

# Intelligent Use of Building Energy

## Abstract

Recent European Legislation (Directive 2006/32/EC) requires present and future Facility and/or Building Managers to reduce building energy consumption and operational costs.

Also, buildings are recognised as leading contributors to the climate change problem contributing in excess of 30% of global CO<sub>2</sub> emissions. Therefore, conducting performance based assessments of building operation is of utmost importance.

## Objective

The objective of the IntUBE project is to develop a system for utilising Building Information to save energy, particularly in existing buildings.

The IntUBE was developed to achieve increased life-cycle energy efficiency of the buildings without compromising the comfort or performance of the buildings:

- by integrating the latest developments in the ICT-field into Intelligent Building and Neighbourhood Management Systems (IBMS and NMS) and
- by presenting new ICT-enabled business models for energy-information related service provision.

## Approach

Work in IRUSE (UCC) focused on the development of concepts for new business models to provide services for efficient and intelligent use of buildings' energy information.

Business Models developed by IRUSE in intube include:

- Business Models for Heat Trade Business
- Business Models for Energy Service Provision
- Business Models for Total Facilities Management
- Business models for Energy Profiling
- Revised and Initial Demonstration Scenarios

Work on Business Models also included:

- (1) Development of distinguished "Energy Profiles" supporting the (standardised) exchange of 'Energy Information' amongst the stakeholders
- (2) Specification of alternative distribution channels and related core resources.
- (3) Characterisation of new stakeholder profiles f. business models emphasizing on Energy Service Provision.

## Achievements

The intelligent energy information management concepts and the new tools and business models developed by IntUBE help owners, operators, and tenants of buildings to use the existing building stock more efficiently.

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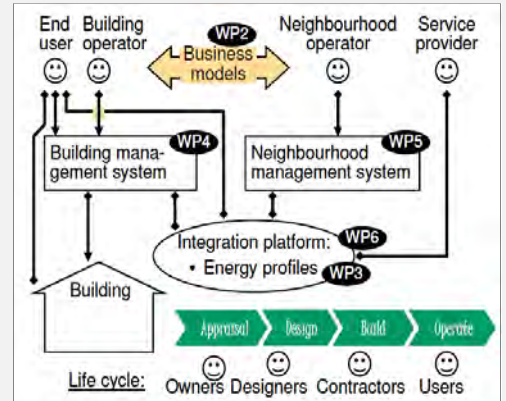


Figure 1: Overall Project and WP Summary

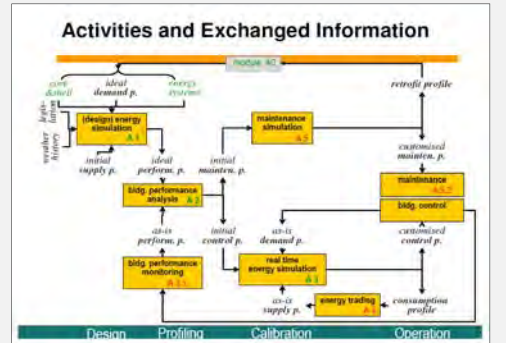


Figure 2: Processes and Exchanged Information (IDEF)

IRUSE contributed to the following work packages:

- WP2 Business Models (Work Package Leader)
- WP3 Energy Simulation: D3.2, D3.3 & D3.4
- WP6 Service Platform
- WP7 Integration and Validation
- WP8 Dissemination and Exploitation

