Real estate transaction chain in the Netherlands

CITIZENS (buyer, seller)

Intermediaries

Real Estate Agencies

Banks

Valuators

Notaries

Kadaster

land registry

cadastral surveying

cadastral registration

Inland Revenue

System highly reliable and trusted
Parallel worlds

Real world

Institutional world

Administrative world
System of key registers in the Netherlands administrative world
Legal Reliability Cadastre (NL-case)

- **Institutional world**: No but often registration mandatory and consequences of non-registration

- **Administrative world**: Yes, mandatory use and assumption of correctness

- **Real world**: No but high level of trust in cadastre function

**Reliability of the cadastre in a digital world**
Data driven society

From the world of quality management

“In God we trust; all others need to bring data”

Quote of W. Edwards Deming

To the world of digital society
Relations between the different worlds

- life event
  - causes
  - ensures
- actor
- rules
- institutional event
- administrative event
- processes
- results in
- institutional fact
- compliance
- data

Source: Best practices for meaningful connected computing (www.bp4mc2.org)
Cadastral Surveying and Mapping
Cadastral (index) map and boundaries

Cadastral map
- Nationwide coverage
- Since 1832
- Digital since end of nineties

Cadastral boundaries
- Archived from ± 1880
- Measurements on field sheets
- 80,000 boundary measurements
Three worlds in practice

Real world: boundary dispute

Institutional world: Adverse possession?

Administrative world: Cadastral registration
What are the issues?

- Cadastral map depicts parcels; Users consider map boundaries as legal boundaries
- Boundary information requires setting out
- Boundary information is difficult to access (too technical)
- Geospatial datasets seem to contradict (within specs)
  Users experience differences
Is the perfect cadastral map the solution?

- Cadastral map with information on quality and source (information map)
- Cadastral map based on accurate geometry (reconstruction map)
Getting closer to physical reality

Delft railway station
- rail infrastructure
- railway terminal
- offices
Current solution: 3D-PDF attached to deed; Increases reliability by providing accessible and usable information

Future: 3D-BIM? (as planned or as built?)
Getting closer to institutional world

**Inheritance**
- Transfer to heirs by law (takes precedence over ‘cadastral owner’)
- Decease of ‘cadastral owner’ notified in registration
- Encourage registration of succession (free or charge)

**Adverse possession**
- Takes effect by law after a transition period
  (takes precedence over ‘cadastral owner’)

**Public restrictions**
- In the process of including all restrictions in the registration
Improvement strategy

Encourage and simplify booking institutional events

Improve currency

Institutional event

Institutional fact

Improve usability and accessibility of data

Better geometric and semantic correspondence between administrative data

Improve correspondence between data and legal facts

Reliability of the cadastre in a digital world

- Improve correspondence between data and legal facts
- Encourage and simplify booking institutional events
- Improve currency
- Improve usability and accessibility of data
- Better geometric and semantic correspondence between administrative data
Concluding remarks

• Society increasingly relies on data and assumes cadastral data is correct
• Be aware of different perspectives in modelling system
• Bring real, administrative and institutional worlds closer together (content and currency)
• Thereby increasing trust that will be perceived as better legal reliability