

# How to Set up a Uniform 3D Topographic Large Scale Object Oriented Base Data Set for the Netherlands

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## SUMMARY

Within the Netherlands there are several 2D geographic Key Registers with their own users and usage of the data. There is increasing demand for large scale 3D information for numerous applications. Therefore Kadaster and its Dutch partners (TU Delft, Esri, Cyclomedia) choose to produce a national 3D large scale topographic object oriented base data set. Production is based on point clouds from dense matching aerial images. Lidar is used to upgrade the height information in forest areas.

The result is a fully 3D object oriented large scale topographic dataset of the whole country of the Netherlands, which will be updated yearly with available aerial images. Terrain, buildings and all other topographic objects are available with their proper height information, both at ground level and top level.

Several aspects are important in the production process from 2D to 3D:

- Uniformity of data sources
- Differences in actuality between topography and height information
- Differences in data models of the several key registers
- Quality of the 2D data to produce valid topologic 3D data.

The production process from 2d to 3D and these aspects are presented and

explained.

The final product of the 3D base topographic dataset is available as open data for numerous applications, like shade analysis for windmills, solar panel potential analysis, urban planning.

Other applications like noise analysis and environmental analysis etc. are possible.

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