

## Workshop

# A new era for high performance buildings using BIM

**Final results** of the EU Project “**ISES - Intelligent Services for Energy-Efficient Design and Life Cycle Simulation**” to be presented at a workshop during the Int. Conference **EinB2014**

**Location:** Ledra Hotel, Athens, Greece

**Date/Time:** November 15, 2014 / 09:30 – 16:00 (*to be confirmed with detailed program*)

The holistic building design and construction is already introduced in Europe through the energy performance of buildings directive (EPBD) and the requirements have been strengthened by the EPBD recast for achieving cost optimal building designs for the life cycle of the building, moving towards nearly zero energy buildings by the end of the decade. Building Information Modeling (**BIM**) and the availability of intelligent interoperable services could play a crucial role in these efforts with improved visualization and productivity due to easy retrieval of information, improved coordination and exchange of information and highly increased computational performance, all leading to a reduced cost for the design of energy efficient buildings.

After three years of work within the European project **ISES** (<http://ises.eu-project.info>) various practical tools and results have emerged for enhancing the use of BIM for energy-efficient design of buildings. These include the development of an energy-extended BIM platform, with enhanced data exchange capabilities "BIM to energy" between stakeholders, using various advanced energy analysis, simulation and monitoring tools from early design to refurbishment and retrofitting. They have all been combined in a common, interoperable BIM-based **Virtual Energy Lab** (VEL) platform that is **accessible via the Internet**. The platform combines advanced state-of-the-art tools (for thermal analysis, CFD etc.) to facilitate a holistic BIM-based analysis of building energy performance and to make informed design decisions. It also incorporates several services for modeling the building, taking into account the stochastic nature of inputs (e.g. material properties, climate and occupancy), utilizing information and communication technology features for efficient data exchange and data processing, served by the necessary computational power through cloud computing. The final decision making process is further facilitated through an easy to use graphical interface to automatically combine and present the results of numerous run in parallel in the cloud design or analysis alternatives that satisfy specific user requirements. This is done on the basis of key performance indicators which highlight another innovative approach developed by the project to enable energy-efficient building design.

Speakers from industry, academia and research will present the **final software, models and tools**, focusing on cloud computing, stochastic considerations, sensitivity analysis and decision making, with **emphasis on practical results and expected impacts** derived from performed real pilot applications.

*The detailed program will be announced soon via the project web site (<http://ises.eu-project.info>).*

### Registration

Attendance is **free of charge**. However, **registration is required**, since the number of participants is limited. Please register as soon as possible by submitting your name and affiliation at [EinB2014@ashrae.gr](mailto:EinB2014@ashrae.gr) (*include in the Subject: ISES Workshop*).

Registration will be confirmed by e-mail.