Educational perspective to BIM-based construction workflow from stakeout to as-built surveying

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SUMMARY

Since the uptake of new Finnish national built environment information system (Ryhti) and legislative changes to the construction law and bylaws in start of 2026, building information modelling, BIM, has become a standard practice for delivering information in the permitting process.

After the National Archive of Finland decided in 2023 that IFC models are archivable BIM models could be also used as officially archivable documents and as such comparative to other more standard archivable data formats like pdf, Jpeg, Tiff, PNG and DNG.

For surveyors these changes have created new skill caps, especially related to building location stakeout and controlling measurement for finished buildings.

What is new?

Since the introduction for the first Common BIM requirements in 2012, use of BIM models on construction sites has increased and for many construction surveyors there is nothing new in use of BIM models as such.

What is new with the new legal changes is that BIM model has to be delivered as part of the construction permit application. This means that from start of 2026 city and municipal surveyors have started to receive also BIM models in IFC formats, which a completely different, if you compare that previously building locations were shown on pdf printed location plans.

This was one of the concrete findings of RAVA3Pro research projects in 2024, when it mapped the

current and future workflows related to building permit measurements in Finland.

Another changing aspect in the new construction process is the requirement to deliver as-built models of completed building including updates on possible changes to original BIM design models. Starting from 2029 these files need to be also delivered to Ryhti system and as such introduce again a new surveying task that lacks common practices.

Integrating new requirements to existing BIM education for surveyors

Earlier the BIM education for surveyors in Finland has focused on as-built surveys for pre-design data collection and BIM processes during the construction phase.

In Metropolia University of Applied Sciences these new requirements were included for the first time as part of the BIM education to surveyors in autumn 2025. Based on the experience it was realized that more surveyor oriented training is needed on the topics and in our session we hope to share with other what we learned and how think the topic would be easier to understand.