



Visions, Requirements and Innovations for Sustainable Building

by

Sustainable Smart Eco-Buildings in the EU “Smart-ECO”



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March 2009

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Sustainable Smart Eco-Buildings in the EU “Smart-ECO”

Project Aim

- evaluate technical and non-technical innovations relative to a stakeholder supported vision for sustainable building

Primary Objectives

- establish a **VISION 2010 – 2030** for sustainable European ECO-buildings considering the requirements of stakeholders’ views
- prioritise elements of the vision with associated requirements
- identify **INNOVATIONS** based on their potential relative to vision and requirements
- **EVALUATE**
- communicate the vision, innovations, requirements and metrics,



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Smart-ECO Vision Overview 1(2)

the Vision

- been condensed into a one page document discussed with stakeholders
- reflects EU policies & directives, ECTP vision, CIB Agenda 21 on Sustainable Construction, embraces ISO standards and CEN work, anchors in relevant references and international summits

Bridge to Innovations

- a matrix of “challenges and solutions” guides from the elements of the vision to the innovations discussed and evaluated in the project



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Smart-ECO Vision Overview 2(2)

Key Statement:

- Buildings contribute to sustainable development when designed and operated to match the appropriate fitness for use, with minimum adverse environmental impacts, while encouraging improvements in economic, social and cultural aspects at local, regional and global levels

Core Aspects of the Vision for Sustainable Smart Eco-Buildings:

- | | |
|---|---|
| <ul style="list-style-type: none"> – designed to meet the needs and the specific conditions, resulting from a dialogue between all interested parties – life cycle perspective on economic, environmental and social aspects – consideration of economic and cultural value over time – built with careful consideration of work conditions, resource and energy consumption, waste generation, applying environmental management | <ul style="list-style-type: none"> – provide the use functions efficiently over the working life – monitored technical and environmental performance – enable fault free efficient operation, e.g. through user and operation manual – integrated into low impact local networks and urban life – permits adaptation to changing performance requirements and functionality – enables reuse |
|---|---|



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Validating and Communicating the Vision

Stakeholder involvement

- draft vision established by project partners
- executive summary circulated for commenting to stakeholders
- full draft Vision discussed with reduced key-stakeholders with significant expertise in sustainability and building
- executive summary and process disseminated for information and commenting to CIB global network
- publications and newsletters disseminate the content to target audiences

Status

- result of the process for detailed “final” scrutiny at the stakeholder conference, March 2009



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Applying The Vision

Challenges and Solutions:

- identify **drivers** towards and against the development required to meet the vision
- identify **challenges** related to these drivers
- **prioritisation** of aspects of the vision are carried out at hand of the challenges, as these allow inclusion of specific regional differences
- identification of **INNOVATIONS** that may provide **solutions**
 - innovations may provide solutions to parts of challenges, or several challenges, but may also increase pressure on other challenges



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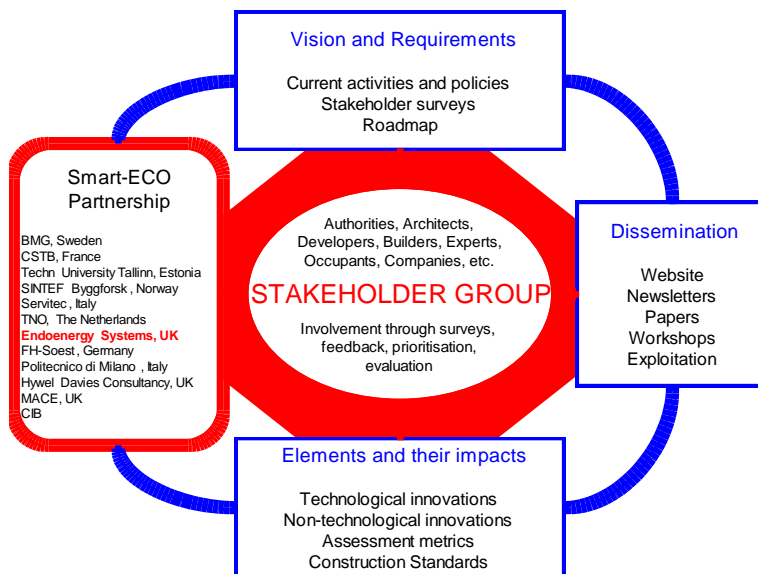
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Smart-ECO: Stakeholders at the core



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Smart-ECO project partners

1. BMG, Sweden
2. CSTB, France
3. Tallinn Technical University, Estonia
4. Servitec, Italy
5. TNO, The Netherlands
6. SINTEF Byggforsk, Norway
7. FH-Soest, Germany
8. Politecnico di Milano, Italy
9. Endoenergy Systems Ltd, UK
10. MACE, UK
11. Hywel Davies Consultancy, UK
12. CIB, The Netherlands



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