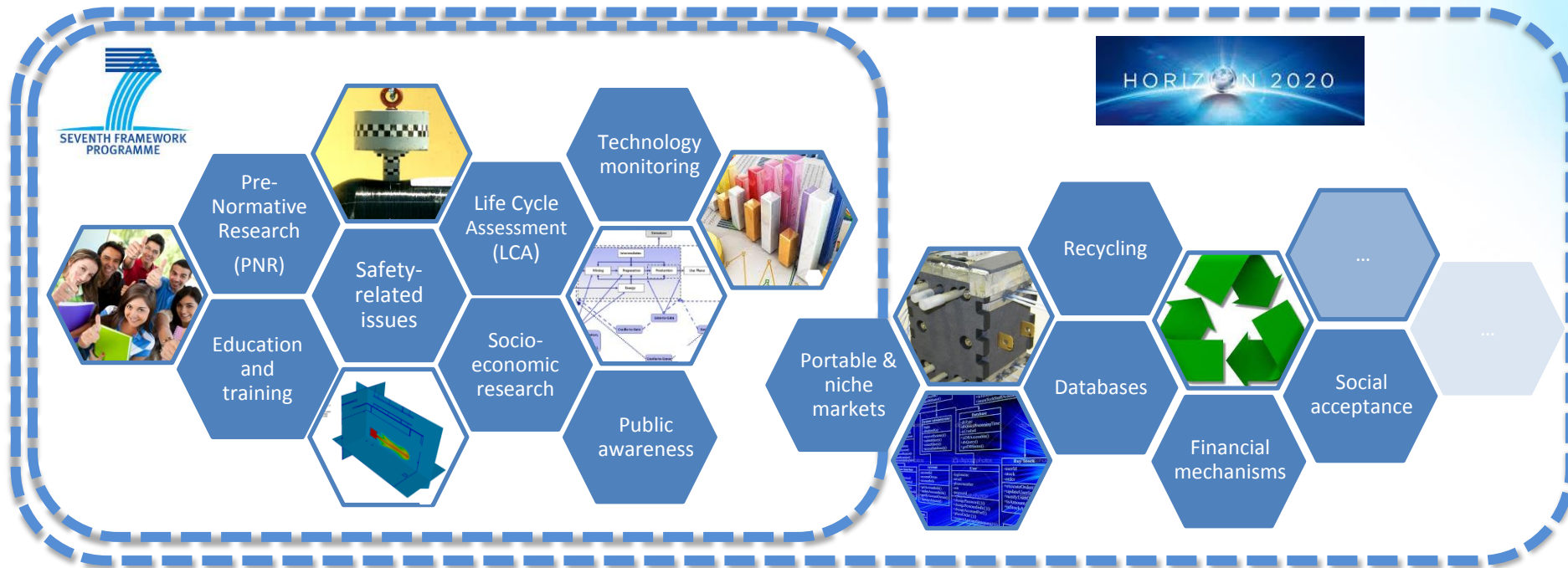
Multi-Annual Implementation Plan
(2008-2013)



Multi-Annual Work Plan
(2014-2020)



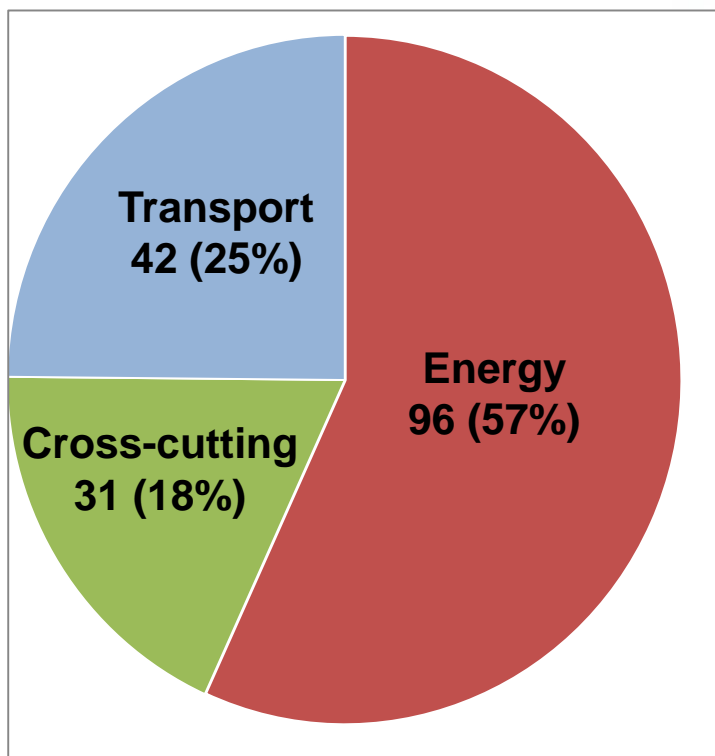
Activities are mainly conducted by supported R&D projects (RIA) and SA (CSA) on...



Cross-cutting Activity Area Contribution to the FCH JU programme

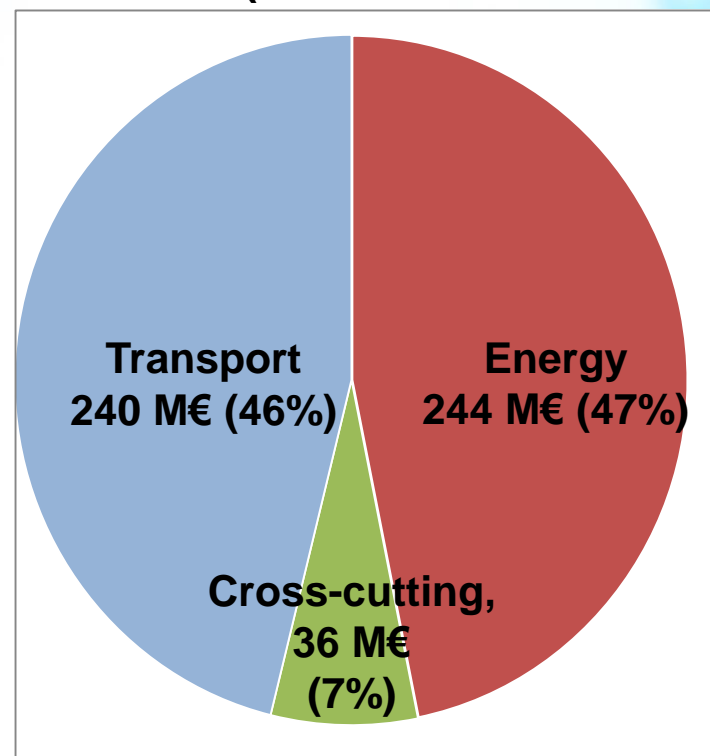
Number of projects

169 (of which FP7: 155)



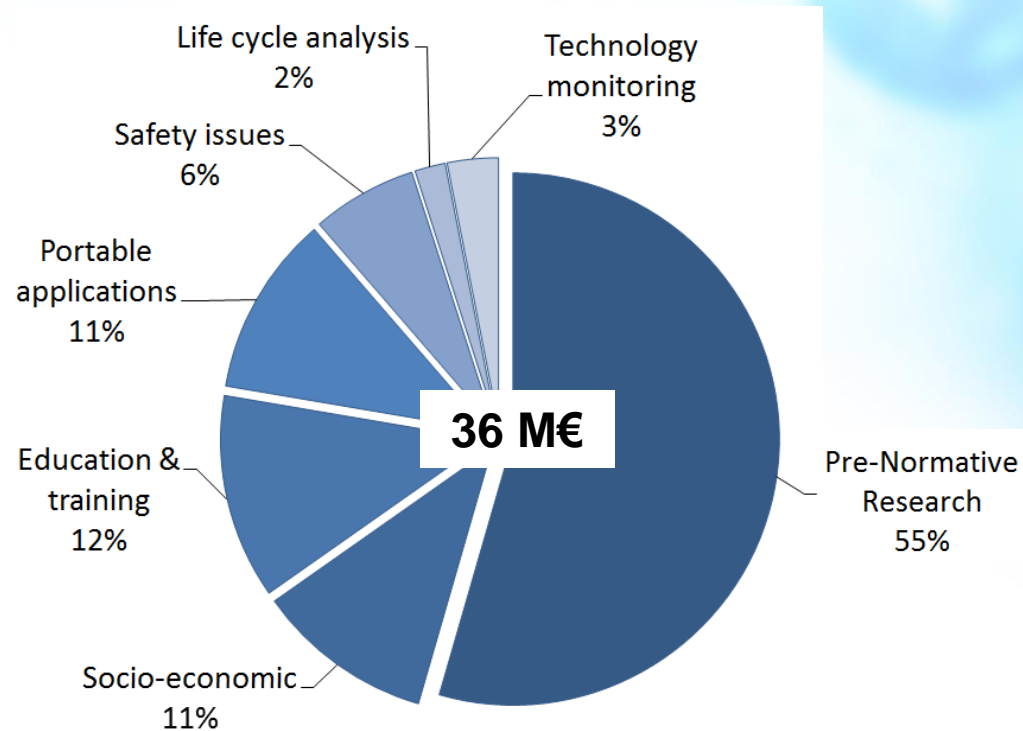
FCH JU contribution

520 M€ (of which FP7: 446 M€)



31 Cross-cutting projects

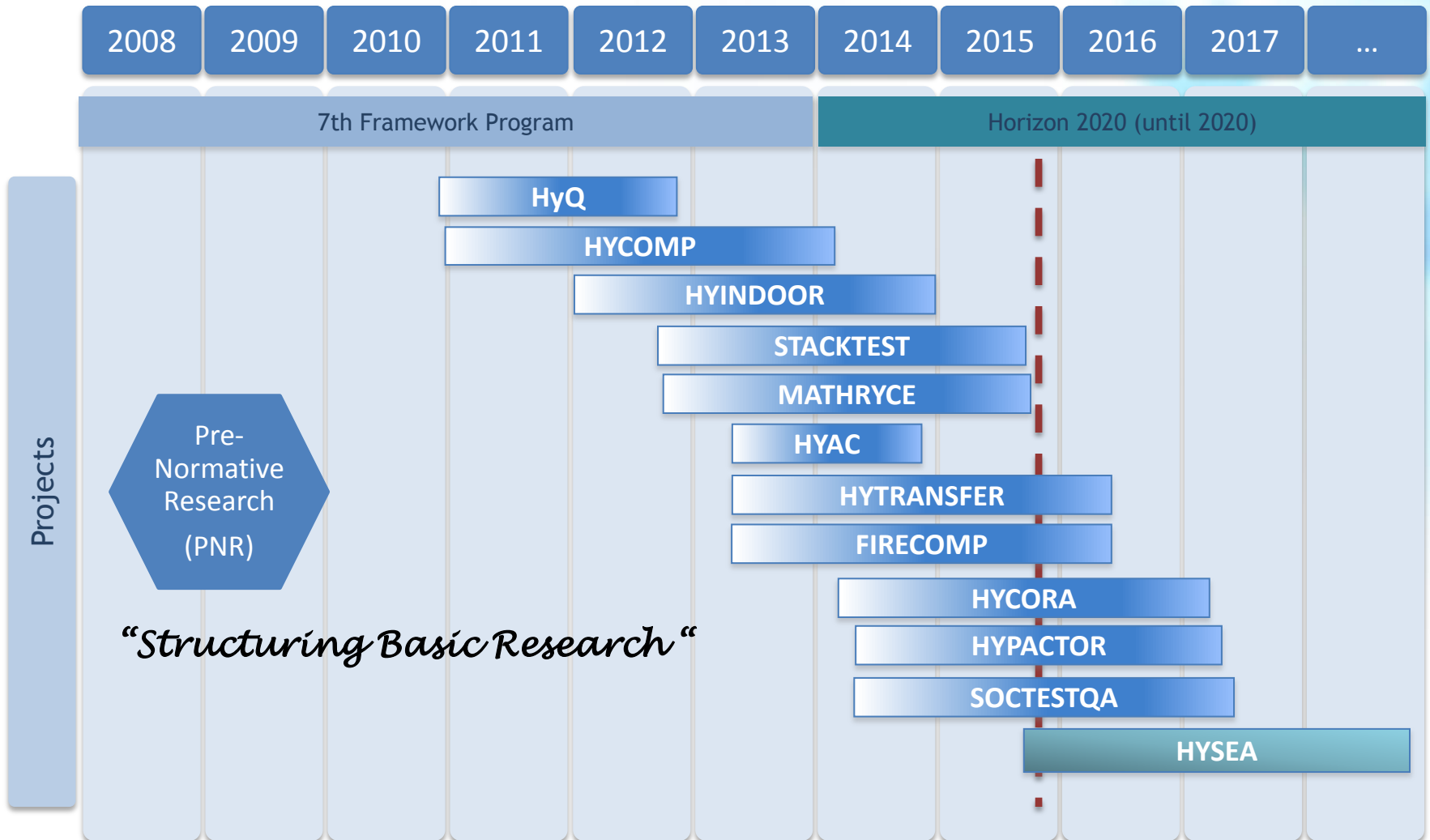
- Pre-Normative research (12)
- Education & training (5)
- Socio-economic research & public awareness (5)
- Portable applications (3)
- Safety-related issues (3)
- Life cycle assessment (2)
- Technology monitoring (1)



FCH JU Contribution breakdown (%)

Cross-Cutting projects - Overview

Pre-Normative Research (I)



Cross-Cutting projects - Overview

Pre-Normative Research (II)

PNR projects nature are...

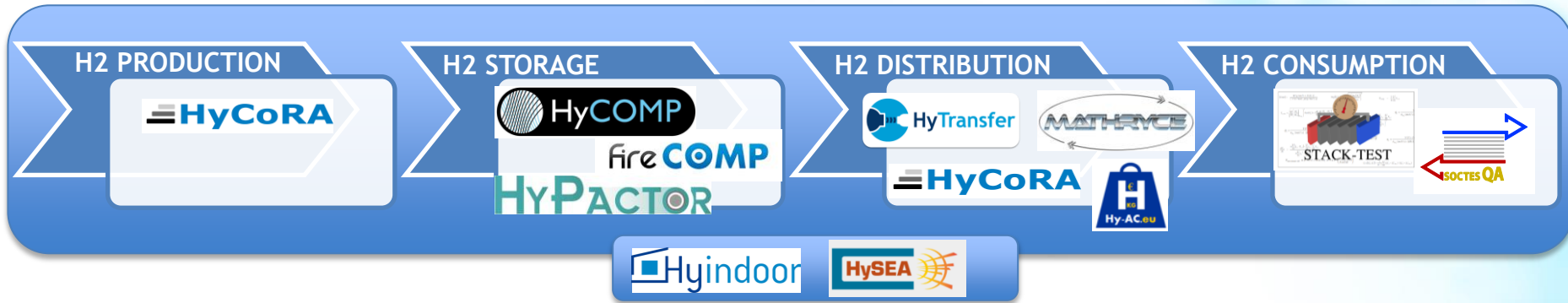
Stack tests protocols	
STACKTEST (*)	Development of PEM fuel cell stack reference test procedures for industry
SOCTESQA	Development of standardized industry wide test protocols for SOFC and SOEC
Materials	
MATHRYCE (*)	PNR for metallic components exposed to hydrogen fatigue
HYCOMP (*)	Enhanced design and testing procedures for composite cylinders intended for the safe storage of H ₂
FIRECOMP	Modelling the thermo-mechanical behavior of high pressure vessels in composite materials when exposed to fire conditions
HYPACTOR	PNR on resistance to mechanical impact of composite overwrapped pressure vessels
Indoor use & vented deflagrations	
HYINDOOR (*)	PNR for safe indoor use of fuel cells and hydrogen systems
HYSEA	PNR on vented deflagrations in enclosures and containers for hydrogen energy application
H ₂ Quality, metering and transfer	
HYQ (**)	PNR to provide a support to organizations in order to normalize an acceptable fuel quality for PEMFC
HYAC (*)	Provision of information & recommendations for legal requirements & procedures for verification & approval of hydrogen metering accuracy
HYCORA	Provision of information to lower the costs of hydrogen fuel quality assurance
HYTRANSFER	PNR for thermodynamic optimization of fast hydrogen transfer

(*) finished (**) terminated

Cross-Cutting projects - Overview

Pre-Normative Research (III)

PNR projects contribute to practically the overall hydrogen chain...



...supporting both Transport and Energy applications (pillars)...

HORIZON 2020

Transport

- Refuelling infras

Energy

- Fuel cells for power and combined heat &...

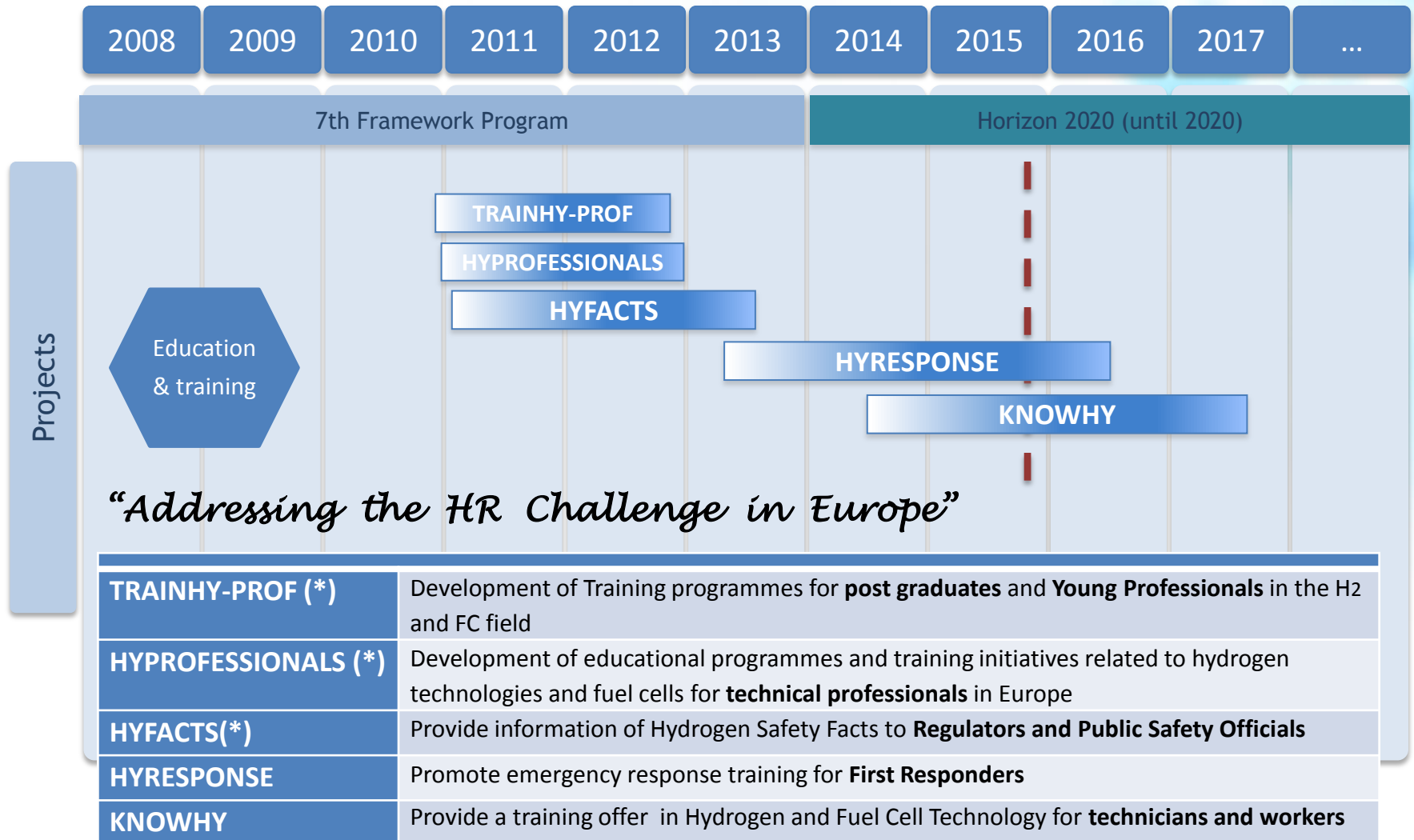
Cross-cutting Issues
(e.g. standards, consumer awareness, manufacturing methods, ...)

...providing inputs to SDO...



Cross-Cutting projects - Overview

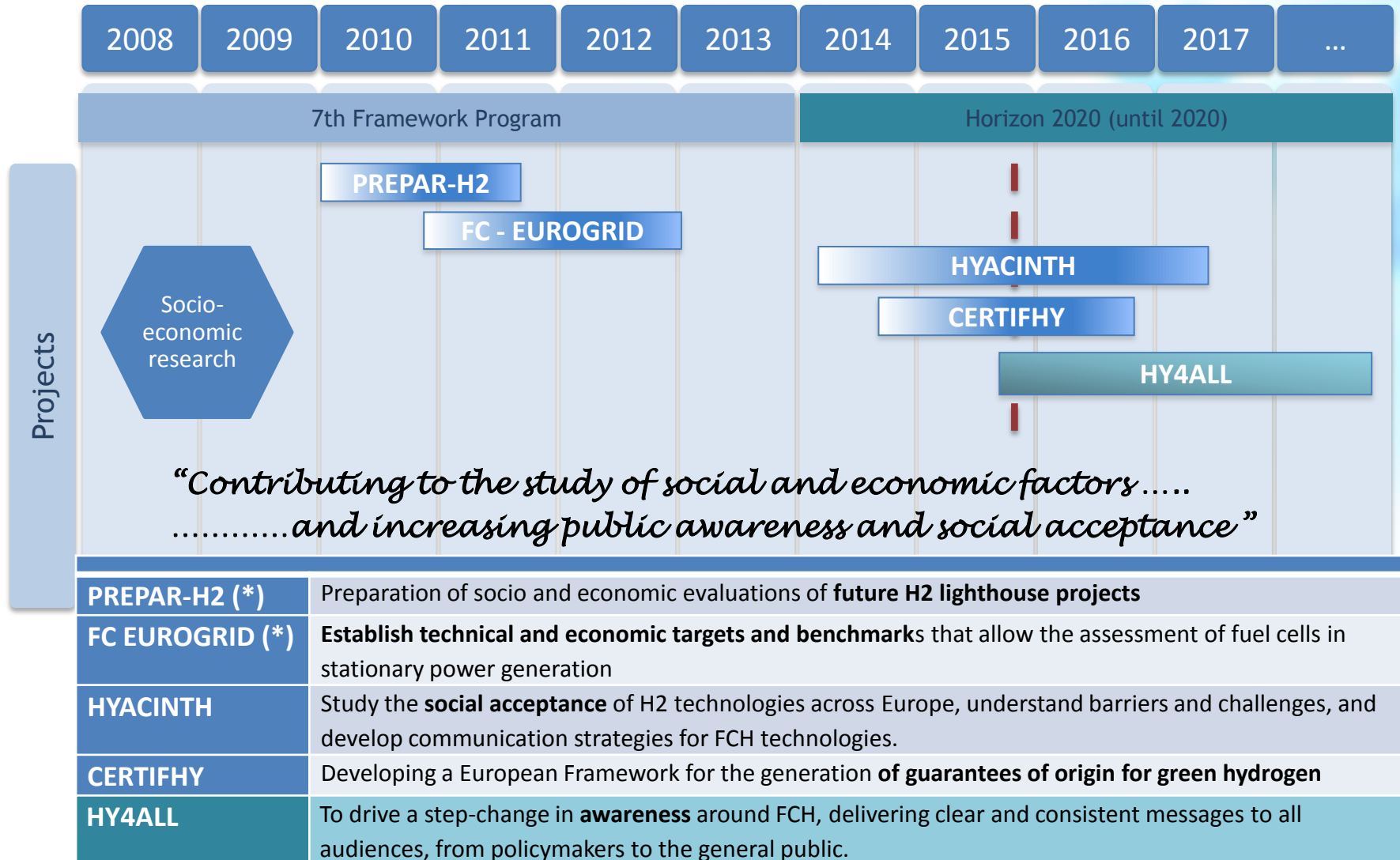
Education & training



(*) finished

Cross-Cutting projects - Overview

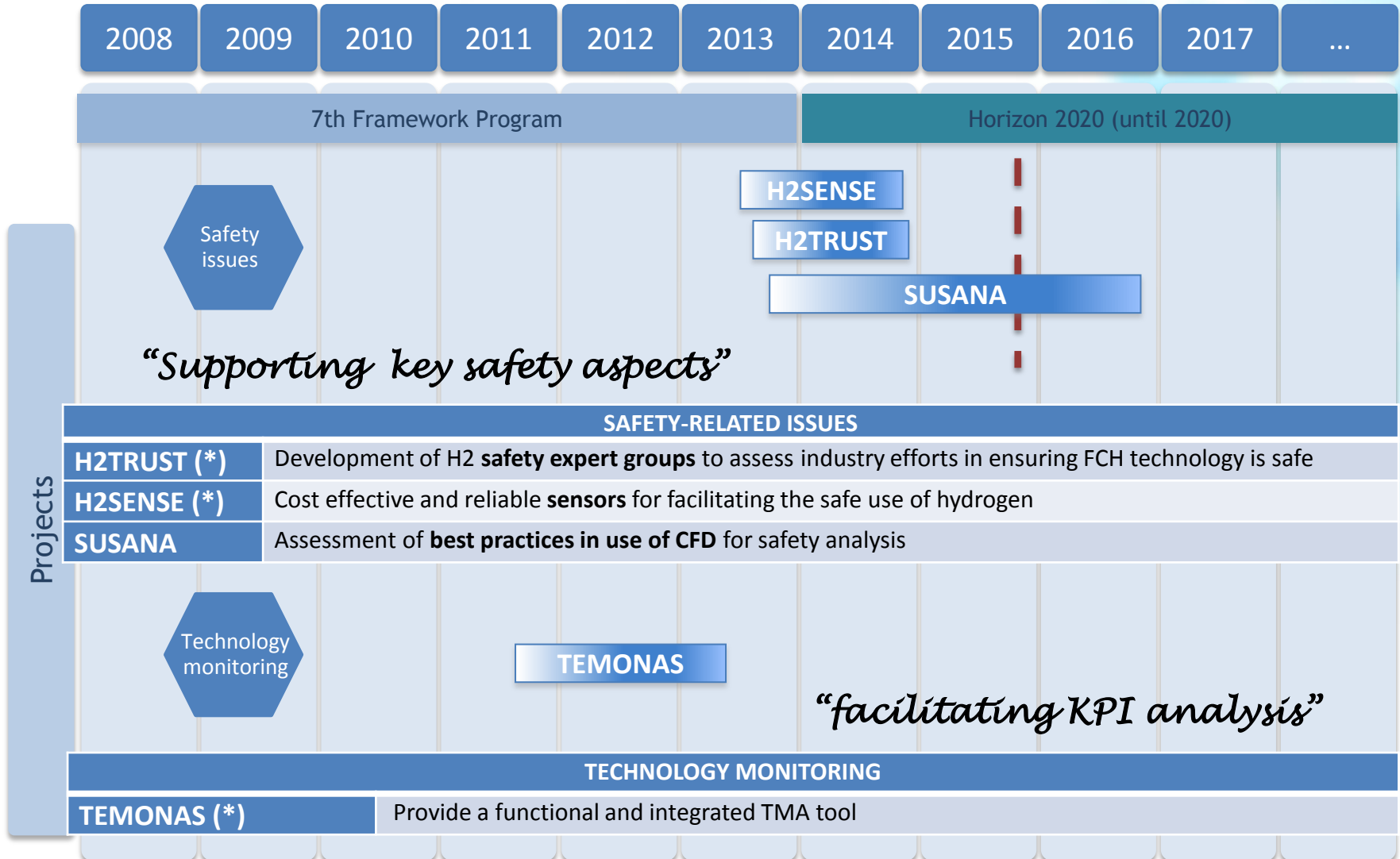
Socio-economic research & public awareness



(*) finished

Cross-Cutting projects - Overview

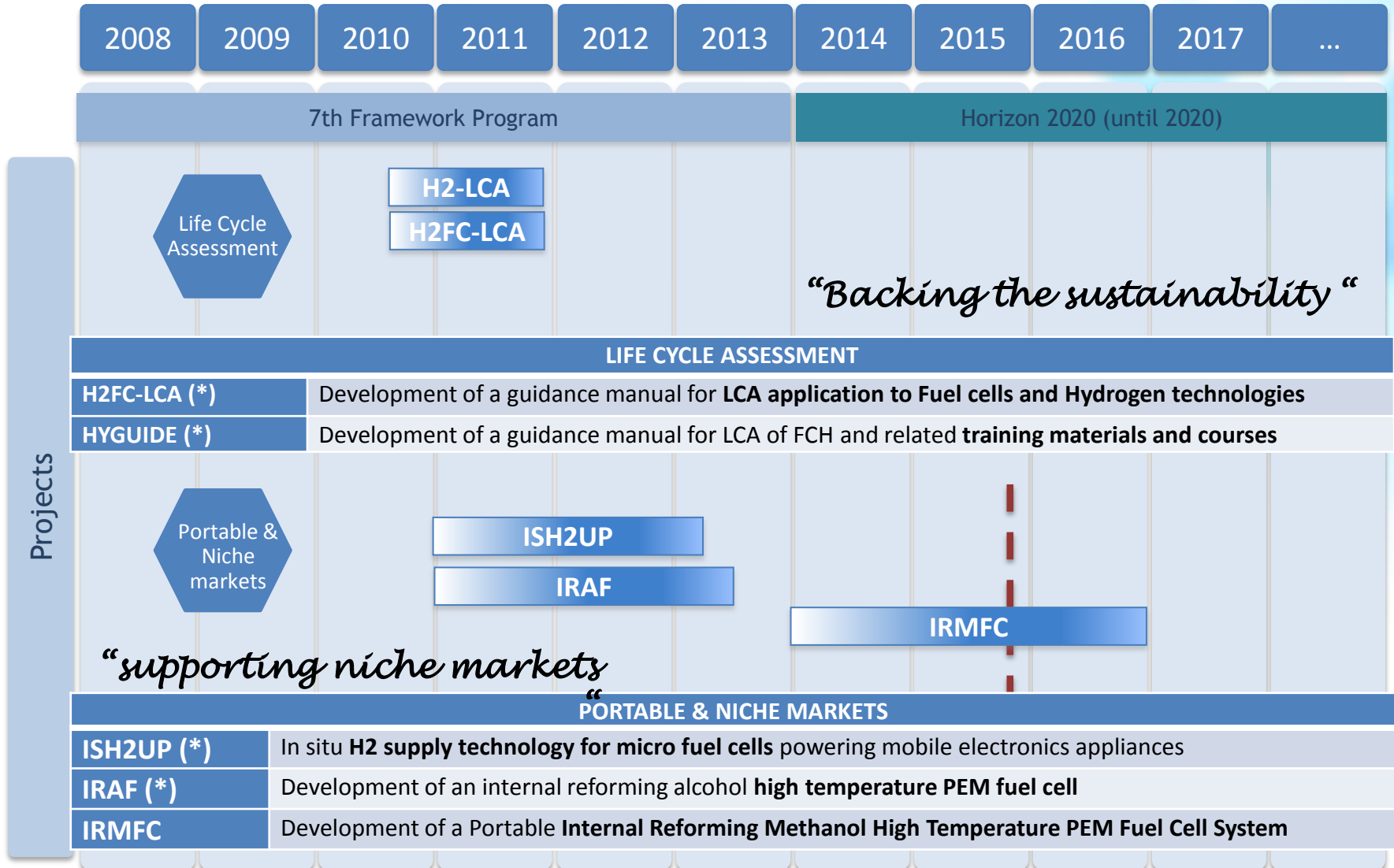
Safety issues & Technology monitoring



(*) finished

Cross-Cutting projects - Overview

Life Cycle Assessment / Portable applications



(*) finished

Cross-Cutting projects - Overview

Conclusions

- Cross-cutting projects are **aligned with the MAIP (2008-2013)** under FP7 in terms of topics and budget and will continue with a **gradual coverage of the MAWP (2014-2020)** under H2020.
- **Strong portfolio of projects for the benefit of all Programme activities** which **facilitates the commercialisation of FCH technologies** in the Energy and Transport pillars.
- **Good participation of industry stakeholders** directly (as partners) but also indirectly (e.g. industrial advisory boards, workshops, etc.).
- **Most of the projects include international cooperation** activities with USA and/or Japan (e.g. PNR indoor use of H₂, material fatigue, H₂ sensors, fuel quality, etc.).



Thank you for your attention !



Session overview

PLENARY SESSION ON PRE-NORMATIVE, SAFETY ISSUES, EDUCATION, TRAINING, SOCIO-ECONOMIC AND BENCHMARKING

12:55 – 13:10 Introduction to Cross-Cutting portfolio: Alberto Garcia
(Alcide de Gasperi Room, 2nd floor)

13:10 – 13:15 Q&A

Panel 6 - Cross-cutting: Pre-normative research, safety issues, education, training, socio-economic and benchmarking

Moderators: Alberto Garcia and Jari J. Kiviaho

Panel - Pre-normative research and safety issues

13:15 – 13:30 STACKTEST

13:30 – 13:45 MATHRYCE

13:45 – 14:00 SUSANA

14:00 – 14:10 Q&A

Panel - Socio-economic and benchmarking

14:10 – 14:25 CERTIFHY

14:25 – 14:40 HYACINTH

14:40 – 14:50 Q&A

Panel - Education and training

14:50 – 15:05 HYRESPONSE

15:05 – 15:20 KNOWHY

15:20 – 15:30 Q&A

15:30 – 16:00 Coffee Break and Networking