

**Status report concerning the research project: "The use of Building Information Modeling (BIM) in the Swedish construction sector"**

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**Status report**

As the project description states the research project concerning the use of BIM in the Swedish construction sector will be divided into two steps; one overall study based on interviews with the largest companies within 6 actor groups in the construction industry, and one more in-depth step focusing on collecting data from two individual construction projects.

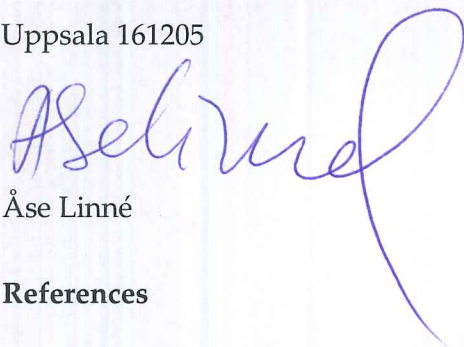
Concerning the first step of the research project I have performed a total of 22 interviews and will finish the data collection during early spring 2017. Through my study on how main construction actors use BIM in Sweden I find that all investigated actor groups (technical consultants, architects, project owners, construction companies, suppliers and other actors) have invested in BIM but it varies between the various actor groups in how far they have used and implemented BIM. Construction companies as well as engineering companies/technical consultants have been leading the adoption of BIM in Sweden while architect firms and project owners have been slow in adopting BIM. Especially among project owners and architects there is an internal reluctance of using BIM as it changes individual work processes. In general there is a basic knowledge about BIM among construction actors and BIM is especially used for design and planning activities while less used for production activities. Still the existing software systems for maintenance and operations are insufficient in handling and 'reading/translating' BIM data. However it seems like higher level of BIM use is mainly implemented in large scale and 'extreme' projects such as New Karolinska Hospital (NKS) in Stockholm, the European Spallation Source (EES) in Lund, the Skandion Clinic in Uppsala. It is evident that these projects are important in 'spreading' the possibilities and benefits of using BIM to other actors in the construction industry.

I have also started to collect data regarding the second part of the research project, the in-depth study of BIM in two individual construction projects. More specifically I have started

to collect data through interviews with main actor groups involved in the construction of the new university administration building of Uppsala University, Segerstedthuset. I have so far performed interviews with the construction company (NCC) and the contractor/project owner (Akademiska Hus) and have more interviews with various construction actors, including the tenant (Uppsala University) and the planning consultant (Arkitektgruppen Gävle), before the end of the year 2016. What is already clear is the internal resistance towards BIM within Akademiska Hus and especially the immaturity of BIM in the management and operation unit within Akademiska Hus. As a consequence it is difficult for the construction unit of Akademiska Hus to push for the use of BIM as they do not get any BIM requirements from the M&O unit. This is in line with the first 'overall' study where I find the project owners to be immature and 'late' in adopting BIM as well as displaying an internal resistance towards using BIM among various units. It is evident that the benefits and costs of BIM vary between units and between actors. I will continue with the data collection during spring 2017 and hope to initiate the collection of data related to the second individual construction project before the summer 2017.

During the first period of the grant from The Lars Erik Lundberg Foundation for research and Education I have also published two conference proceedings related to BIM in the Swedish construction sector at the annual IMP Conference in Poznań in Poland (see references for more details).

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### References

Linné, Å. (2016). The use and adoption of Building Information Modelling in Sweden.

*Proceedings from the 32<sup>nd</sup> IMP Conference in Poznań, Poland.*

Havenvid, I.M & Linné, Å. (2016). BIM as a project resource in a large-scale healthcare construction project – implications for project management. *Proceedings from the 32<sup>nd</sup> IMP Conference in Poznań, Poland.*