Future Opportunities for Construction Research and Innovation in Europe

José-Lorenzo Vallés
Industrial Technologies
DG Research and Innovation
European Commission

Disclaimer: This presentation is not legally binding and does not represent any commitment on behalf of the European Commission

ECTP-E2Ba-Eracobuild Conference, Warsaw 05-10-2011
EUROPE 2020

- **Strategy for smart, sustainable and inclusive growth:**
  - Innovation, Competitiveness, Green & Social aspects
- **Focus on facing the Grand Challenges:** Ageing, Energy …
- **3% for R&D and 20/20/20 climate targets** should be met
- Among 7 **flagship initiatives**, the NMP area has a strategic role in Innovation Union, Resource-efficient Europe and Industrial policy
- **Innovation Partnerships** as a forum to foster innovation
- **Support to PPPs** as a tool to combine public and private funding
- **Acting efficiently together** as in the Recovery Plan
Energy-efficient Buildings PPP

Construction sector (€ 1 billion in 4 years)

- 10% of the EU’s GDP and 32 million jobs before the crisis
- Building activity dropped by 8% in 2009 and declines further
- 40% of energy use and 33% of GHG emissions in Europe
- Themes: NMP, ENERGY, ICT, ENVIRONMENT
Advantages of a PPP

- **Industry has a leading role** in defining research priorities
- **Ad-hoc Industrial Advisory Group** advises on implementation
- **Multi-annual Roadmap** allows long-term investment plans
- **Pre-defined budget** ensures continuity
- More emphasis on **relevance of industry** and **impact**
- Focused on **enabling industrial technologies**
- Increased use of **SME-friendly** instruments and **demonstration**
Special features in the PPP calls

- Involvement of industry in the preparation
- Industrial partners provide added value
- High share of industrial experts in the evaluation
- Single stage evaluation to reduce time to contract
- Coordinated & Joint Calls for Proposals
- Specific PPP Annex to the WP for higher visibility

Open to ALL stakeholders according to normal FP7 rules
### Results of first EeB Calls

<table>
<thead>
<tr>
<th></th>
<th>July 2009</th>
<th>July 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Success rate:</strong></td>
<td>28%</td>
<td>20%</td>
</tr>
<tr>
<td>17 funded of 60</td>
<td></td>
<td>24 funded of 120</td>
</tr>
<tr>
<td><strong>Share by Org. Type:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Higher Education:</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
<td>- Private for Profit:</td>
<td>48%</td>
<td>53%</td>
</tr>
<tr>
<td>- Research Org.:</td>
<td>26%</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Share of Funding of SMEs:</strong></td>
<td>24%</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Countries of funded partners:</strong></td>
<td>24</td>
<td>26</td>
</tr>
</tbody>
</table>
Construction in NMP

Industrial input

- The ECTP and the industrial advisory group of the EeB PPP give the main input to the NMP strategy for the construction sector.
- Construction related topics have provided good coverage of the Strategic Research Agenda of the ECTP and the EeB roadmap.
- Other Industrial roadmaps and national implementation plans are also taken into account.
Construction in NMP
Topics in FP7 (outside EeB)

1st call:  - Resource efficient and clean buildings
          - Innovative added-value construction product-services

2nd call:  - Smart materials for applications in the sectors of
          construction and of machinery and production equipment

3rd call:  - Reducing the environmental footprint of energy intensive industries

4th call:  - Advanced underground technologies for intelligent mining
          and for inspection, maintenance and excavation
Common Strategic Framework for EU Research & Innovation

- Covering FP, CIP and EIT in a Common Strategic Framework
- With a coherent set of funding instruments along the whole innovation chain (from basic research to market uptake)
- Far reaching simplification of procedures and rules

Response to the **Green paper** seeking the views of all stakeholders on the priorities and proposed improvements:

- ETPs are generally seen as a valuable tool
- Efforts must be made to simplify the complex structures of the existing JTIs, for example through the broad application of PPPs like those that emerged under the Recovery Plan

ECTP-E2Ba-Eracobuild Conference, Warsaw 05-10-2011
Horizon 2020

- Based on Europe 2020 and the Innovation Union
- Seamless integration of Research and Innovation
- Proposed amount: €80 billion for 2014-2020
- 46% increase compared to 2007-2013
- Commission proposals for Horizon 2020: by end of 2011

Objectives and structure:

- Excellence in the science base
- Strengthening competitiveness
- Tackling societal challenges
1- Excellent science base

World class excellence; developing and attracting talent

- European Research Council
- Future and emerging technologies
- Marie Curie actions on skills, training and career development
- Research infrastructures
2- Industrial leadership and competitive frameworks

Business led R&I; raising private investment

- Enabling and industrial technologies (ICT, nanotechnology, materials, biotechnology, manufacturing, space)
- Access to risk finance (loans, equity)
- Support for innovation in SMEs
3- Tackling societal challenges

Responding directly to EU objectives; whole cycle from research to market

• Health, demographic change & wellbeing
• Food security, sustainable agriculture & bio-based economy
• Secure, clean & efficient energy
• Smart, green and integrated transport
• Climate action and resource efficiency including raw materials
• Inclusive, innovative and secure societies
Horizon 2020 - Simplification

- **Single set of rules** for eligibility, accounting, reporting, auditing …
- **Simplified cost-reimbursement** approach
- Broader acceptance of **usual accounting practice**, greater use of **lump sums** and **flat rates**
- **Shorter negotiation** and **selection** phases
- **Unique IT portal**, common support structures, guidance
- **External management**: learning from experience with financial instruments, public-private partnerships, public-public partnerships, executive agencies
Next steps

- **Commission proposals** for Horizon 2020: *before end 2011*
- **FP7 Work Programmes 2013**, bridge towards Horizon 2020
- **Negotiations on EU budget** for 2014-2020
- **Legislative decisions** on Horizon 2020 by the Council and the European Parliament (2012-13)
- **Horizon 2020**: from 2014
EeB longer-term outlook

- **Continued dialogue under FP7** via the Advisory Groups
- **New articles related to PPPs** in the Commission proposal for revision of the **Financial Regulation**
- **Horizon 2020 Sub-group on PPPs “Ideal House”** works on:
  - The implementation models for research PPPs
  - The specific criteria to justify the creation of a PPP
  - Definition of the role and commitment of the PPP partners
  - Governance and implementation issues
EeB Implementation for 2012

Calls on the three PPPs in WP 2012:

- Cross-thematic approach for each PPP
- Single-stage evaluation
- **Publication:** 20 July 2011
- **Deadline:** 1 December 2011

**Indicative Evaluation and Negotiation timetable:**

Evaluation: January 2012
Launch of Negotiations: February-March 2012
First projects begin: June 2012
## Public-Private Partnerships
### Calls of July 2011 - Budget Contributions 2012

![European Commission Logo]

<table>
<thead>
<tr>
<th>(M€)</th>
<th>Green Car</th>
<th>Energy efficient Buildings</th>
<th>Factories of the future</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMP</td>
<td>20</td>
<td>70</td>
<td>100</td>
<td>190</td>
</tr>
<tr>
<td>ICT</td>
<td>30</td>
<td>30</td>
<td>60</td>
<td>120</td>
</tr>
<tr>
<td>ENERGY</td>
<td>30</td>
<td>35</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>ENVIRONMENT</td>
<td>5</td>
<td>5</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>TRANSPORT</td>
<td>63</td>
<td></td>
<td></td>
<td>63</td>
</tr>
<tr>
<td><strong>Total 2012</strong></td>
<td><strong>118</strong></td>
<td><strong>140</strong></td>
<td><strong>160</strong></td>
<td><strong>418</strong></td>
</tr>
</tbody>
</table>

ECTP-E2Ba-Eracobuild Conference, Warsaw 05-10-2011
Call Topics WP 2012
Energy-efficient Buildings PPP

- Cross-thematic Call
  EC funding: 140 M€

  - 6 topics from NMP: 2L+1SME+2S+1CSA
  - 1 topic from ENV: SME
  - 1 topic from ENER: CP-SoU
  - 1 topic from ICT: STREP

- Areas covered include: integration between buildings and grids; systemic approach for retrofitting; new processes and business models for EeB; HVAC systems; smart windows; knowledge transfer; energy efficiency of historic buildings; demonstration of renovation; and ICT for energy-positive neighbourhoods
Further information ...

FP7 Research Themes and Call information
cordis.europa.eu

Information on the Research PPPs
ec.europa.eu/research/industrial_technologies/