

Theo Splithof senior advisor / procesmanager Cadastre

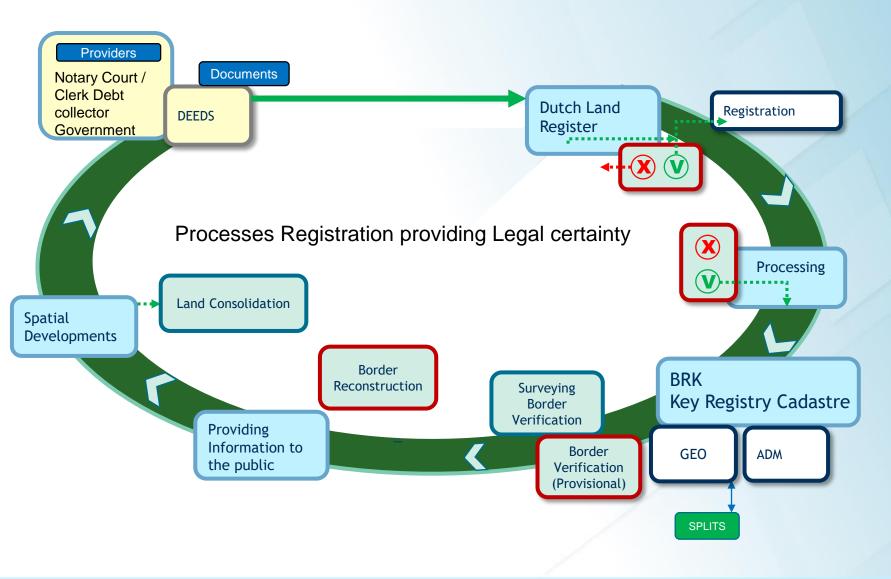
# Cadastral surveying Updating cadastral map

Theo Splithof Senior Advisor Procesmanager Key Registry Cadastre

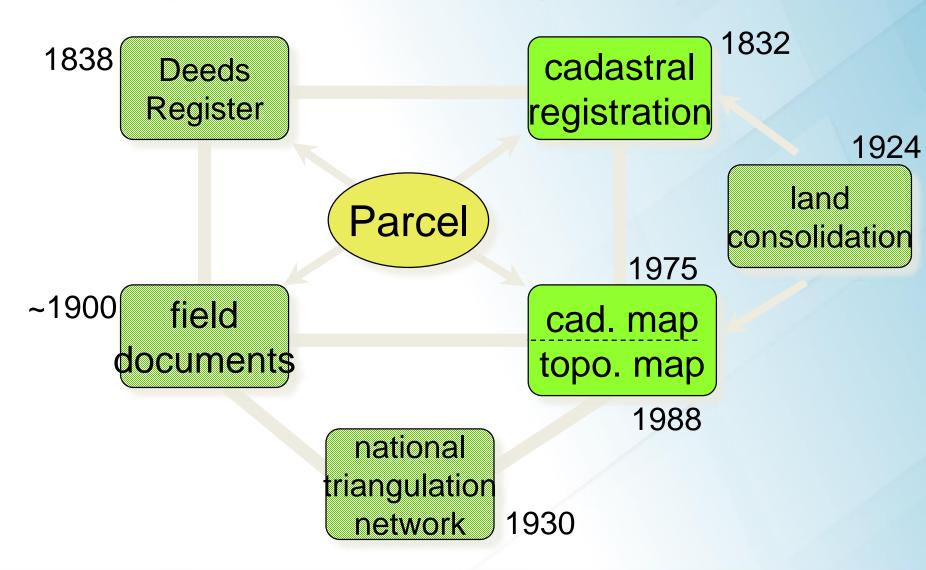
# **Agenda**

- I will give you a short view about our past
- I will give you our processes of maintening the cadastral map
- I will focus on the (new) provisional borders
- I will mention the role of our surveyors.

#### Global diagram process steps Land Registration and Geography

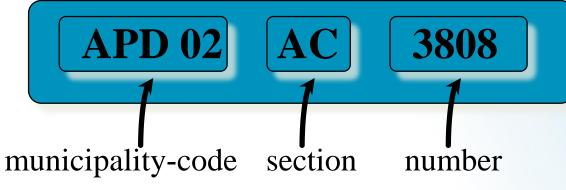


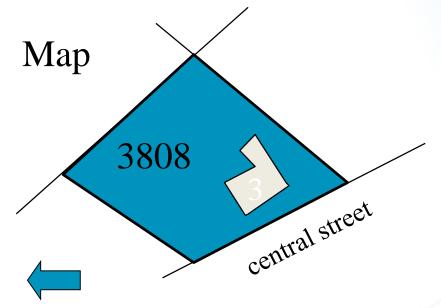
#### **Cadastral Basic Structure**



# Cadastral parcel number

(unique national identification)





#### Administration

identifier	APD02 AC 3808
owner	Smith, J.P.
right	full ownership
object- adress	3 Central street Motown
area	1 a 97 ca
culture	house, garden
history	APD00 A 1027 APD00 A 936
X, Y	197 766 467 428

# Cadastral Map in the Netherlands

#### Form:

- analogue: >35.000 island map sheets
  - (scale 1:500 till 1:5.000)
- digital: complete national coverage
  - (1 seamless mapdatabase).

# Cadastral Map in the Netherlands

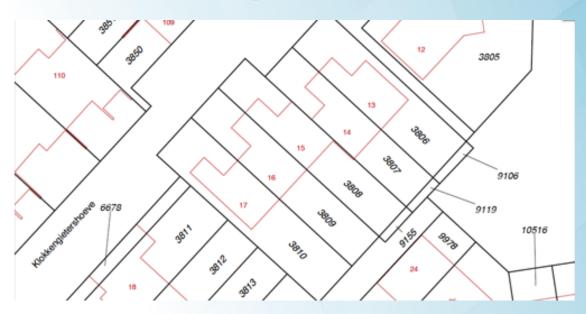
#### Consistency / actuality:

- cadastral map (Geo) is always synchronised with cadastral registration. (Adm)
- Supplemented with Topographic elements.

## Cadastral map

#### **Content:**

- Boundaries of parcel
- Coordinates
- Topographic elements (BGT):
  - Main buildings
  - Street names
  - House numbers



#### Techniques used:

- Main registration in Oracle Spatial database
- INSPIRE Web Portal (PDOK): PostGIS, geoserver (webserver)
- For a specific application, Deegree (webserver)
- Open source components in use (for web applications): openlayers, GeoExt, Heron

Access to cadastral map in INSPIRE Web Portal is restricted

# **Land survey**

- Surveyors employed by our organization
- Choice made in 1832 (focus on levying taxes)

#### Current situation (2019):

- Collecting data ourselves (about 250-300 surveyors)
- Using measurements of third parties
- Outsourcing work.

#### Provisional cadastral boundaries

#### Solution in cadastral update process:

- Parcel creation before deed registration with provisional boundaries and parcel area
- Simple verification of geometry of new boundaries in terrain later on

 How? Web application: Owner/Notary prepares request for parcel division with provisional geometrical data of the new future cadastral boundaries

### Provisional cadastral boundaries (Splits)



#### **Boundaries**



#### **Visual boundaries**













**Fixed boundaries** 



Theo Splithof, Senior Advisor Key Registry Kadaster FIG Commission Annual Meeting Seoul aug 2019

# Surveying Instruments and Software



Surveyilnstrument



Every type mobile device















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Special software & standard OS

#### Land survey

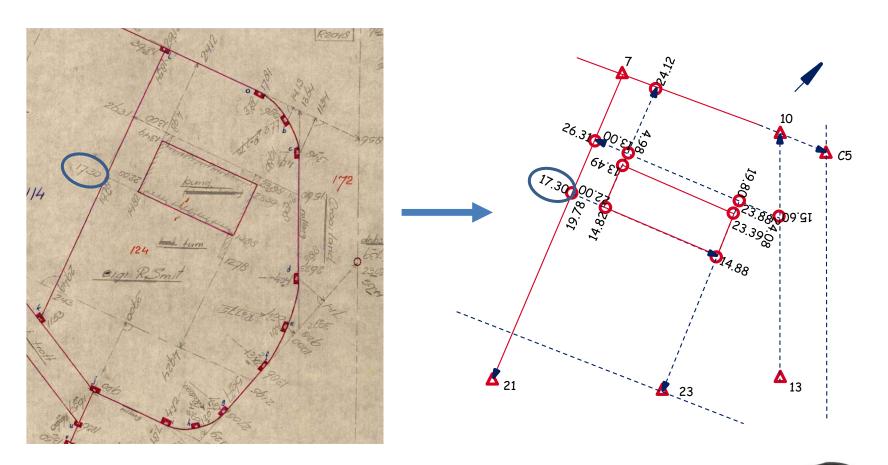
- Instrument:
  - Tachymeter (Leica, Trimble)
  - GPS receiver
- Tablet pc (to register facts)

#### At the office or at home:

- Download of collected data
- Edit environment for cadastral boundaries (Geomedia)



#### Fieldsketch as base for cadastral mapping





# After surveying

- Check and control
  - Technical and Legal. (deed)
- Calculate the aerea

- Update the registration
- Message to the clients

