

# Virtual 3D Models as a Basis for Property Formation

Martin Andréé, Stefan Seipel and Goran Milutinovic (Sweden)

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## SUMMARY

Property formation is the process to make changes in the real estate division by forming new or modify existing properties.

Various customer surveys in Sweden have shown that the cost of property formation is perceived as high, but also that cases take too long to process. If the costs and lead times are reduced, it will directly benefit the landowners but also the society at large by getting the real estate market streamlined. The field work is expected to account for at least one tenth of the total cadastral operations. Can the site visits decrease by use of 3D virtual land models this will reduce both delivery times and costs for property formation while environmental burden of travel decreases.

A field visit is often necessary to sort out the legal boundaries condition, and the decision for location of new boundaries frequently is done physically in the field. Additionally, all new or reorganized properties are required to be suitable for its purpose, an assessment which often requires on-site visits.

This report investigates how access to 3D information can be used to support an efficient administration of the land survey focused on fieldwork in Real Property operations. In this study, a pilot area "Hödalen" in a rural municipality is used to study the work processes, data quality and technical possibilities for implementation. This area was chosen as it represents an environment mixed with both agricultural and forestry land and also includes roads, buildings, ditches, etc. and therefore could be used to create a picture of how various phenomena appearing in the information.

The report describes how data quality is managed to create a 3D model from available information and a technical description of the implementation of 3D model in the demo

application.

The approach builds on existing Swedish regulations, the ability to streamline the process by ordinance field work is very dependent on the quality of data and current legislation.

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