

BIM Training - Introduction and Technical Insights

by **weTHINK.** and **BEXEL**

- **Date:** 21 - 22 September 2021 (6 lessons, 45 min each).
- **Topic:** BIM Training - Introduction and Technical Insights.
- **Lecturers:**
 - **Igor Osmokrovic**, Chief Operating Officer (COO) of BEXEL Consulting, with extensive international experience in BIM project management. Highly qualified for business development and creation of business plans, project management and implementation of BIM in the company's internal processes. Member of the Board of Directors of BIM Serbia, researcher on Horizon2020 projects and experienced lecturer in the field of BIM and digitalization of construction.
 - **Aleksandar Ilic**, architect and senior BIM Manager at BEXEL Consulting with many years of international experience in BIM project management. As a BIM manager, he led integrated BIM project management, optimizing processes and achieving significant savings in the time of implementation and budget of various projects around the world. He is a guest lecturer at the Faculty of Architecture, University of Belgrade and a member of the group for professional education programs at the buildingSMART International Association.
- **Participants:**

Construction companies, consultants, architects, designers, public authorities and others.

STRUCTURE AND CONTENT OF THE COURSE:

First day – Tuesday, 21 Sep. 2021.

On the first day, the concept of *Building Information Modeling* (BIM) will be presented, as well as the advantages and possibilities of automation and optimization of traditional processes of design, planning and project management using BIM technology. Participants will be introduced to current research on the growing BIM market globally, as the concept and importance of “open” BIM approach. Lectures will cover the basics of proper implementation and use of BIM technology, as well as the benefits that BIM brings to the organization

- **Class 1: What is BIM? Market research and general outlook.**

- (21 Sep. 2021. 13.00 - 13.45).

In the introductory part, the BIM methodology and the general process of digital transformation of the construction industry will be presented, followed by the current market analysis in terms of BIM technology. The most important concepts, documents and international standards will be explained, and the role and benefits of BIM technology in different phases of the project life cycle will be explained.

- **Class 2: What BIM brings to an organisation. Benefits.**

- (21 Sep. 2021. 14.00 - 14.45).

The second lecture will present advanced BIM technology and its application in project management through all phases of its implementation. The importance of the *openBIM* approach and format will be explained. It will be explained how the BIM methodology follows the *Lean construction* principles and will talk about the benefits that the proper implementation of BIM brings to organizations.



- **Class 3: 3D BIM Uses - Data Quality, Clash Detection, QTO.**

- (21 Sep. 2021. 15.00 - 15.45).

The third lecture will present various BIM processes starting from automatic quality control of BIM models, conflict analysis in the BIM environment as well as the creation of bill of quantities followed by visualizations from the BIM model using the BEXEL Manager platform.

Second day – Wednesday, 22 Sep. 2021.

The second day of training will introduce participants to the 4D/5D integrated approach, creating a database of work positions, creating and analyzing a dynamic plan, the process of monitoring project implementation through the entry of progress and analysis of planned and performed. Lectures will include creating a 6D BIM model by adding information and linking documents to BIM model elements, as well as preparing long-term maintenance plans using the BEXEL Manager platform that integrates 3D/4D/5D/6D BIM analysis into one solution. The lectures will demonstrate the approach to integrated BIM project management, on the examples of award-winning projects of BEXEL Consulting at the most important international competition *buildingSMART International Awards* 2018, 2019 and 2020.

- **Class 4: 4D and 5D BIM Uses - Planning and budgeting.**

- (22 Sep. 2021. 13.00 - 13.45).

The fourth lecture will introduce participants to the 4D and 5D BIM dimensions and the benefits of an integrated project management approach. The lecture will include creating a 5D BIM database of work positions, defining prices, resources, formulas and connecting with BIM elements.

- **Class 5: Integrated 4D/5D BIM Approach.**

- (22 Sep. 2021. 14.00 - 14.45).

The fifth lecture will present an integrated 4D/5D BIM approach through the development of dynamic plans, creation of zones and methodologies. Participants will be introduced to the analysis of the dynamic plan through the *Line of Balance* diagram as well as 5D analyzes such as *cash flow* and resource needs. The lecture will include the creation of a 5D simulation. Participants will also be introduced to the process of entering the progress of works, analysis of planned-performed, *earned value* analysis and monitoring of key project indicators in the form of interactive reports.

- **Class 6: 6D BIM Uses - As built, Facility Management.**

- (22 Sep. 2021. 15.00 - 15.45).

The sixth lecture will provide participants with an insight into facility management upon completion of construction using the BEXEL Manager platform. The lecture will include the preparation of 6D BIM models, facility maintenance planning and creation of maintenance plans. The capabilities of the BEXEL Manager API console as well as the capabilities of the BEXEL Manager *Common Data Environment* (CDE) platform will be briefly presented.

- **At the end of the class participants will:**

- Receive a certificate attesting their participation in the course.
- Have access to the recording of the training and all the relevant training materials.
- Be prepared to attend specialized BIM classes.
- Know when and how BIM can be used.
- Understand the technical part behind BIM.
- Get an initial understanding of BIM usability.
- Make a short presentation regarding BIM to their company and colleagues.

