



Workshop on European RTD roadmapping on ICT for energy efficiency:

**REEB - The European-led strategic research
Roadmap to ICT enabled Energy-Efficiency in
Buildings and constructions**

ICT for sustainable homes 2010 conference

NICE, France

17-19 November 2010

Dr. Alain ZARLI

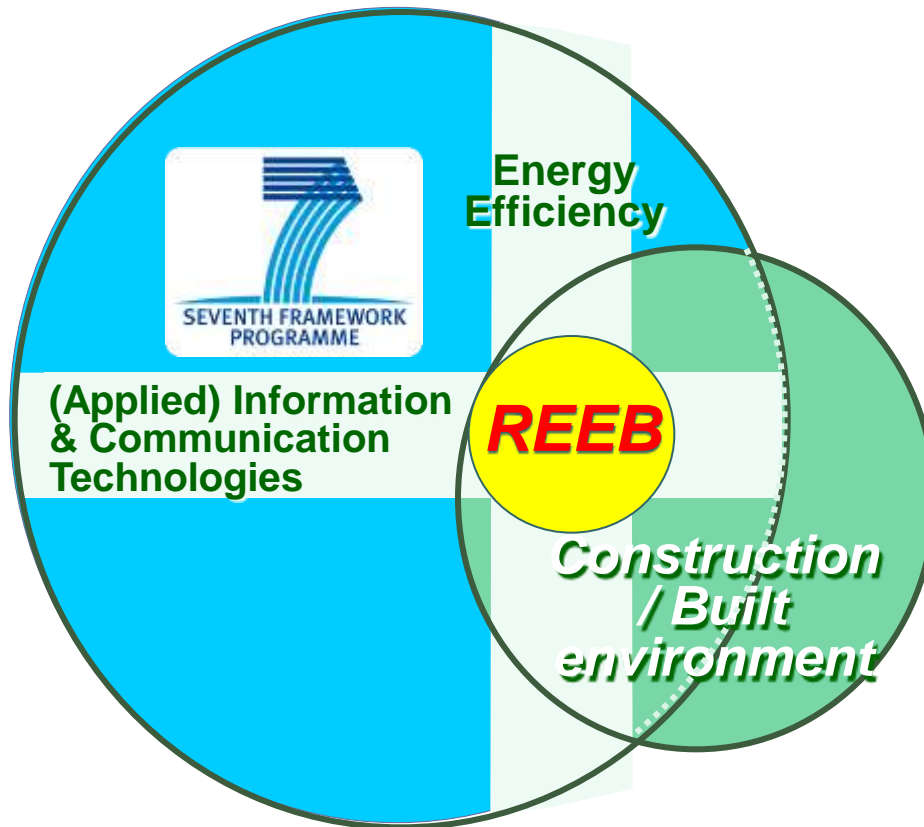
Head of Division

Information Technologies & Knowledge Dissemination Department

CSTB - Centre Scientifique et Technique du Bâtiment – France



The REEB *Coordination Action*



- Establish a European strategic research roadmap to ICT enabled Energy-Efficiency in Buildings and construction
- Funded by European Commission under its 7th framework programme (*GA n° 224320*) - *May 2008 / October 2010*

REEB snapshot

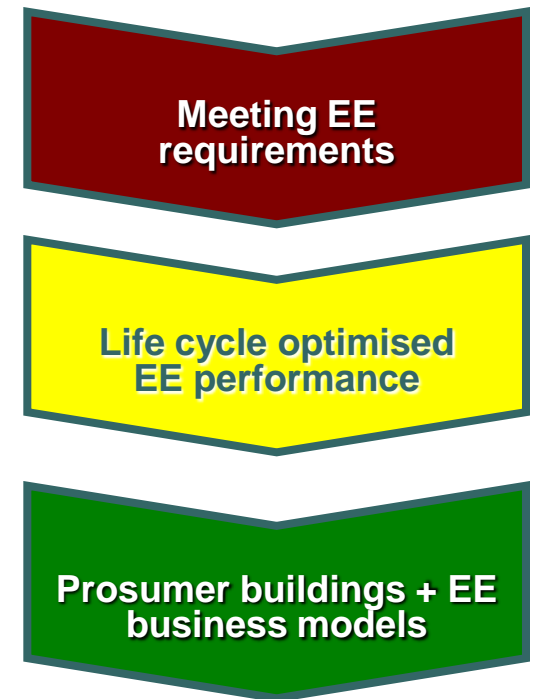
- **Key objective #1: Setup European & National REEB communities**
“Bringing together actors from the ICT, Energy and Construction sector”
 - **Key objective #2: Identify current best practices & RTD project results**
“Key exemplary projects and initiatives in the field of ICT for EE in construction”
 - **Key objective #3: Establish a vision, a roadmap and implementations recommendations**
“A shared European vision for ICT supported EE in Construction”
 - **Key objective #4: Dissemination, Training, Education**
“e-learning lecture courses in ICT supporting sustainability in buildings”
- To provide with a persuasive result:
- *in reference to improvement of energy efficiency & climate change*
 - *to stimulate the development of a large leading-edge market for ICT enabled energy-efficiency technologies in buildings that will foster the competitiveness of European industry & create new business opportunities*



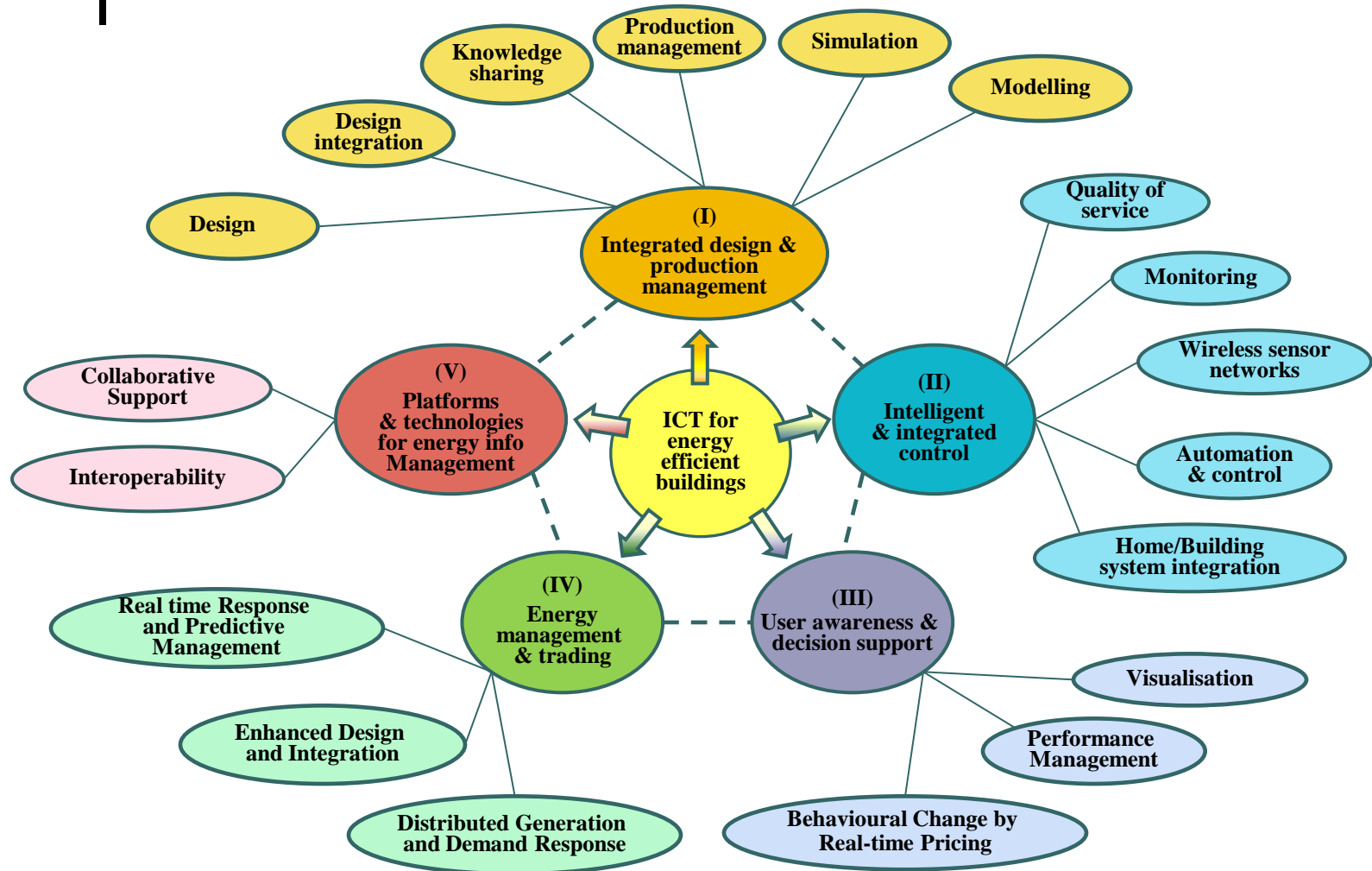
The REEB Vision

ICT will contribute to the energy efficiency of buildings mainly via design tools, automation & control systems and decision support for various stakeholders:

- Short term: ICT will be used to ensure that existing and new buildings **meet the current and emerging requirements for energy efficiency**.
- Medium term: ICT tools will enable **life cycle optimised design and energy management** during operation.
- Long term: ICT will enable and support **new business models and processes driven by energy efficiency**. Buildings have evolved **from energy consumers to “prosumers” (producer + consumer)**.IST4SH conference



The REEB categories



Note: ICT = Information & Communications Technologies

REEB: Case studies & Best Practice Guide

- **Objective #2:** *Identify current best practices* & RTD project results
 - “Key exemplary projects and initiatives in the field of ICT for EE in construction”
 - Provide a reference basis for identification of SOTA in the roadmap

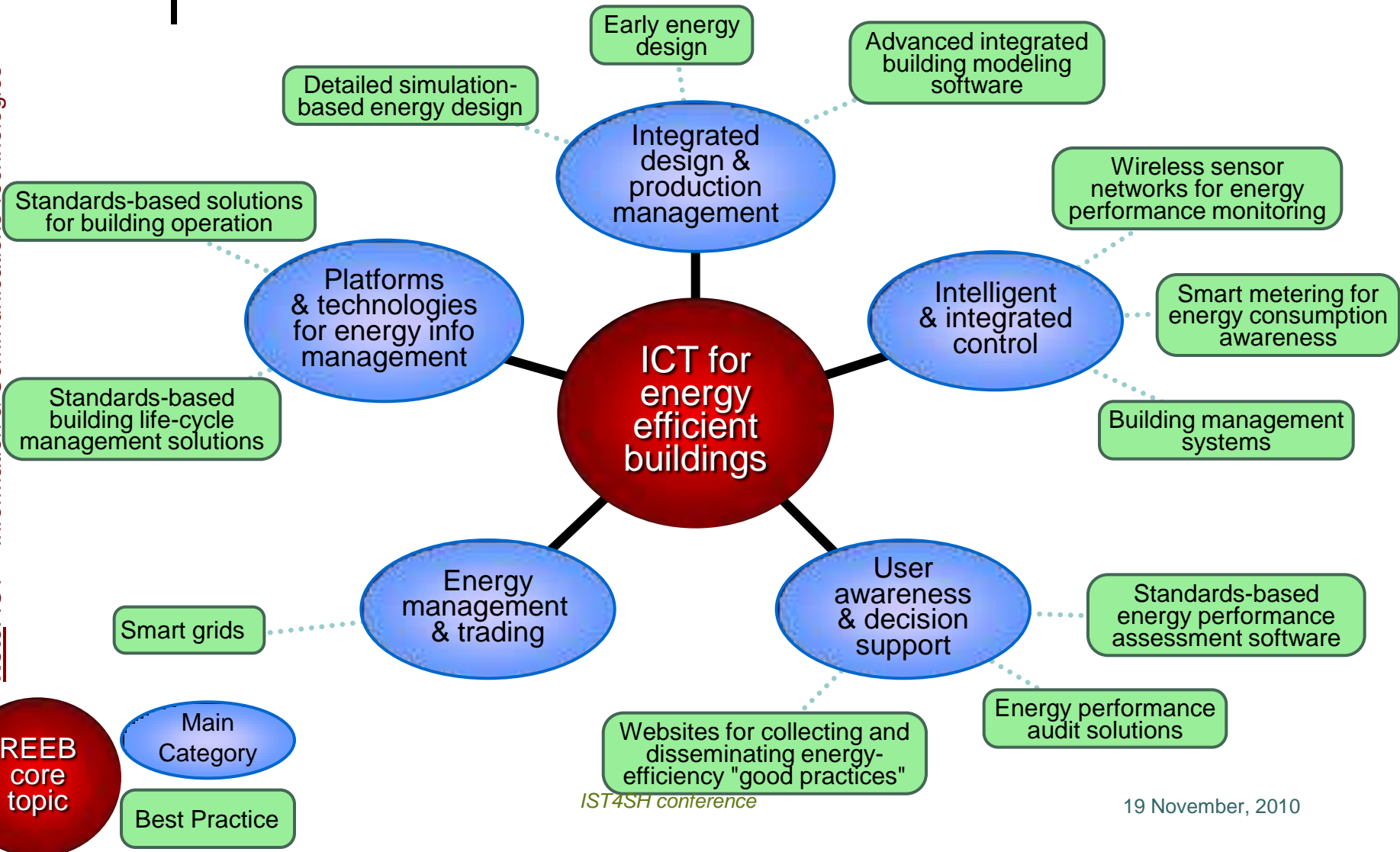
→ **Outcomes:**

- **Collection of Case studies:**
 - ~90 – throughout Europe
 - Focus on use of ICT tools / systems in Case Studies
- **Best practices Guide:**
 - Based on clustering the collected Case Studies dealing with similar concepts, services or applications
 - Final version available with **12** Best Practices



Best Practices over REEB Categories

Note: ICT = Information & Communications Technologies



REEB: RTD Projects results

- **Objective #2 (continued):** *Identify* current best practices & *RTD project results*
 - “Key exemplary projects and initiatives in the field of ICT for EE in construction”
 - Provide a reference basis for identification of SOTA in the roadmap

→ **Outcomes:**

- **Key Research Projects collection**
 - 270 projects & initiatives initially “scanned” - 52 out of the 270 selected for more detailed analysis
 - 5 Classification Categories for RTDs (→ harmonisation)
- **REEB-Map of European & International Research Initiatives on EE in Construction**
 - Position EC-supported RTD projects / relate them to key RTD challenges: synergies / harmonisation - current RTD strengths and weaknesses
 - Identification of current efforts towards standardisation in EE, and prioritization in the development of future International standards



REEB: Identified Projects (alphab.)

AIM	ADDRESS	Advanced facades at the Univ. of Southern Denmark
ATEST	Be Aware	BeyWatch
BuildWise	Building Controls Virtual Test Bed (Wiki)	CITYNET
DEHEMS	Demand controlled ventilation systems for EE and good indoor climate	DElight
DEMOHOUSE	DigiHome	E-ARCHI
e-retrofit kit	eDIANA	FM Comfort / FM Ware
GINSENG	HOMES	HOSPILOT
I3CON	InPro	Integrated control of solar shading, daylight and artificial lighting
IntUBE	IRON	ITOBO
LOCON	NEMBES	OPEN meter
POBICOS	PV TP – SEC	SafetyBIM
SemSorGrid4Env	SensoByg	SIMUENER
SM4ALL	SmartHouse / SmartGrid	SmartSpace
Smart Systems for Intelligent Energy Netw.	WSAN4CIP	Total: 41 European RTD projects
		Plus another 11 International RTDs

REEB: Vision & Roadmap

- **Objective (#3 in REEB):** *Establish a vision, a roadmap and implementations recommendations*
 - “A shared European vision for ICT supported EE in Construction”

→ **Outcomes:**

- *Vision:* European-wide detailed & agreed view on future ambition & targets for ICT supporting Energy Efficiency in Construction
- *Roadmap:* detailed set of priorities (short-, medium- and long-term) for all the categories identified in the REEB taxonomy
- *Recommendations for implementation actions* considering the REEB roadmap. Suggested following innovation stages: Policies, Coordination, RTD development, Take-up, Standardisation, Education & training.



REEB: Training

- **Objective #4:** *Dissemination, Training, Education*
 - “e-learning lecture courses in ICT supporting sustainability in buildings”
 - Provide awareness to future stakeholders in the Construction sector

→ **Outcomes:**

- Development of e-learning lecture courses for students as well as for industrial people - offered in the course of a virtual European Master programme in Construction Informatics.



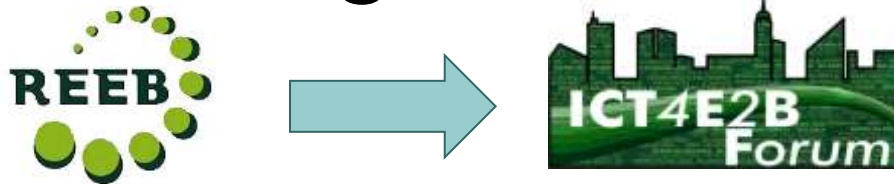
REEB main public documents

- Download reports → www.ict-reeb.eu/downloads.html
 - Collection of best practices
 - Report on relevant European & International initiatives
 - Vision – Roadmap – Implementation recommendations
 - Lecturing modules
- ***The REEB Book!***
 - ***A synthesis in 120 pages...***
 - ***... summarizing the series of continued work for the development of the REEB Vision and SRA***



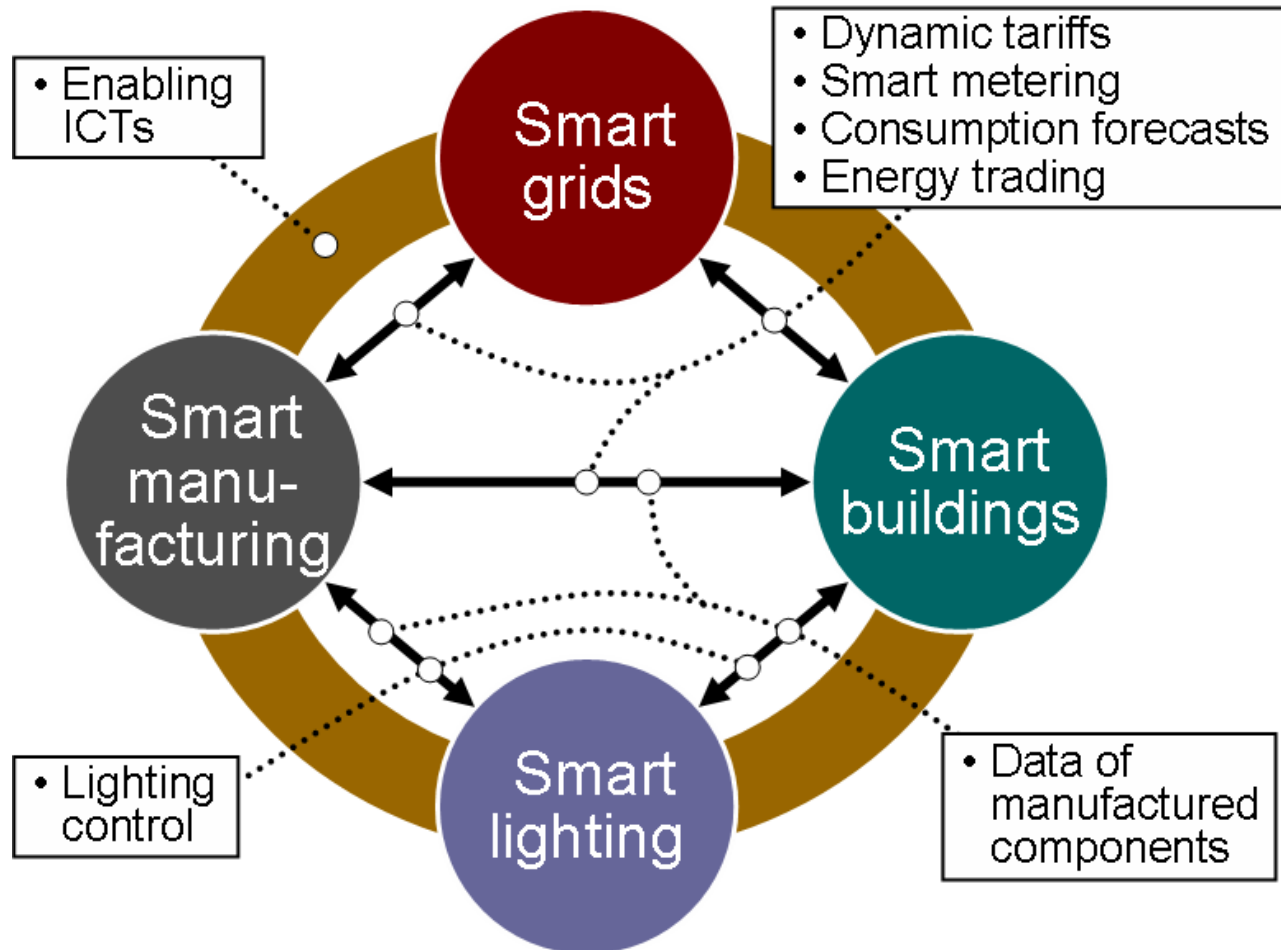
I want to get more information about ICT for EE in Buildings

Life after REEB...(1/2): extending REEB outcomes



- Prepare the grounds for future developments - the ICT4E2B Forum CA:
 - starting in Sept. 2010
 - building on the REEB outcomes & updating its roadmap → value and innovation chains
 - to generate consensus throughout the cross-industry community on key priorities for the introduction of ICT technologies and energy efficient solutions in the built environment
 - with an overall methodology for the identification of future priorities - tackling
 - technological challenges;
 - non-technological barriers: business models, standards, regulations...
- Discuss ongoing activities & potential areas of cooperation, as well as potential new project(s) to monitor implementation of the REEB roadmap

Life after REEB...(2/2): *cross-sectors synergy*



REVISITE
Coordination
Action
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● ● ● | Thank You & Do Contact Us

→ <http://ict-reeb.eu/>



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