



Programme Review Days 2016

Panel 4: Research activities for stationary applications

Moderator: Dionisis TSIMIS, FCH JU Project Officer
Co-moderator: Bernard DAM, T.U. Delft

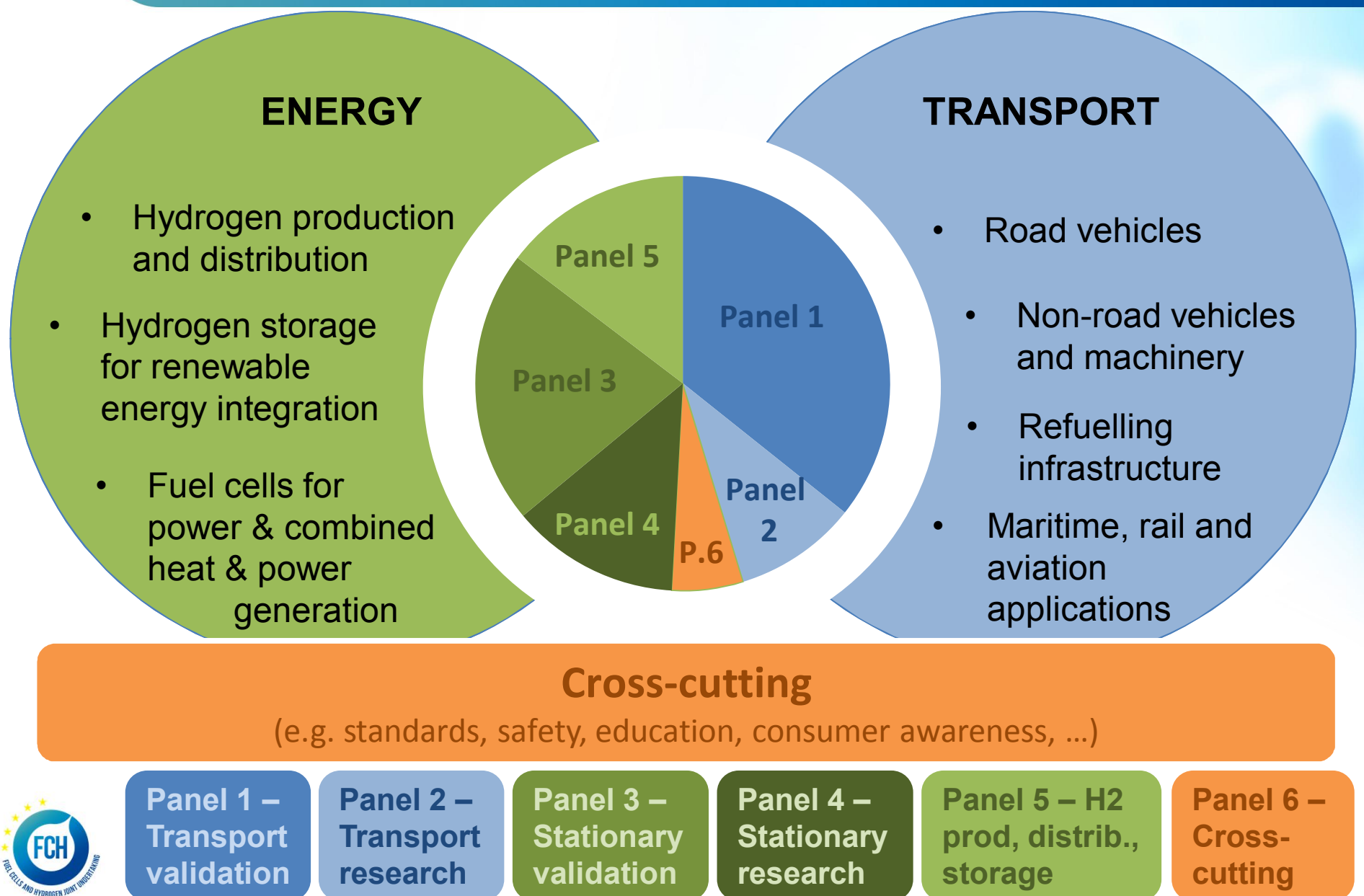


<http://www.fch.europa.eu/>

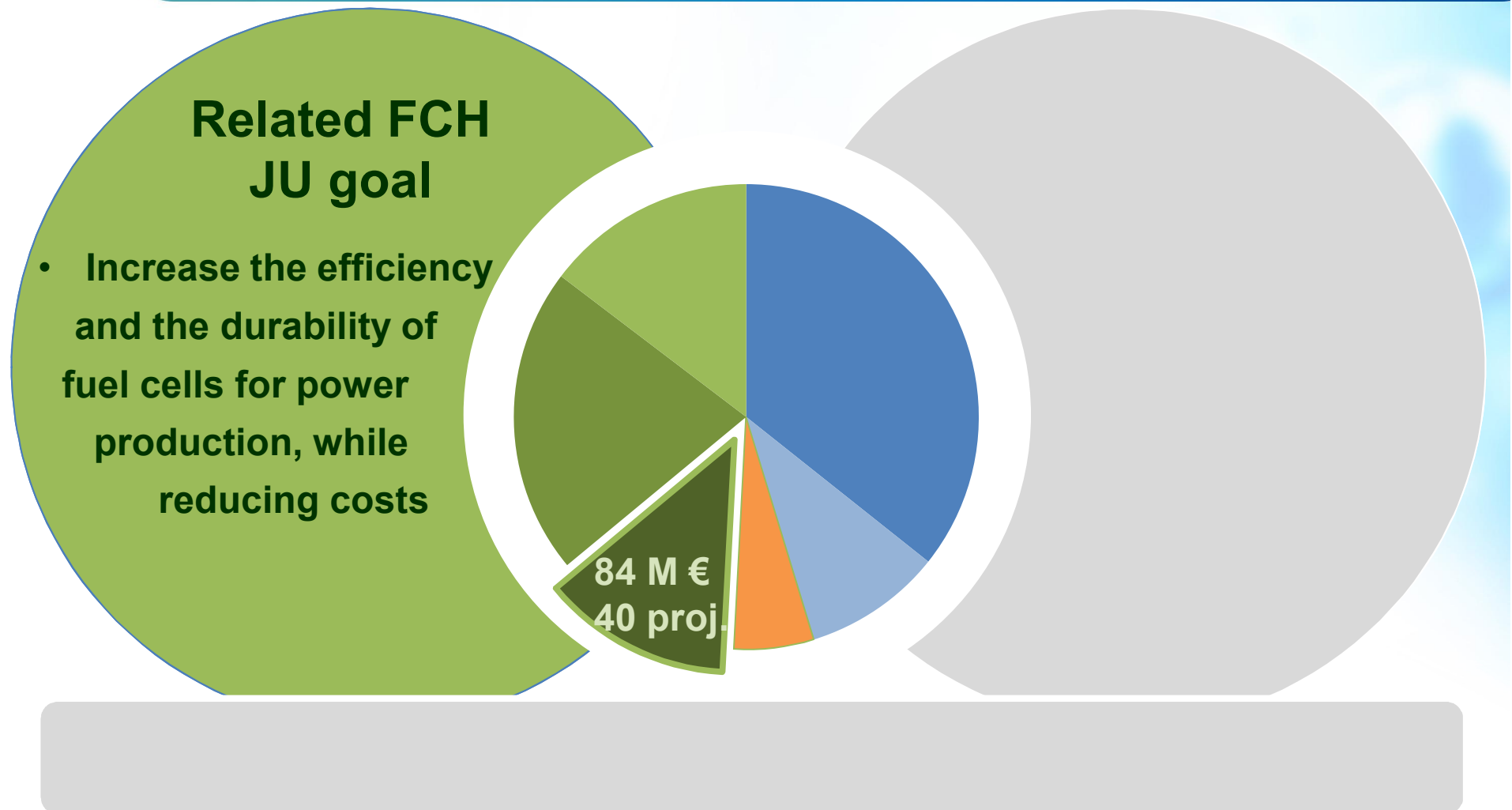
In the agenda

13:05	15:05	RESEARCH ACTIVITIES IN STATIONARY APPLICATIONS: Materials, components, diagnosis, performance phenomena, subsystem design and production (Panel 4) – Moderated by Dionisis TSIMIS and Bernard DAM
13:05	13:15	Portfolio presentation
13:15	13:30	HEALTH-CODE
13:30	13:45	SAPPHIRE
13:45	14:00	NELLHI
14:00	14:10	Q&A
14:10	14:25	SCORED 2:0
14:25	14:40	DEMSTACK
14:40	14:55	METSAPP
14:55	15:05	Q&A

FCH JU portfolio 2008-2015: 185 projects, 638 M€



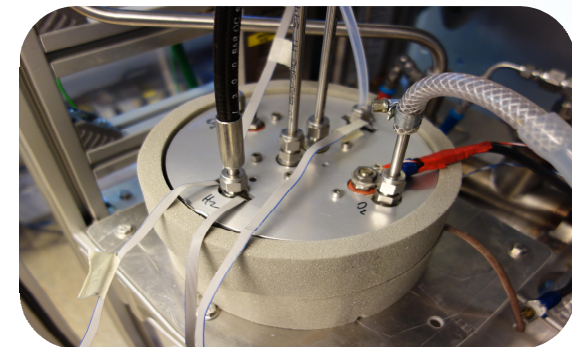
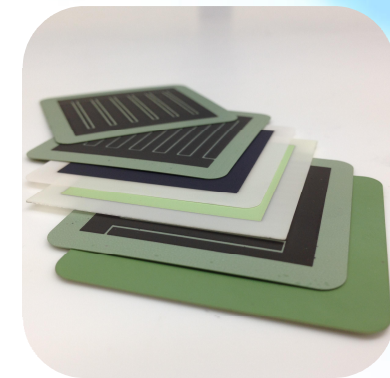
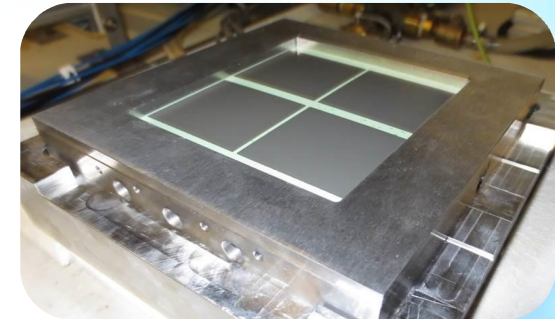
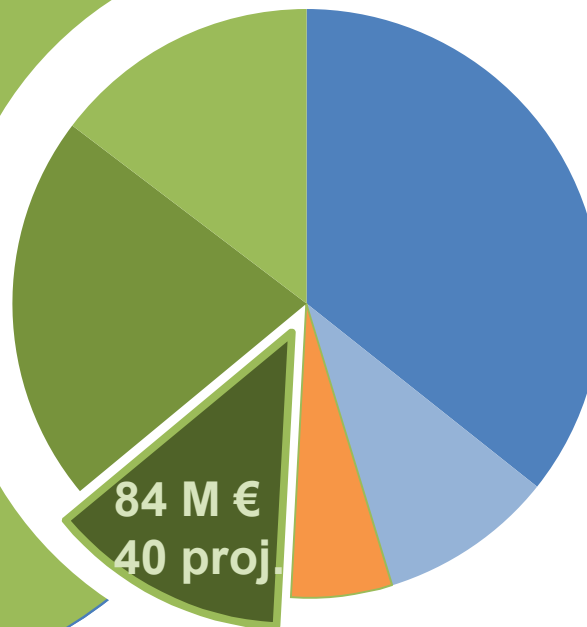
Panel 4: Research activities for stationary applications



Panel 4: Research activities for stationary applications

Related FCH JU goal

- Increase the efficiency and the durability of fuel cells for power production, while reducing costs



Covering all technologies at all stages of development

40 projects
84 M€

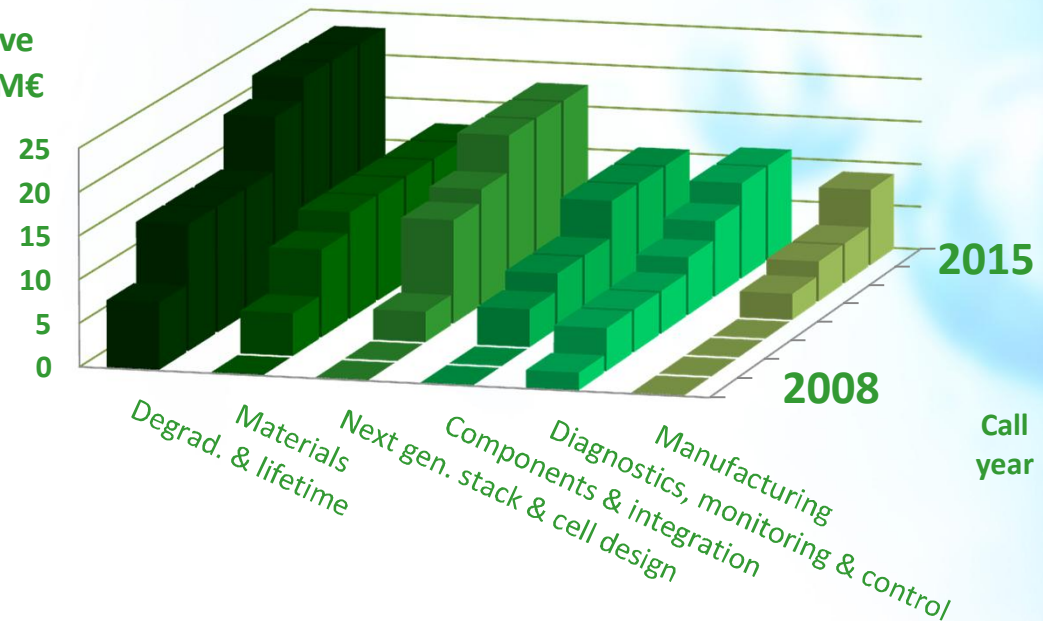
Financial Contribution

Partners
76 M€



FCH JU
84 M€

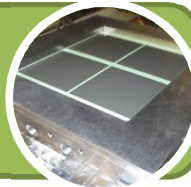
Cumulative
Funding, M€



Extending fuel cell stack
lifetime



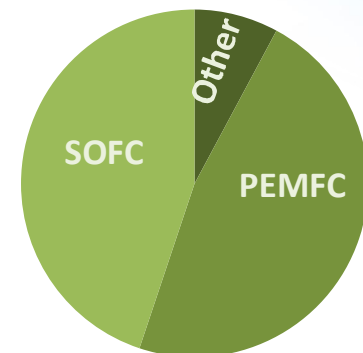
Shifting the focus to
manufacturing



Enabling cost
reductions for
demo projects



Technology neutral



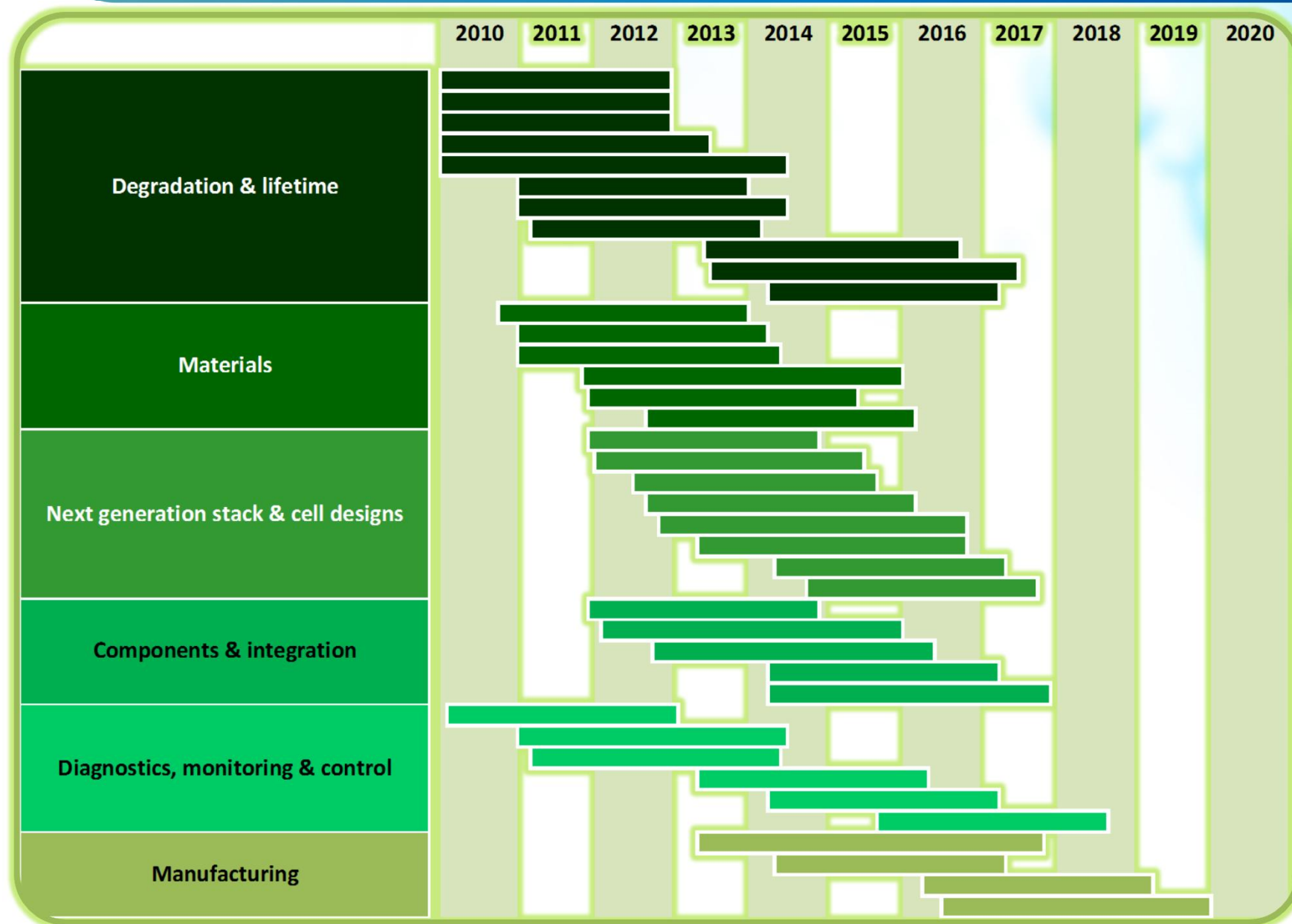
(funding)



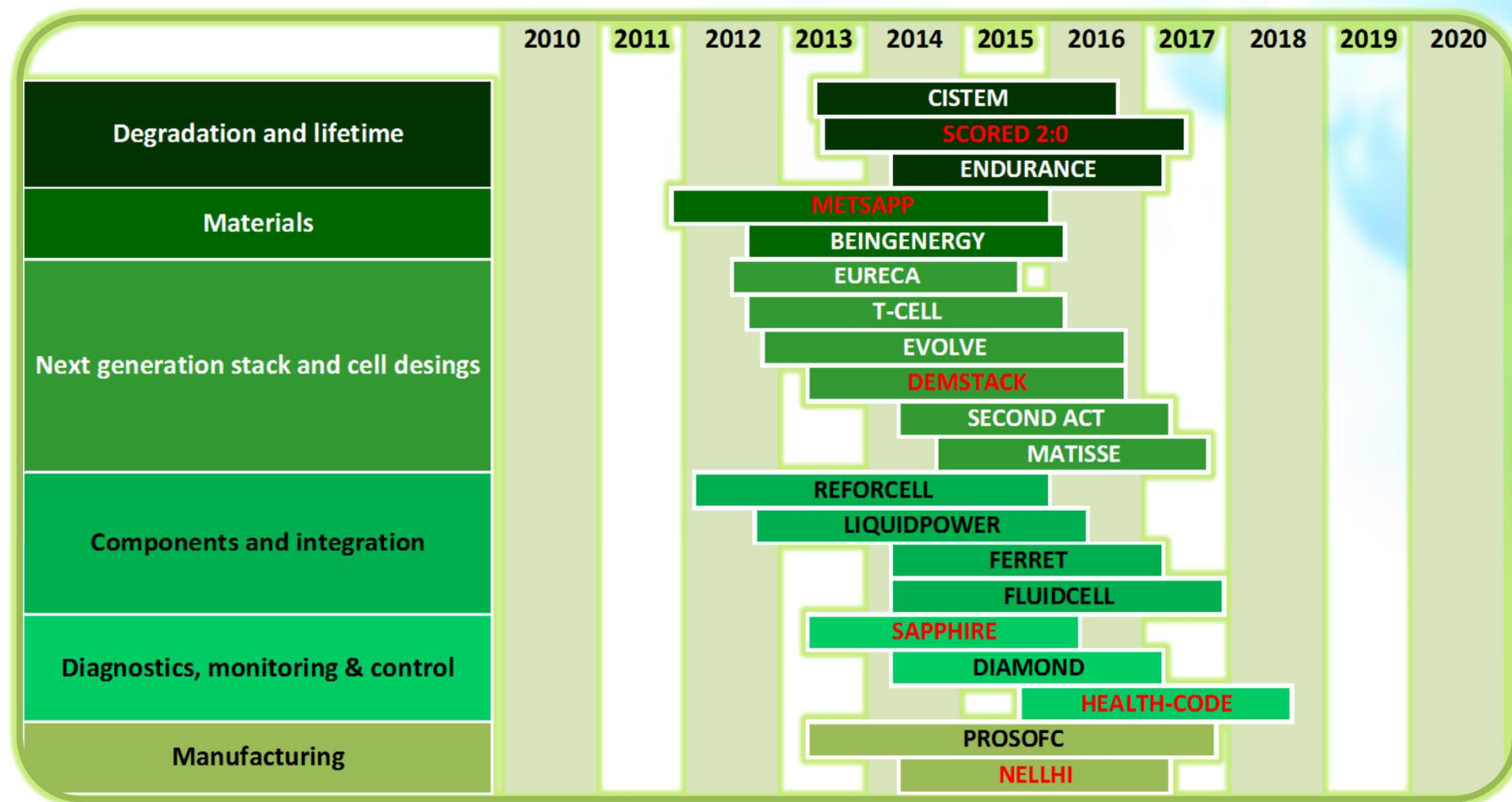
European leadership
in SOFC

From basic research to manufacturing and commercial applications




40 projects
84 M€



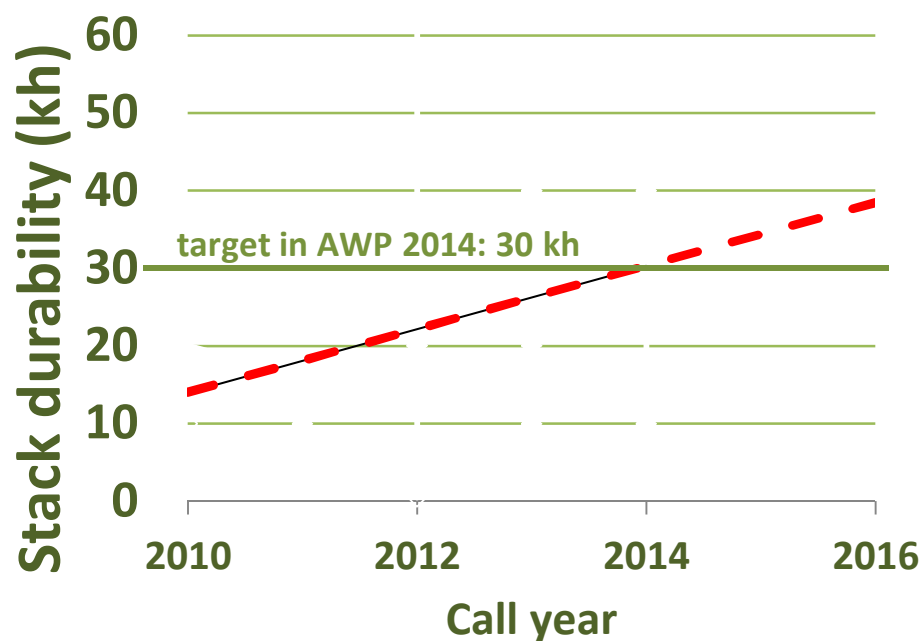
20 projects/48 MEUR in the 2016 programme review



On track to reach our 2017 performance targets

CHP SYSTEM	FCH JU project results 2015	Objectives 2017*
System electrical efficiency, %		> 57
Total system efficiency, %		> 82
Stack lifetime, kh		> 30

*Based on AWP2014



2015 achievements:

- 76,000 h+ of operation
- 4,200 €/kW SOFC stack average cost
- 5,300 €/kW PEMFC stack average cost
- 92% of average stack availability

Based on 2015 project data gathered in the FCHJU 2016 data collection exercise

Horizontal aspects

Dissemination and exploitation

- ✓ +380 conference presentations
- ✓ +220 Publications
- ✓ 15 patent intentions

Training and education

- ~15 PhD and ~17 post-doc trained/recruited
- ~5 MSc students involved
- Trainings and courses

Launch of Testing protocols harmonization activity with JRC

- Establishing a scientifically sound basis for comparison of results
- Kick-off meeting on the 28th of November

Workshops



The Joint Workshop on the Development of the European SOFC Value Chain

30/01/2017
Stuttgart



Construction of Improved HT-PEM MEAs and Stacks for Long Term Stable Modular CHP Units

24/11/2017
Brussels

Support services for exploitation of research results

Summary



Good progress towards our objectives



Extending research to higher TRLs closer to commercial products



Increasing interest in manufacturing research



European leadership in SOFC



Thank you for your attention

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Further info :

- FCH JU : <http://www.fch.europa.eu/>
- HYDROGEN EUROPE : <http://hydrogeneurope.eu/>
- N.ERGHY : <http://www.nerghy.eu>

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