



Joint EuroSDR EuroGeographics Workshop

Sustainable business models for national mapping and cadastral agencies



NGI-BEL

The role of the NGI Belgium in the new Open (geo)data landscape

Eric BAYERS, General counselor

Jasper BEERNAERTS, Partners manager



NGI IGN



NGI BELGIUM

Short introduction

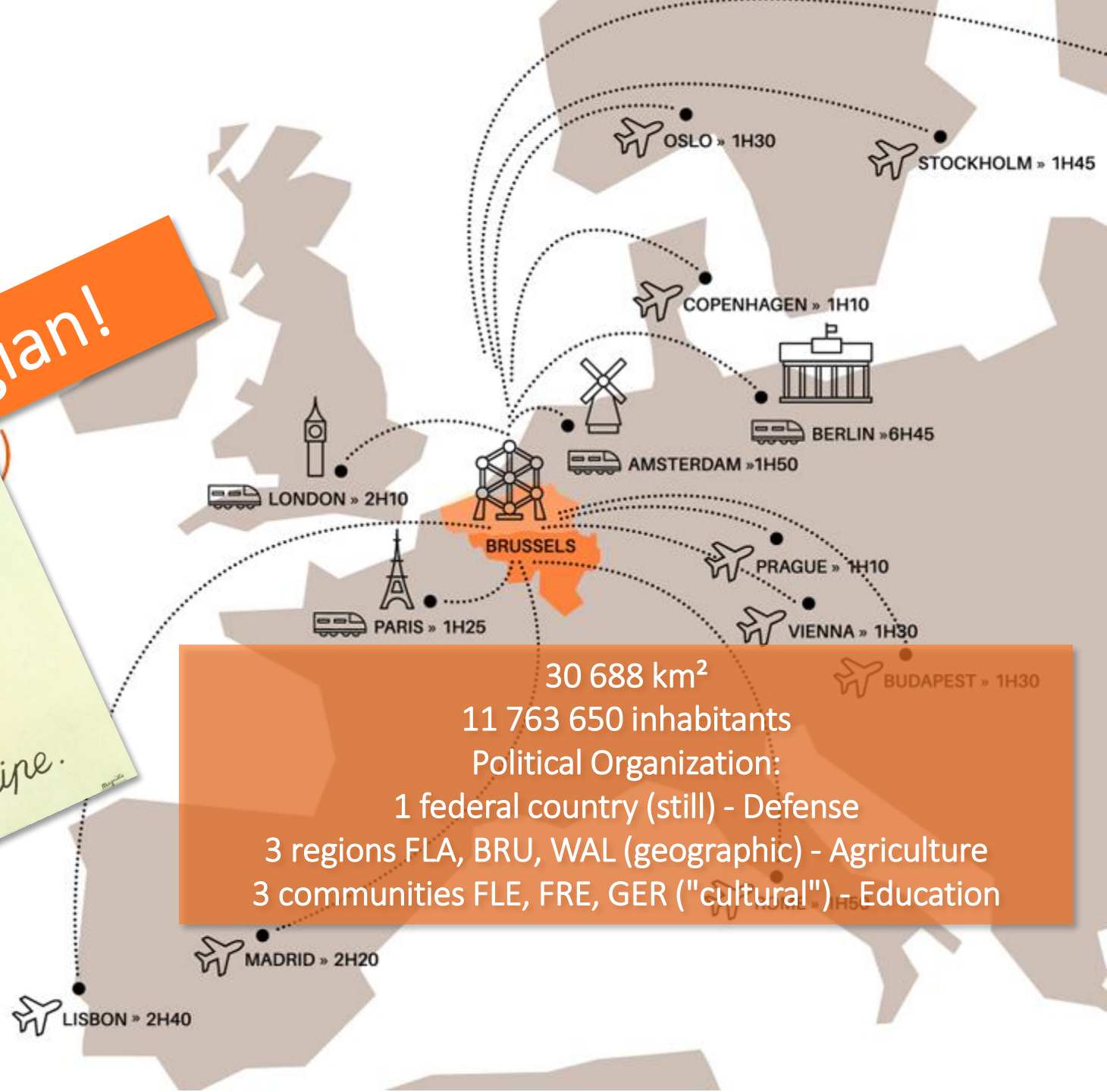
BELGIUM

6 governments (it's
5 parliament
4 seas
2 kinds of wa
1 EU hotspot

If it's simple, it's not Belgian!



Ceci n'est pas une pipe.



30 688 km²
11 763 650 inhabitants
Political Organization:
1 federal country (still) - Defense
3 regions FLA, BRU, WAL (geographic) - Agriculture
3 communities FLE, FRE, GER ("cultural") - Education

NGI Who are we?



L'institut géographique géographiques sur la géodonnées numérique privées ou professionnelle

NGI
Nationaal
Geografisch
Instituut



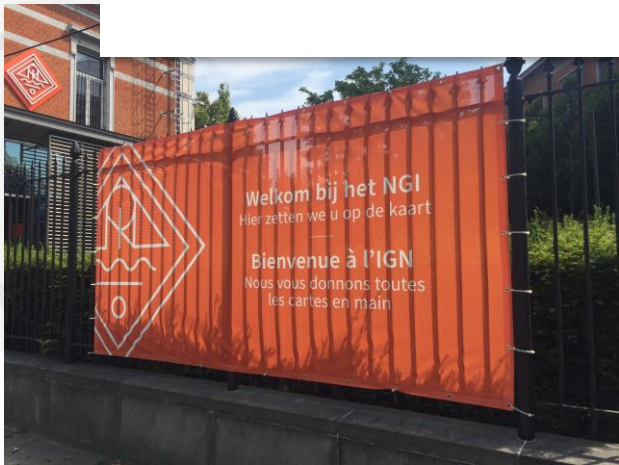
IGN
Institut
Géographique
National

National Geographic Institute of Belgium

- National Mapping Agency (**NMA**)
- **Federal administration**, type B parastatal under the **tutelage of the Minister of National Defence**
- **Autonomy of management** (through a management committee) of budget and human resources

- 196 staff
- Annual Budget of around 25 M€

Very limited resources...
But the same challenges



NGI IGN

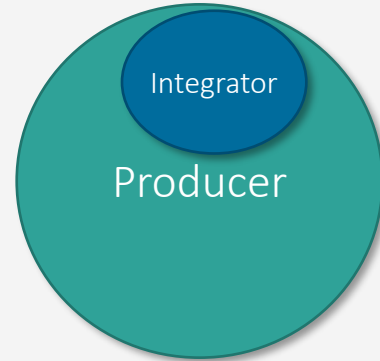
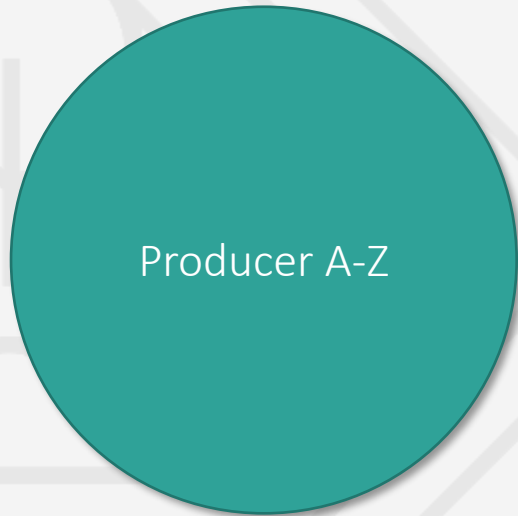
NGI

What is our vision?

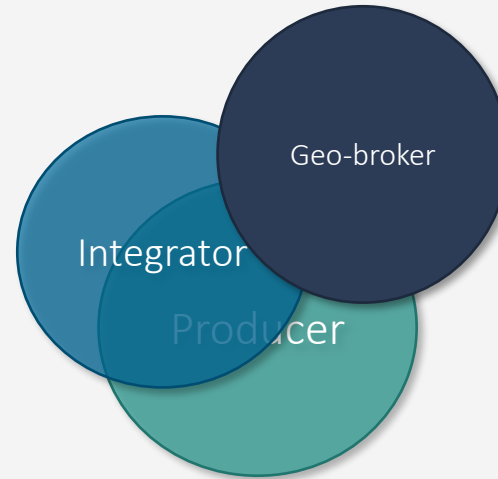
- Make available complete territory-covering **reference data** of homogeneous quality
- For **federal government**:
 - Provide federal officials with the geographic information they need to carry out their tasks.
 - Disseminate federal government information that contains a geographical component to government, the private sector and society
- To develop the **national geo-information infrastructure**:
 - grafted onto the **local, regional** and **federal** infrastructures
 - embedded in **international partnerships** around geographic information
- Support, encourage and strengthen **cooperation between different governmental levels**
 - Develop missing links.
- **Providing expertise** on geographical information.

NGI

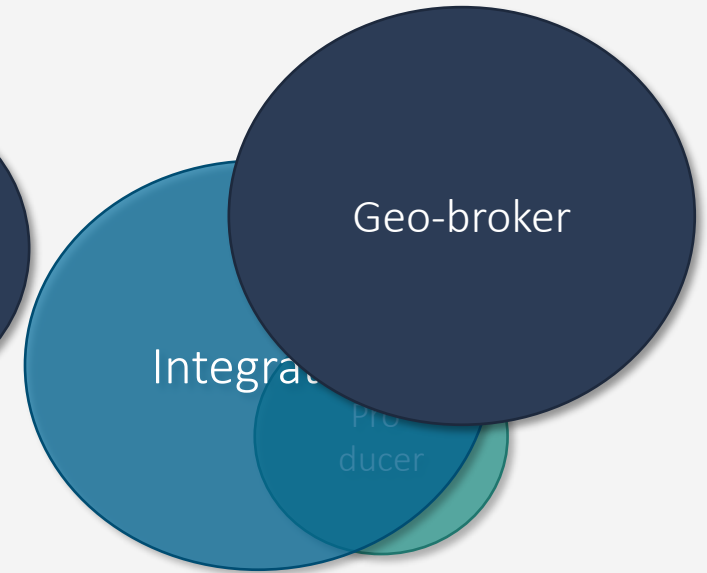
How do we want to do it?



ITGI



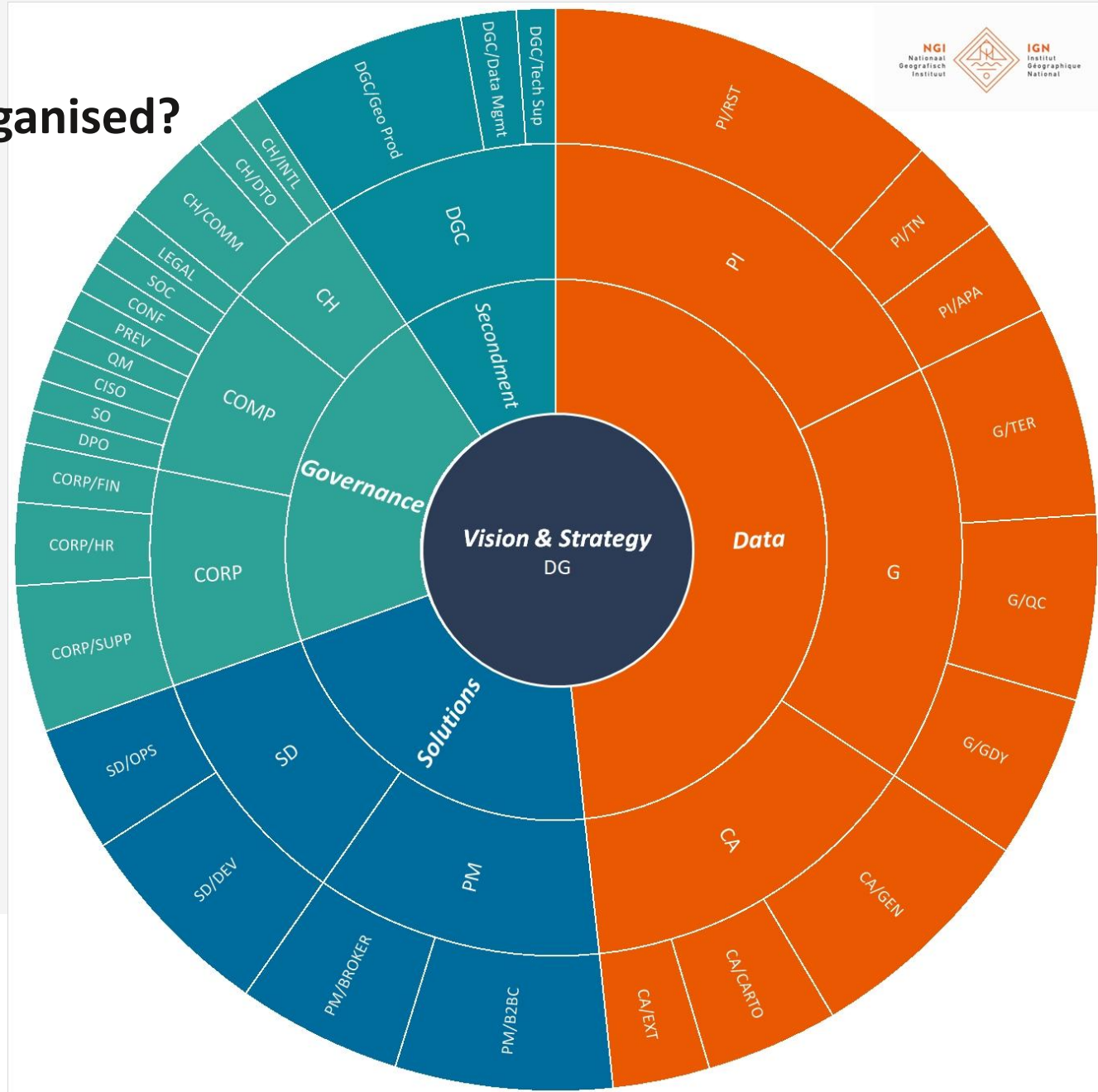
Strategy 2020



Vision 2030

NGI

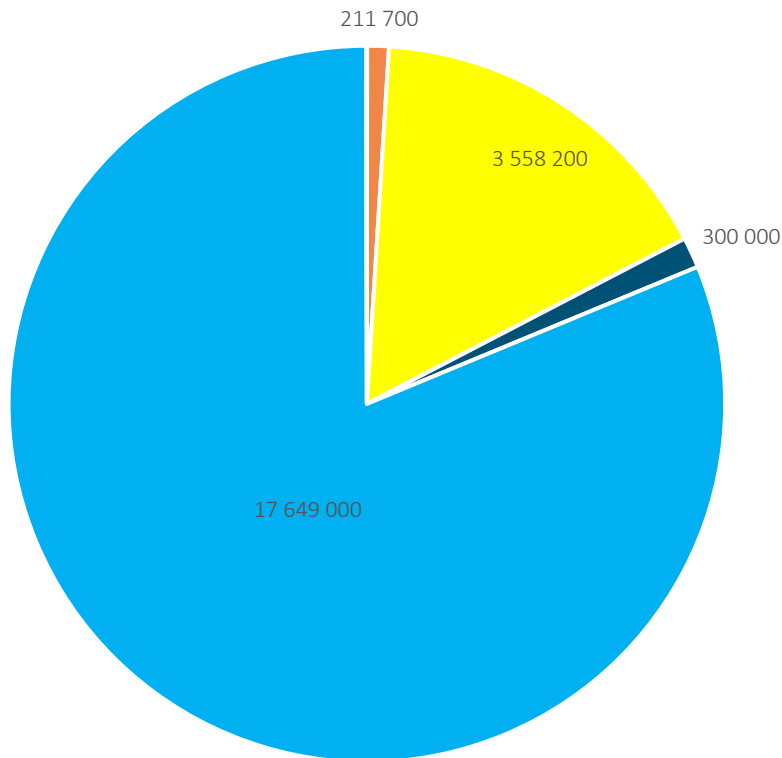
How are we organised?



Budget 2025

INCOMES

- Ventes aux entreprises et ménages
- Ventes au secteur public
- Subsidés reçus
- Subventions publiques



■ Rémunérations du personnel

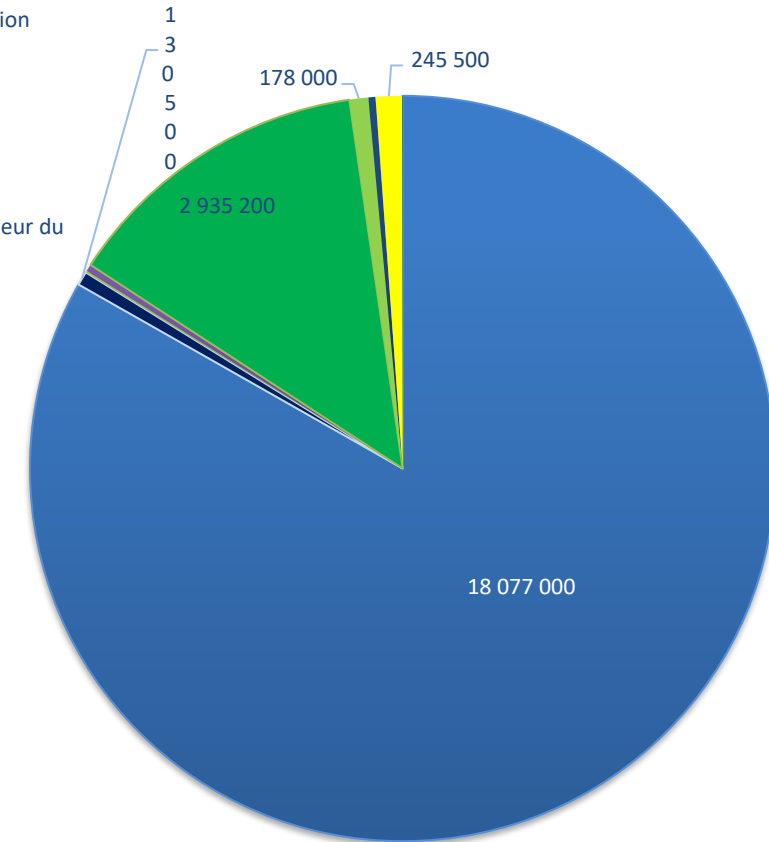
■ Autres éléments de la rémunération

■ Frais de fonctionnement

■ Frais de fonctionnement à l'intérieur du secteur public

■ Véhicules

■ Matériel et mobilier



EXPENSES



NGI IGN



NGI-B ACTIVITIES

As “Data producer / Integrator”

What do we do?

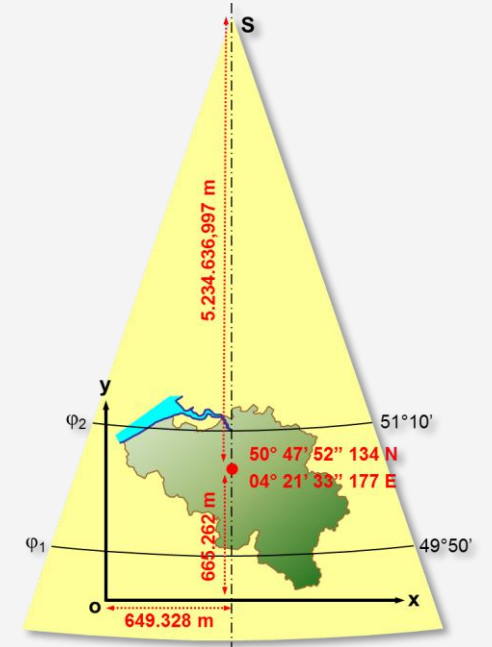
Manager of geographical reference systems

Establishment and maintenance of geodetic infrastructure

- National reference for geographical coordinates, map projection and elevations
- Ensuring consistency between national and European references

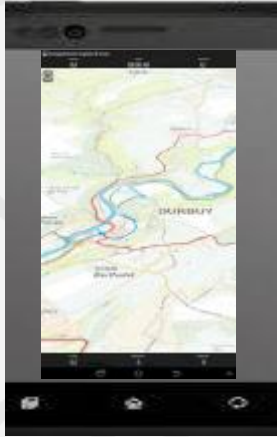
Management of the integration of GPS reference stations / provision of RTK services

- GPS-RTK: fast calculation of coordinates (1-2 min) with a vertical accuracy of about 1 cm
- Infrastructure managed by regional institutions
- Central coordinating role by the NGI



What do we do?

Provider of maps



Topographic map

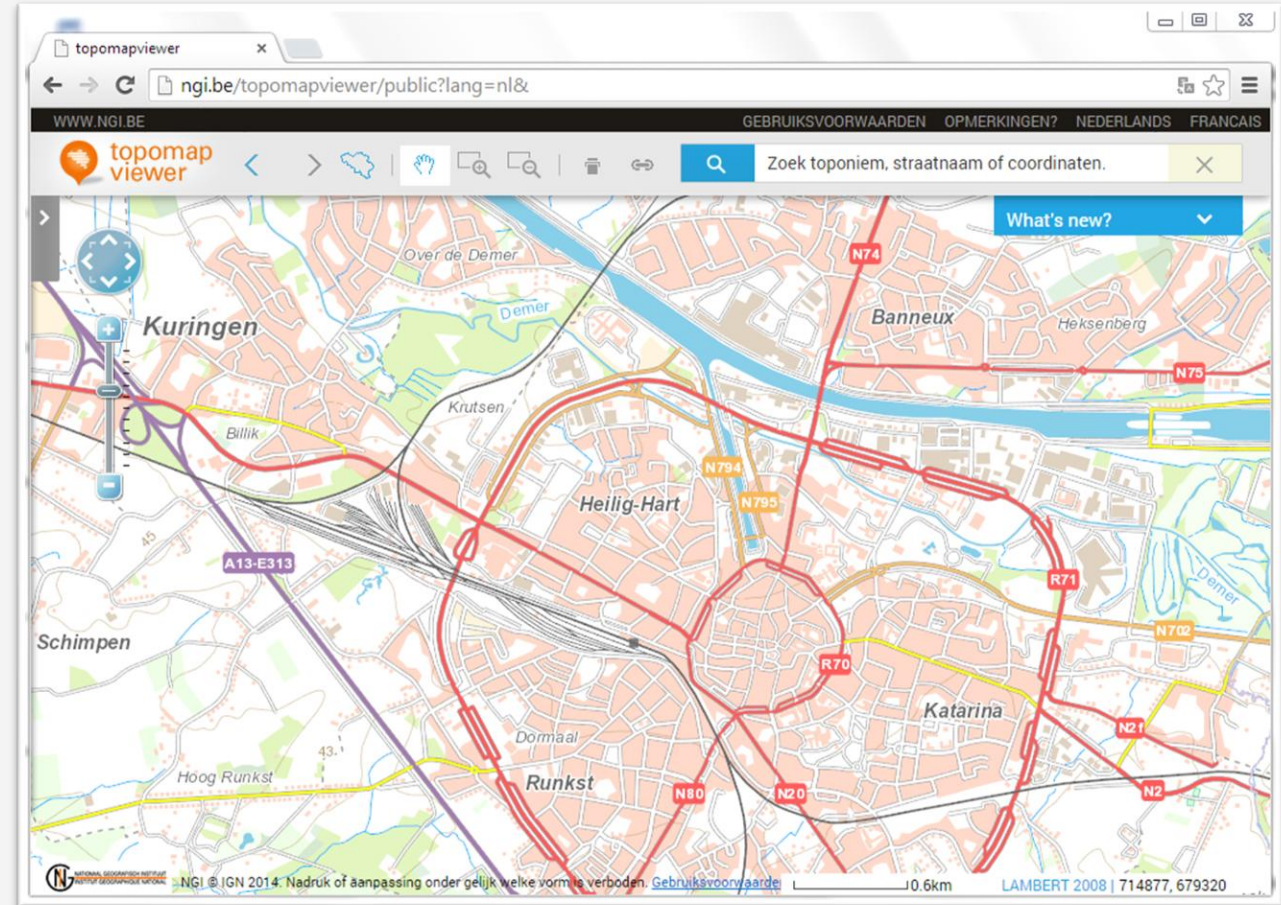
Multi-scale and
multifunctional
for the "web"

Cartoweb.be



my Data
Sources authentiques

Cartoweb IGN
Institut Géographique National
SPF BOSA DG Transformation digitale



<https://topomapviewer.ngi.be/>



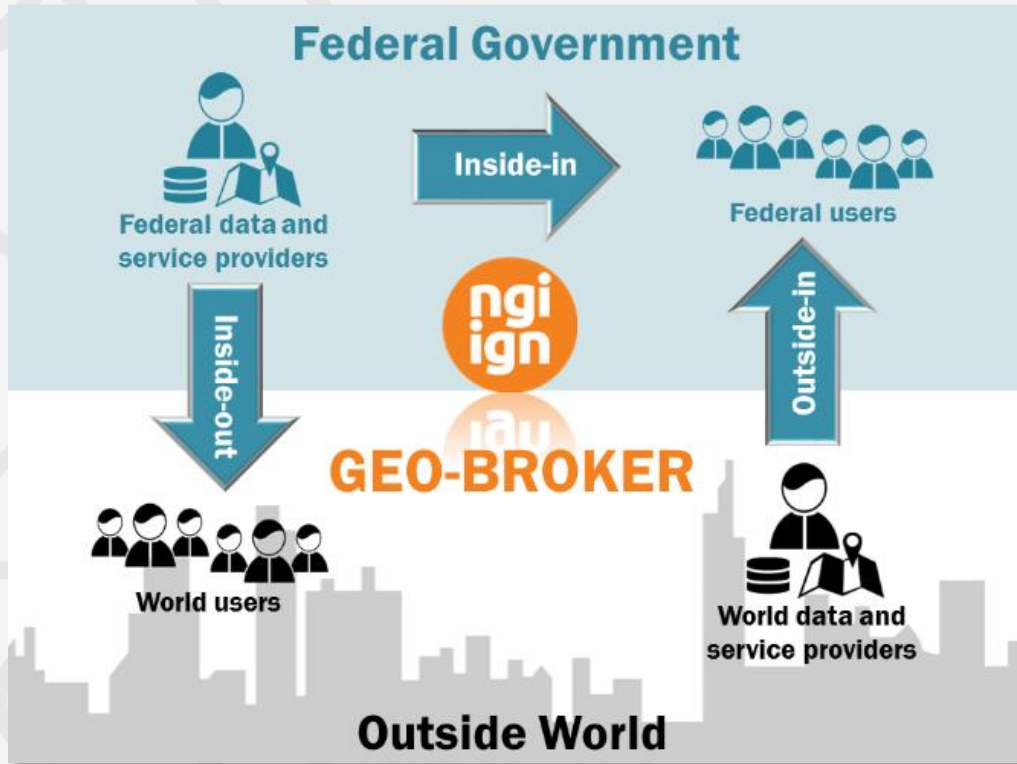


NGI-B ACTIVITIES

As “GeoBroker”

geobroker

What do we want to do?

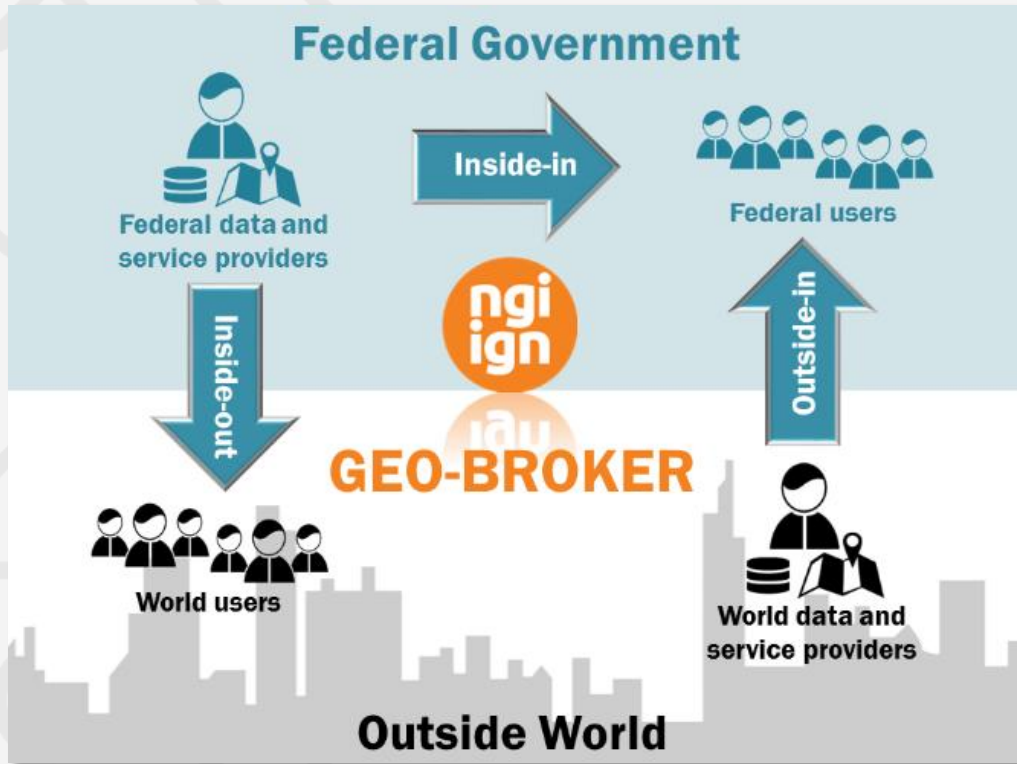


Role of geobroker

- Determine the federal government's overall geodata and geoservices **needs**
- Bring geodata and geoservices providers closer to end users by **facilitating** transactions.
- **Facilitate** access and **improve** the reuse and dissemination of geodata and geoservices.
- Study the market in order to provide **appropriate recommendations**.
- Provide at the request of its partners **additional geoservices and geosolutions** based on its **expertise**.

geobroker

What do we want to do?



The National Geographic Institute is the recognised **geobroker** in Belgium for **geospatial information**, where stakeholders can easily benefit from the provision and use of geographic information.

Priority partners:

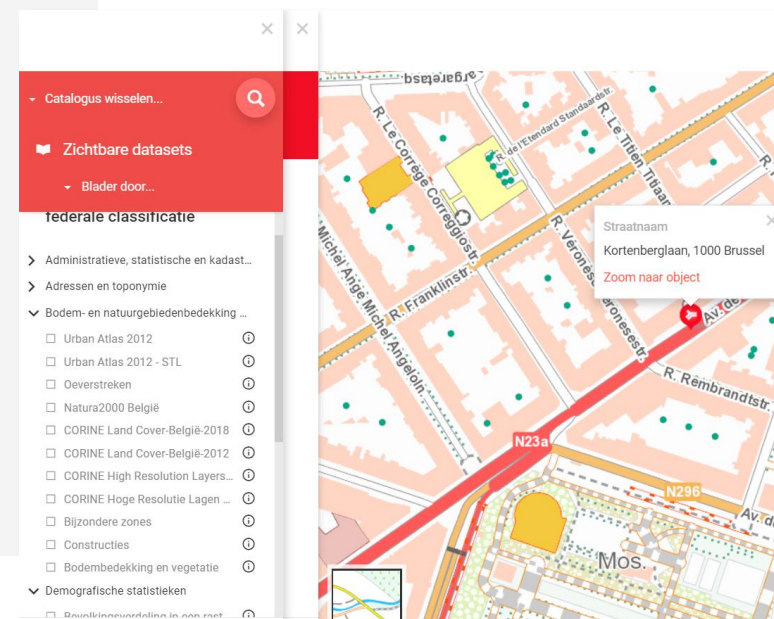
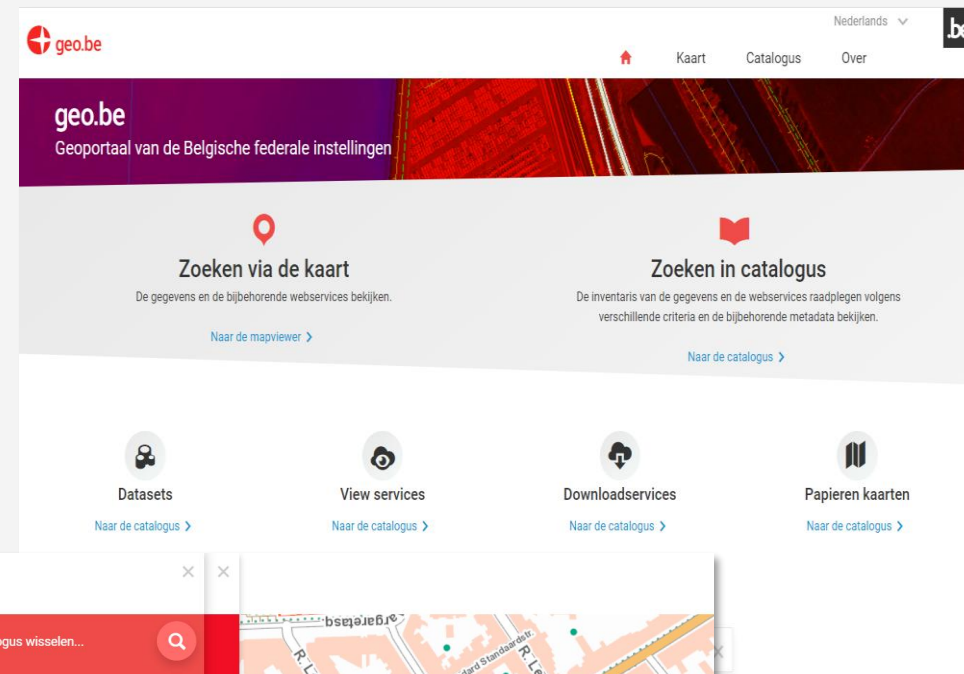
- Defence
- IBZ, crisis centre,... “crisis management”
- Other federal institutions
 - Mobility management players (SPF Mobility, ITS)
 - Actors in climate management (CERAC, BCC,...)
 - ...

1. [Geo.be](https://geo.be): Federal geoportal

Webportal for geographical information of the Belgian federal institutions

Functionalities:

- Discovery, via a metadata catalogue (INSPIRE/ISO & DCAT-AP)
 - For NGI standard geoproducts and geoservices
 - For INSPIRE geoproducts and geoservices (NGI and partners)
 - For third-party geoproducts and geoservices (on request)
- Visualisation of available data and services via a map browser
- Access to the URLs of viewing and downloading services
- Direct access to download existing OPEN data.

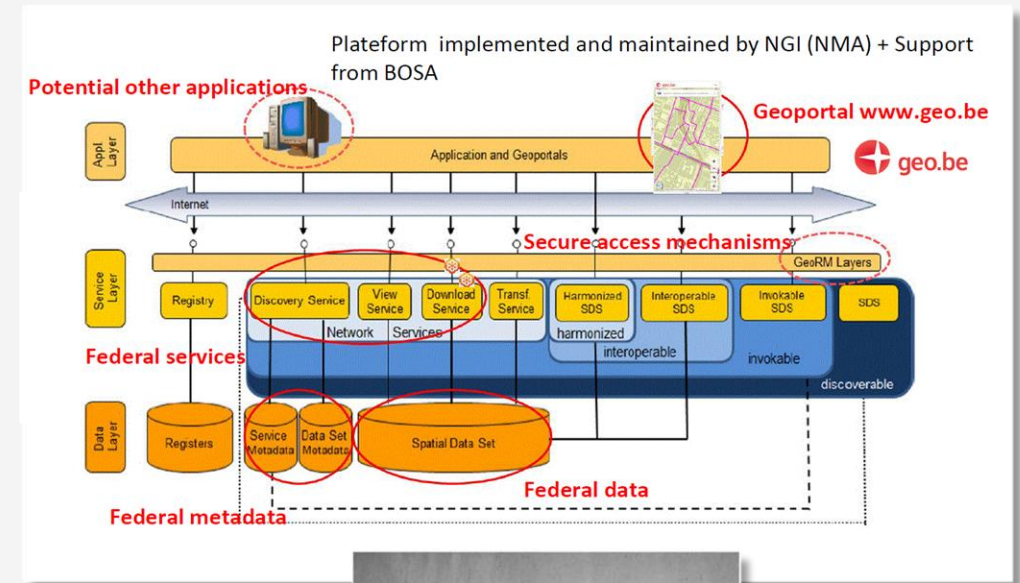


2. National & International follow-up of INSPIRE

Infrastructure for Spatial Information in Europe

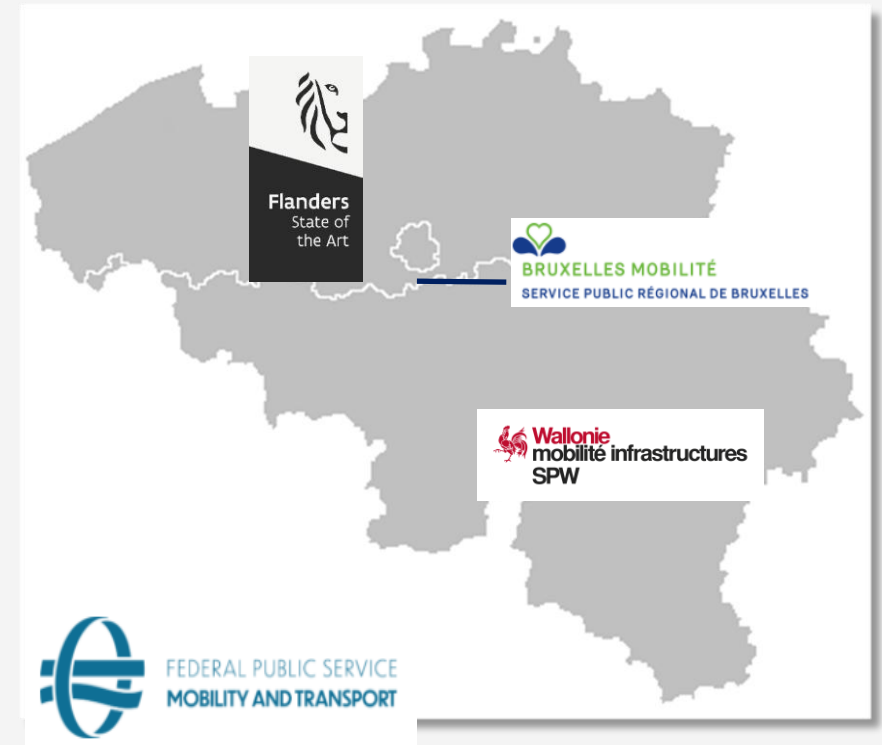
Activities:

- CC-INSPIRE
 - **National Coordination** Committee for Belgium
 - Role in **Secretariat** of the Steering Committee
 - Participation in several working groups on specific topics (e.g. metadata, address)
- Support to other federal institutions
- Publication of INSPIRE datasets & webservice (Geo.be)
- Microservice for mapping of INSPIRE (ISO) to geoDCAT-AP
- Yearly INSPIRE reporting to European Commission
- Making link with other legislative frameworks (e.g. PSI, Data Spaces)



3. [Transportdata.be](https://transportdata.be): Belgian National Access Point for Intelligent Transport Systems (NAP ITS)

The screenshot shows the Transportdata.be website. At the top, it says "TRANSPORTDATA.BE" and has navigation links for "Datasets", "Organizations", "News", "About", and a search bar. The main header is "BELGIUM'S NATIONAL ACCESS POINT FOR INTELLIGENT TRANSPORT SYSTEMS (NAP ITS)". Below this is a search bar for "SEARCH FOR DATASETS & SERVICES" with a search button and a "Popular Tags" section listing "Rail (including hig...", "Bus", and "Car". To the right, there is a section "Add datasets and services" with a description and an "Add Data" button. Below the search bar, there are three boxes: "Need help? Contact our helpdesk contact@transportdata.be", "More detailed instructions on how to register your dataset(s) and or services can be found in the about section and in our instruction video.", and "Subscribe to our newsletter and stay informed" with an email input field and a "Subscribe" button. At the bottom, there are two columns of content. The left column is titled "DISCOVER THE NAP & REGISTER CONTENT" and lists services like MMTIS, RTTI, SSTP, and SRTI. The right column is titled "ACCESS & (RE)USE CONTENT FROM THE NAP ITS" and lists instructions on how to consult datasets and services, discover the Belgian transport landscape, and obtain practical information on how to (re)use datasets and services from the NAP ITS.



4. LowAir & eTOD

LowAir

= aeronautical map for use at low altitudes

Product for defence with 30+ years of history including

- Airspace traffic layers
- Airspace warning layers

eTOD: Electronic Terrain and Obstacle Data

= Electronic Terrain and Obstacle Data

Geodata for air navigation defined in ICAO (civil aviation) technical specifications:

- Terrain Data = Digital terrain model
- Obstacle Data = a database of airborne obstacles



5. Uniform & Shared Cartography for Emergency Services

= Community based approach to assist emergency services

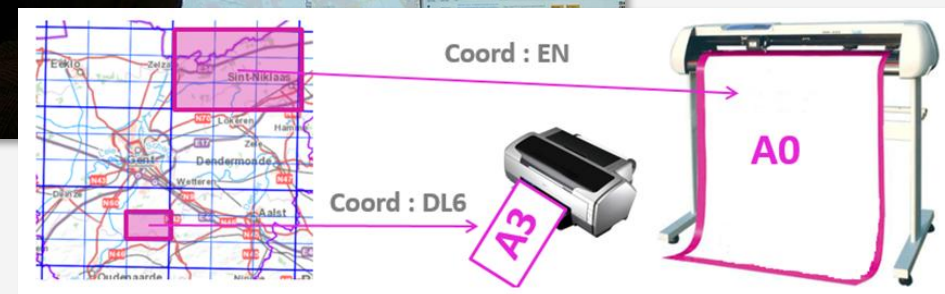
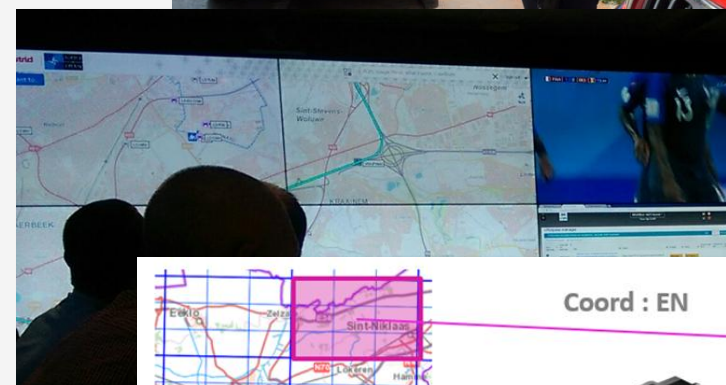
Cartography for wildfire management

<https://youtu.be/9HytxnDFXW0>

GeoNAVTool

Unified and Shared Cartography for crisis management

- National Crisis Centre
- Emergency services (including defence)
- Innovative government project (PIO)
 - Workshops with emergency services across Belgium
 - Consolidation of mapping and functionalities
- National Committee of Emergency Services Geo



6. Purchasing frameworks for geodata

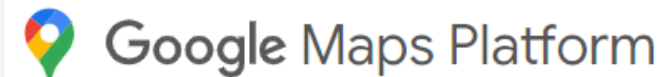
Road navigation data

- Provision of a Digital road network that enables navigation and geolocation (TomTom data)
- Federal initiative (Central purchasing office)
- Goals:
 - Savings.
 - Better and stronger cooperation between the federal authorities.
 - Increasing efficiency.
 - Application in as many services as possible.
- User group
 - Integrated police, 112 service, FPS Interior (fire brigade and medical intervention teams), ASTRID, FPS Mobility and Transport, Defence, NGI,...
 - Expandable for other federal users
 - 4k licenses

The TomTom logo consists of the word "TOMTOM" in a bold, black, sans-serif font, followed by a red icon of two hands shaking.

Google Map Pro

- With the help of NGI, contacts are made between interested partners and Google Map Pro / Localyse.
- Negotiation of a common tariff scale for federal administrations
- Government contract with Localyse regarding the purchase of Google Maps licenses

The Google Maps Platform logo features the multi-colored location pin icon to the left of the text "Google Maps Platform" in a dark grey, sans-serif font.The Localyse logo features a green circular icon with a white location pin inside, to the left of the text "localyse" in a bold, lowercase, sans-serif font. Below "localyse" is the tagline "EMPOWERING LOCATION" in a smaller, uppercase, sans-serif font.

7. Collaboration on Climate Change Research

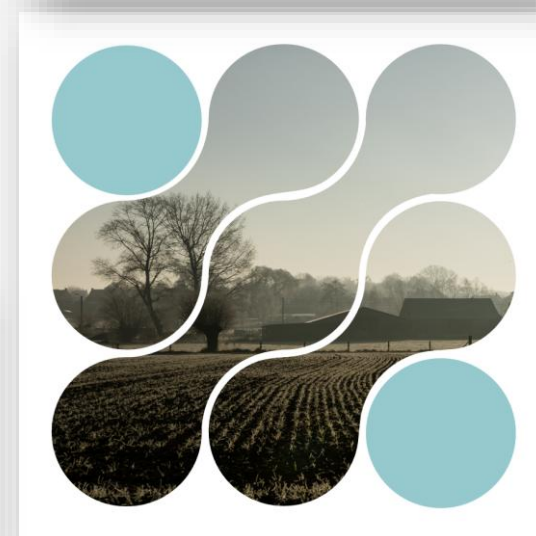
Climate Risk Assessment Centre (CERAC)

First cooperation agreement with NGI (2023-2025)

- Wildfire risk assessment
- Biodiversity loss assessment

Second cooperation agreement (2025 – 2027)

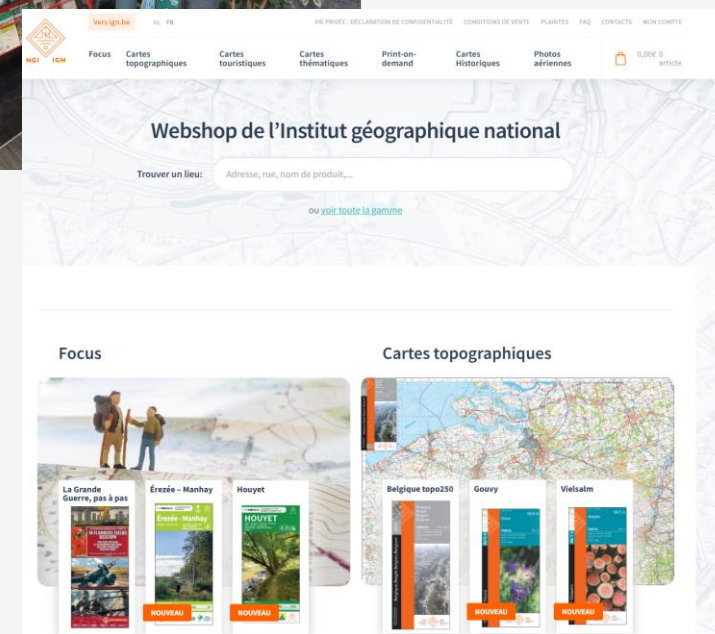
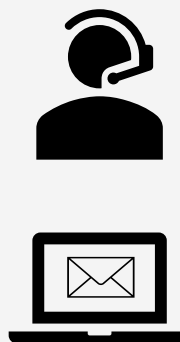
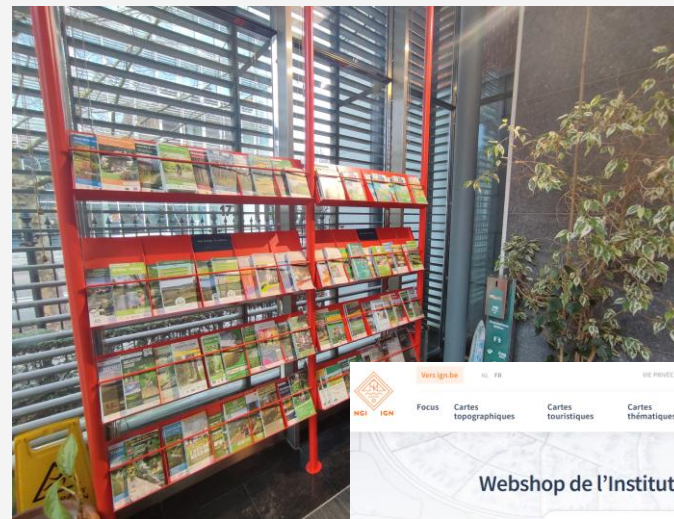
- Flood hazard assessment



8. We advise and sell

Some numbers (2024):

- More than 74 000 paper maps sold
 - including more than 44 000 touristic maps
- 12 000+ deliveries of digital data
 - Including 3000+ Photo's & Ortho's
- 800+ printed photo's & ortho's
- 700+ maps printed on demand



9. International representation



Partnerships Visibility

Toenemend belang van de geobrokerrol van het NGI en geografische informatie in sleutelsectoren

NGI - National Geographic Institute
3,645 followers
6mo • Edited •

Grâce au partenariat renforcé entre l'IGN et **Sciensano**, les premières données de surveillance épidémiologiques dans les eaux usées sont disponibles sur geo.be, le portail développé et maintenu par l'IGN qui centralise les géodonnées ...more

Show translation



JEU DE DONNÉES
Surveillance épidémiologique nationale du SARS-CoV-2 dans les eaux usées - Stations d'épuration



esri Esri BeLux
6,652 followers
2w •

+ Follow

Vorige week organiseerden we een geslaagde ontbijtsessie voor de Federale Overheid in Brussel. Een warme dankjewel aan alle deelnemers én in het bijzonder aan NGI voor de heldere en inspirerende presentatie! 🙌 ...more

Show translation



cerac Cerac - Climate Risk Assessment Center
2,238 followers
2mo •

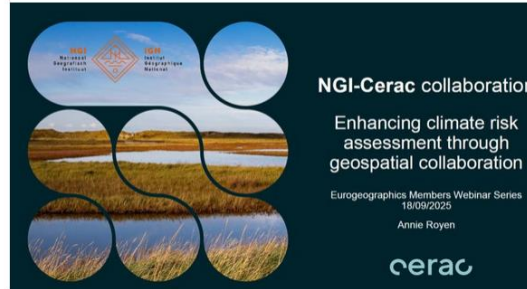
Samen met **NGI - National Geographic Institute** bundelt **Cerac - Climate Risk Assessment Center** de krachten voor geospaatiale analyses van klimaatrisico's.

Show translation

NGI - National Geographic Institute
3,644 followers
2mo •

Gisteren leverde onze collega **Annie Royen** namens het NGI een bijdrage aan de **EuroGeographics Members Webinar Series**. ...more

Show translation



De laatste maanden van het jaar waren voor het NGI rijk aan uitwisselingen en zichtbaarheid, dankzij verschillende belangrijke evenementen. Deze bijeenkomsten, waar het NGI werd uitgenodigd om zijn expertise te delen, illustreren de groeiende erkenning van de strategische waarde van de geografische gegevens die het NGI produceert, integreert en toegankelijk maakt. Ze benadrukken ook de rol van het NGI als federale geobroker ten dienste van essentiële domeinen zoals mobiliteit en crisisbeheer.



NGI - National Geographic Institute
3,644 followers
6mo • Edited •

L'IGN est très désireux de contribuer au projet TAKIWAMA, en soutenant notre partenaire **Enabel** avec son expertise géospaatiale, et surtout une bonne référence géodésique autour du lac, ancrée dans le système géodésique mondial 🇵🇹 🇱🇺

Show translation

NGI - National Geographic Institute reposted this

Transportdata.be
358 followers
3d • Edited •

Yesterday we had our first Belgian NAP User Day !

It was inspiring to see how motivated everyone is to keep improving the ...more




Enabel
148,509 followers
6mo • Edited •

Tanganyika lake: Where science meets climate action
Holding 18% of the world's freshwater reserves, Lakes Tanganyika and Kivu are environmental treasures. They provide vital resources for nearly eight ...more

Show translation

Lake Tanganyika • 5 pages



NGI - National Geographic Institute
3,645 followers
11mo •

Het NGI is trots om zijn partners **Flagis VZW** en **AM/FM-GIS Belgium/Luxembourg** te steunen door de jury van de **#GeoSpatial #Awards** te laten doorgaan in onze kantoren in Brussel. Het was een vruchtbare dag van uitwisselingen met de kandidaten ...more

Show translation

Flagis VZW • 1st
Flemish Association for Geographical Information Systems vzw at Flagis VZW
11mo • Edited •

Jury en kandidaten voor de **#GeoSpatial #Awards** ontmoeten elkaar op het **NGI - National Geographic Institute** voor een hele dag **#Pecha #Kucha**'s afgelopen 25 november! Wat een fantastische kandidaten! De kwaliteit van de ...more

Show translation



Matinale in Brussel, een boeiende voormiddag






NGI-B ACTIVITIES

Concerning “Open data and HVD”

Open data & PSI

NGI implications and impacts



- The NGI will have to **adapt its business model**
 - We will have to stop our commercial activities related to the sale and reuse rights of our standard digital products and services.
 - Loss of **commercial income**
- The NGI will have to **change the content and access modalities** of its current standard products and services.
 - They currently meet the needs of the **INSPIRE directive** in terms of content and accessibility (geo.be infrastructure). The implementation of the Open Data & PSI directive will oblige NGI to fundamentally **upgrade its production processes and its infrastructure** in order, among other things, **to systematically deliver our products in recent open formats and with accessibility channels that are fully “machine readable”** (new web services and OGC APIs).
 - To adapt **user licenses** and metadata.  **CC BY 4.0**
 - Increase in **costs for the production, maintenance and distribution** of current and additional products
- The NGI will also have to **upgrade the volume of its infrastructure** for access to geo-information.
 - Experience has shown that a move to open data also leads to an increase in the volume of transactions with the available data.
 - Increase in **infrastructure costs**

Open data & PSI

NGI action plan



After the **impact analysis** carried out in 2023 (and provided to the government), NGI is working on **an action plan** (detailed analysis of the actions to be undertaken) for the implementation of the directive which provides :

- WP1: Program governance and as-is analysis
- WP2: Unlock data
- WP3: Setting up infrastructure
- WP4: Legal aspects
- WP5: Human resources
- WP6: Partnerships

This analysis is carried out by identifying all the actions necessary for the transcription of the directive.

The necessary budget (3M €/year for the next 3 years) has been found... Thanks to the Defense

A staff reinforcement of 17 people is planned for 2025-2026 to implement this action plan.

Challenge: Now we need to find them, recruit them, train them and retain them!





BeGeo 2026

24/03/2026 | Brussels Expo

La géo-intelligence au service de la résilience
Geo-intelligentie voor een veerkrachtige toekomst



begeo.be

Thank you for your attention...

NGI – IGN

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Joint EuroSDR EuroGeographics Workshop

Sustainable business models for national
mapping and cadastral agencies

