**Project: REViSITE**
**Roadmap Enabling Vision and Strategy for ICT-enabled Energy Efficiency (www.revisite.eu)**

# Title: Deliverable 3.1 - Vision for multi-disciplinary ICT-enabled Energy Efficiency

**Deliverable 3.1 download**

**Work Plan:**

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**Executive summary:**
This deliverable presents the REViSITE vision for multi-disciplinary ICT-enabled Energy Efficiency. The baseline for the development of the REViSITE vision is made by the current visions (sector and non sector specific) supplemented by expert views, analysis of state-of-the-art RTDs, ICTs and the potential of their application on a cross sectoral basis. The REViSITE vision builds on the interpretation of current visions and the envisioned implications of the full uptake of ICTs as an enabler for ICT4EE across various sectors. The REViSITE vision is broken down into components as per the SMARTT taxonomy (as described in Deliverable D2.1) and will lead to identifying the ICTs which maximise the impact of ICT on EE without necessarily being related to a specific sector. This vision will lay down the basis for the development of the future Europe's ICT4EE roadmap and its associated Strategic Research Agenda (SRA) and Implementation Action Plan (IAP).

Three steps were employed to produce the REViSITE vision: (i) Review and analysis of general and sector specific ICT visions under SMARTT taxonomy categories; (ii) Validation through statistical content analysis of existing ICT visions; and (iii) Qualitative survey of domain experts' vision views within the REViSITE Expert Group (REG). To extract useful ICT related components from the reviewed visions a comparative analysis has been conducted to determine the apparent and potential commonalities; this used a mapping table summarising all the components which are relevant to the ICT4EE vision across the four sectors. The main extracted components were clustered using the SMARTT taxonomy.

Content analysis of the text in the reviewed visions' documents was carried out based on a number of codes in order to extract the commonalities in various documents inherent to the vision on ICT4EE in Europe. Sections of text which referred to these codes were extracted as they appeared in the various visions documents, then were analysed separately in their original context to help the development process of the REViSITE vision after being classified using the SMARTT taxonomy.

A questionnaire was sent to the REG members regarding their views on the vision for ICT4EE and their corresponding feedback was also used in the formulation process of the vision.

As a result REViSITE suggests that Europe has to focus on a stronger role of ICT as an enabler of energy efficiency requiring more embedded intelligent computing systems, and to transform EU into more knowledge driven economy based on competitive R&D system
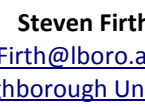
and networked enterprises to rationalise processes and resources to improve energy efficiency. All will be heavily supported by efficient knowledge sharing and the pooling of research and technological development resources of all disciplines. This ensures a wide availability of new services at reasonable costs to the providers and the users, with a sector of consumers shifting to be 'prosumers'. Management, monitoring, data analysis and decision making will become a service that is provided via a networked system similarly to the internet.

The alignment of the REVISITE vision with the SMARTT taxonomy leads to identifying ICT enablers for Specification & design, Materialisation, Automation & operation support, Resource & process management, Technical integration and Trading and transactional management. REVISITE can more clearly identify 'what' ICTs should be adopted or developed, 'where' they should be applied and 'how' they are likely to impact on sustainability. These ICTs are foreseen to contribute to the realisation of the vision where new services for EE are widely available; processes and systems are integrated; design and automation systems are interoperable with the availability of cross sectoral data exchange standards; knowledge sharing related to energy consumption and grids loads are enhanced and facilitated; Infrastructures for distributed collaborative engineering are available; Open platforms for monitoring, automation and control are widely used; embedded intelligent systems are in operation; and new business models geared to EE are implemented with a shift from 'consumer culture' to 'prosumer culture'

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