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# Visualisation of spatial register data quality in public dashboards

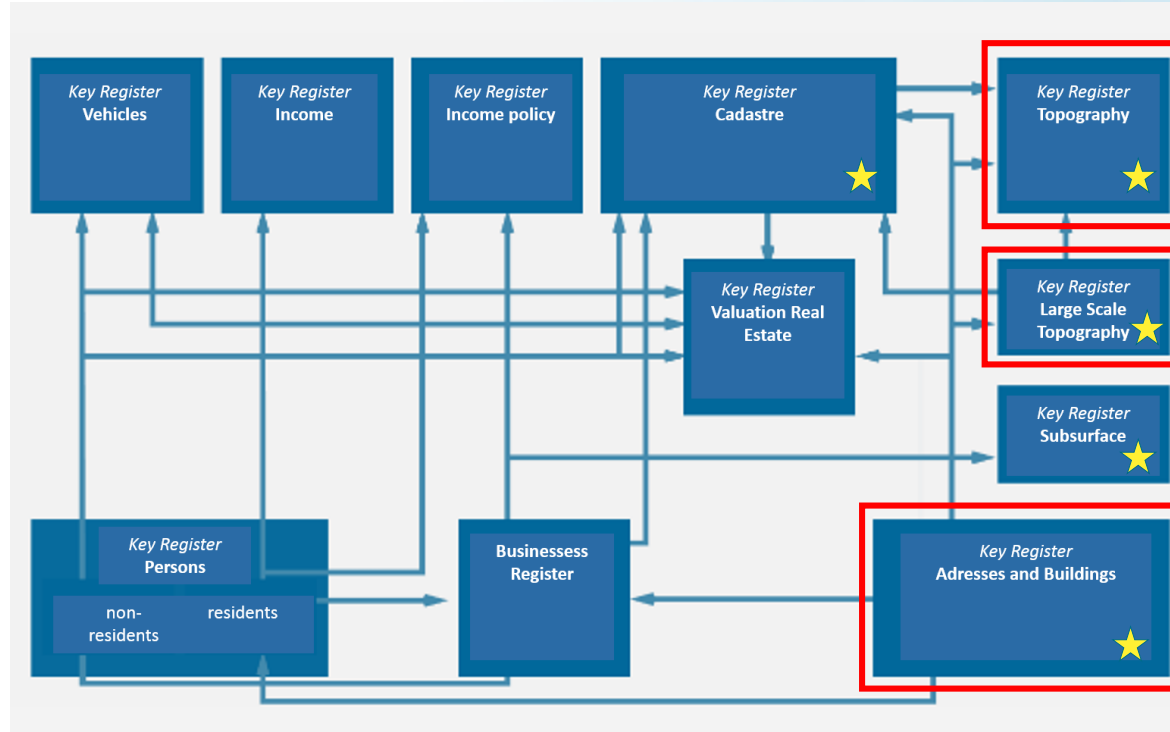
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*SDQ 2018 Malta*

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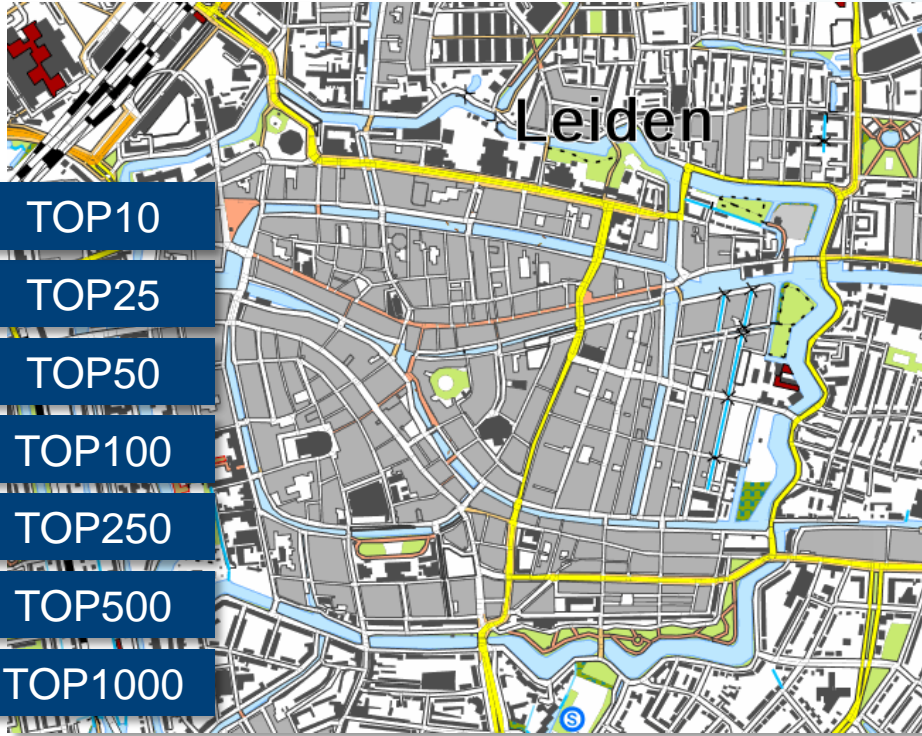
- Dutch system of Key Registers
- Role of Kadaster
- Quality dashboards
- Crowdsourcing

# Dutch system of Key Registers



★ Key register with a spatial component

# BRT Topography



Key Register Topography

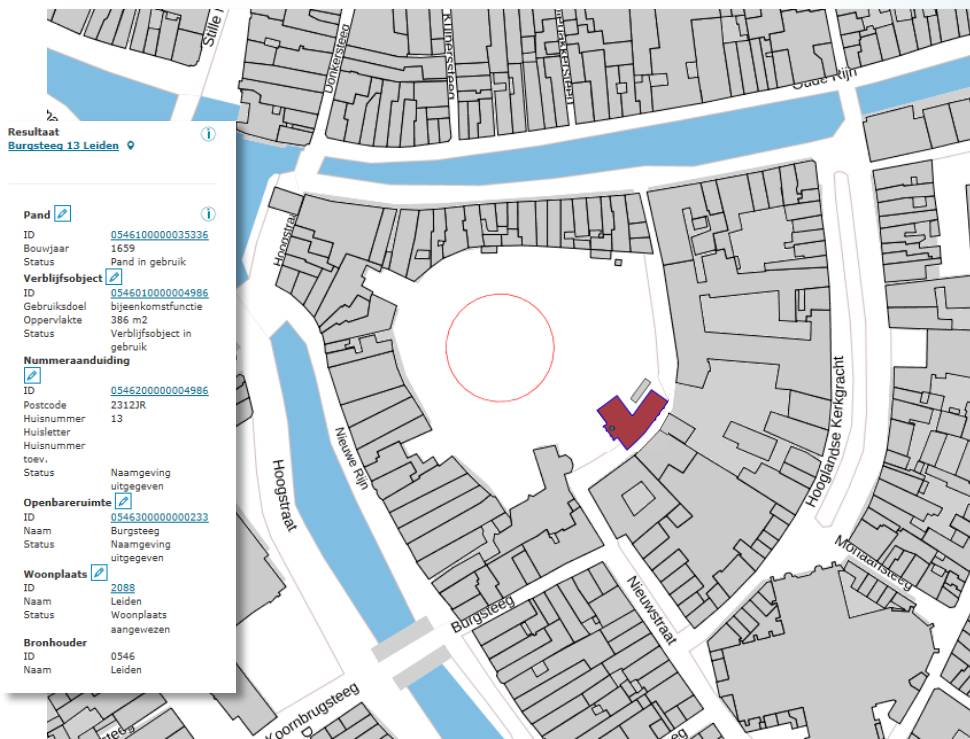
Produced by Kadaster

Data and raster maps, 3D  
and Linked data

Fully updated yearly in 5  
releases with uniform quality

Automatically generalised

# BAG - Addresses and Buildings



Key Register Addresses and Buildings

Unique objects with address, area, contour and purpose

Produced by municipalities (380)

# BGT - Large Scale Topography



Key Register Large Scale Topography

Produced by local, regional and national authorities (418)

Initial completion mid 2017

Phase of quality improvement until 2020

# Roles Kadaster for BRT, BGT and BAG

Key Register	Producer	Register keeper	Server
BRT (topography)	Kadaster	Kadaster	Kadaster (pdok.nl)
BGT (large scale topography)	Local, regional and national authorities	Kadaster	Kadaster (pdok.nl)
BAG (addresses and buildings)	Municipalities	Kadaster	Kadaster (pdok.nl)

# Key register quality

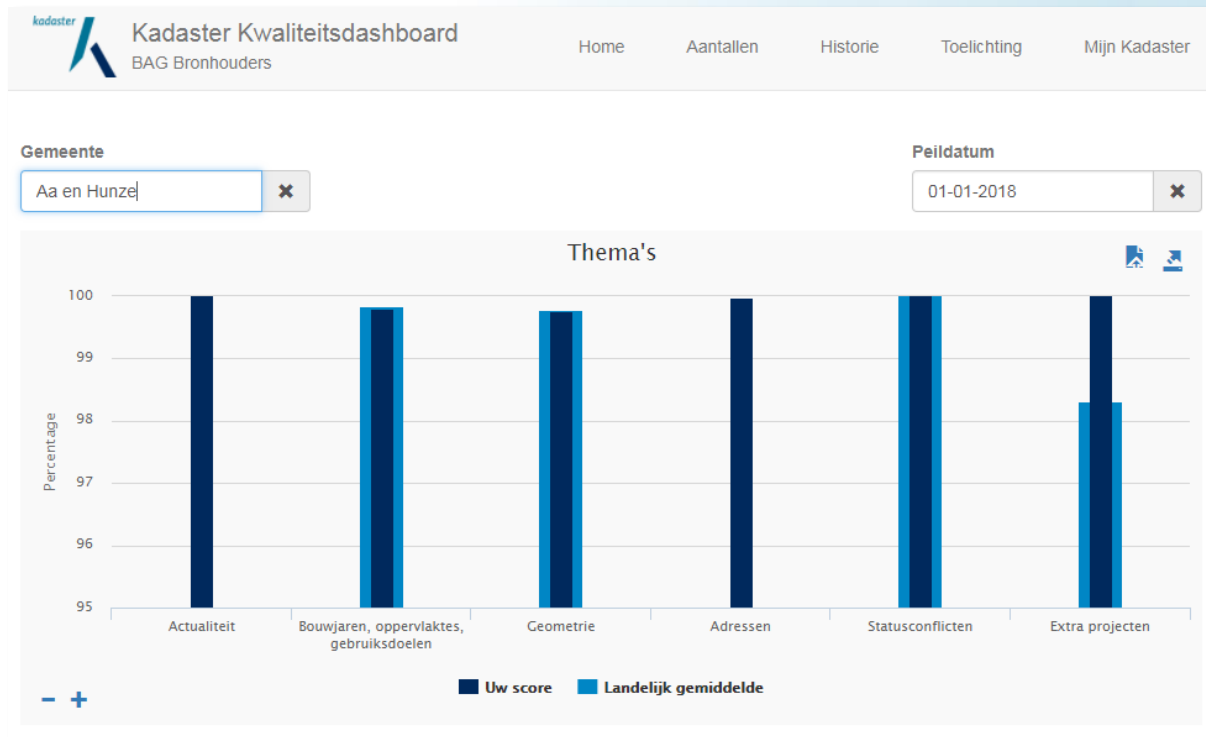
- Insight in key register quality
  - Handles for improvement
- ➔ Quality dashboard for quality management



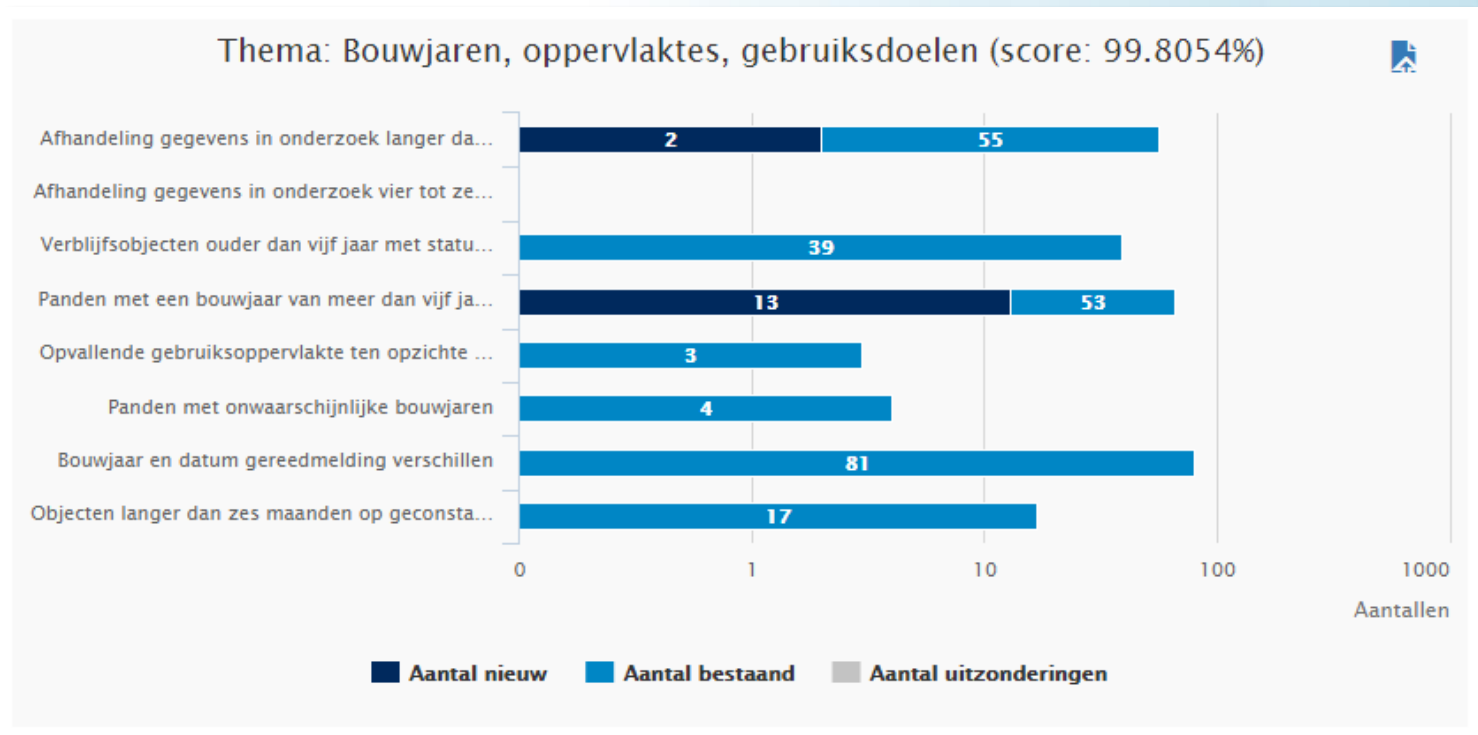
# Quality dashboard

- Quality managers and producers consider the same information
- Positive approach: working towards 100%
- Comparison to national average
- Results: errors and signals
- Themes – results – details
- Exports
- Numbers
- History

# Quality dashboard - Themes



# Quality dashboard – Theme results



# Quality dashboard - details

Details: Opvallende gebruiksoppervlakte ten opzichte van het gebruiksdoel

10 ▼ resultaten weergeven Zoeken:

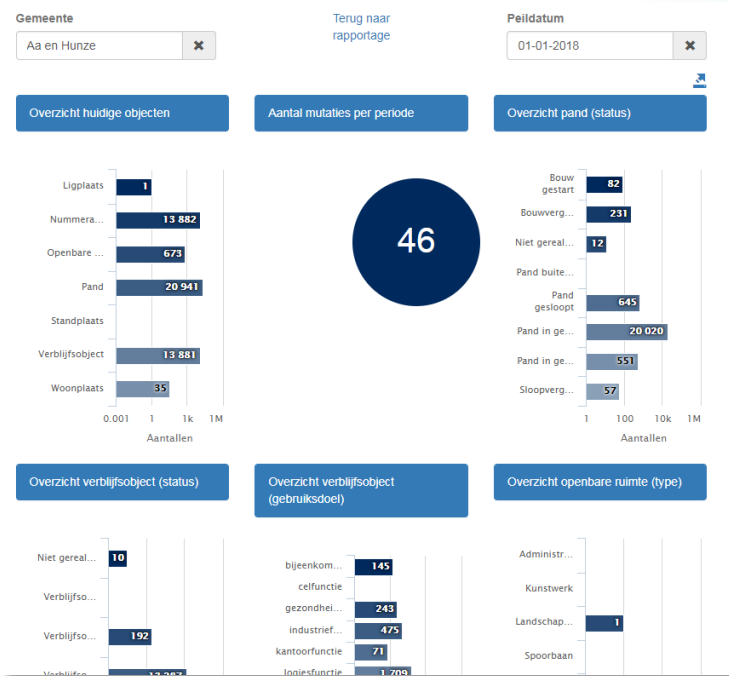
VBO-ID	gebruiksdoelen	ADO-status	oppervlakte	OPR-naam	huisnr.	letter	toev.	postcode	WPL-naam
1680010000000289	logiesfunctie	Verblijfsobject in gebruik	6	Hoogte der Heide	10		5	9462TT	Gasselte
1680010000004784	woonfunctie	Verblijfsobject in gebruik	2727	Zandvoort	3			9461TA	Gieteren
1680010000005387	logiesfunctie	Verblijfsobject in gebruik	3	Gieterweg	13		26	9462TC	Gasselte

1 tot 3 van 3 resultaten

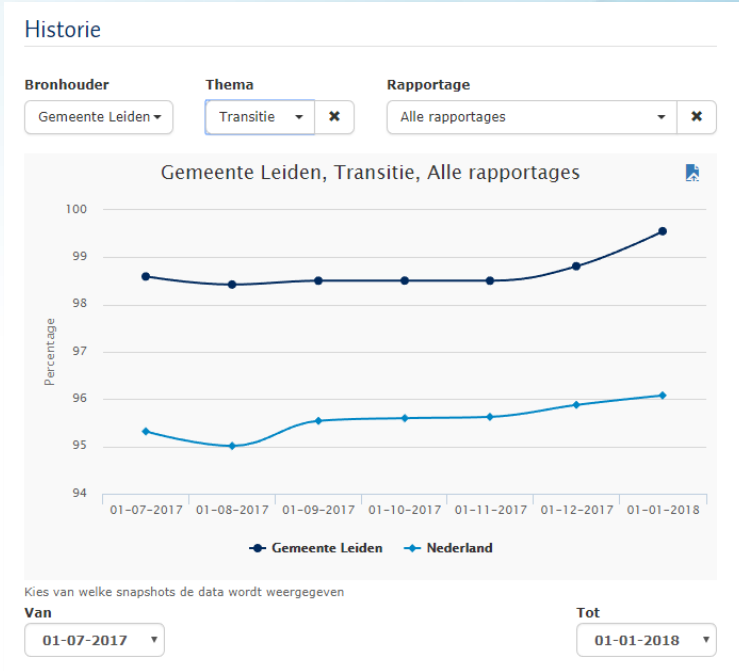
Eerste Vorige 1 Volgende Laatste

# Quality dashboard

## Numbers

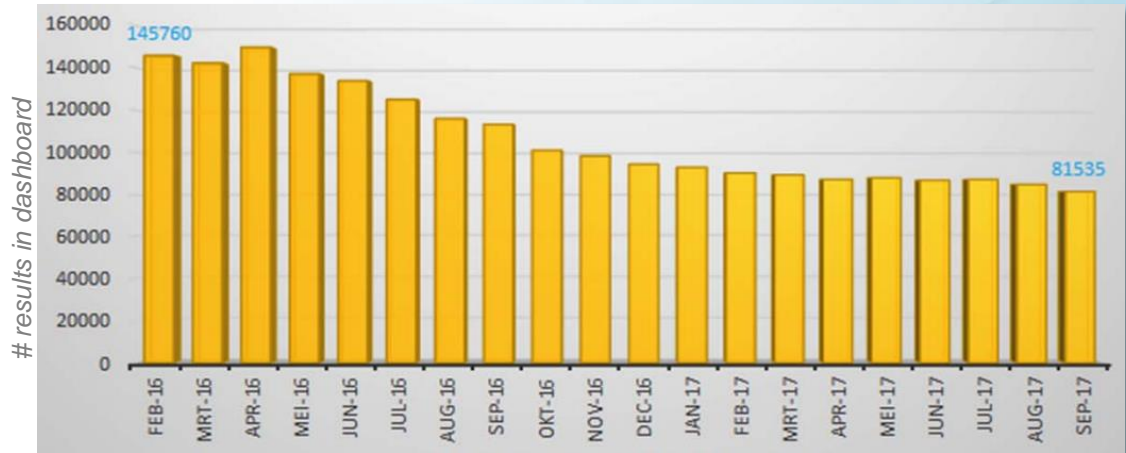


## History



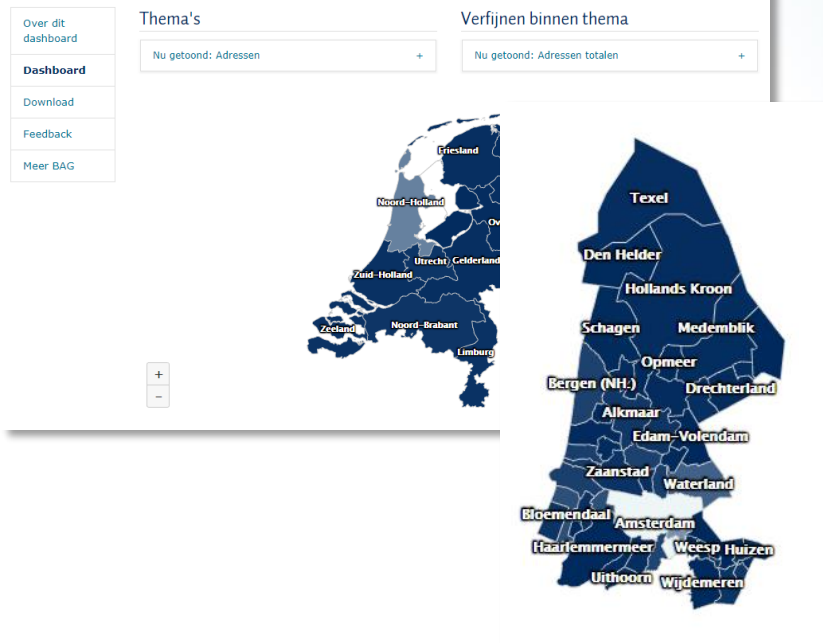
# Results of quality management BAG

- 44% error reduction in 20 months
- Producers are active in solving results and enthusiastic about the positive approach
- Dashboard is a practical and well used tool.

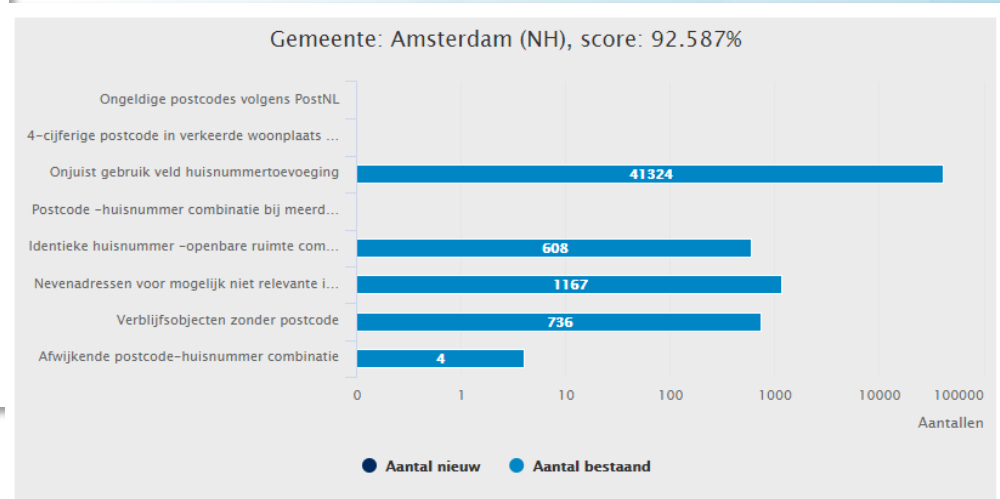


# Public dashboard BAG

## BAG kwaliteitsdashboard voor afnemers



<https://www.kadaster.nl/bag-kwaliteitsdashboard-voor-afnemers/over-dit-dashboard>



# Public dashboard BRT

## BRT Kwaliteitsdashboard

### Actualiteit



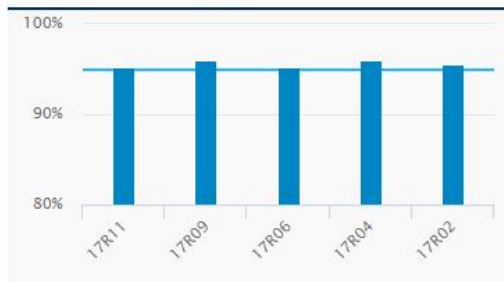
### Kwaliteit



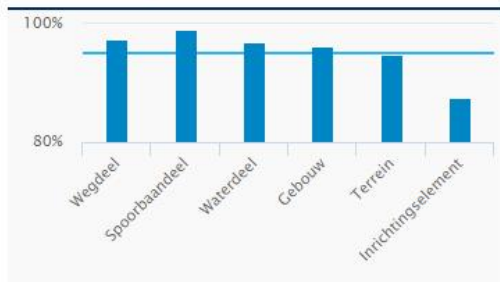
### Links

- » Toelichting BRT Kwaliteitsdashboard
- » Over Basisregistratie Topografie
- » Verbeter de kaart
- » Downloadservice BRT via PDOK
- » Webwinkel topografische producten

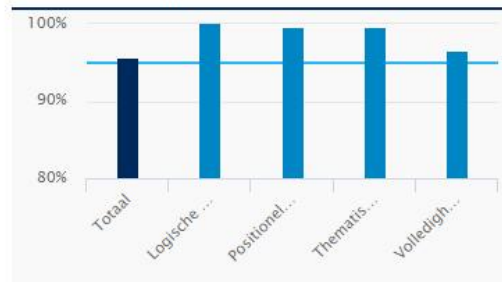
### Kwaliteit leveringen



### Kwaliteit objectklassen



### Kwaliteitsaspecten



<https://www.kadaster.nl/brt-dashboard>



# Future developments

- Expanding BGT and BRT dashboards
- Linking between registers and dashboards: BAG buildings in BGT
- Feedback numbers in dashboards
- All public dashboards?

# Crowdsourcing

It is compulsory for government users of Key Registers to provide feedback on errors and changes in the data or maps.

But now anyone can give feedback at  
[www.verbeterdekaart.nl](http://www.verbeterdekaart.nl) (BRT and BGT) or  
[bagviewer.kadaster.nl](http://bagviewer.kadaster.nl) (BAG)

# Improve the Map (verbeterdekaart.nl)

**kadaster** *Verbeter de kaart* [veelgestelde vragen](#) [contact](#)

**MELDING MAKEN VOOR TOP10**

**Melding BGT00001918**

**Gemeld op:** BGT  
**Geregistreerd op:** 20-09-2016 20:42  
**Status:** In onderzoek  
**Omschrijving:** Nieuwe haven  
**Bronhouder:** Zutphen  
**Status gewijzigd op:** 20-09-2016 20:42  
**Toelichting bronhouder:** Automatisch

**Legenda**

- ☒ Toon legenda
- ☐ Toon BGT legenda
- Nieuw
- In onderzoek
- Goedgekeurd, ingepland door bronhouder
- Geparkeerd
- Doorgestuurd naar andere basisregistratie
- Afgewezen
- Afgerond

**Zutphen**

Kaart: TOP10 Zoomniveau: 11

**Legend:**

- New
- Under investigation
- Approved, change planned
- Parked
- Transferred to other Key Register
- Denied
- Finished

# Key register data quality

- Initial filling first, attention for data quality second
- Quality dashboards are a great tool for quality management
- Map feedback

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# Quiz

What is the national error percentage based on measured errors in the BAG quality dashboard?

- A. less than 1% errors
- B. 1-10% errors
- C. more than 10% errors

**0,29%**

of 28,5 million objects in BAG  
(measured errors in the quality dashboard)