



Fuel Cell and Hydrogen Technologies in Horizon 2020

**5th FCH JU Stakeholders' General Assembly
12 October 2012**

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What's new in *Horizon 2020*?

- ✓ A **single programme** bringing together FP7, CIP (Competitiveness and Innovation Framework Programme) and EIT (European Institute of Innovation and Technology)
- ✓ **Coupling research to innovation**, from research to market
- ✓ Structured around **3 main axes or priorities**
- ✓ **Simplified access**, for all companies, universities, institutes in all EU countries and beyond.
- ✓ Increased focus on **partnering**

Priority 1 *"Excellent science"*

Why: to develop, attract and retain **research talent**, and to provide access to the **best research infrastructures**

Proposed funding (2014-20): 24,6 billion euro

European Research Council
Frontier research by the best individual teams
Future and Emerging Technologies
Collaborative research to open new fields of innovation
Marie Curie actions
Opportunities for training and career development
Research infrastructures (including e-infrastructure)
Ensuring access to world-class facilities

Priority 2 *"Industrial leadership"*

Why: Europe needs more innovative SMEs, more private investment in R&I and strategic investments in key technologies to create growth and jobs

Proposed funding (2014-20): 17,9 billion euro

Leadership in enabling and industrial technologies
(ICT, nanotechnologies, materials, biotechnology, manufacturing, space)
Access to risk finance
Leveraging private finance and venture capital for research and innovation
Innovation in SMEs
Fostering all forms of innovation in all types of SMEs

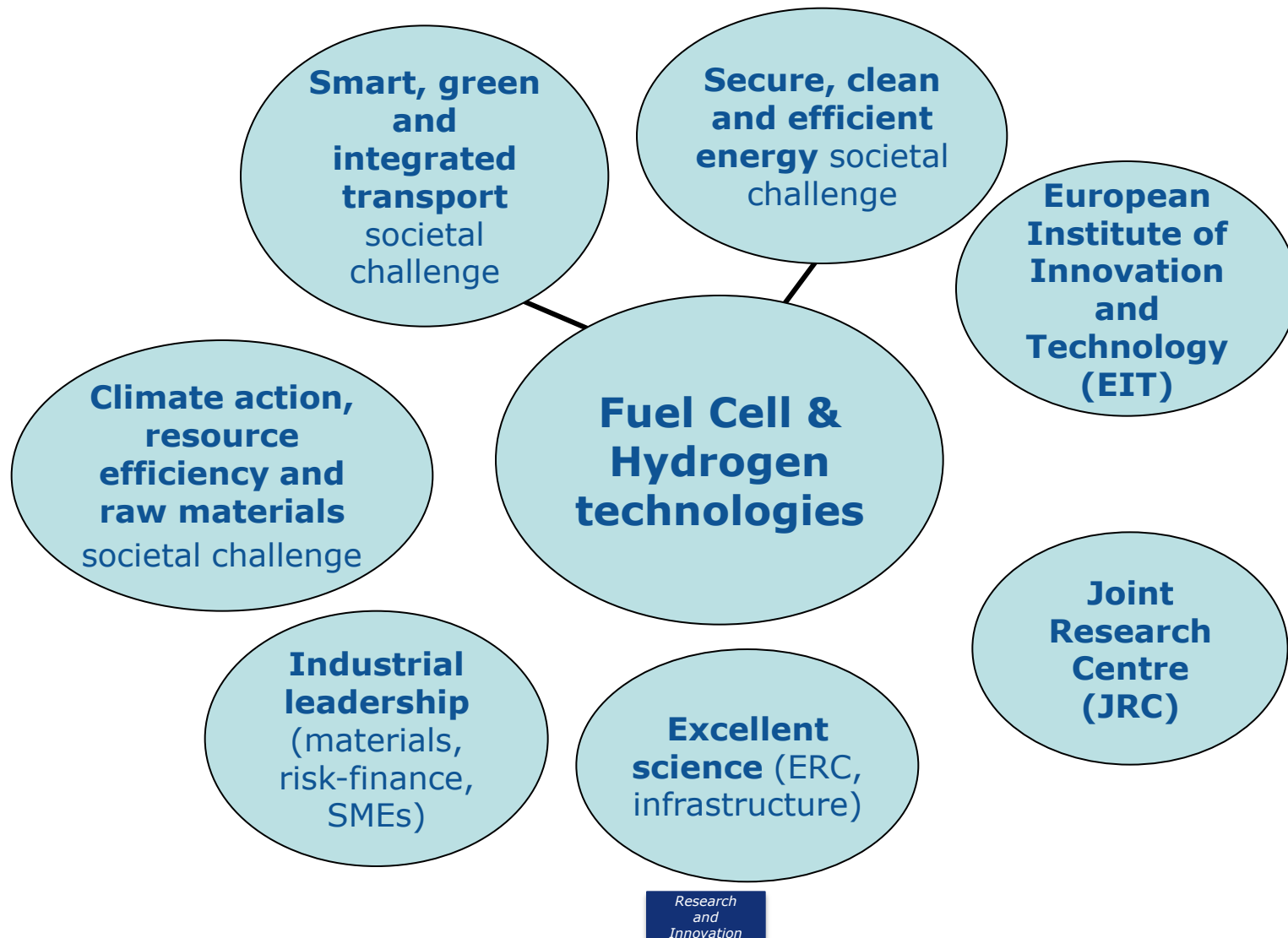
Priority 3 *"Societal challenges"*

Why: Innovation needed to achieve EU policy objectives, breakthrough solutions come from multi-disciplinary collaborations, including social sciences & humanities

Proposed funding (2014-20): 31,8 billion euro

Health, demographic change and wellbeing	8033
Food security, sustainable agriculture, marine and maritime research & the bioeconomy	4152
Secure, clean and efficient energy* (*) Excluding nuclear activities	5782
Smart, green and integrated transport	6802
Climate action, resource efficiency and raw materials	3160
Inclusive, innovative and secure societies	3819

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Secure, clean and efficient energy

- **Objective:** *"Promote the transition to a reliable, sustainable and competitive energy system, in the face of increasingly scarce resources, increasing energy needs and climate change".*
- **Strategic approach:** Support implementation of **SET Plan**
- **R&I Focus:** Speeding up the development of new, cleaner, low-carbon and more efficient technologies that can compete against well-established incumbents.
- Seven **broad lines** of activities including *"alternative fuels and mobile energy sources"*, which has as one of its targets reducing time to market for ***hydrogen and fuel cells technologies***

Smart, green and integrated transport

- **Objective:** *"Achieve a European transport system that is resource-efficient, environmentally friendly, safe and seamless for the benefit of citizens, the economy and society".*
- **Strategic approach:** To support the implementation of the White Paper on Transport
- **R&I Focus:** *To accelerate the development and deployment of new technologies and innovative solutions for vehicles, infrastructures and transport whilst reducing investment risks, pioneering common standards and shortening time-to-market.*
- Four **broad lines** of activities including "Resource efficient transport that respects the environment", which has as a goal "Developing cleaner propulsion technologies based on electric engines and batteries, **fuel cells**, or hybrid propulsion".

Partnering in Horizon 2020 – Main options

- **Public private partnerships (PPPs):**
 - ✓ **Joint Technology Initiatives** or other formal structures (Art. 187 TFEU), e.g. FCH JU
 - ✓ **Contractual agreements**, e.g. European Green Cars Initiative
- **Public public partnerships (P2Ps):**
 - ✓ **“ERA-NETs”**
 - ✓ **Joint programmes** between MS (Art. 185 TFEU)

Public private partnerships in Horizon 2020 – Selection Criteria

- **Added value** of action at EU level;
- Scale of **impact** on competitiveness, sustainable growth and socio-economic issues;
- **Shared vision** and clearly defined **objectives**;
- **Clear commitment** from private partners
- Scale of the resources / ability to leverage **additional investments** in Research & Innovation;
- Clear definition of **roles** and **performance indicators**

Legislative process for Article 187

- **Impact Assessment** (including results of public consultation)
- **Scientific and Technical** Background Document
- Commission Proposal for a **Council Regulation** (i.e. the legal act)
- **Inter-Institutional** discussions on the Council Regulation
- **Adoption** of Council Regulation

Timing will depend on the approval of Horizon 2020 package (co-decision)

THANK YOU FOR YOUR ATTENTION