

kadaster



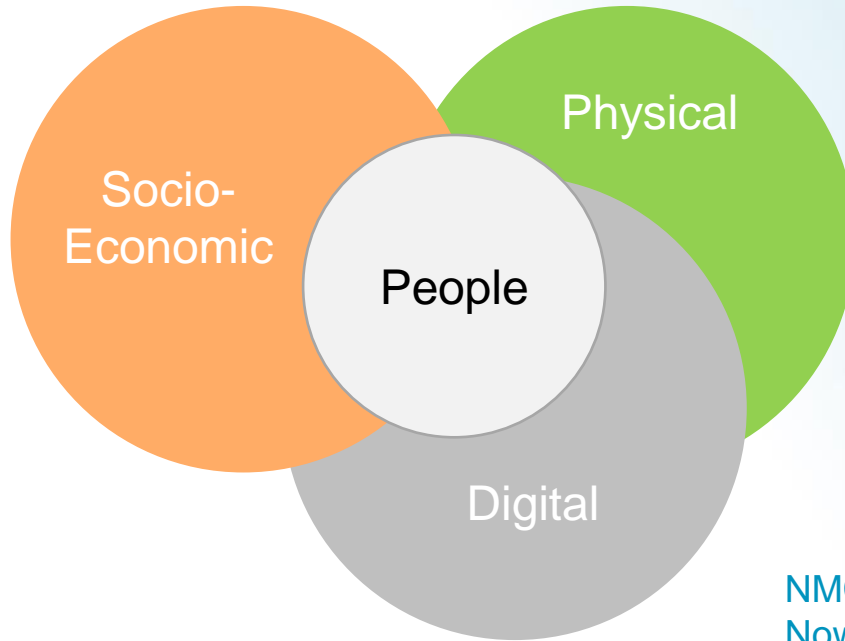
NMCAs role in the digital economy

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The Netherlands

Eurogeographics General Assembly
Vienna, Austria ,October 1-3, 2017

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View of the world



NMCAs have digitised their processes and data
Now the NMCAs are digitized



Real World Case in the public sector:
More data or an additional fire engine?

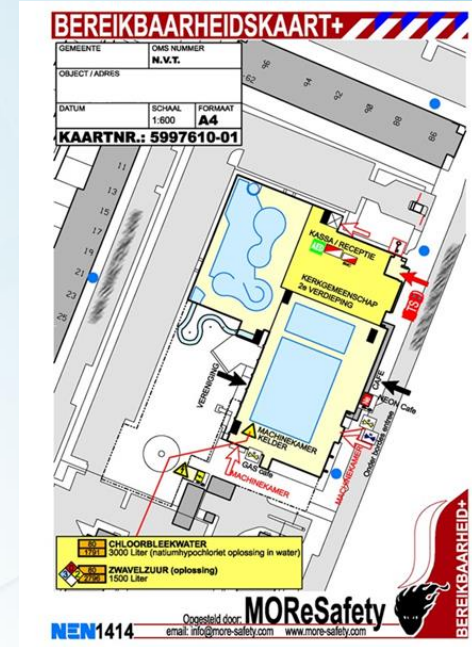
Case fire brigade

User's needs

- Complete picture for the issue at hand
- Issue at hand varies (no one size fits all)
- Up-to-dateness is critical
- Enable predictive fire fighting

Context

- Multiple sources of data/services (public, private, fire brigades)
- (Limited) sharing of data
- NMCAs data/services are a sound basis, but only part of the solution



Digital Economy and Open (spatial) data

Data for free is not the only issue

Simple and harmonised licences across borders

Accessible (web developers)

Service levels

Discovery

Continuous (quality) improvement and feedback

Properly documented and correct metadata

Users are willing to pay for a **service**

Trust is the basis of sharing data

Closed data

GDPR (general data protection regulation)
How to exchange data within Europe?
EDPS refers to national authorities



What about objects?

Personal Data Management
Object Data Management



Data acquisition: simpler, faster, cheaper



Doe mee Hulp in Nederland Hulp wereldwijd EHBO Over ons Menu Doneer Zoek

Mensen redden vanachter je laptop? Breng Zuid-Azië in kaart!

Geplaatst op: 19 augustus 2017

Je hebt het vast voorbij zien komen in het nieuws. Ruim 41 miljoen mensen in Zuid-Azië zijn slachtoffer van zware overstromingen. De helft van Bangladesh en grote gebieden in India en Nepal staan onder water. Hulpverleners hebben jouw steun hard nodig, maar op een andere manier dan je misschien zou denken.



Emergency mapping for Nepal
on request of the Red Cross

European Location Services (ELS)

The logo for EuroGeographics, featuring the text "EuroGeographics" in white and yellow on a dark blue background, with a yellow swoosh above the text.

NMCAs are the custodians of authoritative spatial and cadastral data across Europe

ELS is the means to make that resource available in the digital economy

But... that requires action now:
make data available, accessible, user-focussed in a harmonised manner

ELS: where are we now?

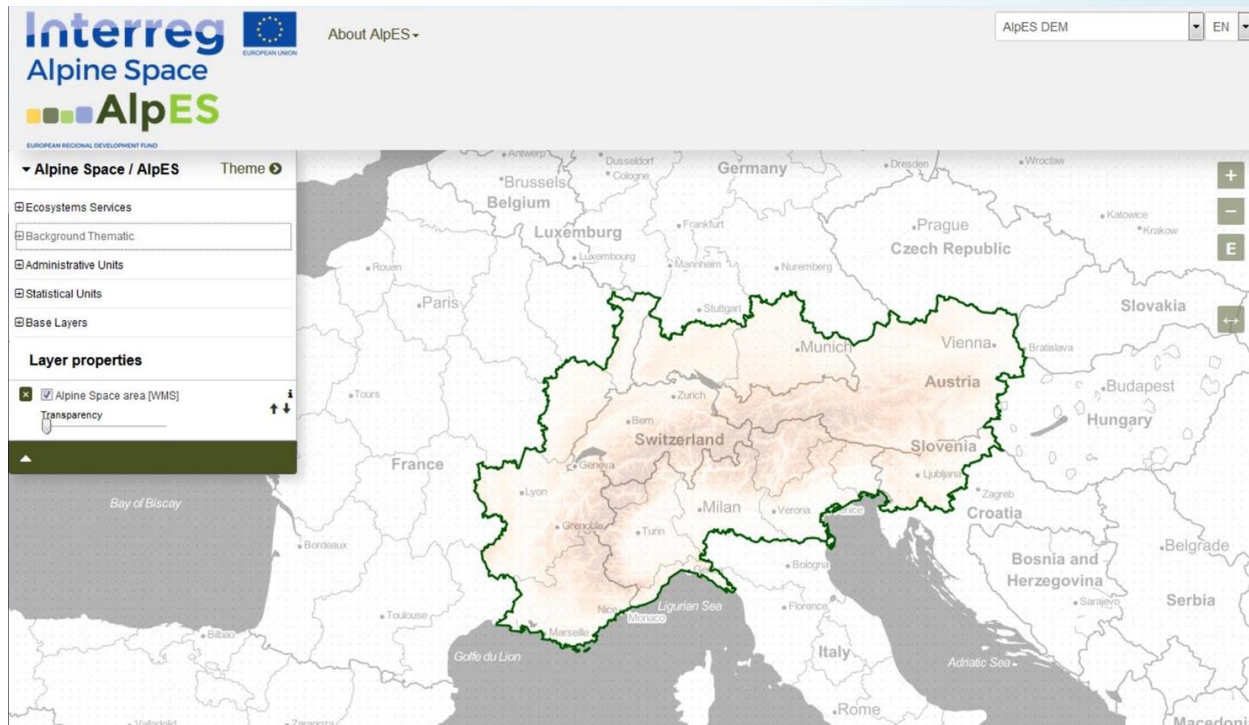
Focus on services that make a difference:
basemap and cadastral index map; metadata is up to date

Metadata maintenance procedure in place

What are the data-elements most needed by customers in terms of coverage? Survey with the EEA, Eurostat

Open ELS (spatial data) based on OGC/W3C-services

ELS as a potential resource



Data/services

- Compatible accross borders
 - Available
 - Accessible
- Enable cross-border cooperation

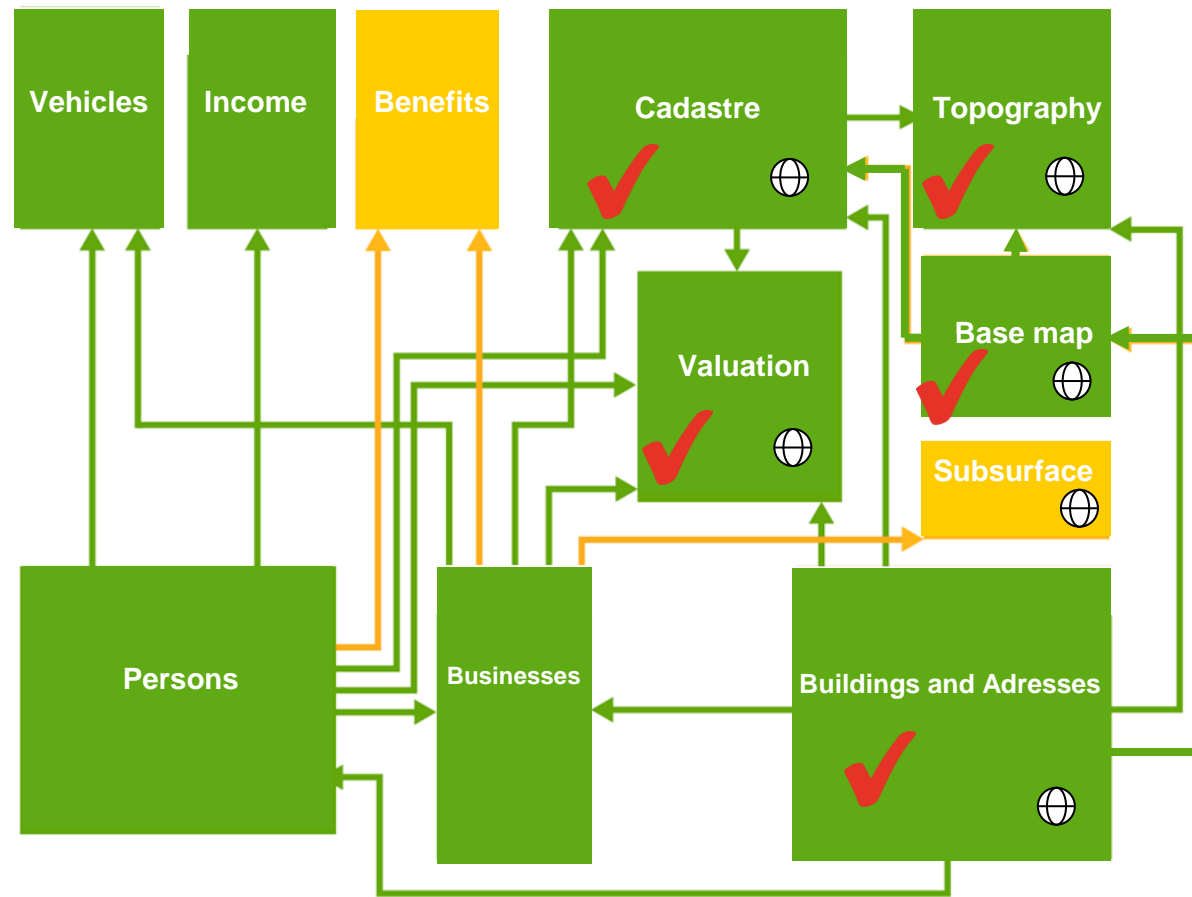
State of play in the Netherlands

- **Authoritative data**
available, accessible?
- **Developments**
technical, users, data-sharing, innovation

Kadaster prime supplier spatial foundation data

System of key registers Netherlands (2017)

✓ Kadaster involved



Accessibility and availability of Geodata

All geodata (including key-registers) available and accessible at one point also serving NSDI and INSPIRE

PDOK Publieke Dienstverlening op de Kaart

Home Products For Whom How About PDOK

What is PDOK and how to access PDOK?
PDOK enables users to access digital geographical data via official PDOK webservices.
About 250 web services (aimed at digital mapping) are available to the general public, private companies, organisations and the public sector.
The use of PDOK is for free. This website explains how to use PDOK products and services. Not all parts of this website are fully up-to-date.

Overview PDOK services

PDOK promotion movie

Statistieken

318 view- en downloadservices

117 datasets

4,4 miljard hits in 2016
2,1 miljard hits in 2015
1,1 miljard hits in 2014

450 organisaties PDOK Basis

PDOK Viewer
The [PDOK Viewer](#) demonstrates PDOK services.

National Georegister
NGR Metadata Search
Search the Metadata in the [National Georegister](#) directly.

PDOK Kaart
Create your own map directly with the [PDOK Kaart Wizard](#).

<https://www.pdok.nl>

Digital economy: public *and* private sector



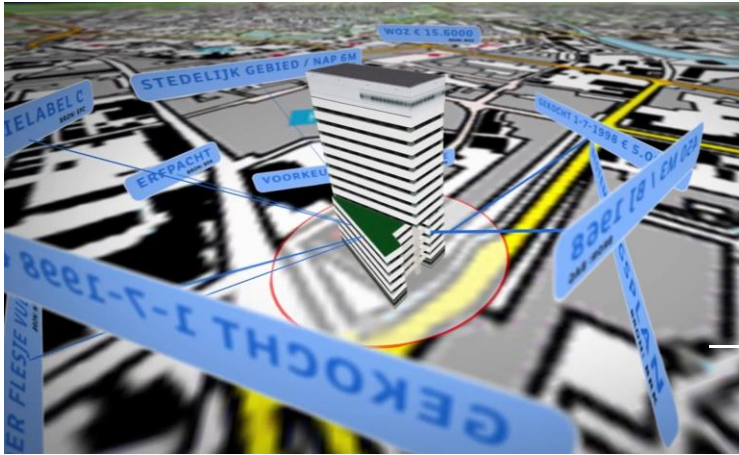
Developments

Geo4Web

Availability ✓
Accessibility ✗
Connectivity ✗

- Access to data is critical:
 - linked-data
 - make information available with API's (NL-maps)
 - standardisation (OGC, W3C)
- Demand towards 3D base register (planning, permits, subsurface)
- Involve your communities/users (VGI)
- Public sector meets Private Sector meets Developers meets Users


Towards linked data/apps/web?



Gebruik NL Maps nu

Ben jij een developer? Bekijk de [NL Maps Library](#)

- Kies je service
 - Leaflet
 - ☒ Google Maps
 - Mapbox
 - OpenLayers
- Kies je kleurschema
 - ☒ standaard
 - pastel
 - grijs
 - luchtfoto
- Kopieer de code



Code selecteren

```
<div id="nlmaps-holder"></div>
<script src="https://maps.googleapis.com/maps/api/js?v=3&key=YOUR-API-KEY"></script>
<script type="text/javascript">
```

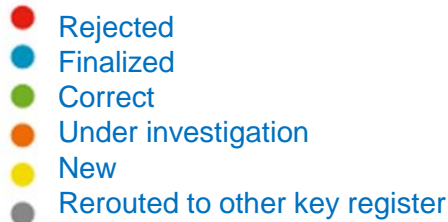
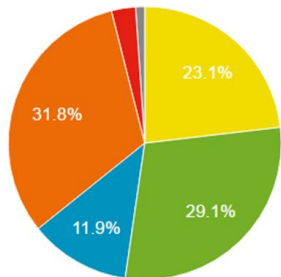
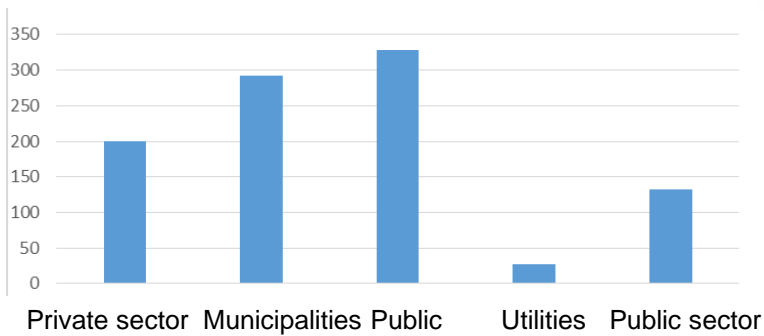


<https://nlmaps.nl/>

Results of reporting of errors by users 31-07-2017

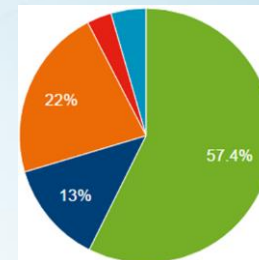
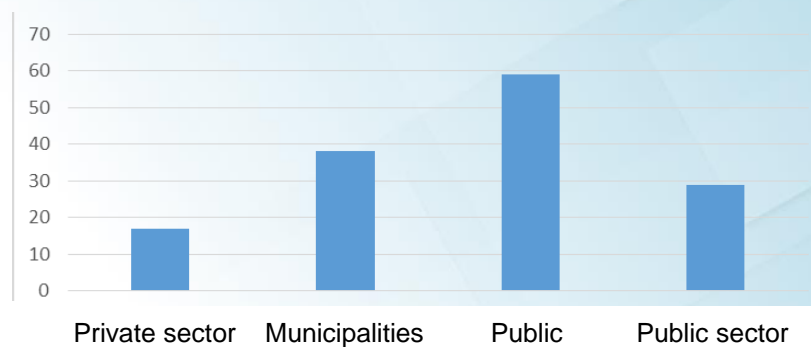
Basemap

Feedback reports: 3138; reporters: 979



Topographic map

Feedback reports: 354; reporters: 143





Map of the future? Decisions made in a virtual world

Innovate in networks



Concluding Remarks

- The digital economy is here to stay: from the local to the European level
- NMCAs' assets are authoritative data/services
- Requires opening up your data user-focussed (nationally, European level (ELS))
- Based on that developers create new products and services
- Operate in an public-private information network and become more adaptive to users' needs