kadaster

Key Registers in the Netherlands

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Netherlands' Cadastre, Land Registry and Mapping Agency

Geoinformationstag 2024

Grundlegende Geobasisdaten für eine eine digitale Schweiz

Des géodonées de bases fondamentales pour une Suisse numérique

Bern, October 2, 2024

Introduction

- Brief introduction to the Netherlands
- Digital Government in the Netherlands
- System of key registers
  (starting point, development, state of play)
- Current developments and challenges
  (data centric approach, users' demands, data sharing)
- Interoperability (cross-sector)
- Application to the spatial planning domain

The Netherlands

12 provinces
342 municipalities
41,000 km^2
18,0M inhabitants

provinces: spatial planning
environment and conservation
regional economy and agriculture
regional (public) transport and infrastructure

municipalities: social affairs, employment, welfare
education (primary/secondary)
land management, zoning, development
local infrastructure
key partner in eGovernment and SDI

(spatial) eGovernment in the Netherlands

Overall data strategy

Ministry of the Interior and Kingdom Relations
(Public Data, eGovernment, Digital society)

EU policies
Data acts,
GDPR, AI,..

Geodata strategy

Ministry of Housing and Spatial Planning
(Spatial/Geo-information)

Data ownership

National Government and Agencies
Municipalities
Provinces

execution

Municipalities
Provinces

Agencies
- **Kadaster**
- Geological Survey
- Statistics NL,…

GEONOVUM

NSDI executive committee
geospatial data standards
(public network organisation)

users

Obligatory use of data by public sector
Society at large (open geo-data)

Key registers in the Netherlands

Back to the future

Starting point system of key registries: 2003

Objectives:
- a government that does not ask for the known
- a government that is citizen/business-oriented
- a government that does not allow itself to be fooled
- a government that knows what it is talking about
- a government that has its affairs in order and does not cost more than necessary.

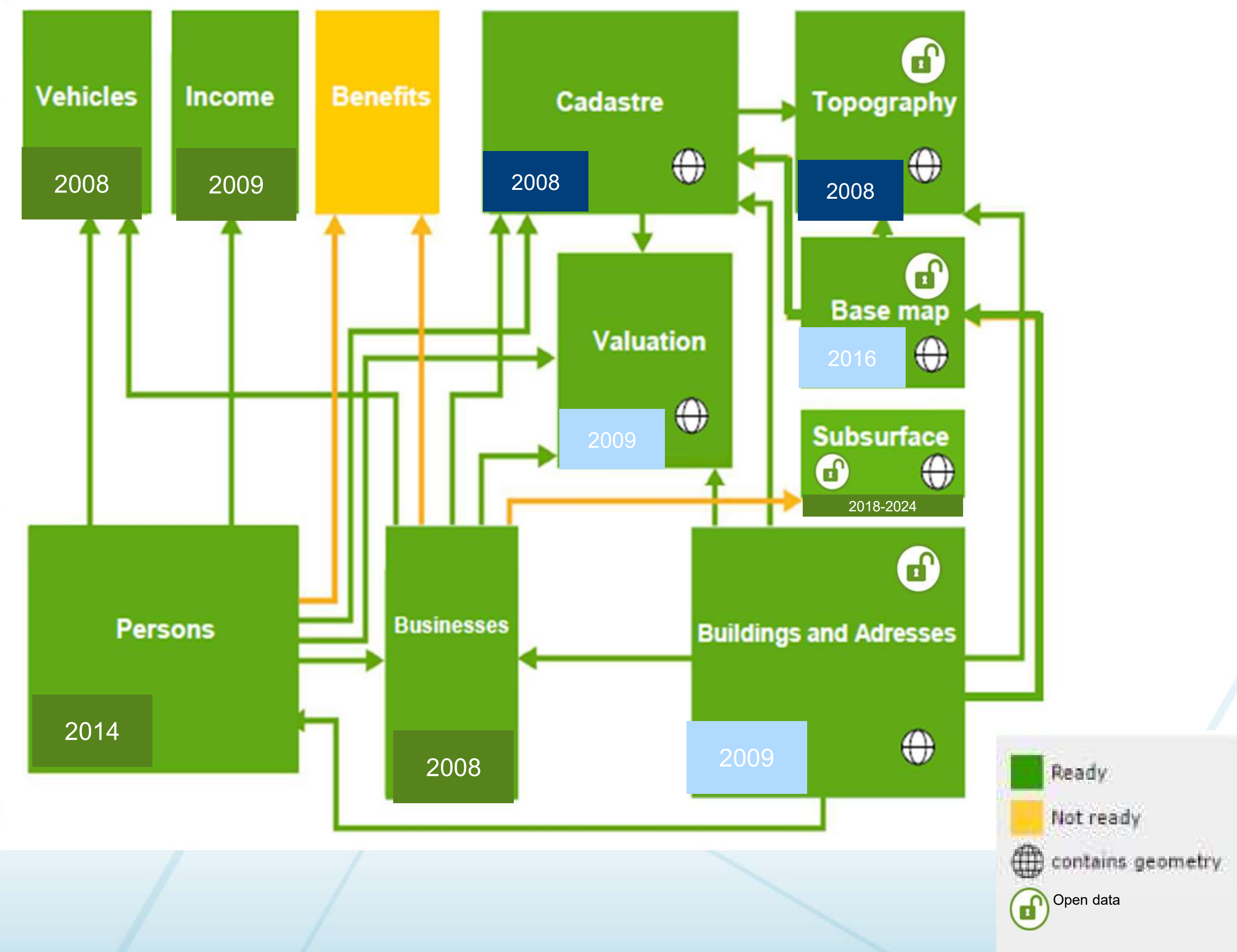
Guiding principle: single collection – multiple use

Notes:
1. The system covers the entire public sector (all layers of government)
2. The system is a set of agreements and principles; it is not an IT-system

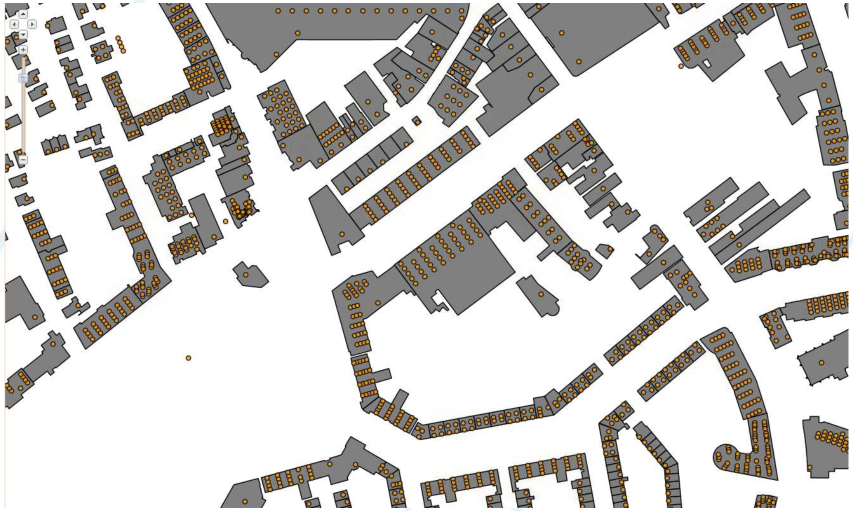
Requirements for a key register

1. Each Key Register is vested in law.
2. Public sector organisations are obliged to use the key register (collect once, use many times).
3. Public sector users are obliged to report errors or other irregularities.
4. Liability is explicitely defined.
5. Financing is arranged.
6. Content of the datasets is well defined and catalogues are available.
7. Procedures and standards for data contribution and distribution are clear.
8. Accessibility is guaranteed.
9. A strict regime for Quality Assurance is in place.
10. Users have a binding influence on policies concerning the key register.
11. Relations within the system of Key Registers are clearly defined and documented
12. Control and responsibilities are with a public body; political ownership is held by a minister.

Twenty years later

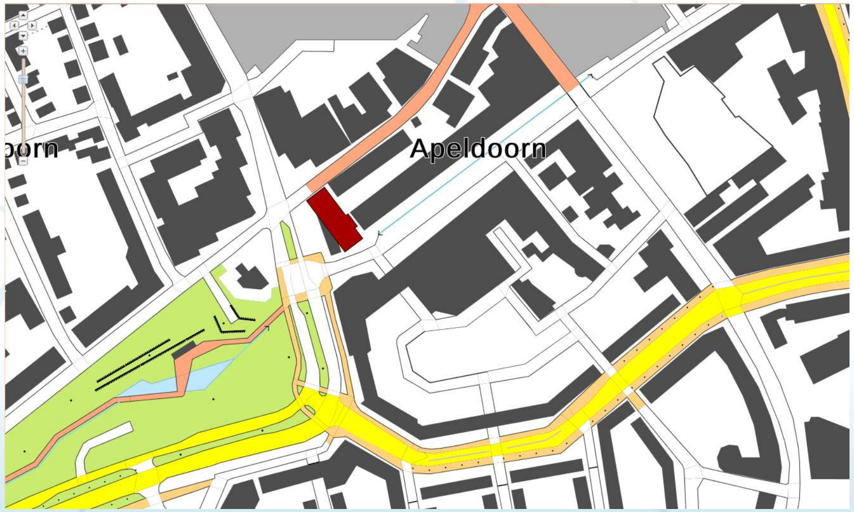


Buildings and addresses



Cadastre

Large scale base map



Topography

Teaming up in creating the national large scale base map

custodians of data


rail infra (prorail)


highways (RWS)


dept. of defence


provinces


waterboards


economic affairs


municipalities

assembly of information

central registration (key register)

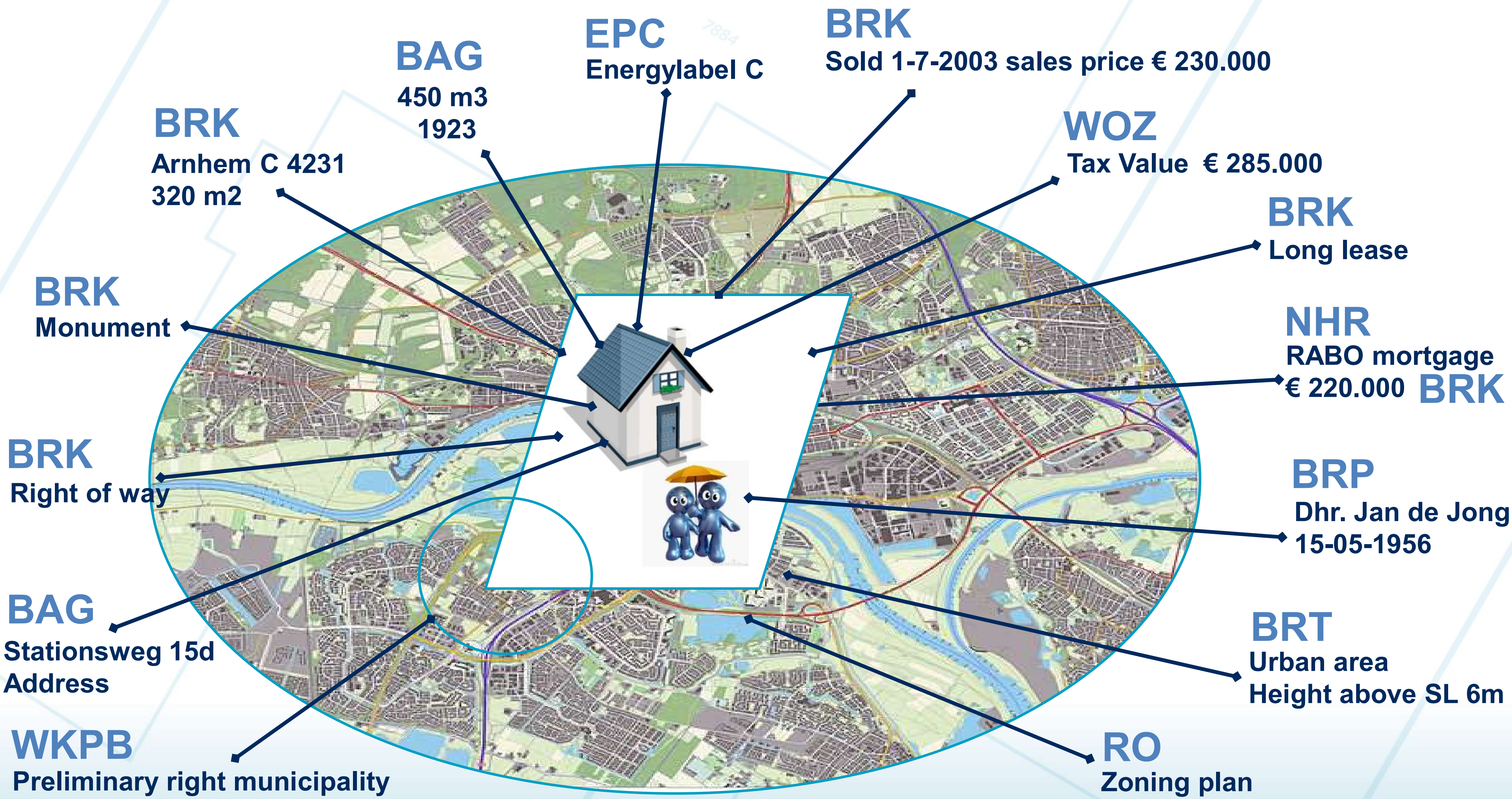
kadaster

data distribution

pdok

kadaster

users



Kadaster makes many data accessible related to properties

Key registers in the Netherlands

Extensive use of data
National GeoData Portal

pdok

PDOK is the leading platform for Dutch high-quality geodata.

Visit us at pdok.nl

Services

- PDOK Viewer
- Location Server
- Standard formats:
  (OGC) webservices,
  (OGC) API's en
  ATOM downloadservice

Power of PDOK

Facts & figures

Most popular datasets
BRT Achtergrondkaart, BGT, BRK and PDOK Aerial photos

214 datasets
642 services
282 INSPIRE services

Nationaal Geodata Register
26,6 million hits

PDOK datasets
22,2 billion hits

111 PDOK tweets

450 Geoforum topics

Data

3D Buildings	Cycling/walking routes	Railways	Waterways
3D Terrains	Drone no-fly zones	Road networks	Water infrastructure
Addresses & buildings	Energy	Spatial planning	World heritage
Administrative areas	Height	Topography	
Aerial photos	Nature & Environment	Transport networks	
Cadastral parcel	Provincial data	Underground	

New in 2023

- 3D Basic provision via 3D Tiles (OGC API 3D Geovolumes)
- 3D Viewer on PDOK.nl
- GEO base registers in OGC API Tiles and Styles
- 10 years of PDOK: congress 'The Great Geodata Experience'
- New datasets CBS: Squares 500 x 500 m and 1 x 1 km LAEA
- New datasets HWH: Waterboard boundaries IMSO + Waterzoning and Waterworks IMWA

Availability

99,74 % uptime

7 interruptions (> 30 min)

Metadata

NGR Nationaal Georegister

National Geodata Register is the guide for geodata in the Netherlands

INSPIRE

European distribution of INSPIRE datasets

Availability of 99,74 % 'INSPIRE conform'

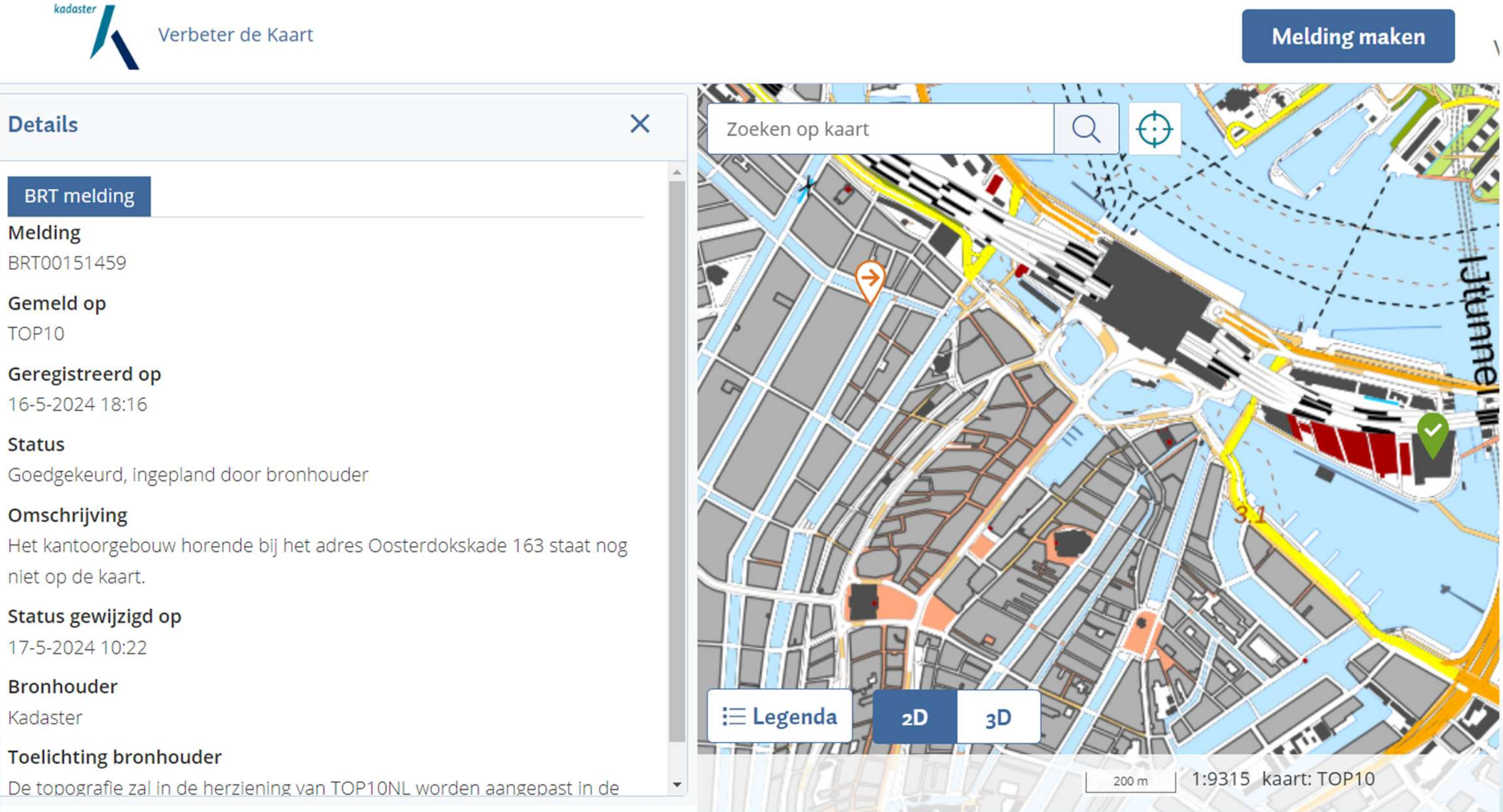
2403_PDOK factsheet

Improving maps with users

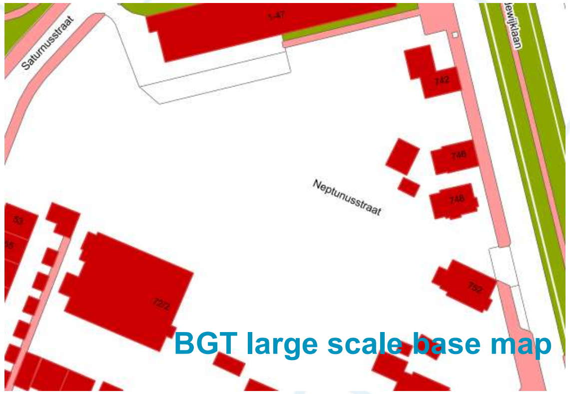
Users can report errors in our maps providing feedback on the map itself

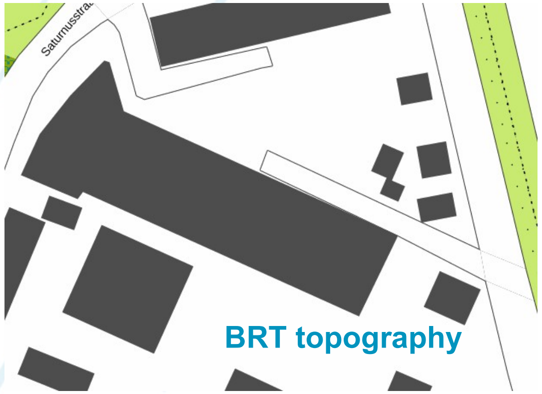
Earlier feedback and status of actions undertaken are visible on-line

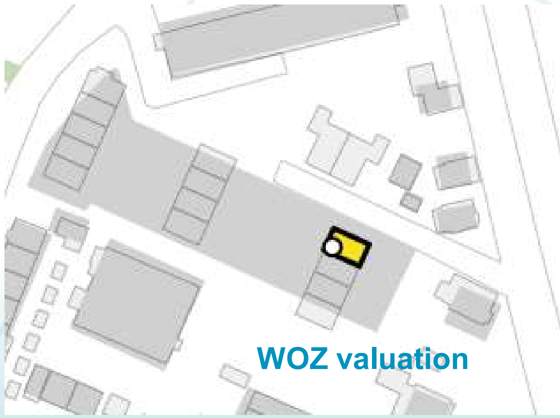
www.verbeterdekaart.nl

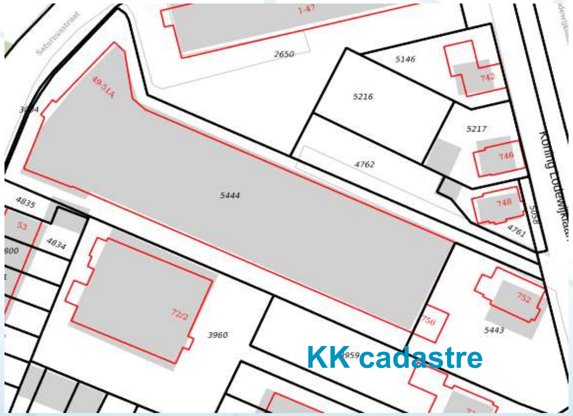

kadaster
Verbeter de Kaart
Melding maken
Details
BRT melding
Melding
BRT00151459
Gemeld op
TOP10
Geregistreerd op
16-5-2024 18:16
Status
Goedgekeurd, ingepland door bronhouder
Omschrijving
Het kantoorgebouw horende bij het adres Oosterdokskade 163 staat nog niet op de kaart.
Status gewijzigd op
17-5-2024 10:22
Bronhouder
Kadaster
Toelichting bronhouder
De topografie zal in de herziening van TOP10NL worden aangepast in de
Zoeken op kaart
IJtunnel
3.1
Legenda
2D
3D
200 m
1:9315 kaart: TOP10

Perfect registrations vs. users' expectations









Neptunusstraat, Apeldoorn, 22 juni 2019

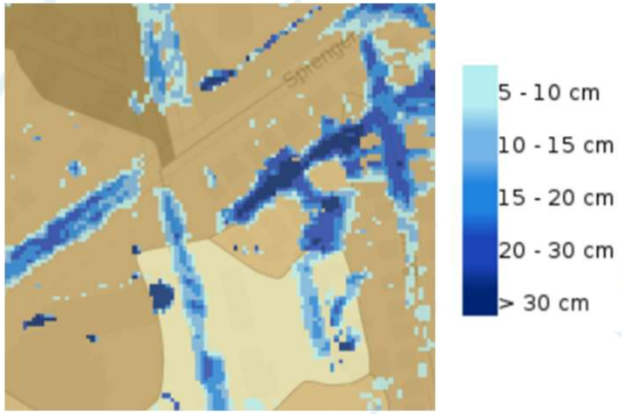
Twenty years later (II); state of play

- 10 key registries operational and intensively used
- Geo registrations well connected and mature
- Geospatial sector is a front runner (location is primary connector)
- Most Geodata is open data
- Governments and Agencies are in a constant conversation
- Increasing demand for cross-sectoral information

- Kadaster key player

Example: climate change and the built environment

Risk: Excessive Downpours



Risk: Foundation damage due to weak soil and groundwater lowering

<u>Parties involved:</u>

Banks: Mortgage Lending

Insurance companies

Building industry (prevention, recovery)

Utilities

Emergency services

Residents and users

Example Increasing cross-sectoral operation: preventing excavation damage: geospatial as connector

Bringing together:
- request of the builder/excavator
- collecting information from the utilities and coupling to the large scale basemap
- reporting of damages

About 1 million requests anually

Based on close coperation between Kadaster, construction industry, utilities at a local *and* national level

Data driven world: Challenges ahead

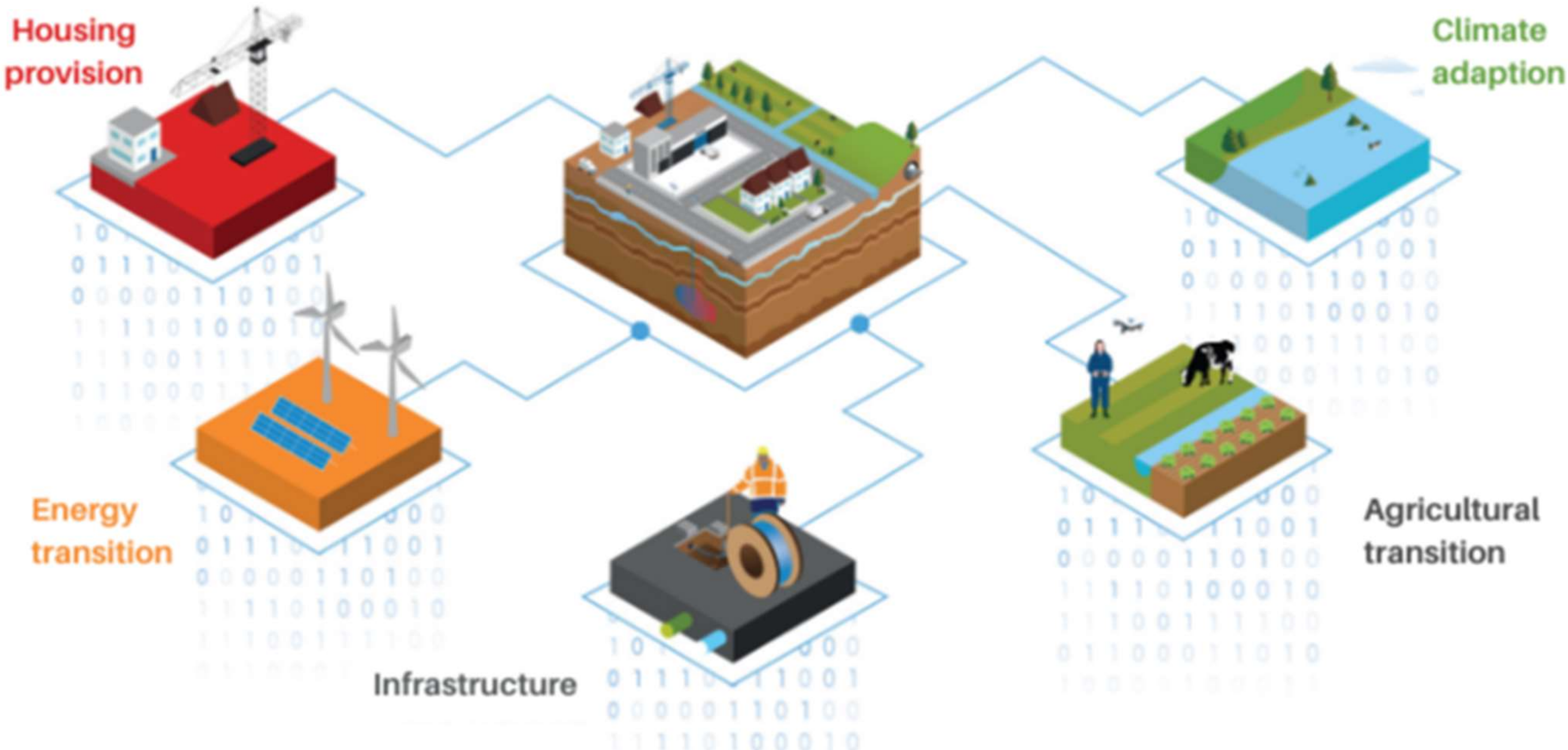
Different sets of supporting facilities for data delivery
*Focus on **data access** and enable **data-sharing***

System of key registers supply driven
*Shift to a more **demand driven** approach*

Increasing users' demands and requirements
(also) from non-traditional users
*Invest in **quality, currency, metadata, interoperability, coverage***

The government-wide (societal) business case is not equal to the individual organisational business case.
The party incurring the costs does not collect the benefits
Secure ***sustainable governance and funding***

Societal challenges in the spatial domain



Policy on spatial data

A geo-view on the Netherlands

Together with our partners, we provide insight into the Netherlands with high-quality geo-data. In this way we enable data-driven policy, governance and implementation - and numerous solutions for third parties.

Grip on the major societal challenges

We enable data-driven working across organizational boundaries

Data foundation

We realize a connecting geo-data foundation

Related data

We create an integral and rich picture of our living environment

Sharing data

We ensure an optimal flow of the geo-data

Conditions for success

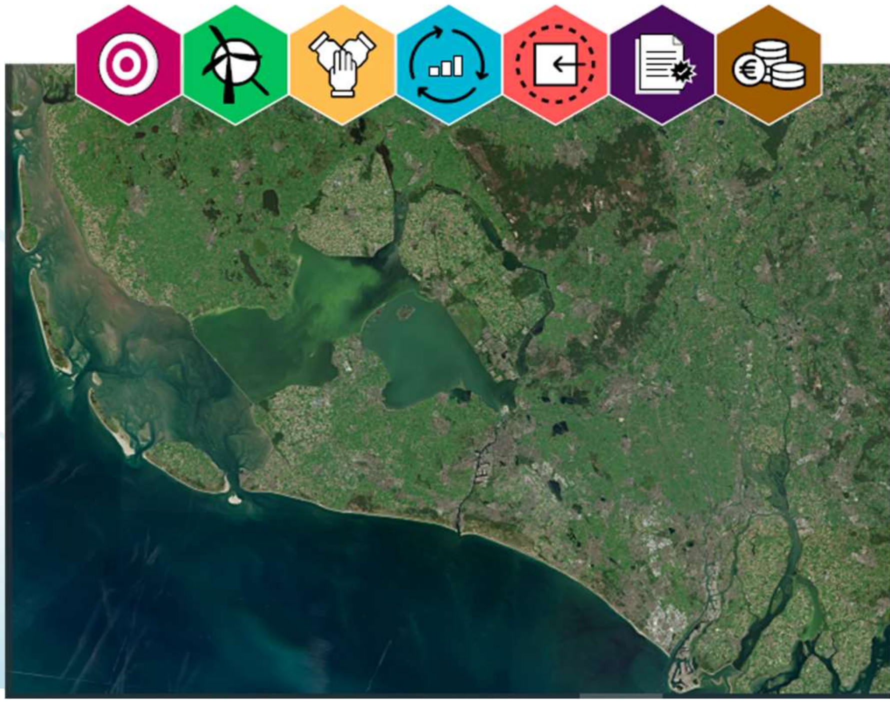
We create the conditions for a future-proof data foundation

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties

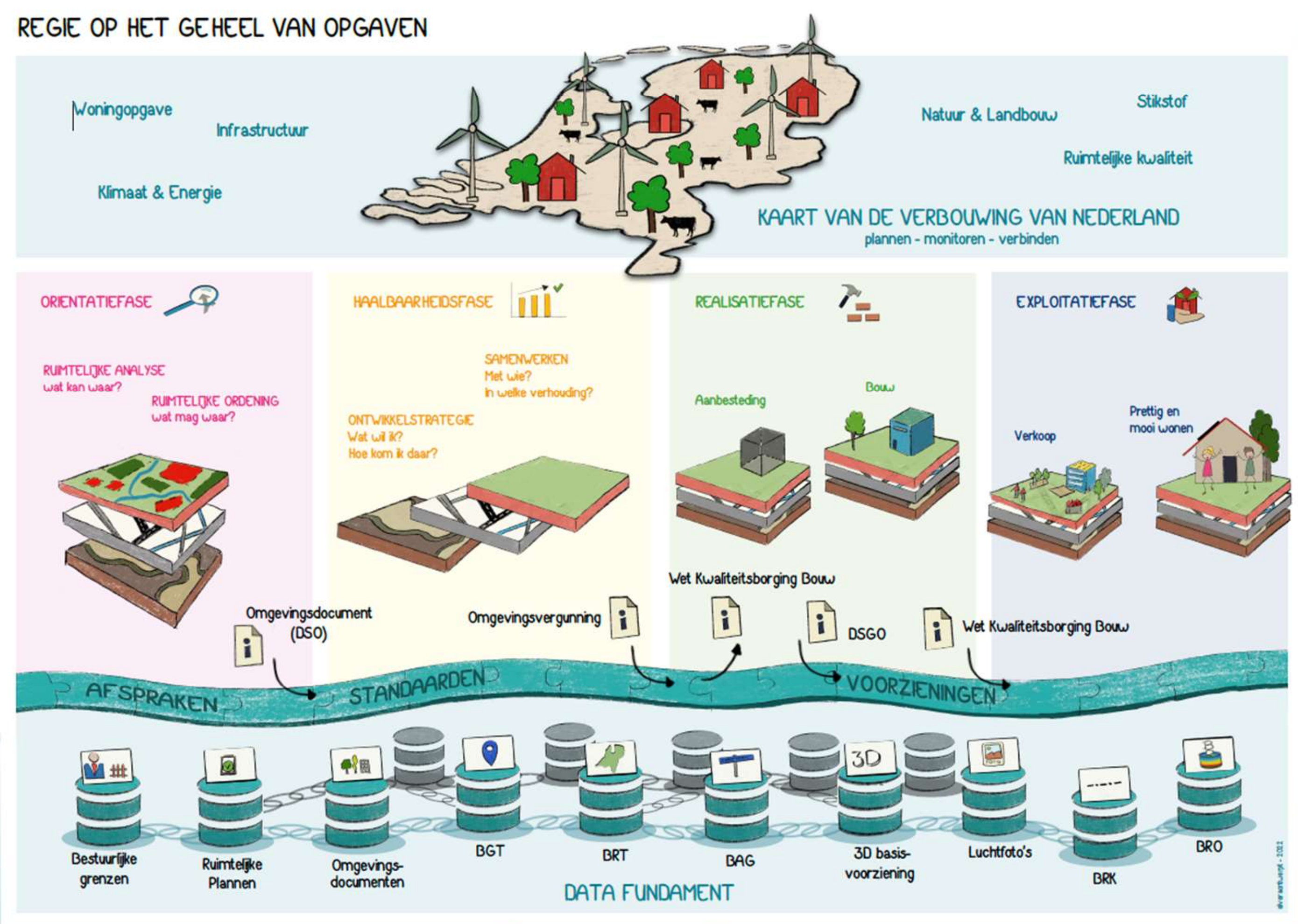
Meerjarenvisie Beraad voor Geo-informatie (2024)

Zicht op Nederland

Samen datagedreven werken aan de fysieke leefomgeving



Reconstruction of the Netherlands



Key registers in the Netherlands

Key registers in the Netherlands

Societal issues (policies, governance)

Spatial planning process (demand)

Access to data and services (sharing)

Data foundation (supply)

Overall policy framework towards 2032

Concluding observations

- A solid, connected (spatial) data foundation is an ideal starting point

  For continuity you need an underlying business or public case
- Modern (data) ecosystems are user/case driven
- Users want an integral and consistent answer
- Create and cherish the connections in the public sector
- Short term priorities:

  data access and data sharing (public and private)

  semantic interoperability (cross-sector demands are the new normal)