BIM TECHNOLOGY TO ENHANCE ENERGY EFFICIENCY OF BUILDINGS

The Luxembourg Institute of Science and Technology is coordinating BIMEET, a new European project bringing together 9 partners around BIM technology as a key digital support for the energy efficiency of the built environment.

On 13 and 14 September 2017, the official launch of the BIMEET "BIM-based EU-wide Standardized Qualification Framework for achieving Energy Efficiency Training" project was held at the Luxembourg Institute of Science and Technology (LIST). Focusing on qualifications and training in BIM (Building Information Modelling), the project is funded by Horizon 2020, the European framework programme for research and innovation. Running for two years, this initiative brings together nine partners from the UK, France, Finland, Greece and Luxembourg, and numerous European experts. Luxembourgish expertise in BIM will be represented by LIST, the project coordinator, on the one hand, and on the other hand by the House of Training, the centre for lifelong learning in Luxembourg.

When BIM and energy efficiency meet

Faced with unprecedented challenges, whether in terms of energy efficiency, including the roll-out of passive or positive construction standards, or the digital revolution, with the increasing interest stirred by BIM and “Smart Building” technologies, the European construction sector is central to this new project. The project ties in these two challenges with an ambitious goal: to create a standardised skills framework applicable across the EU, based on BIM, in order to develop without delay new training modules focusing on energy efficiency and BIM.

The project goal is to encourage not only the adoption of information and communication technologies, but more broadly the deployment of the smart technologies associated with BIM, by upgrading the skills of professionals in the European construction sector.

To achieve this, the project has the backing of a consortium of partners from the research and training sectors. These partners are working hand-in-hand with governmental bodies and institutions representing the construction sector, harnessing their respective skills to:

- develop a matrix of skills linked to BIM and energy efficiency, for the disciplines of architecture, engineering, construction and building operation;
- develop a European qualification framework and its national roll-out;
- deploy a platform in order to distribute information to the public on these topics, and to improve professionals’ skills by integrating the BIM and Energy training offer.

The approach combines academic research results, applied innovation (notably through European projects) and concrete expectations of the sector. The aim is to raise
awareness among as many professionals as possible, gather their feedback, and leave a lasting impression on the content of current training programmes.

**BIM takes centre stage**

In Luxembourg, the result of the work carried out as part of the “Third Industrial Revolution” in 2016 highlights the role of BIM technology in the smart building and smart city sectors, presenting it as one of the pillars guaranteeing the circularity of materials and structures. The report also recommends the development of a national BIM strategy. On this topic, the “BIM implementation guide”, the first national reference document on BIM, was published by the Resource Centre for Technologies and Innovation in Construction (CRTI-B), with the support of LIST.

LIST, in its capacity as a Research and Technology Organisation (RTO), is supporting this market trend through its initiatives and projects: BIM4VET, which is producing a skills grid for BIM actors along with a method and tools for assessing the maturity of BIM skills; 4DCollab, a project focusing on collaborative uses of BIM in support of construction site activities; and BIMetric, a method and tools for evaluating the value added by BIM to construction projects. These are projects respectively financed by the Erasmus + programme, the National Research Agency (France) and the National Research Fund Luxembourg (Luxembourg), and the Plan Urbanisme Construction Architecture (France).

BIM also recently featured prominently at the international Life Cycle Management (LCM 2017) conference held in early September 2017 in Luxembourg. At the conference, scientists and international practitioners working in Life Cycle Analysis (LCA), a method designed to quantify the cradle-to-grave environmental impact of a product or service, stressed the importance of BIM in sustainable production and management methods for construction and urban systems.

For further information about BIMEET, visit www.list.lu/en/project/bimeet or contact Sylvain Kubicki, sylvain.kubicki@list.lu