Building Energy-Efficiency delivered with the Help of Improved Building Information Modelling Skills

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Abstract:

Construction industry has a wide impact on the socio-economic development of any nation. It employs a large number of population and contributes to a nation's built wealth - buildings and infrastructure. In contrast, this sector has an adverse environmental impact and is responsible for high energy use, greenhouse gas emissions, resource consumption, solid waste generation, environmental damage and pollution. Energy efficient (EE) buildings are an important and cost-efficient way today to mitigate the release of greenhouse gases. Moreover, technological changes namely building information modelling (BIM) has brought about a digital transformation in the industry and have significant interest across Europe. This has created a potential for a better digital management of energy-efficiency of buildings and – concurrently - a huge demand in new skills and competence requirements for the construction workforce - professionals, managers, labors as well as engineering students.

This paper presents the objectives and discusses the challenges and initial results of BIMEET (BIM-based EU -wide Standardized Qualification Framework for achieving Energy Efficiency) research program funded under H2020 program. BIMEET project aims to leverage the take-up of ICT and BIM through a significant upgrade of the skills and capacities of the EU construction workforce. The paper provides an overview of the BIMEET project and discusses the use cases that especially will need a description of skills related to BIM and energy-efficiency. Such descriptions should rely on the European Qualifications Framework in order to be standardized across Europe and countries' specific competencies and training schemes. The paper finally defines the purpose of the training platform aiming to widely disseminate the BIMEET outcomes. The platform will support registering labelled training offering and finding suitable BIM training in different levels of AEC sector.
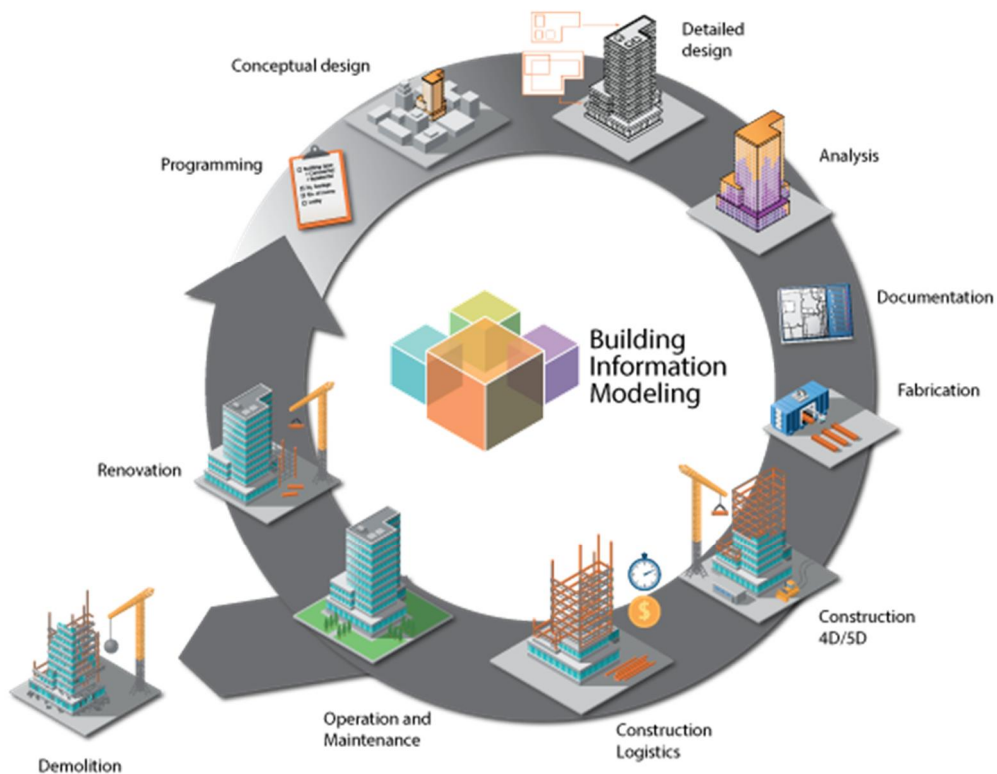
Figure 1. BIM uses across building lifecycle