

When several designers work together on a big project, varying personal BIM practices can make the model unclear and difficult to work on. Therefore we, Tella Asikainen and Adele Mansner, as construction architecture students created a set of common guidelines for modeling to make working smoother and more efficient.

Since Lundén Architecture Company has several employees and it is a growing company, common BIM practices are becoming more and more important. Also in general, BIM is becoming more important because of rapidly increasing digitalization. After the Land Use and Construction Law (MRL) will be reformed in 2025, a building permit will be applied with BIM. What does this mean for the architecture companies? They must focus more on constructing the BIM in a way that follows the official guidelines.

Therefore as an innovation, we created documents and instructions to coordinate the work targeting the needs of the office. Our studies in Metropolia University of Applied Sciences include a multidisciplinary innovation project with the aim of developing working methods or use of company software. Our goal was to develop BIM processes and ArchiCAD practices of Lundén Architecture Company.

Our innovation makes working faster and unified. We compiled three documents for different uses. Our initial idea for the final products was to make only two documents: a manual of ArchiCAD BIM practices and a checklist. As the project progressed we noticed that the checklist should be more extensive and include the phases of the construction project in more detail. The checklist is meant to be used for checking how detailed the BIM must be in each phase of the project.

During the project it became apparent that Lundén Architecture Company could also benefit from a renewed BIM description template. We divided the BIM description template into two parts. The first part consists of information that is officially required to be sent to external designers in the project. The rest of the document is meant to be used internally in the office for communicating chosen BIM practices to colleagues. These BIM practices are dependent on the project type and cannot be specified in the manual of ArchiCAD BIM practices. The document is prefilled with instructions and recommended practices to help choose a suitable practice. The purpose of the document is to support modeling from the start of the project to the end of the project. To summarize the outcome of the innovation, the final products that we produced were a manual of ArchiCAD BIM practices, a checklist and a BIM description template. All three are related to each other and easy to use together.

The project is based on the official BIM requirements and additionally we produced an internal survey and workshop for Lundén Architects. Using the mentioned techniques we created documents that are based on the law and official requirements but are also suitable for the internal needs of Lundén Architects. During the project we did a lot of research and developed our own expertise in BIM and ArchiCAD. We managed the project by ourselves and the work was mostly independent. During the project, the supervisors of Lundén and Metropolia UAS guided our work and led us in the right direction to achieve the best possible outcome for the project.

The project benefits Lundén Architects by making work more efficient, but also we benefited from the work and gained expertise. Thanks to our UAS we had a great skill base for modeling in ArchiCAD and developing its use, but we still faced a lot of new topics. We learned the importance of using hotlinks, layers, the coordinate system and other ArchiCAD tools in the right way and how to make work processes efficient. Furthermore, we got to expand our knowledge on the phases of a design project. In addition, the company's bilingualism allowed us to get more familiar with the English vocabulary of the industry and software. As a work pair we gained new skills in communication and meetings and also understood how to manage a project. Overall we really enjoyed working on the project with Lundén Architects and we hope that the final products support their work in the transforming digitalization era.