

Rebuilding the Cadastral Map of the Netherlands: the Overall Concept

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SUMMARY

Kadaster provides legal certainty about every piece of land in the Netherlands. Cadastral parcels are recorded in land surveying fieldwork reports and processed in the nationwide Cadastral Map. Because of the different working methods over time and the production scale, the current map has a so-called graphic quality. As a consequence of this graphic quality (standard deviation of boundaries are 20 cm for urban areas and 40 cm for rural areas), the current map is not suitable for determining the exact parcel location in the terrain. With increasing digitization and open data policy, multiple sources of information (including the Cadastral Map) are becoming increasingly accessible to a wide range of users. This situation leads to bottlenecks and incomprehension.

That is the reason why Kadaster has started a research program to develop a map where the location of borders is so accurate, that the map is more in line with future developments. For this purpose, almost all (historical) field sketches have to be processed. An enormous challenge that requires far reaching automation. The research program has investigated whether it is possible to automatically extract the original measurements from the fieldwork reports and to combine this information and re-determine the location of the boundaries. With the help of several companies in the field of Artificial Intelligence, it has been possible to build an accurate cadastral map with known geometrical quality: the Reconstruction Map.

In addition to the technical challenge, it was also investigated whether the more accurate map meets the future needs. With the arrival of the new map, a changing way of communicating is foreseen.

When the built-up (partial) Reconstruction Map is ready and the involved parties agree, it will be introduced and presented as the Cadastral Map Next and will replace the current Cadastral Map.

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