Implementation and use of BIM technology in multidwelling facilities for management and maintenance of buildings

Authors: Borut HAFNER m.eng.arch. ¹, Branka TREBUŠAK ² bce.

¹ Housing Fund of the Republic of Slovenia, borut.hafner@ssrs.si; ² Housing Fund of the Republic of Slovenia, branka.trebusak@ssrs.si

Abstract: (250 to 500 words: for each heading use the bullet points or narrative - the submission including graphics should not exceed one page)

Problems - Issues / Challenges-Needs
- why the implementation of the BIM approach is important
- what are the benefits of the BIM approach
- the process of implementation itself
- determining the processes, roles and levels of the BIM model in all phases of use and implementation
- longer-term challenges are the production of standardized inventories of construction works in conjunction with BIM elements and classifying them

Solutions - Methods / Results - Findings
- Within the construction project of four multi-apartment buildings (102 apartments) in the size of 7,500 m², the environment and objects from 2D in 3D models were transformed. For the final 3D BIM model, it was necessary to combine the 3D model with all the relevant technical information and the rational allocation of housing units with the associated elements and defined maintenance cycles with cost monitoring. To this extent, it is important to know the scope, desires and purpose of using the BIM model and to carefully plan a system that provides usable value in the next stage of the use of the BIM 6D. We started this process ourselves at the end of construction, in the phase of taking over the apartments from the construction craft installation work provider, while at the same time all the acceptance and project documentation were connected into meaningful structures and built-in elements

Novelty - Value / Relevance to …
- start of the BIM approach on all projects
- finished one project from 2D through 3D to 6D BIM approach
- started with structure of the production of standardized inventories of construction works

Forum statement
Added value of BIM approach in facility management is mostly the collaboration of all stakeholders, tracking changes due to the use and maintenance of the buildings, enforcing and tracking maintenance plans and costs

Keywords: (up to 5 keywords)
Facility management; BIM 6D; multidwelling facilities, housing found, maintenance
**Graphics:** (please use the gray area below for representative graphics or graphical summary: select the gray area below and paste your graphics)