PILOT PROJECT: Data Quality Validation For a National 3D City Model

Case Study: Danish Agency for Data Supply and Efficiency

Agency for Data Supply and Efficiency

"It's great to see SDFE leading the way in building a constantly maintained national 3D dataset in this way. 1Integrate 3D is perfectly placed to support their 3D data management plans."

- Seb Lessware, CTO, 1Spatial

Industry	Government
Customer	Agency for Data Supply and Efficiency
Challenge	Production of 3D data to support a digital twin that is current, complete and of good quality across the municipality of Aarhus.
Solution	Developing an automated data management process for the production and update of 3D data.

Key Benefits:

- Confidence of quality of 3D data being provided to clients
- Automated processing of data validation against parameters stored in the data specification
- Processing of 3D and 2D data
- Central storage of data validation rules for schema and geometric and topographic checks

Danish Agency for Data Supply and Efficiency

About SDFE

The Danish Agency for Data Supply and Efficiency (SDFE) is a government agency responsible for national geodesy, geodata and cross-governmental data infrastructure. They provide authoritative and open data to all users; citizens, public and private sectors. Their data is free and open, and can be used commercially, only requiring a license reference. SDFE's aim is to provide a coherent data foundation and infrastructure for building a digital society.

SDFE consists of 14 offices, each with its own specialty. The offices are grouped in four themes, which together reflect how data is processed and used. The themes are basis, data, supply and use, which align with 1Spatial's capabilities with Location Master Data Management.

The Goal

SDFE have a vision (but there is still neither political decision nor funding) to create an automated process to build and continuously update a national 3D city model at the CityGML Level of Detail 2, ensuring the model is consistently reliable and complete. The data will be made available to all government departments and be used help solve many important challenges including combatting climate change, disaster mitigation, emergency response and tax calculations. Municipalities will also be able to incorporate more detailed 3D data into a joint model, provided the external data passes the data quality specification. For example; more detailed data could be a scan of a historic building of interest.

The Pilot

1Spatial are working closely with SDFE on a pilot project together with the municipality of Aarhus, to validate that the proposed automated workflow for producing a 3D City Model and data quality specification is viable.
The pilot project is focused on automating the import of geospatial data into a 3D database, and automatically validating against the project's data specification using 1Spatial's rules engine, 1Integrate 3D. The rules inspect the building information, finding and correcting any overlaps, overhangs and any misalignments. The current and correct data can then be loaded into the central databank, where the data is made available for use by the SDFE stakeholders.

Seb Lessware, CTO, 1Spatial, says...

'It's great to see SDFE leading the way in building a constantly maintained national 3D dataset in this way. 1Integrate 3D is perfectly placed to support their 3D data management plans'.

The Future

This pilot aims to create a process that could be scaled and used across multiple municipalities. The process established during the pilot therefore needs to use automation, providing a service for good quality and trusted 3D data for all public departments.

Watch our webinar

For more information on how 1Spatial are working with 3D data, watch our webinar on the 'Next Steps for 3D in the Public Sector'.

Watch now

Benefits

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