

# BIMcert Closing Event



**Energy Efficiency in the Building Sector  
– The impact of Making Changes  
BIMcert Solution**



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 785155



## The impact of Making Changes - BIMcert Solution

# ENERGY EFFICIENCY IN THE BUILDING SECTOR

## The Impact of Making Changes

### - BIMcert Solution -

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### The objectives of optimization of energy performance of buildings are:

- Rational, cost effective minimization of energy consumption, by selection of environmental friendly materials and techniques;
- Maximization of use of low carbon and renewable energy sources for supply of buildings;
- Reduction of gap between predicted and actual energy performance of buildings;
- Decarbonization of buildings by decrease of embodied energy share and origin.

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### BIMcert Concept

- All stakeholders included in buildings' design, construction and usage, need to know their own and each other's roles in the buildings' life cycle in order to act synchronously towards sustainability of buildings.
- Achieving the expected performance in aspect of environmental impacts and energy efficiency should be observed as a common responsibility of all stakeholders – industry, policy and wide social community.
- A system thinking approach is necessary to engage all stakeholders (construction and performance drivers) in taking their part of responsibility in this action.

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# BIMcert response to the challenge of impacts:

## Applied system thinking approach

- The objective of applying system thinking approach is to address all interactions that have impact on building performance gaps.
- To avoid these gaps, there is a need to unite building construction techniques, policy formulation and policy implementation into a balanced and coherent system of analysis and implementation.
- In order to assess thoroughly impacts of buildings to natural and social environment, it is important to have all building components analyzed as a functional and operational whole in all phases of the building life cycle.

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# BIMcert Approach Towards Energy in Buildings

System thinking for energy performance of buildings is applied in two aspects:

- 1) Inclusion of all stakeholders (designers, construction contractors, site workers, manufacturers, owners, facility managers, policy makers) in united actions to achieve and maintain energy efficiency of buildings throughout their life cycle;
- 2) Optimization of overall energy efficiency of a building, in terms of:
  - Building life cycle;
  - All parts of design;
  - All factors that influence energy efficiency.



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# BIMcert Approach Towards Training on Energy in Buildings:

- Collaboration across the supply chain in digital environment,
- Build on existing knowledge and expertise,
- Use BIM to leverage sustainable energy skills,
- Encourage a more blended approach to self development.

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### BIMcert made impacts by:

- International engagement of construction sector,
- Design of training program based on industry needs,
- Including the whole construction supply chain in the training program
- System thinking approach for the buildings' life cycle
- Blended method of delivery, micro accreditation units, time and cost effective, accessible for all, encouraging progression
- Backing on users' experience and demonstrating benefits of BIM compared to their traditional method of work



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# BIMcert Method of Generating Impacts

- Learning materials that confirm measurable savings in energy when applying BIM, compared to traditional design:
  - Increased final energy savings for at least 10%, in new building projects;
  - Increased energy savings for at least 20%, in renovation building projects;
  - Increased generation from renewable sources, in buildings, for at least 13%;
  - Reduction of gap between designed and achieved energy performance by 20%.
- Tailored learning modules, specific for different target groups,
- Active learning environment (combination of ILT and PBL, CS, GSL),
- Permanent communication with industry, responding to its needs, implementing feedback and recommendations for improvement
- Establishing links, providing support by governments, public administration, energy agencies.

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# BIMcert Generated Impacts by Inducing Potential to Drive Energy Efficiency

**BIMcert taught participants in the program how to achieve, costly effective, the stated energy savings, using collaborative BIM environment, by:**

- explaining use of BIM tools for optimization of energy performance of buildings in their complete life cycle,
- explaining methods of exchange of digital information, benefits of working in a collaborative environment, roles and responsibilities in energy efficiency design, construction, and operation.

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# BIMcert Created Long Term Impacts

**The participants' interest and willingness to further follow and engage with the BIMcert training program are firm indicators that their induced potential will result in measurable energy savings and low carbon energy usage, when applied in their work practice.**

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**Thank you for your attention**