

# Boosting Data Quality by a Participatory Approach: the Success of Quality Dashboards and Crowdsourced Feedback

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**Key words:** data quality; dashboards; quality indicators; crowdsourcing; feedback; key registers

## SUMMARY

In the Netherlands a system of key registers has been set up. A key register is a governmental register of authentic data which has to be used by all public institutions in fulfilling their public tasks. One of the goals of the system of key registries is that the data should be used by governments ‘without hesitation’. Data quality is key and a bad data quality can have serious consequences such as wrong tax assessments or unjustified building permits.

The world is constantly changing. Maintaining data quality on a sufficient level is not an easy task. The Netherlands’ Cadastre, Land Registry and Mapping Agency – in short Kadaster – has successfully experimented with two participatory systems for improving the data quality of their topographic and addresses key registries: Quality dashboards and crowdsourced feedback. Both systems are now in place for over three years, resulting in a data quality boost for these datasets.

Kadaster has developed the quality indicator dashboard in close consultation with the Key Register producers to provide insight in the data quality of a key register. A quality indicator dashboard serves various purposes. It shows data owners their score on different quality indicators for their own information, but also relative to the national average. The dashboard assists a data owner in quality management. And finally it can help to allocate resources to improve on the register data. Alongside the quality dashboard for data owners, there is also a public version for data users.

Next to the quality indicator dashboards, Kadaster has made it possible for the public to get involved in the improvement of register data through crowd sourcing. At dedicated websites anyone can report a change or error in the data by clicking on the map, adding a comment and adding supporting information. These reported issues are shown on the map by a marker. The markers are visible for everybody and a status attribute (e.g., new, under investigation, finished) is

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added and updated by the data owner. This way a reporter can keep track of the progress of a reported issue by viewing the map. To motivate data owners in a quick response on this feedback, these reports are also integrated in the quality dashboard.

This paper will show the results of three years of quality dashboards and crowdsourced feedback on the topographic and addresses key registries of the Kadaster. Furthermore it will explain the road to development and the daily use. It is clear that these systems are not only useful for topographic and address data, but also can be implemented for cadastral and valuation data. By motivating and stimulating the public, data quality can be much higher than one organisation alone can achieve.

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