



Energy efficient buildings and districts, a European PPP to tackle grand societal challenges while fostering industrial competitiveness, knowledge intensive jobs and eco-innovation

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Where is the built environment?



- Buildings use 40 % of total EU energy consumption
- The built environment generates 1/3 of GHG in Europe
- Even new buildings are far from being all energy efficient
- Replacement rate is very small (1 to 2 % per year)
- The renovation of the existing stock is a real challenge
- Many experiments are made but actual impacts are limited

Business as usual is not an option!

Industry mobilisation and engagement ...



Within the framework of ECTP, E2BA was established to **engage into a long term partnership with EC**, aiming at:

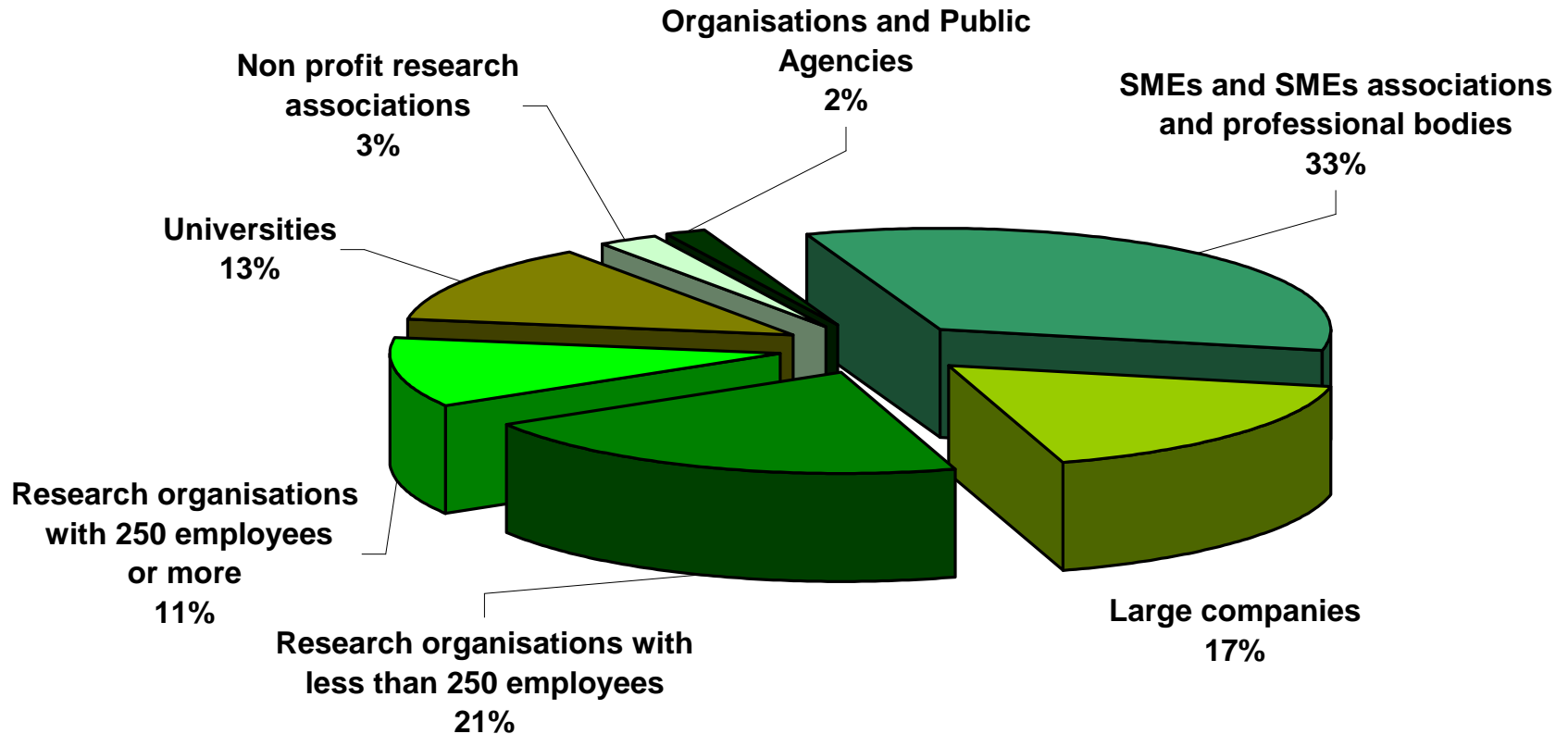
- Seeking and demonstrating industry engagement
- Coordinating research interests towards Public stakeholders
- Keeping close links with international initiatives
- Liaising with national/regional initiatives



... in the full innovation chain



159 members have joined the Association.



Public-Private Partnerships

Double approach



Involvement of industry, including SMEs, in the planning and implementation

Quick response needed: use of **existing instruments**

- **7th Framework Programme**
- **Multi-annual Roadmaps until 2013** developed by industry in the framework of the **Ad-hoc Industrial Advisory Groups**

Double approach for implementation :

- Fast start with **cross-thematic** calls for proposals under FP7
- In parallel, exploration of **strategy and options** for longer term

For industry: Why a PPP ? (compared to biz as usual)



- Industry wants to have a leading role in defining research priorities, and to be involved in **programme implementation**
- A multi-annual integrated Work Programme with pre-defined budget ensures **continuity in the implementation of research** strategies & allows industry to have **long-term investment plans**
- Activities going from basic and applied research through to large-scale demonstration. More **emphasis on impact.**
- Increased use of **SME-friendly** research instruments

The industry vision and long term strategy (1/2)



Trends and scenarios
Industry objectives and vision
Strategic targets (Recovery Plan, SET plan, ...)

Key pillars:

- **Systemic approach (Globally optimised, locally designed)**
- **District potential**
- **Geoclusters**

energy needs

STEP 1 Reducing the energy consumption of buildings and its negative impacts on environment (main goal within the PPP EeB 2010-2013)

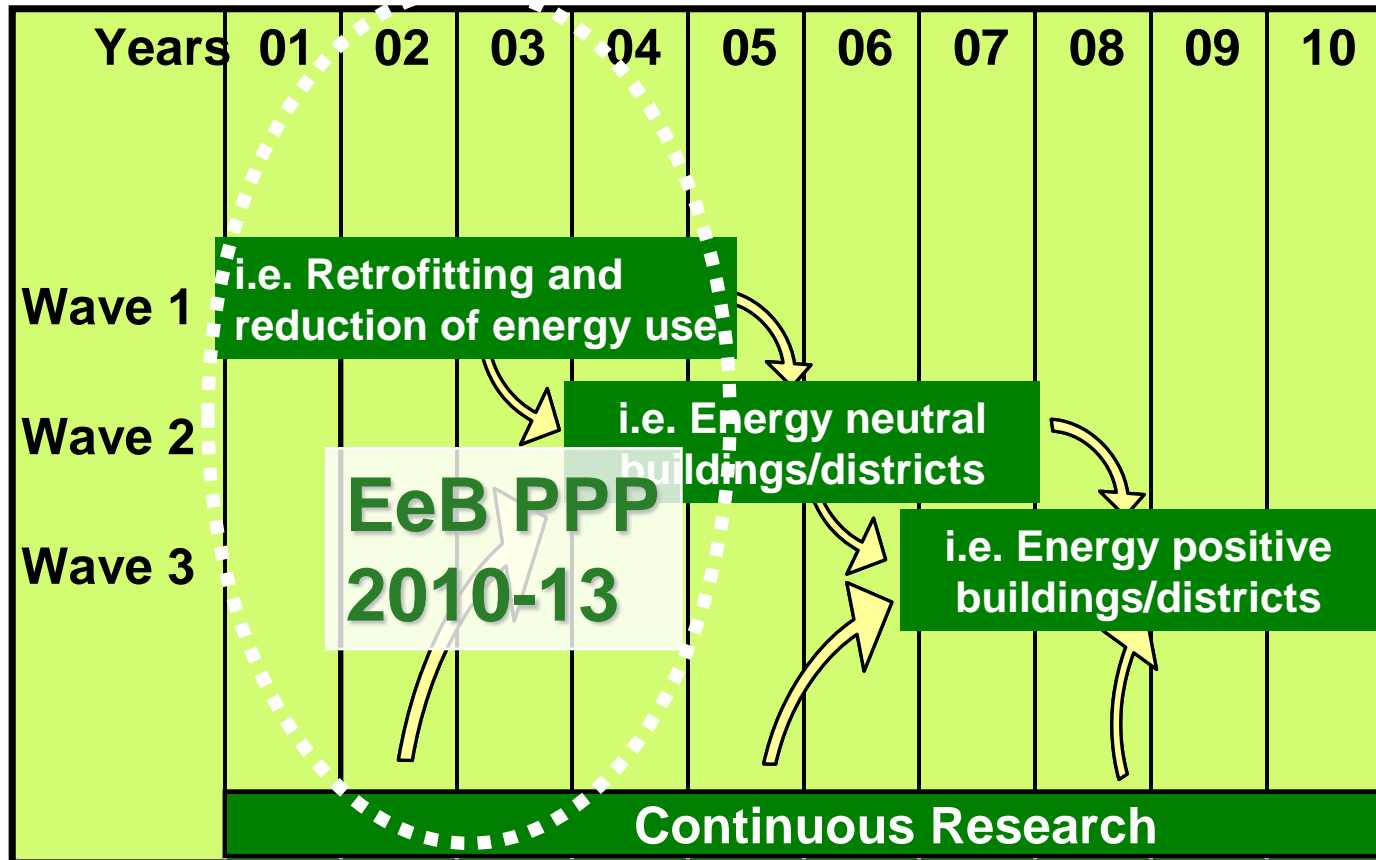
The built environment today



The industry vision and long term strategy (2/2)



EeB PPP as first wave of a Long Term Strategy



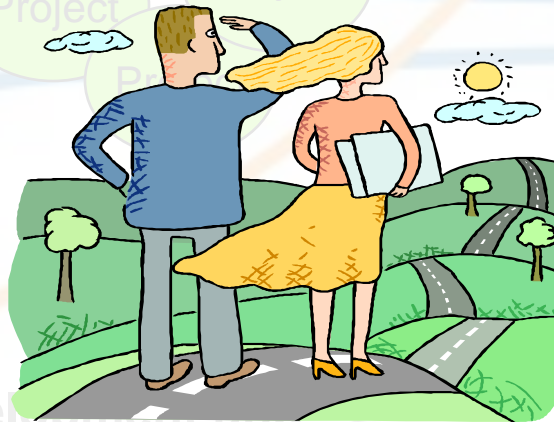
Fostering an ambitious long term R&I Programme (2/2)



project changes/
directions

**Aligning EU and local roadmaps,
funding tools, public procurements
and contracting practices, ...**

Concepts
Screening/Innovative



Front End >

Development

Deployment and

Deployment throughout

**Anticipating education/training needs,
new standards, IPR strategies,**

>>>>

EUROPEAN CONSTRUCTION TECHNOLOGY PLATFORM

The road



ENERGY-EFFICIENT BUILDINGS PPP

MULTI-ANNUAL ROADMAP AND LONGER TERM STRATEGY

Prepared by the Ad-hoc Industrial Advisory Group

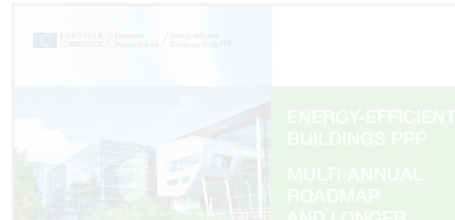


SRAs Analysis
• SRAs and Implementation been analyzed



Inputs from Stakeholders (c

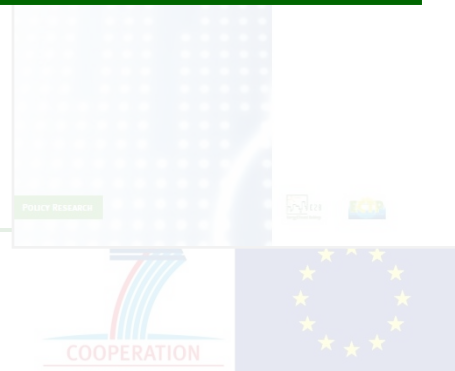
Search Priorities



5.0 DEFINITION OF A MULTI-ANNUAL ROADMAP	37
6.0 INTERNATIONAL COOPERATION	41



POLICY RESEARCH



Research

Relationship between user and energy



HALLENGES

NEUTRAL/
ENERGY
POSITIVE NEW
BUILDINGS

Systems and equipment
for energy use for new
buildings
Systemic approach for
new buildings

ORGANISATIONAL
ASPECTS

Value Chain and SMEs focus

Energy and equipment for
Envelope for existing
Systemic approach for
existing buildings

Equipment for energy use (horizontal)
Energy

Environment
Integration of new solutions
Components

and mass customization

Automation and control

Life cycle analysis (LCA)

Energy Management Systems

Labelling and standardization

Materials: embodied energy and multi-functionality

Diagnosis and predictive maintenance (continuous)

Interaction (integration)

Energy (horizontal)

ENERG
DIS

Between buildings, grid,
heat networks, ...

Energy (district):
District or other

District

Interaction
grid, heat network ...

Energy use (district)

Examples of EeB-PPP related running projects



Multi-source Energy Storage Systems Integrated in Buildings
www.messib.eu

Clean buildings along with resource efficiency enhancement using appropriate materials and technology
<http://www.clear-up.eu>

Resource and Cost-effective integration of renewables in existing high-rise buildings
<http://www.cost-effective-renewables.eu>

Development of a clean and energy self-sustained building in the vision of integrating H₂ economy with Renewable Energy Sources
<http://www.h2susbuild.ntua.gr>

Other projects are under negotiation (FC-district, E-hub, etc,)

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Thank you for your attention!!

Further information:

www.e2b-ei.eu

http://ec.europa.eu/research/industrial_technologies/lists/energy-efficient-buildings_en.html

