

Trends in the Geo-spatial world, and how to react to them as a NMA

Lecture KULeuven – 4th may 2018

We live in a VUCA world

- Volatile
- Uncertain
- Complex
- Ambiguous

Digital transformation

- Need for a strategy that allows flexible response
- Based on clear vision, clear goal
- But not fixing the way to go there
- Framework for choices



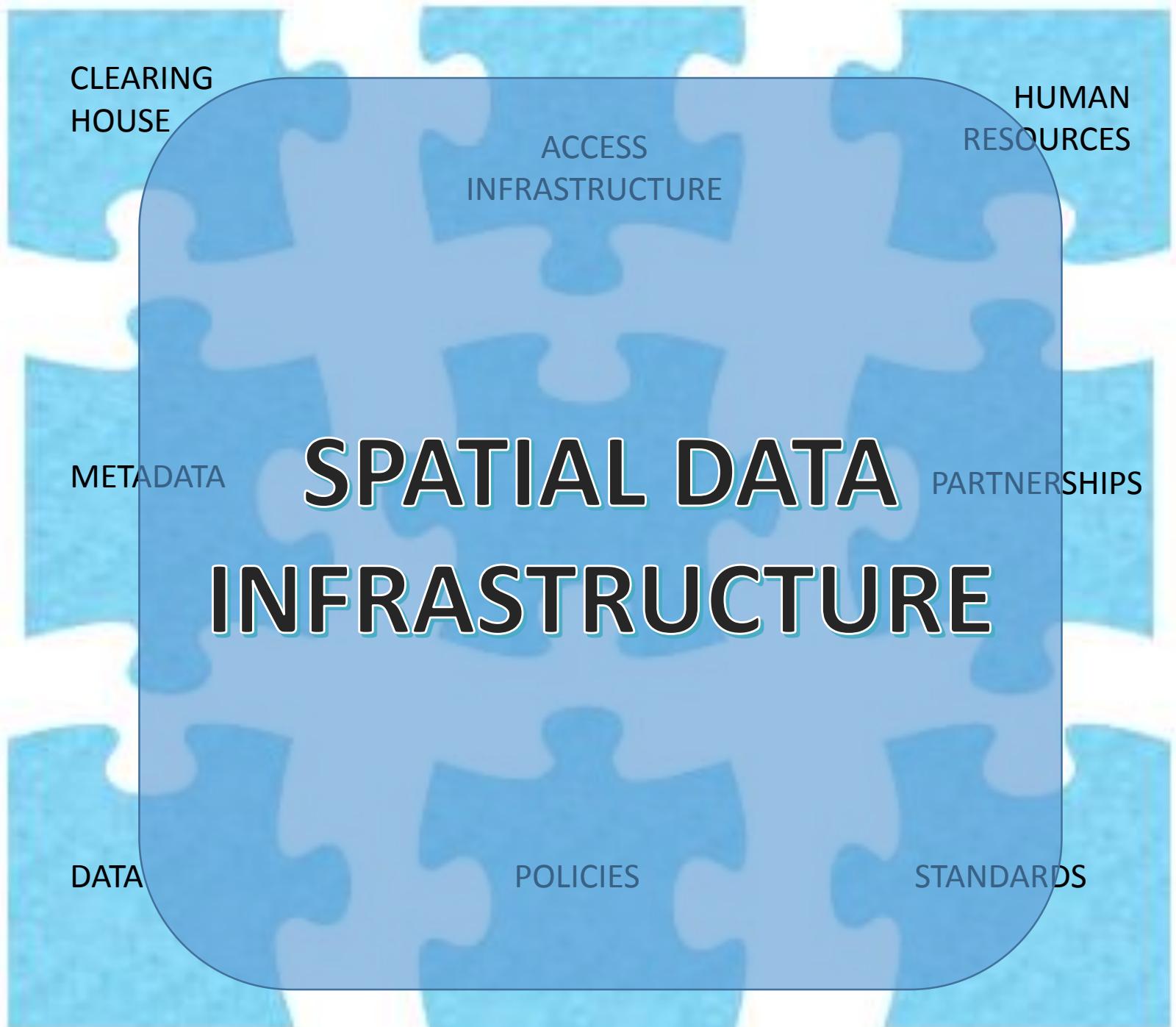
The information-tsunami

Data is the new gold

- Geo-data is the nuggets
- We are at the heart of the goldmine: everything happens somewhere

Spatial Data Infrastructure

= The mining infrastructure



SPATIAL DATA INFRASTRUCTURE

CLEARING
HOUSE

ACCESS
INFRASTRUCTURE

HUMAN
RESOURCES

METADATA

PARTNERSHIPS

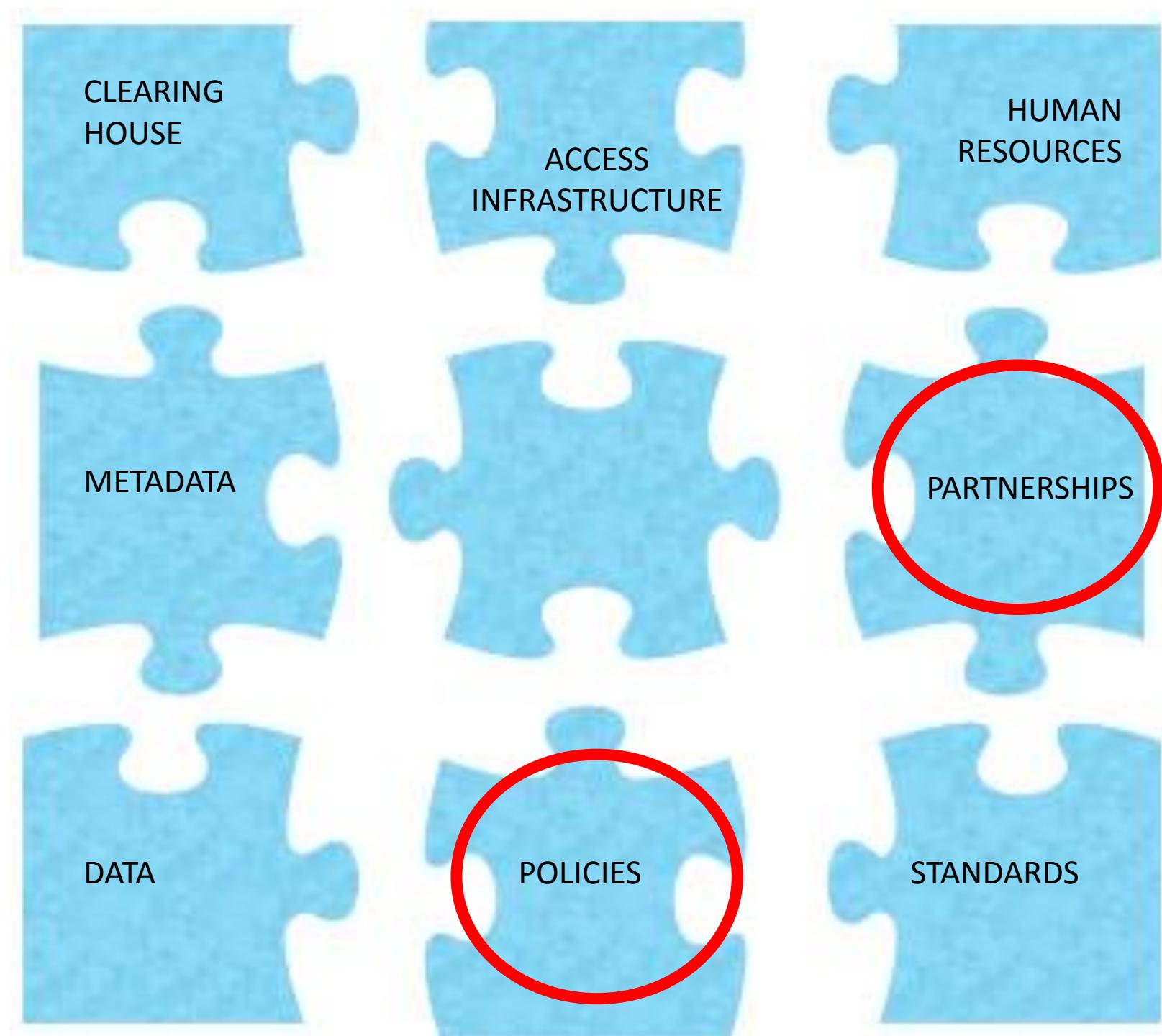
DATA

POLICIES

STANDARDS

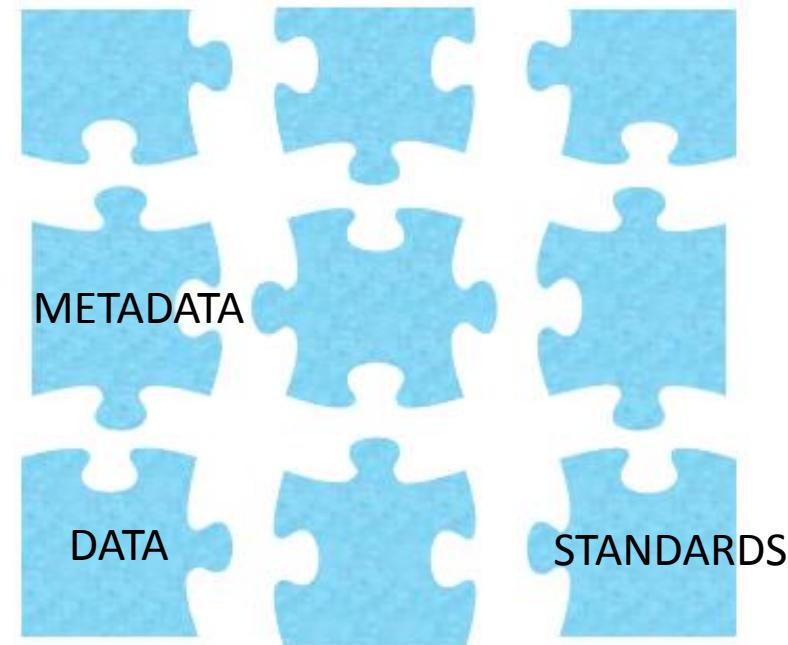
What will I talk about today

- What role for NMCA in the geospatial field
- What is the legal framework and Funding of SDI
- Coordination and Organisation – example of INSPIRE
- Geospatial Data Policies
- Geoweb services



Role of NMCA

- Old school: NMA as data producer

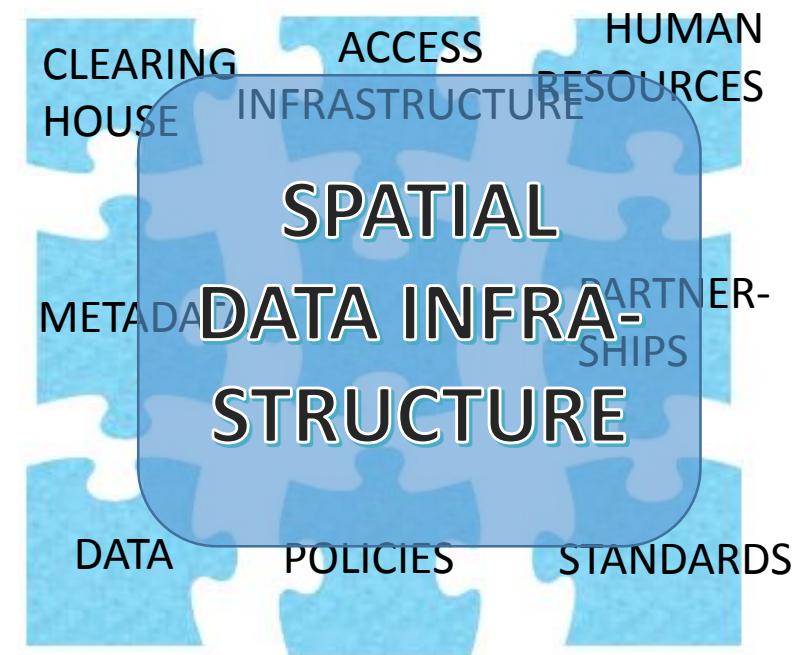


NMA as Geo-spatial data reference authority

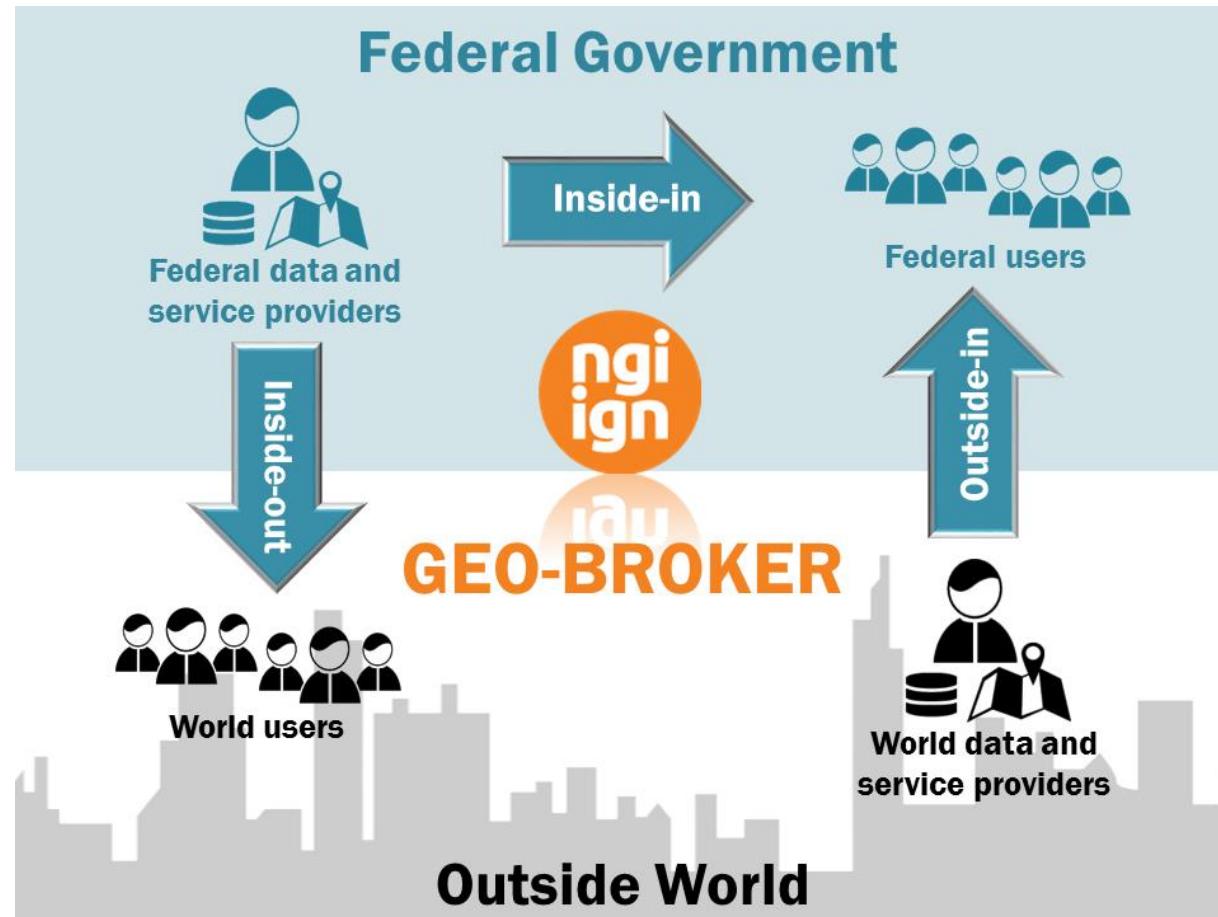
- Geodetic reference system
- Authentic source of reference topographic information
- Land information (cadastre or “master map”)
- Toponymic reference

Role of NMCA

- Today: NMA as SDI facilitator

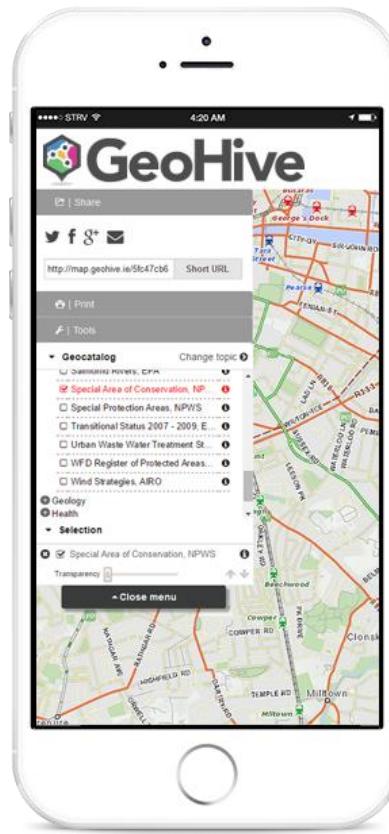
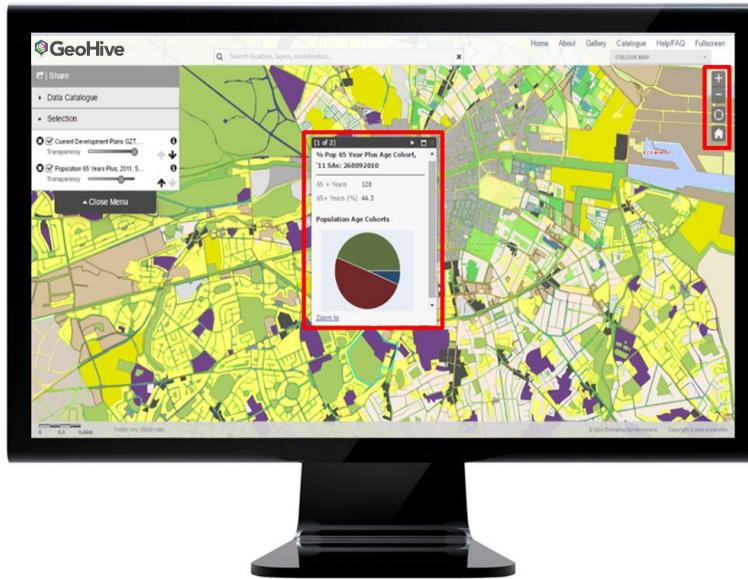


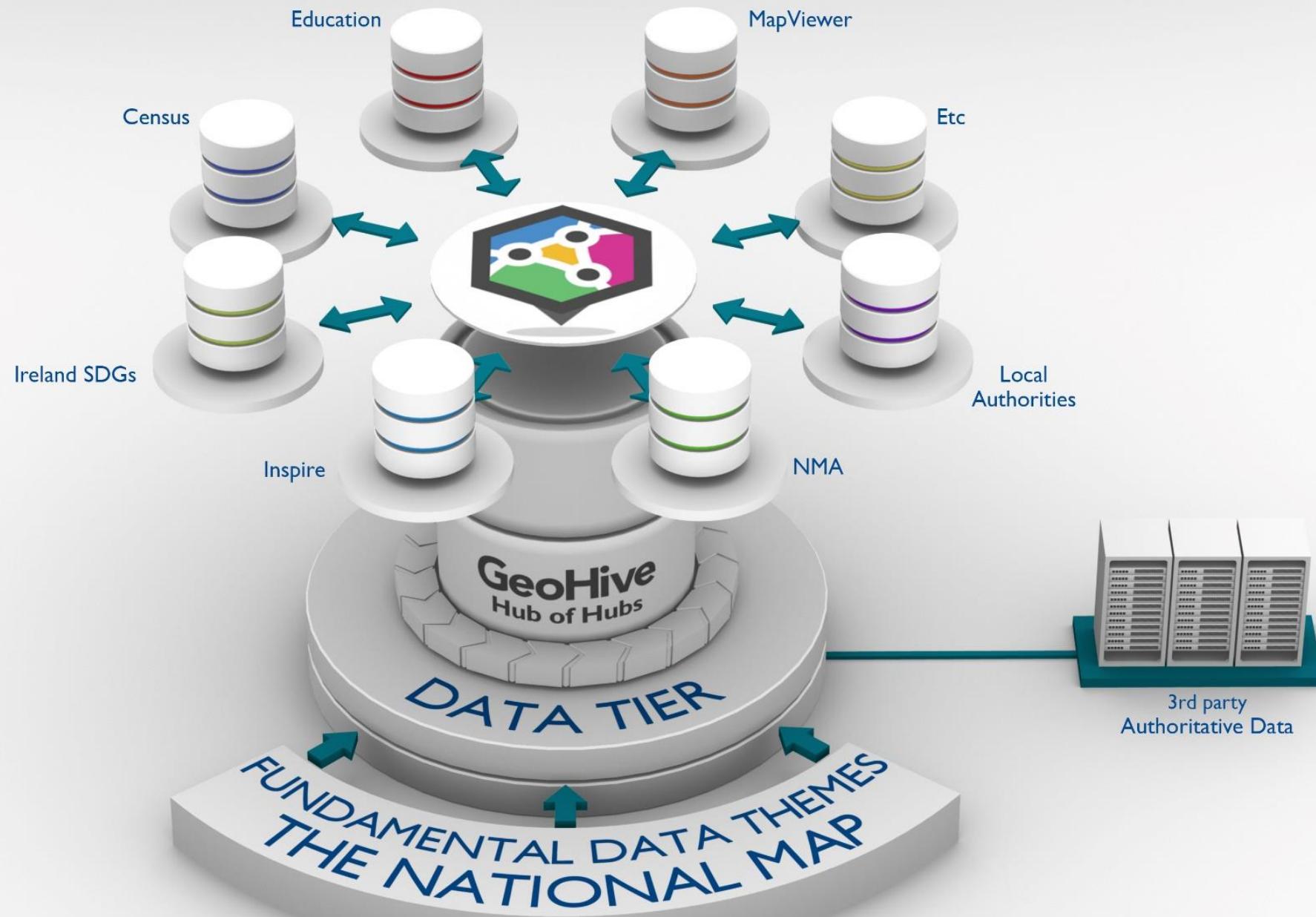
NMA as national geo-information broker



Broker inside-out

- Making governmental data available to the outside world
- Good example: OSI GEO HIVE





Geodata as a public utility service



Broker outside-in

- Make other data available to government
 - local authorities data
 - crowd sourced data
 - private sector data

Public tender for navigation data

Geo-optified1

Needs in central government

One dataset for navigation en geolokalisation

Univoque intervention planning

Role of NGI

Central procurement agency

Centre of Expertise

TomTom data

Users group

Geïntegreerde Politie, Dienst 112 FOD Binnenlandse Zaken (brandweer en medische interventieteams), ASTRID, FOD Mobiliteit en Vervoer, Defensie, NGI

Uitbreidbaar voor federale gebruikers



Data policy



Provocation

- Some things are free
- Others (unfortunately) are worthless





“Vale más la vida
de un ser humano
que todo el oro
del hombre más rico del mundo.”

che



Hasselt





Nieuws

Regio

Sport

Ontspanning

Opinie

Dossiers

Tv-gids

Tot uw dienst

Kies uw gemeente

ZOEK

Binnenland

Buitenland

Economie

Media & Cultuur

In de Rand

Wetenschap

Interactief

Video

Weer

Experts

nieuws > binnenland

Senioren binnenkort niet meer gratis met tram of bus



Aanbevelen

124

Tweeten 6

+1 0

16/04/12

BINNENLAND

Senioren betalen volgend jaar wellicht tussen 30 en 35 euro voor een

Meest gelezen

Mechelse Feesten gelast Maanrock 2013 af



15/03 **MECHELEN (2800)** Voor het eerst sinds de start vindt er deze zomer geen Maanrock plaats. Dat heeft de raad van bestuur van de vzw Mechelse Feesten vrijdagavond beslist. In 2014 komt er wel een nieuwe editie, maar ...

Economische crisis is in 2014 gedaan



15/03 **ECONOMIE** De crisis in Europa gaat voorbij in 2014. Dat zegt de Europese Commissie in een uitgebreid rapport over de economische toekomst van de eurozone. De oorzaak is de goede aanpak van de crisis ...

Microsoft

Surf zonder zorgen.

The challenge

How to avoid that *free*
equals
worthless

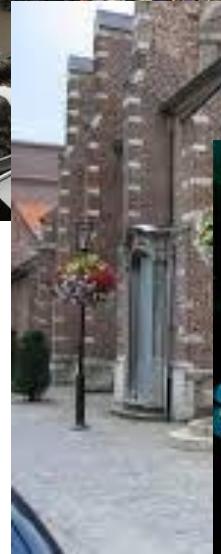
...

WORTHLESS!



Open (1) DATA

- Easy access to government data
- Often translated as 'free access'
 - For 'education and science'
 - For 'the citizen'
 - For commercial reuse
- Legal framework: PSI directive
- Open data initiatives at Federal and regional level



Full government funding

- Taxpayer bears full cost
- Everyone pays, whether you use the service or not
- Everyone pays the same, whether you use the service a lot or a little
- No link between usability and financing
- Added value goes to (big) commercial players that do not pay taxes (in our country)

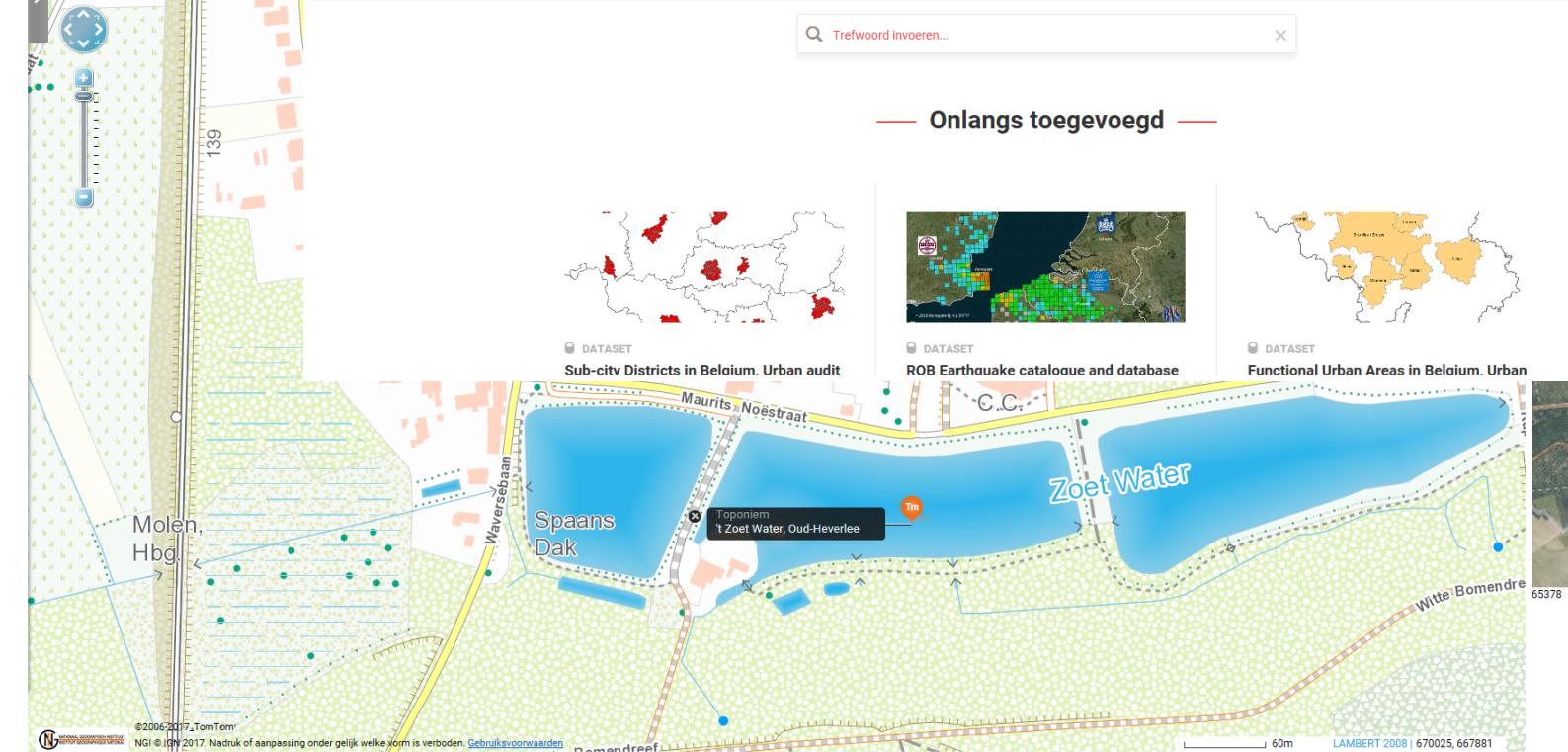
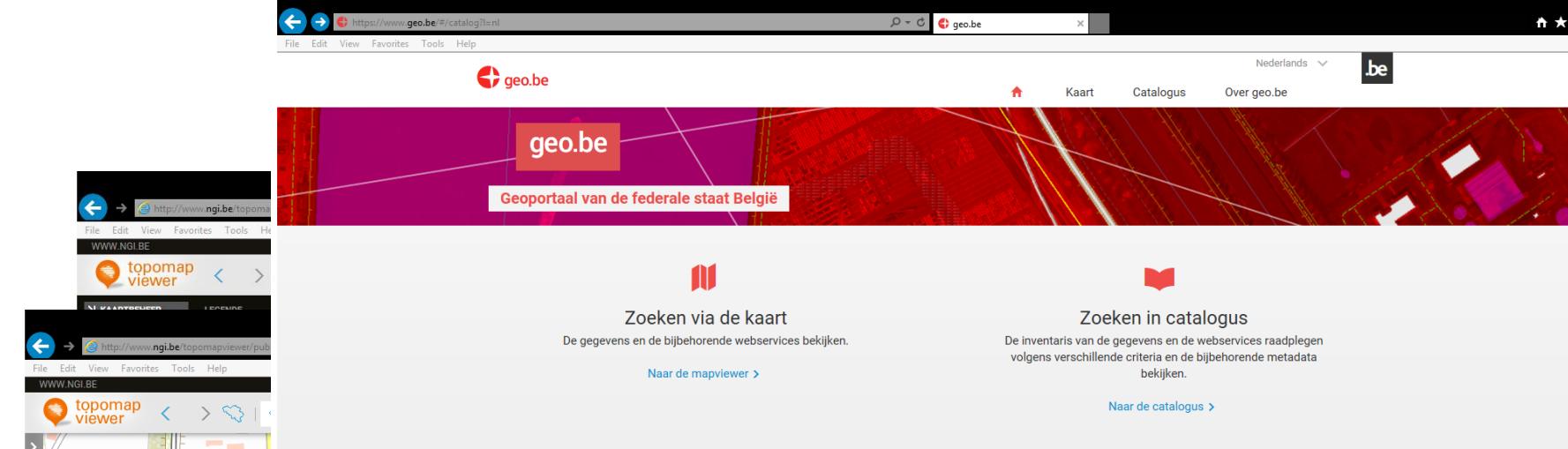
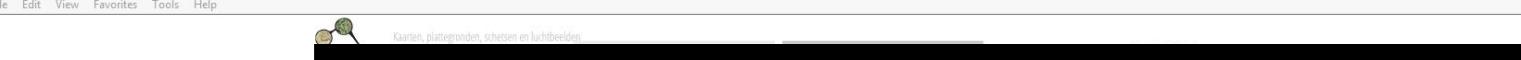
How then?

- Mixed model
 - View freely accessible
 - Free use for private purposes
 - Commercial reuse has to be paid for
 - Private sector doesn't mind paying for quality public data and services



Open NGI data and services

- All NGI-data open for federal government
- Topomap viewer www.ngi.be/topomapviewer
- Cartoweb service
- Cartesius portal www.cartesius.be
- Federal geoportal www.geo.be



Open (2) SOURCE

- Basic idea:
 - Source code of programs is freely available
 - Everyone can contribute to the development
 - No monopoly
- In practice
 - Big community needed
 - Big investment in own developments
 - Support needed (even more)
- Innovative motor

Open (2) STANDARDS

- Open Geospatial Community
 - Standardisation-initiative on geodata
 - Many organisations and software providers are joining
 - Facilitates modular approach

Licencing policy using creative commons licences

- **CC-BY** : Attribution ;
- **CC-BY-ND**: Attribution ; no modification (No Derivable)
- **CC-BY-NC**: Attribution; no commercialization (No Commercial)
- **CC-BY-NC-ND**: Attribution; no commercialisation, no modification.

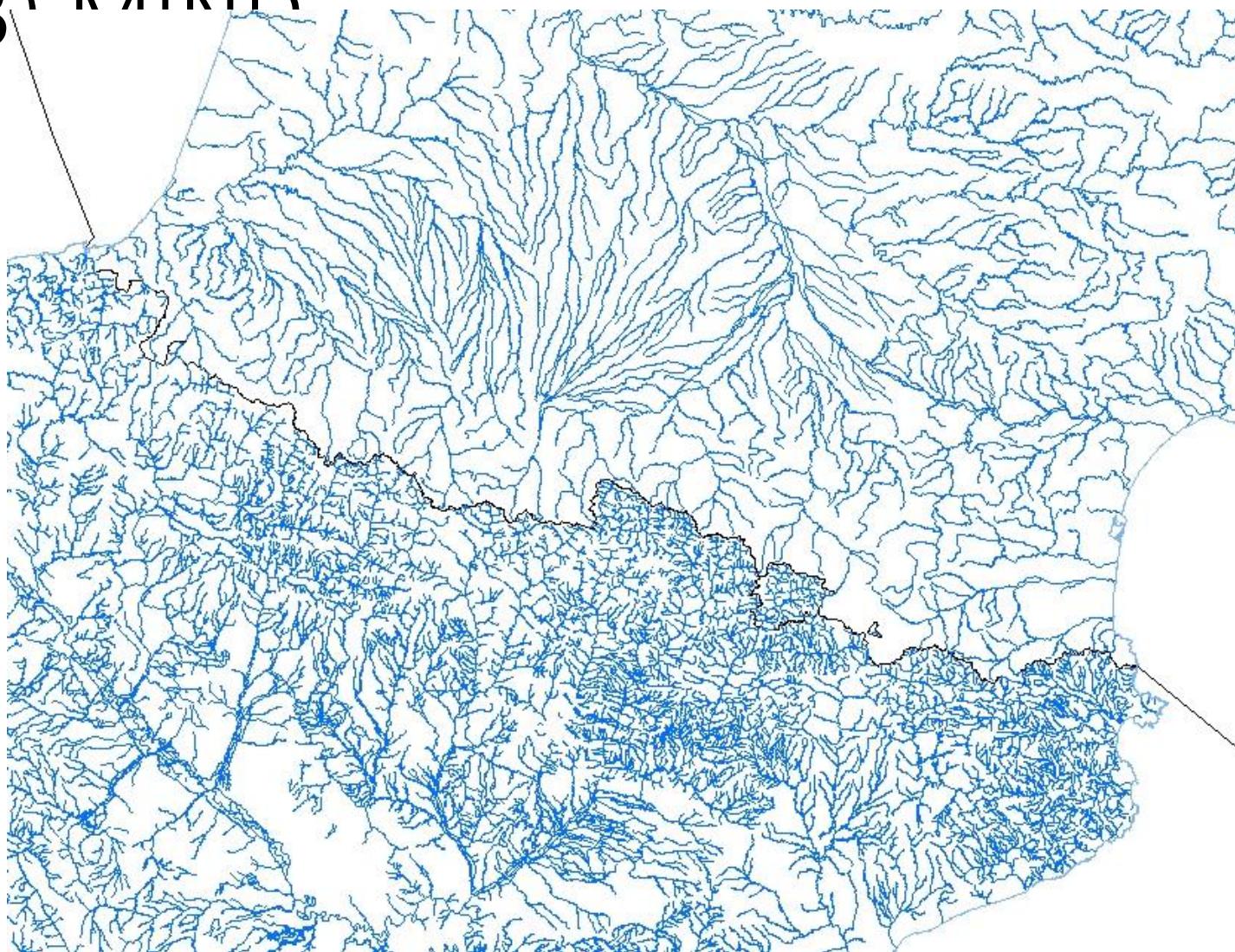
- **CC-BY-NC-NS** : Attribution ; no commercialisation, no diffusion (No Sharing) ;
- **CC-BY-NC-ND-NS** : Attribution; no commercialisation, modification or diffusion – internal use only

Open (3) MIND

- collaboration
- Willing to find compromise
- Willing to step away from “I am right”
- ...

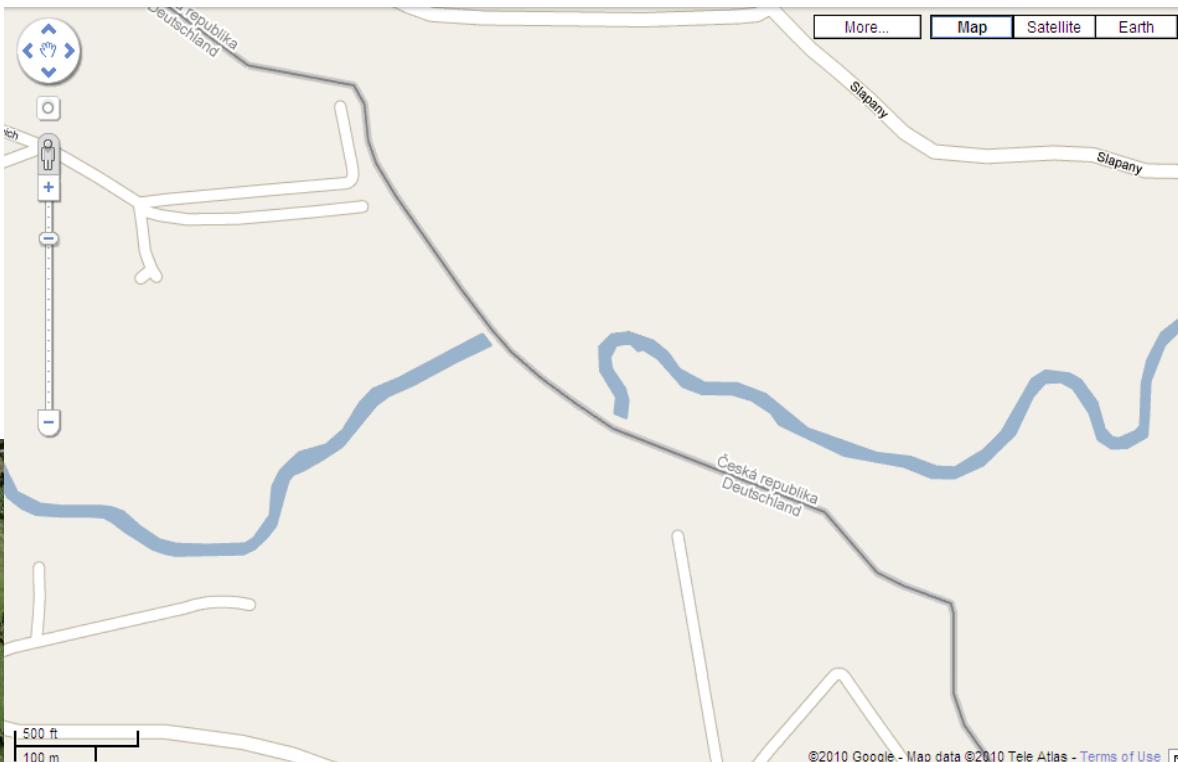


Open (3' V MIND



Why are reference data important?

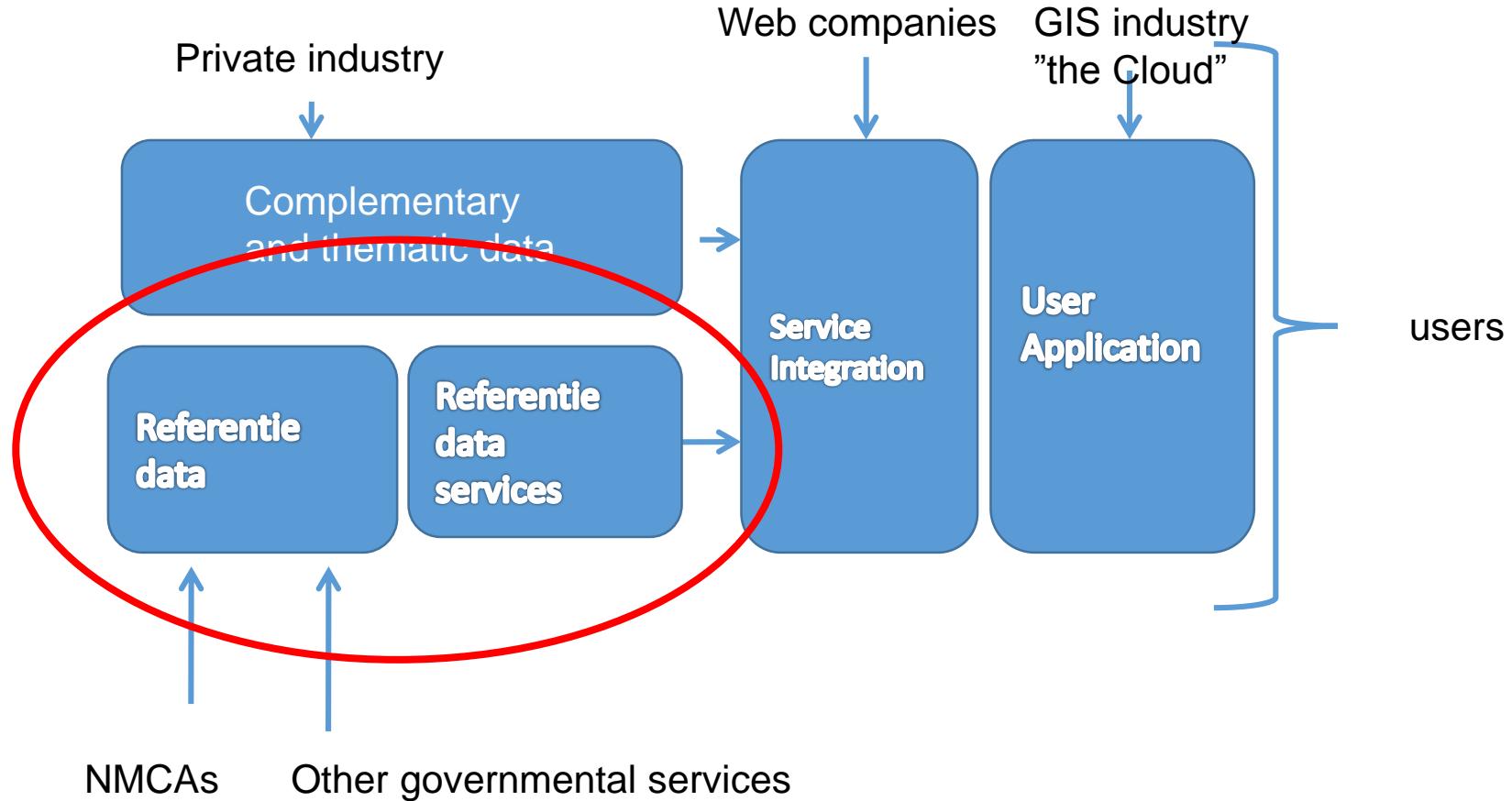
Users ask for a certified source of quality data



The 'on the web' world

The real world – *but not all can be seen from the sky ...*

Reference data are part of the solution





SEARCH

MAP LAYERS

SELECTED LAYERS 2

MY DATA

CREATE EMBEDDED MAP

MAP LEGENDS

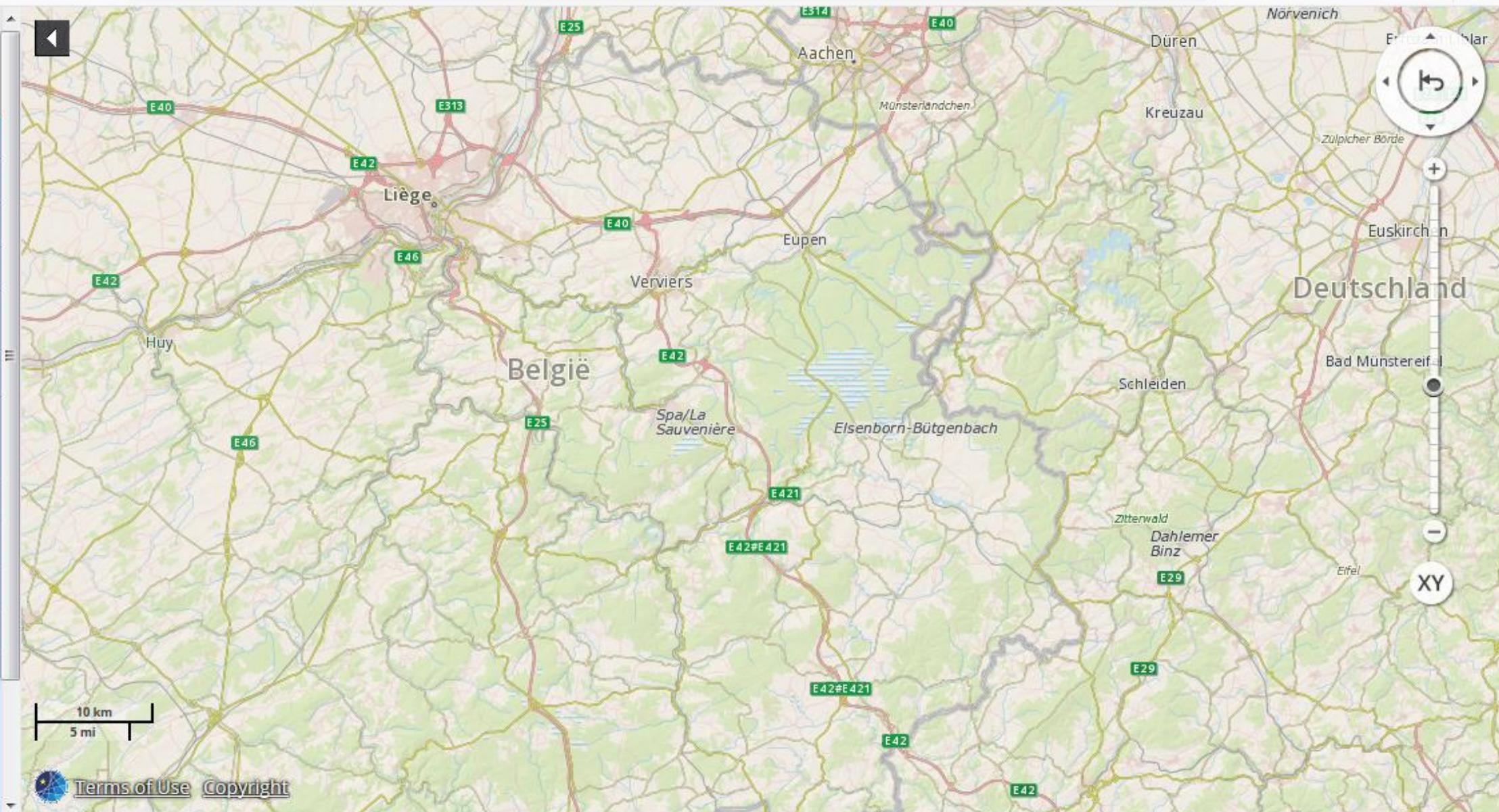
USER GUIDE



Username

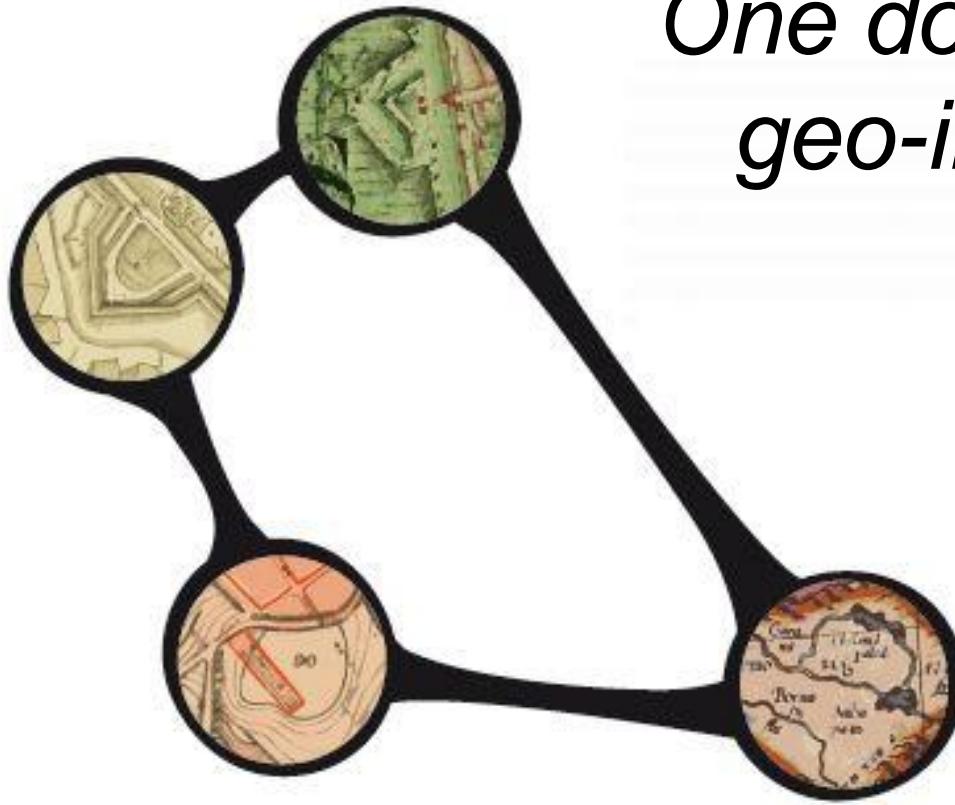
Password

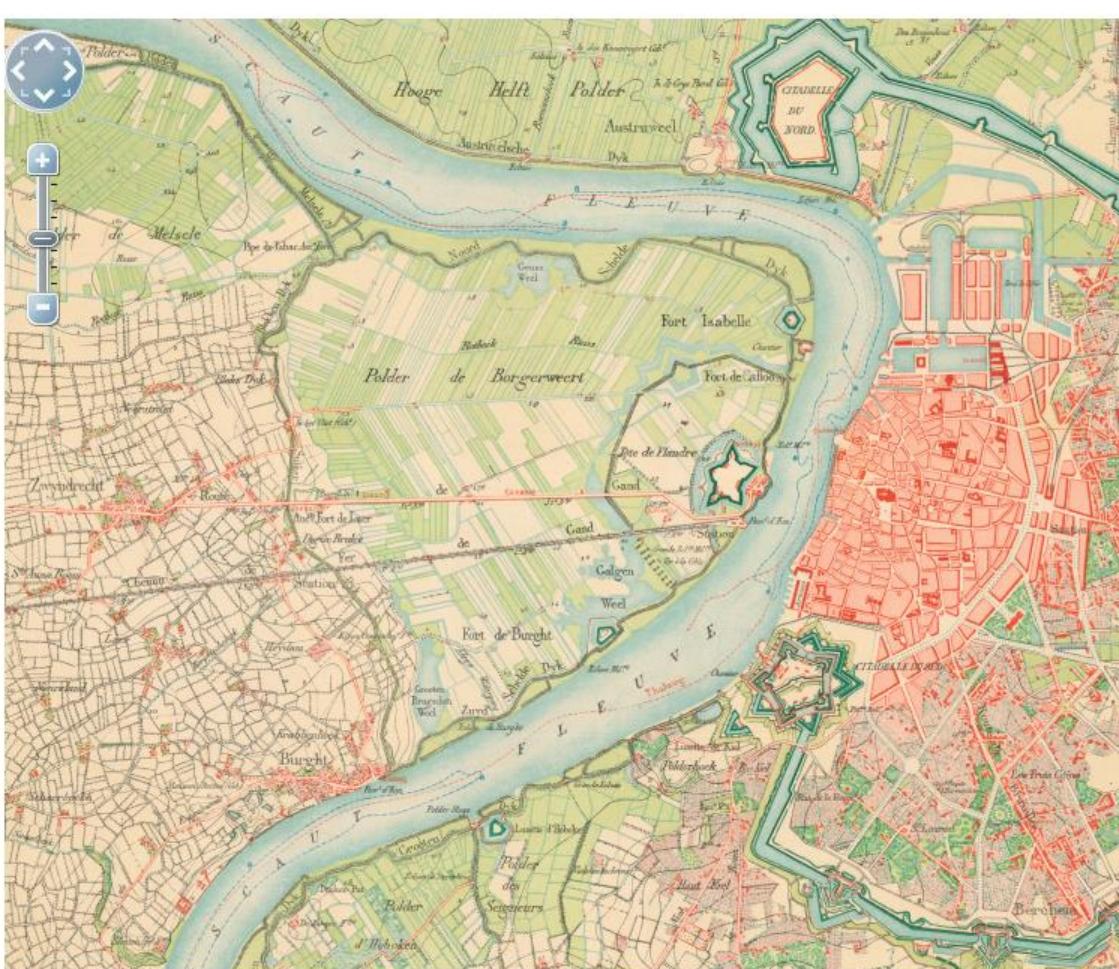
Login



Cartesius

One door to historical geo-info




[Detail](#)
[Zoeken](#)
[Resultaten](#)


CARTE TOPOGRAPHIQUE DE LA BELGIQUE

[Title] Carte topographique de la Belgique
 [subTitle] Feuille XV, planchette 3 Anvers
 [Author][s] Depot de la Guerre [Publisher]
 Depot de la Guerre [datePublication] 1865
 [Collation] numbe ...

Nationaal Geografisch Instituut (NGI) =
 Institut Géographique National (IGN)

DATUM

1863

SLEUTELWOORDEN Cartografisch niet-gegeorefereerd

[+ Metadata](#)
[Bekijk beeld](#)


XVII. PROVINCIAE BELGII SIVE GERMANIAE INFERIORIS : PRISCIS TEMPORIB[US] CIRCULO BURGUNDICO S.R.I. ANNUMERATAE QUARUM X HODIE MAXIMAM PARTEM HISPANIARUM NON NULL ...

[Augsburg] : Tobias Conrad Lotter, [1757] - 1
 carte : en coul., ill., arm. ; 48,7 x 58 cm -
 Millaria Germanica communia 15 in uno
 gradu = [10,6 cm], [et al.] - Oude kaarte der
 Nederlanden ...

Koninklijke Bibliotheek van België (KBR) =
 Bibliothèque Royale de Belgique (KBR)

DATUM

1757

SLEUTELWOORDEN Cartografisch niet-gegeorefereerd

[+ Metadata](#)
[Bekijk beeld](#)

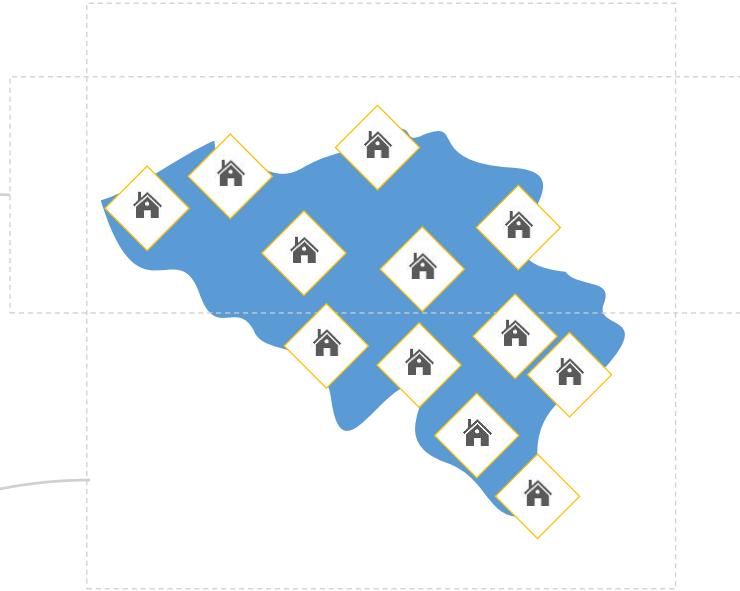

BELGIUM SIVE INFERIOR GERMANIA : IN SUAS XVII PROVINCIAS DIVISA

BeSt Address: interconnecting regional address registers

**UrBIS, CRAB,
PICC/ICAR**

Scope = Regional

CRAB-standard = validated by the steering committee GIS-Flanders, and serves as a model for the national BeSt-address model



BEST
Scope = Belgium

Joint initiative of the regions and the federal authorities regarding the development and activation of a system for the smooth exchange of address information in Belgium

BeST Add as linked (open) data?

- Best Add as Open Data?
 - Which pricing model?
 - Which licensing model?

- Best Add as Linked Data?

- Which URIs for address identifiers?
- Which Vocabularies?
- Which infrastructure?

The ISA Programme would support a pilot in this area.

5 stars for linked open data

- ★ Available on the web (whatever format) *but with an open licence, to be Open Data*
- ★★ Available as machine-readable structured data (e.g. excel instead of image scan of a table)
- ★★★ All the above, plus: non-proprietary format (e.g. CSV instead of Excel)
- ★★★★ All the above, plus: Use open standards from W3C (RDF and SPARQL) to identify things, so that people can point at your stuff
- ★★★★★ All the above, plus: Link your data to other people's data to provide context



Political framework

UNGIM

Aims and Objectives

The United Nations initiative on Global Geospatial Information Management (UN-GGIM) aims at playing a leading role in setting the agenda for the development of global geospatial information and to promote its use to address key global challenges. It provides a forum to liaise and coordinate among Member States, and between Member States and international organizations.



TOPICS

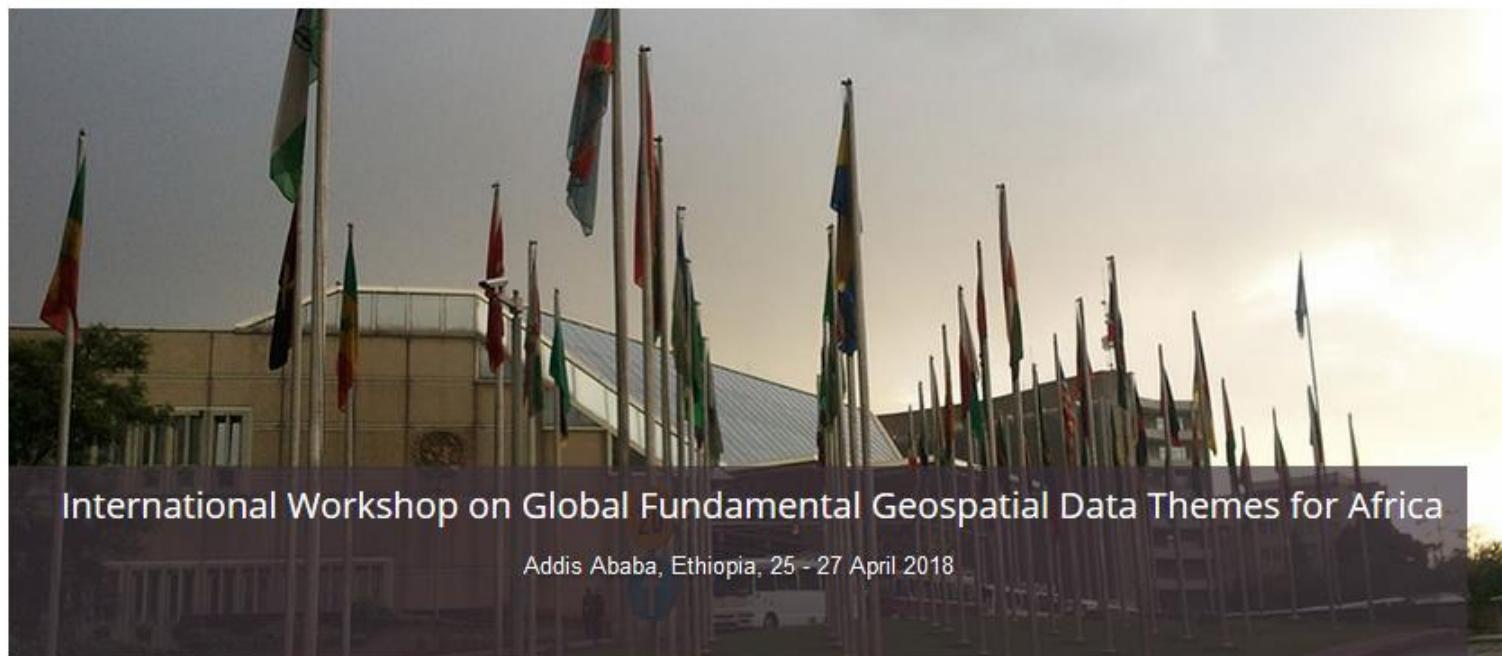
DATA

METHODOLOGY

EVENTS

PUBLICATIONS

ABOUT



Annual sessions

- ▶ Seventh session
- ▶ Sixth session
- ▶ Past sessions

Overview

- Mandates
- Aims and Objectives
- Bureau
- Regional Committees
- Expert and Working Groups
- Thematic Groups

Quick links

Tweets by
@UNGGIMEurope

UN-GGIM: Europe Retweeted

 Peter Njagi
@njagip@UNGGIM
@UN_GGIM_AFRICA
@UNGGIMEurope
@UNGGIMAmericas

Apr 25, 2018

Embed View on Twitter

RELATED TWEETS

EuroGeographics



The Fifth Plenary Meeting of the European Region of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM: Europe) will be held from 6 - 7 June 2018 in Brussels, Belgium. The meeting venue is the Crowne Plaza Brussels, Le Palace 3, Rue Gineste, 1210 Brussels, Belgium. This Plenary Meeting of UN-GGIM: Europe is being hosted by Eurostat.

The Fifth Plenary Meeting of UN-GGIM: Europe will bring together senior executives from national geospatial information and statistical authorities within Member States, and international geospatial experts from across the region. It will provide participants with an overview of the successful activities carried out by the regional entity during the past year.

The draft agenda is available here.

Fourth Joint UN-GGIM:
Europe - ESS - UNECE
Meeting

Demonstrating geospatial
value is key to regaining
public trust in experts says
UN-GGIM: Europe

UN-GGIM: Europe
announces new Executive
Committee

more

FORTHCOMING EVENTS

06/06/2018 to 07/06/2018
Fifth Plenary Meeting of
UN-GGIM: Europe

Past events

Country reports

UN-GGIM

Legal framework

- . National level
- . European level
 - INSPIRE
 - PSI

Coordination

How to make an NSDI in Belgium?

- Spatialist/Prof Bouckaert
 - Hierarchy / market / network
- 3 conditions for ‘good governance’
 - From organisations with databases to databases with organisations
 - Demand driven supply
 - Multidisciplinary approach

How to make an NSDI?

- SDI don't create themselves
- a law helps but cannot make it work in practice
- Data <> information
- GDI has to be the 'backbone' of the 'back-office' of all facets of public authority
- Governance is the key, bureaucracy and power thinking are the bolts

WHAT TO REMEMBER?

- Collaboration is a necessity**
- Sharing of knowledge is essential**
- Trust is indispensable**

Ingrid Vanden Berghe

ivb@ngi.be

3 x OPEN

Open DATA

hopefully not worthless

Open STANDARDS

if possible open Source

Open MIND

or you cannot work together

All you need is the plan,
the road map
and the courage to press on
your destination

E. Nightingale

e-gov

+ g-gov

i-gov

ivb@ngi.be



NATIONAAL GEOGRAFISCH INSTITUUT
INSTITUT GEOGRAPHIQUE NATIONAL