

# Real Estate Cadastre – Recent Developments at Federal and Länder Level



**Niedersachsen**

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# Federal Structure



Federal Republic of Germany  
consists of  
16 states („Länder“)

Capital: Berlin

Area ~357.000 km<sup>2</sup>

Inhabitants ~ 82,8 million

Settlement area: ~ 29.000 km<sup>2</sup>

Agricultural land: ~ 187.000 km<sup>2</sup>

# Working Committee of the Surveying Authorities of the Länder of the Federal Republic of Germany

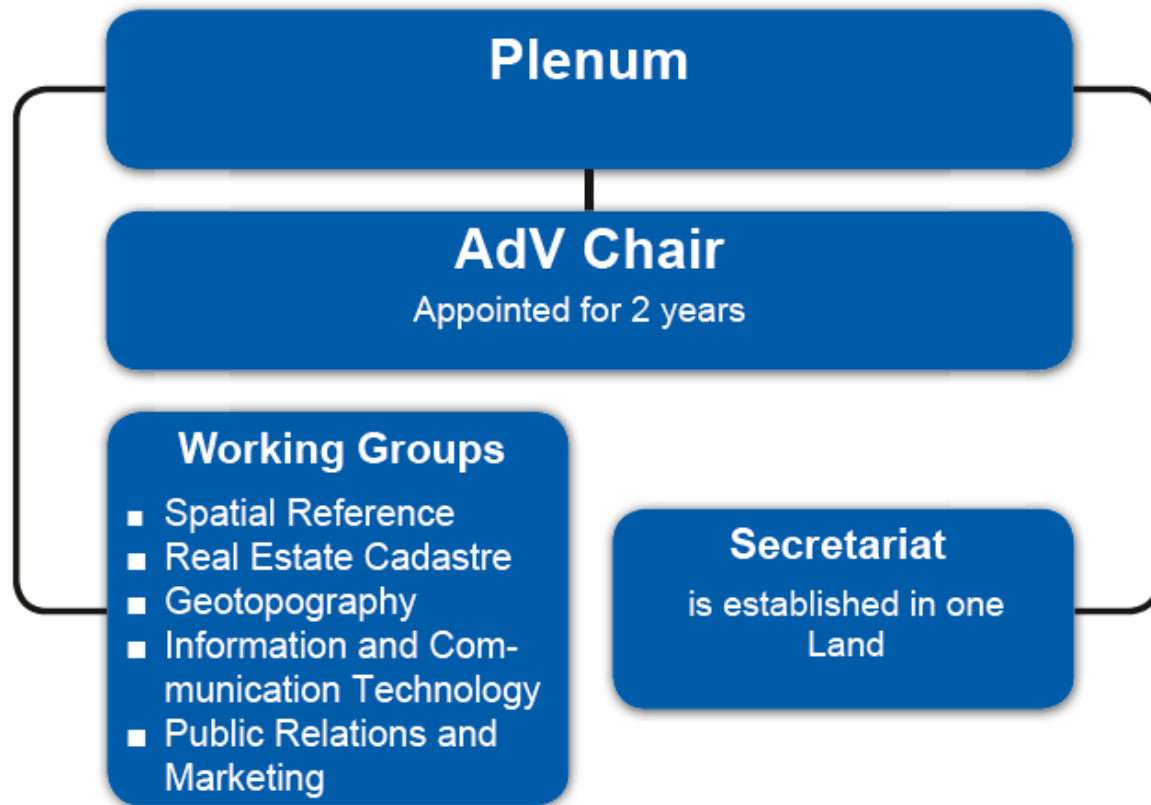


Fig. 1: Organisation of AdV

# EU Directive on Open Data and the Re-use of Public Sector Information

- Adopted in June 2019
- Transposition on national level until June 2021
- Free availability of public sector data, API in place...
- Emphasis on high-value datasets (HVD) in six categories:

## ***Geospatial***

*Earth observation and environment*

*Meteorological*

## ***Statistics***

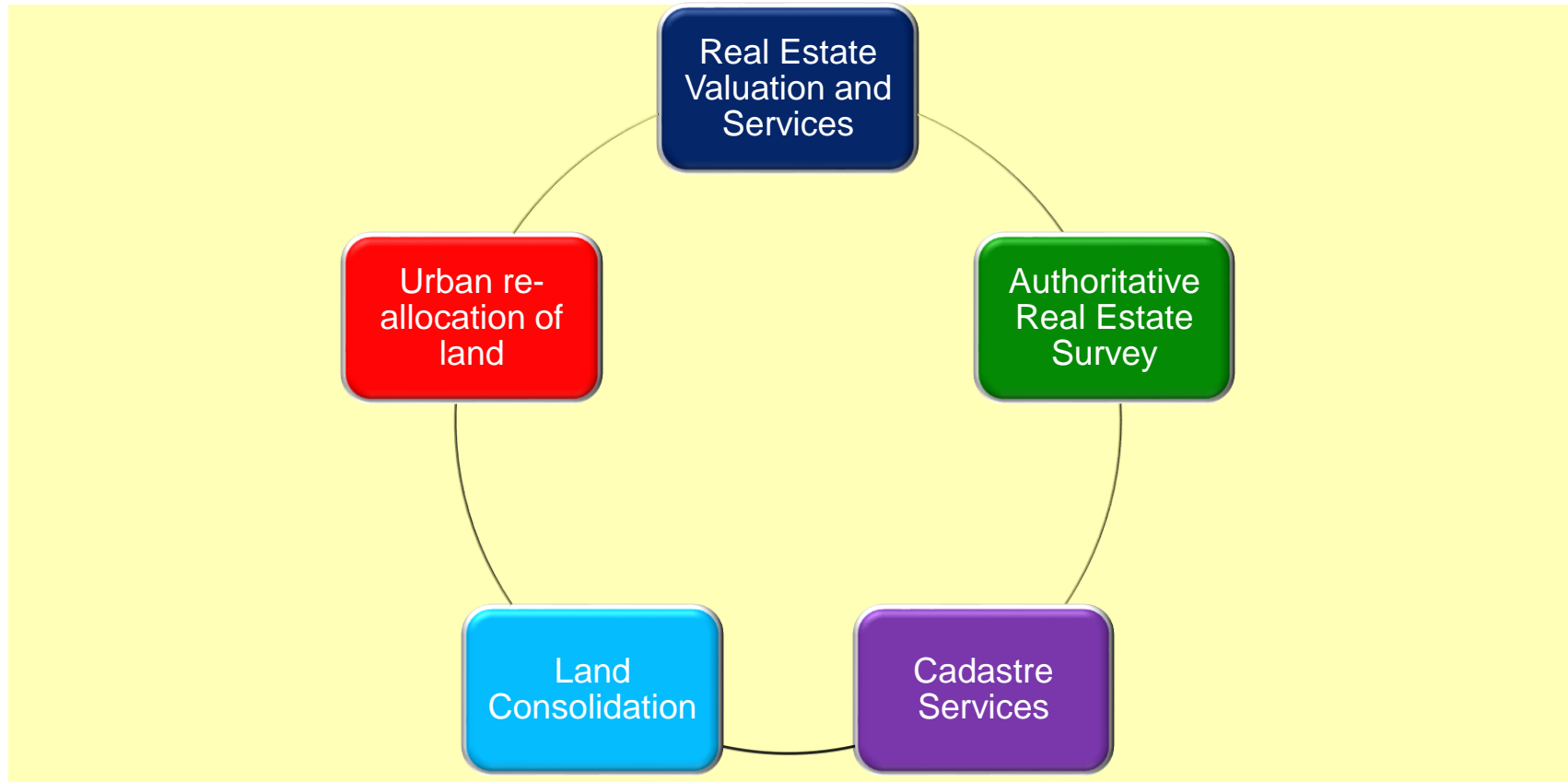
*Companies and company ownership*

*Mobility*

# Law on Improvement of Online Access to Administrative Services – OZG (2017)

- Establishment of administrative portals at federal and Länder level
- Establishment of a network of connected portals for delivery of digital online services
- Implementation of digital administrative services based on a catalogue for implementation of OZG-services (**14 thematic areas, 575 services**)
- OZG-Catalogue clusters services according to so-called 'life situations' and is a living document
- Services related to surveying (e.g. cadastre services)

# OZG Services Related to Surveying



# GeoInfoDok 7.1



Dokumentation  
zur  
Modellierung der Geoinformationen  
des amtlichen Vermessungswesens  
(GeoInfoDok)

Hauptdokument

Version 7.0  
Stand: 28.02.2014

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Arbeitsgemeinschaft der Vermessungsverwaltungen  
der Länder der Bundesrepublik Deutschland (AdV)

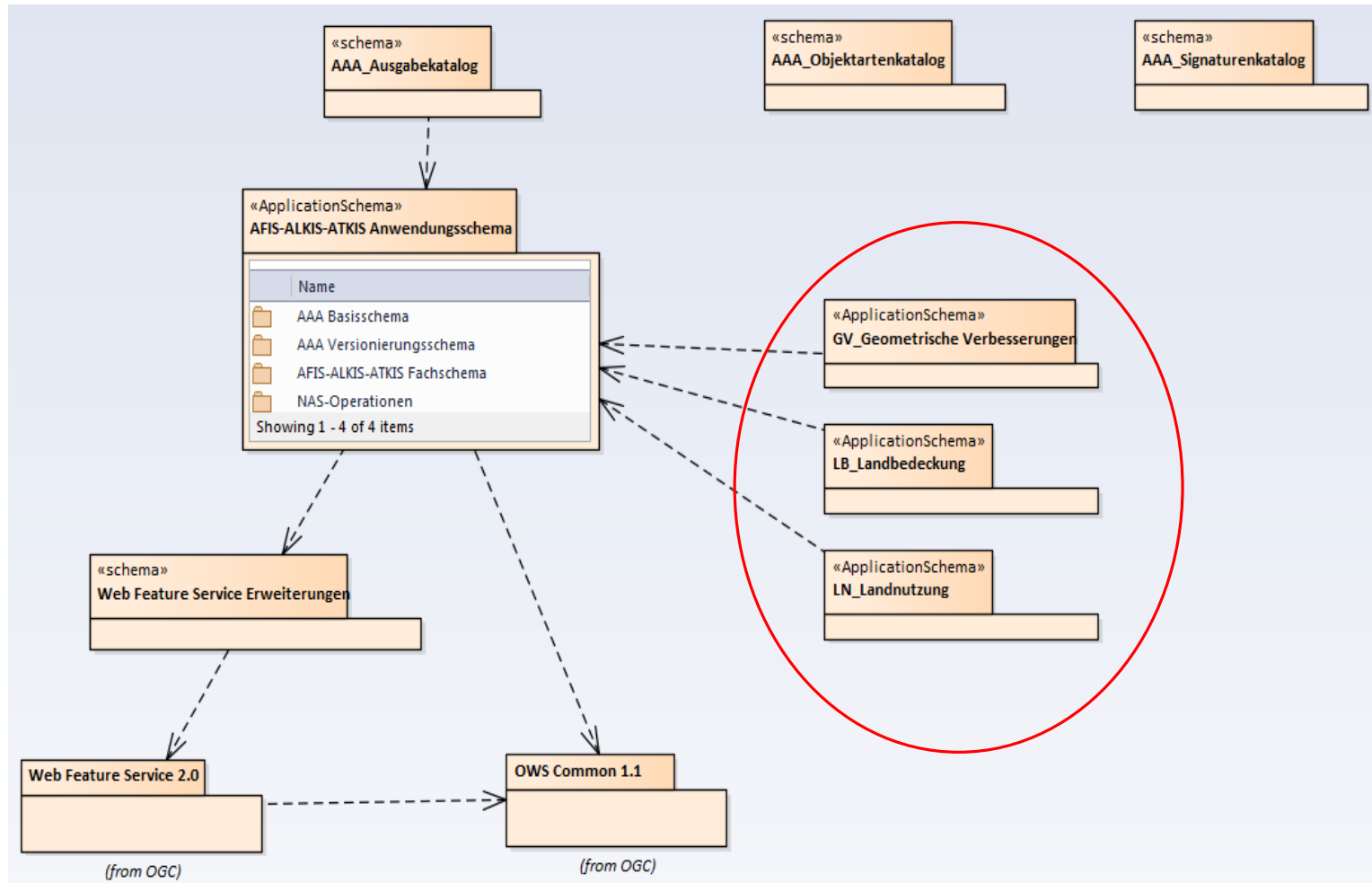
- Modelling of **3D-buildings**
  - Information on buildings, constructions, **3D**
- **Terrain**
  - Digital Elevation Model (grid, contour lines), **3D** measurements, different terrain forms
- **Soil Valuation**
  - Adjustment to BodSchätzG 2008
- **New object classes** from EU-Catalogue on CORINE Land Cover
  - CORINE = Coordination of Information on the Environment
  - **Land Cover and Land Use**
- **Standards, INSPIRE**
- **Harmonisation ALKIS-ATKIS...**



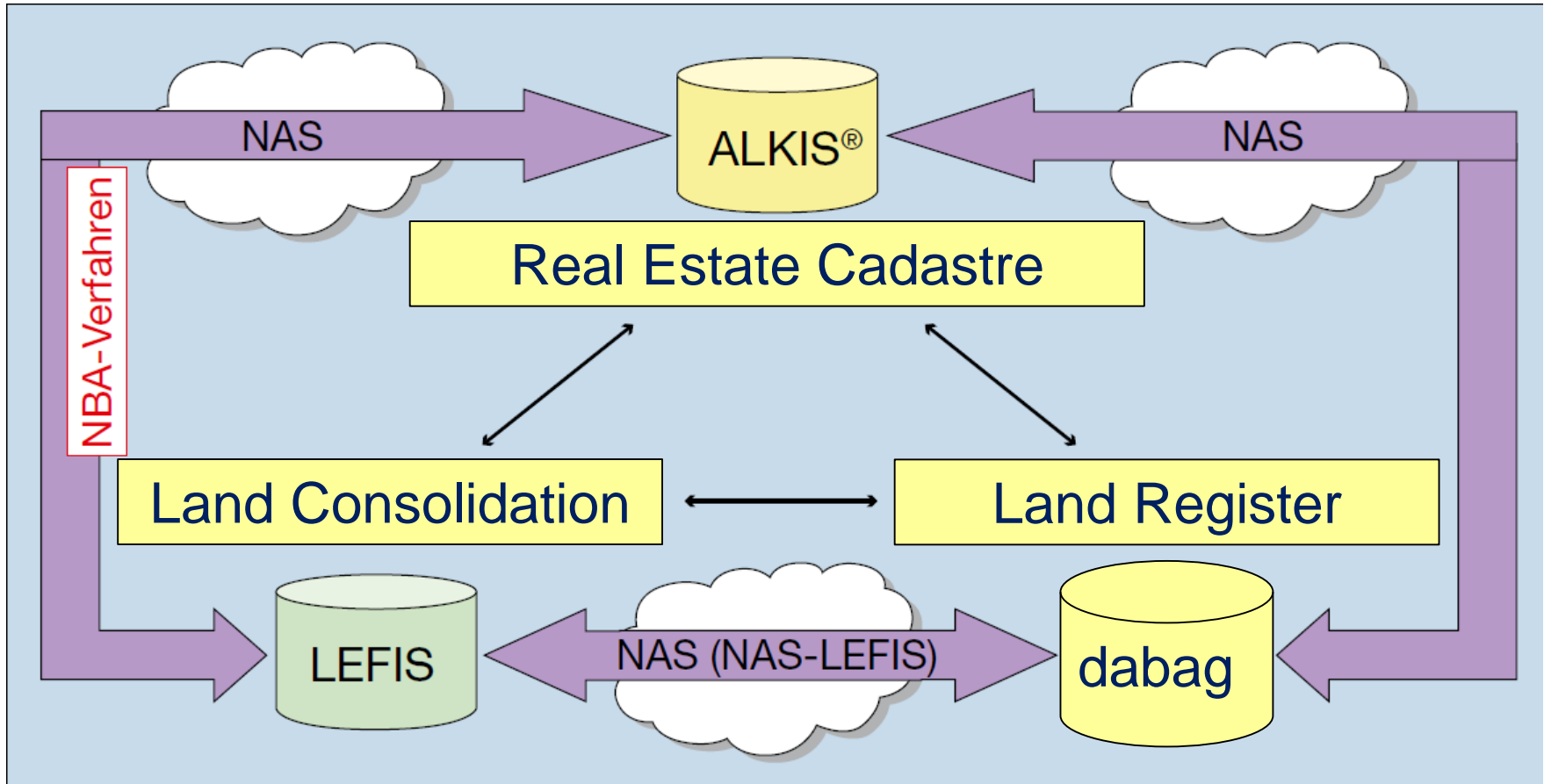
# From Actual Use to Land Cover and Land Use

- Harmonisation of inconsistencies between ALKIS (cadastre) and ATKIS (topography) necessary
  - Complex user requirements towards land use information and environmental aspects
  - Existing classification concepts:  
CORINE Land Cover (2012), HILUCS, LUCAS, LBM-DE, OSM
1. Land Use to be deducted automatically from cadastre data (ALKIS)
  2. Land Cover dataset automatically from remote sensing data

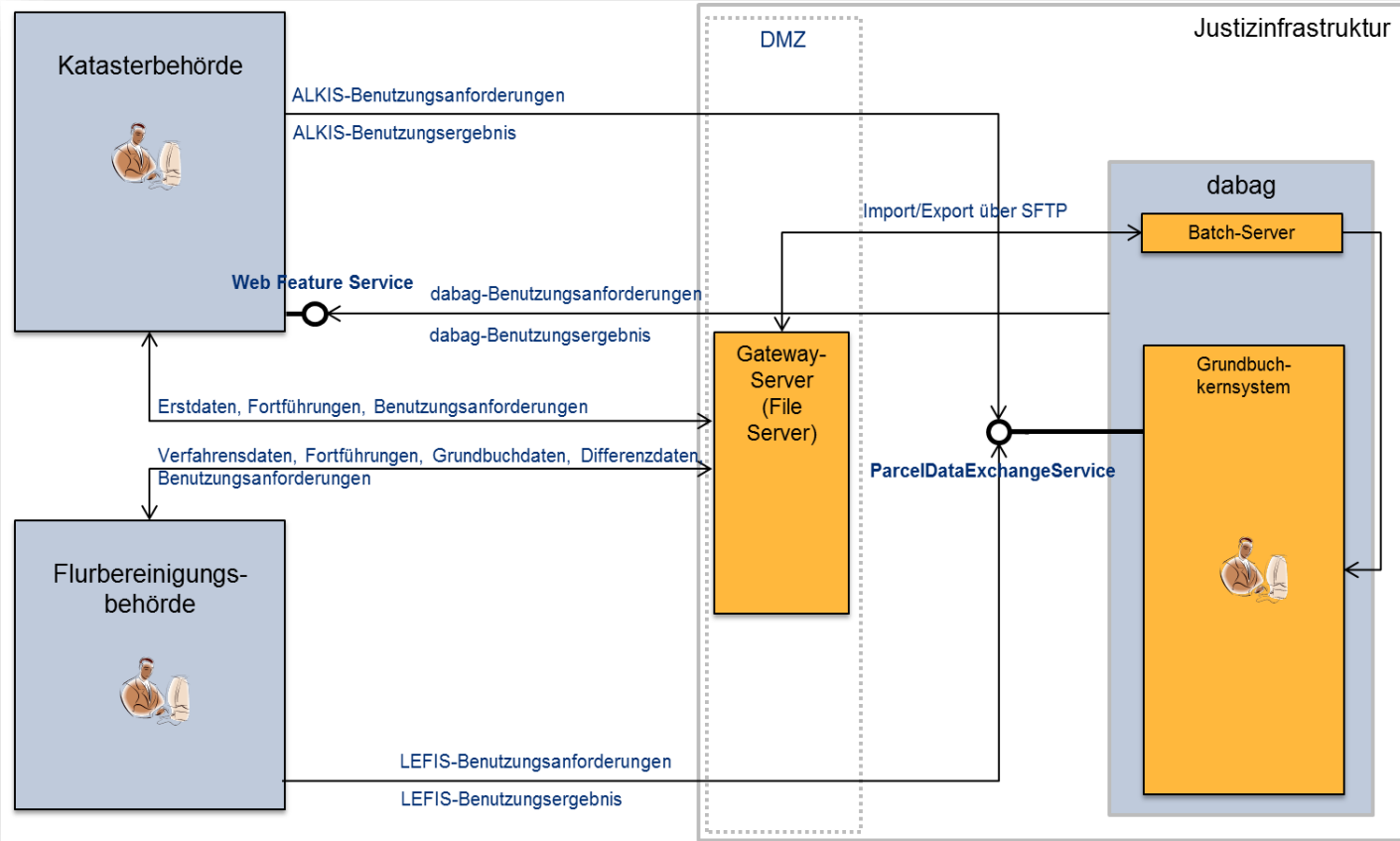
# GeoInfoDok 7.1 – Land Cover and Land Use



# Data Exchange ALKIS, LEFIS and dabag



# Platform for Data Exchange ALKIS and dabag



# Lower Saxony Drivers For Change

- 1
  - European Requirements
  - Customer Focus
- 2
  - New legislation (PSI, OZG)
  - Environmental aspects
- 3
  - Digitisation
  - Disruptive Technologies

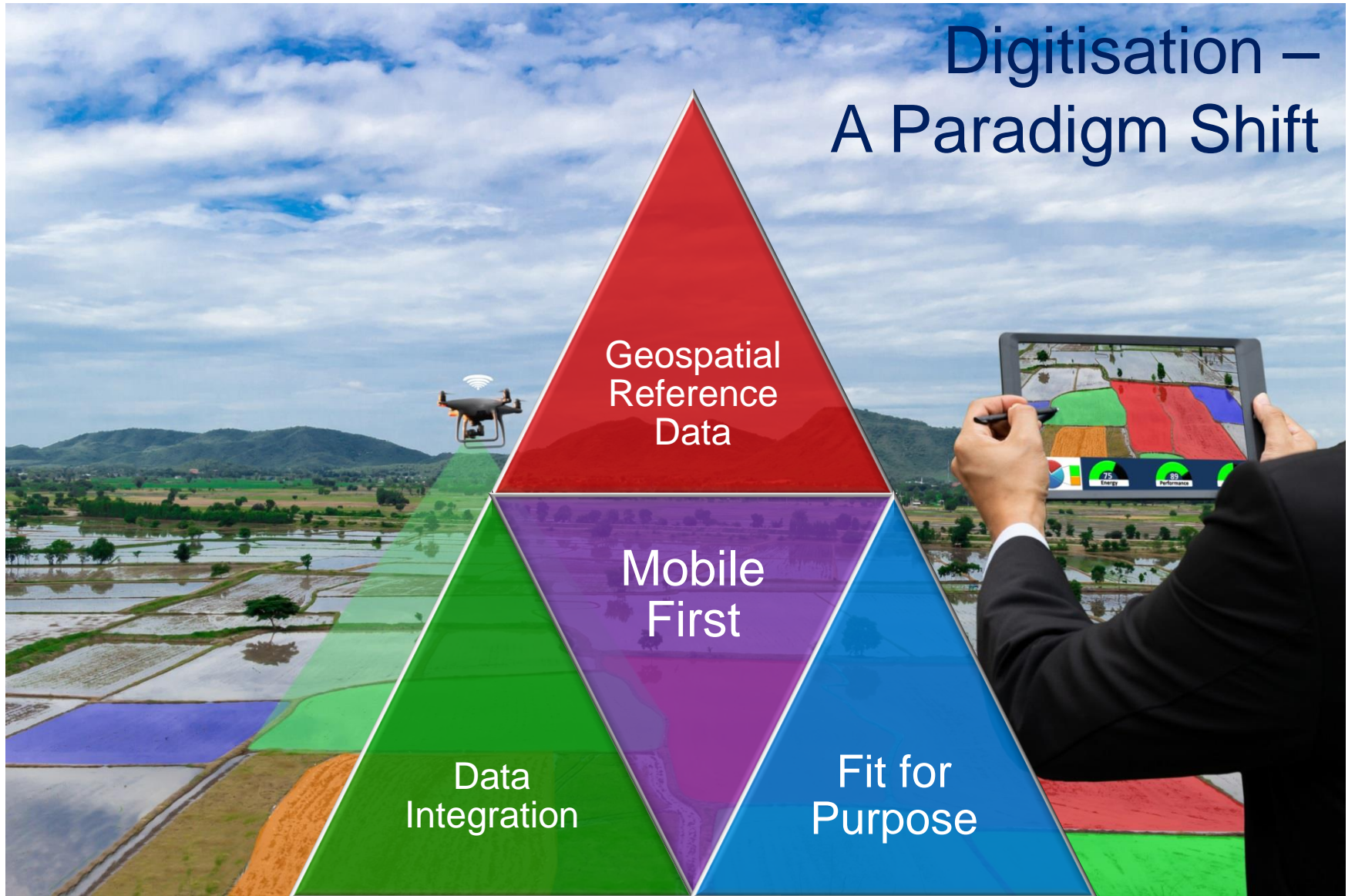


©AdobeStock\_pickup

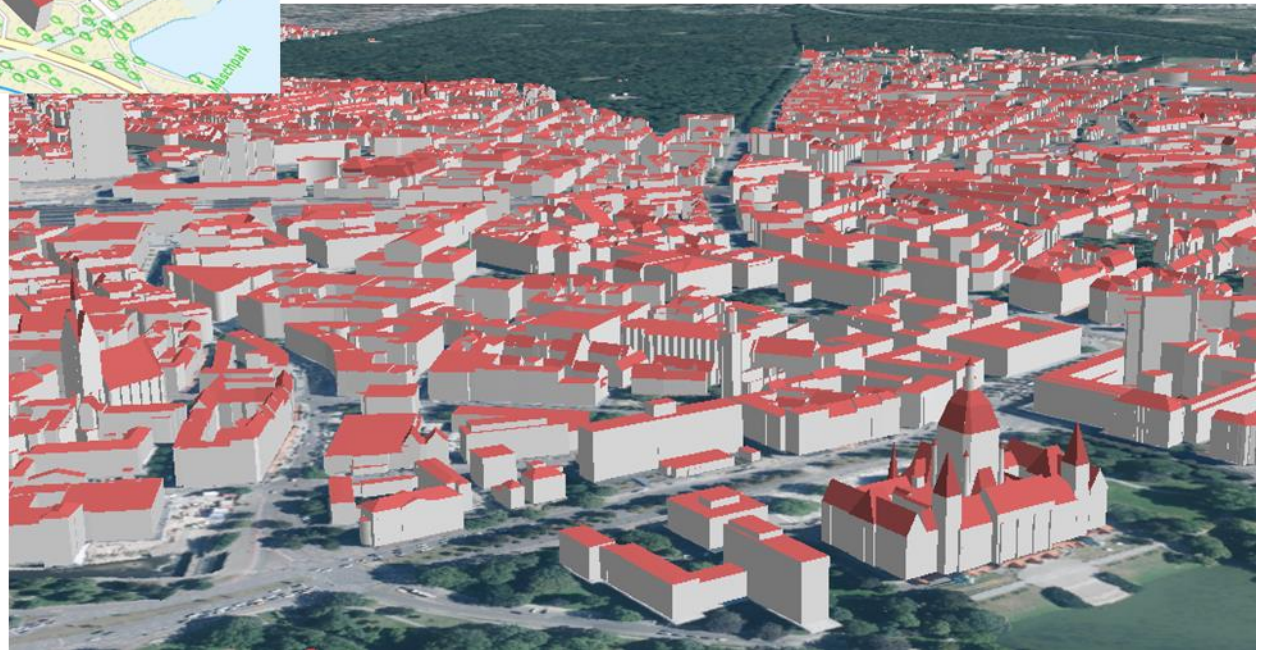
# The Customer Perspective

- Basic and individual products and services
- 3D measurement data (Digital Elevation Model in high resolution, 3D-buildings in cadastre, digital surface model DOM ...)
- Basic visualisation of topographical data and customising of visualisation
- Web-services
- Time series and analyses...

# Digitisation – A Paradigm Shift



# 3D





# Standard Values for Land

## Location-related land values

- Average values, area-covering
- Different development stages of land taken into account
- Public access (Internet)

## Zoning

- Areas with similar land use characteristics
- Use of official reference data

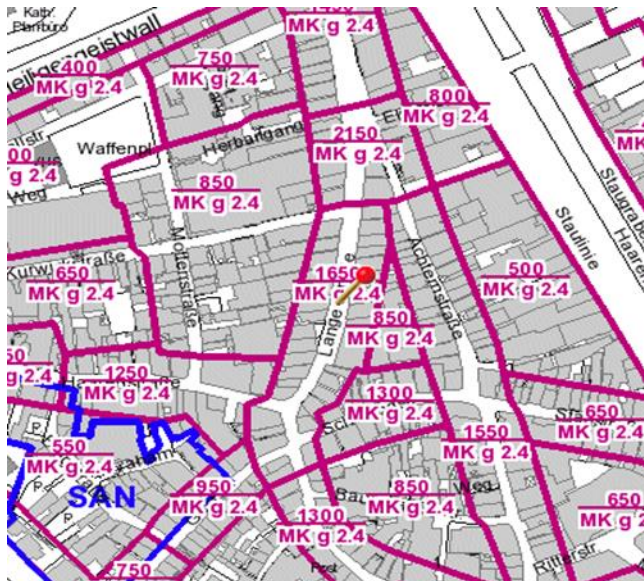
## Sales Comparison Approach

- Sufficient number of comparison values
- In Euro per m<sup>2</sup>

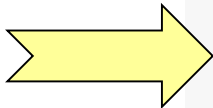
## Value-influencing characteristics

- Stage of development, land use
- Additionally: soil quality (agricultural areas), various characteristics for developed land

# Market Transparency



95 B ebf (1255)  
 WA EFH WGFZ0,3 b25 1750



**GAG** Gutachterausschüsse für Grundstückswerte in Niedersachsen

Niedersachsen

zurück zum GAG-Portal

Demuzerkenntnis: demo DEMO Bodentrichtwertkarte Bauland 1:100 000 Logout

Startseite Teilmarkt: Bauland Stichtag: 31.12.2017 Maßstab: 1:100 000

Layer Werkzeuge: [Map Tools]

Overlays:
 

- Webatlas
- Luftbilder
- AP 1:2 500
- Bauland
- Verfahrensgebiete
- Zugriffsgebiet DEMO

Suche:
 

- Ort / PLZ:
- Gemeinde:
- Flurstück:
- Ort / PLZ:
- Straße:
- Haus-Nr.:

Anzeigen neue Suche

Bodentrichtwerte:
 

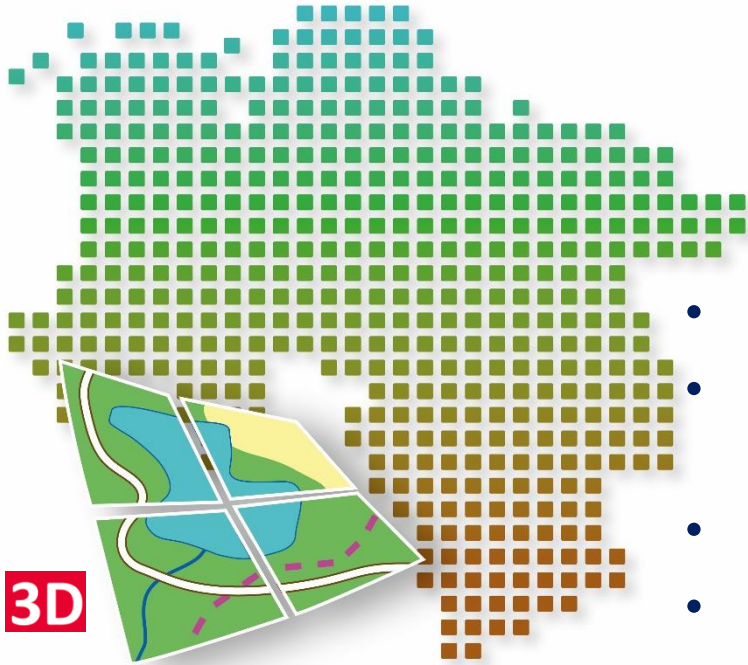
- Bitte in die Karte klicken oder eine Suche starten.

Bodentrichtwert-Legende:
 

- Herausgeber: Gutachterausschüsse für Grundstückswerte in Niedersachsen
- Grundstückmarktbericht: Produkt nicht registriert

BORIS N - Bodentrichtwerte Niedersachsen online / Version: 2.0-rev.803 vom 17.12.2019 07:38

# Customer Requirements Valuation

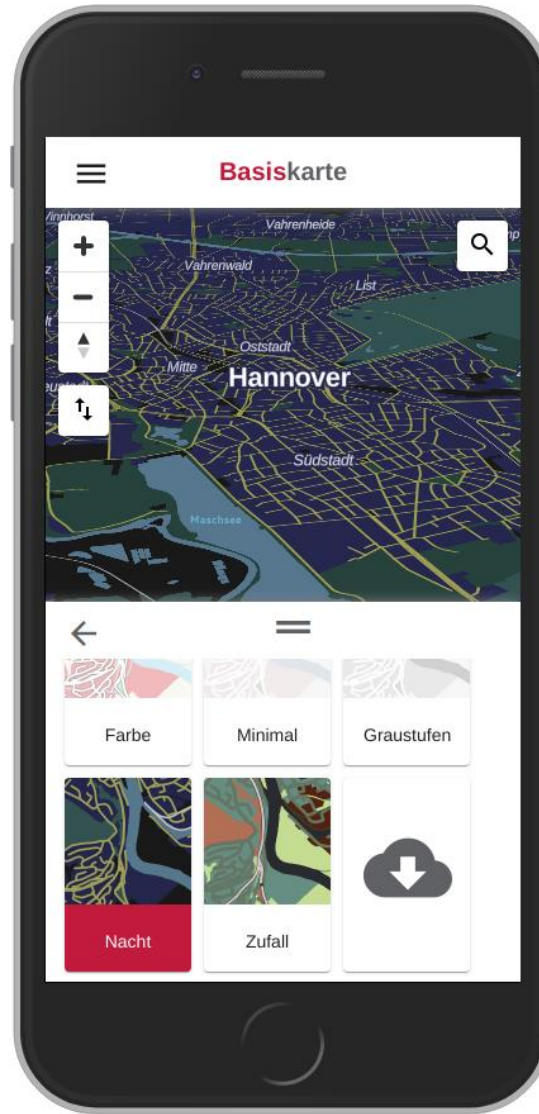


**3D**

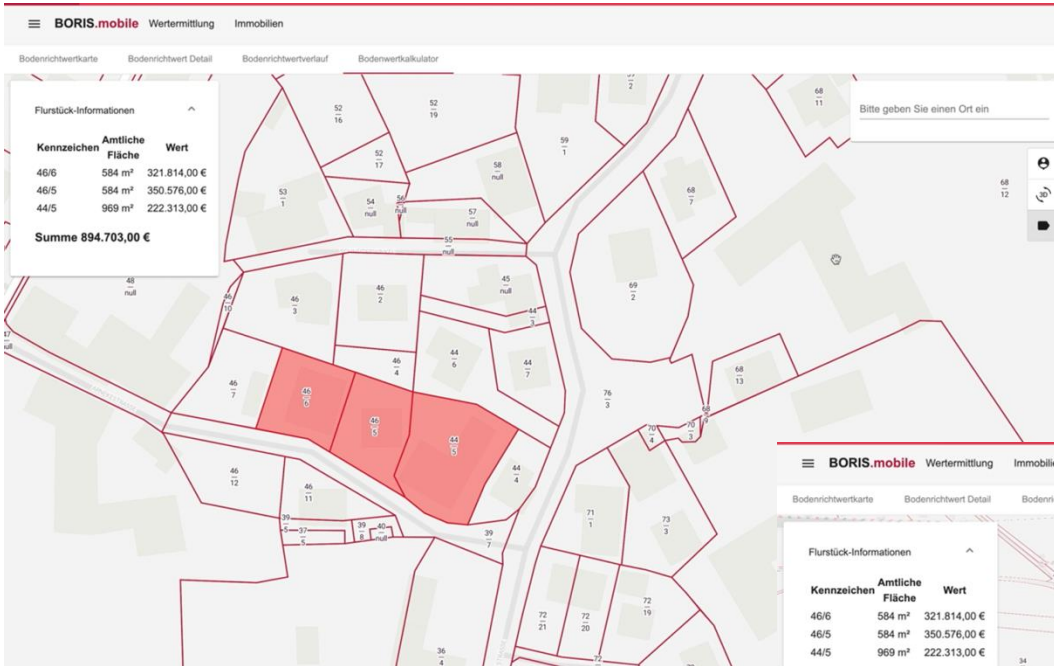
**Vector Tiles**

- Transparent data and mathematical models
- Real-time availability instead of (long) update-cycles
- Easy to handle on mobile devices
- Participation in data acquisition and model development
- Agile development for new thematic and spatial submarkets
- Certification of data sources and models by officials
- ...

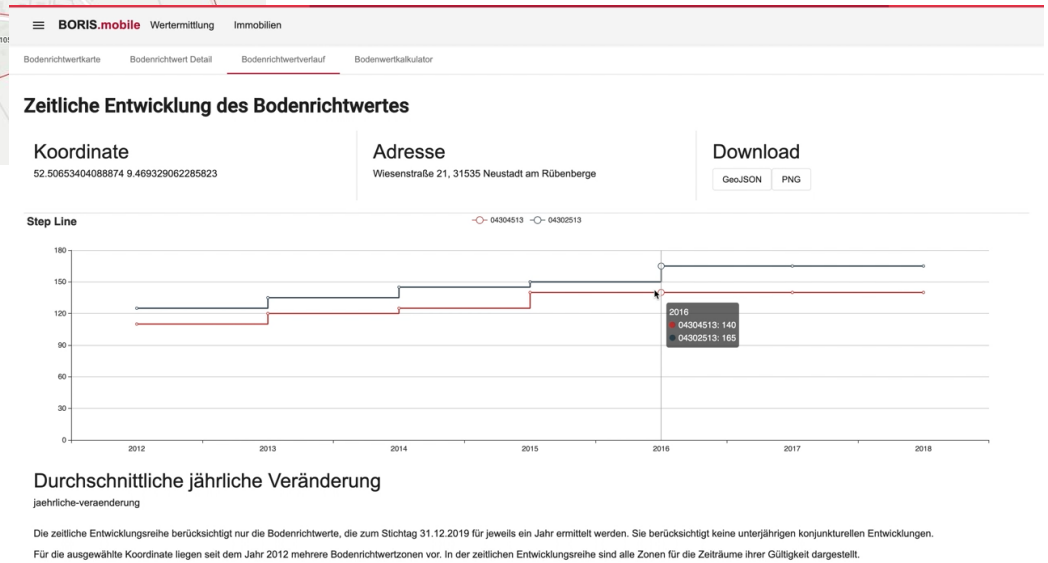
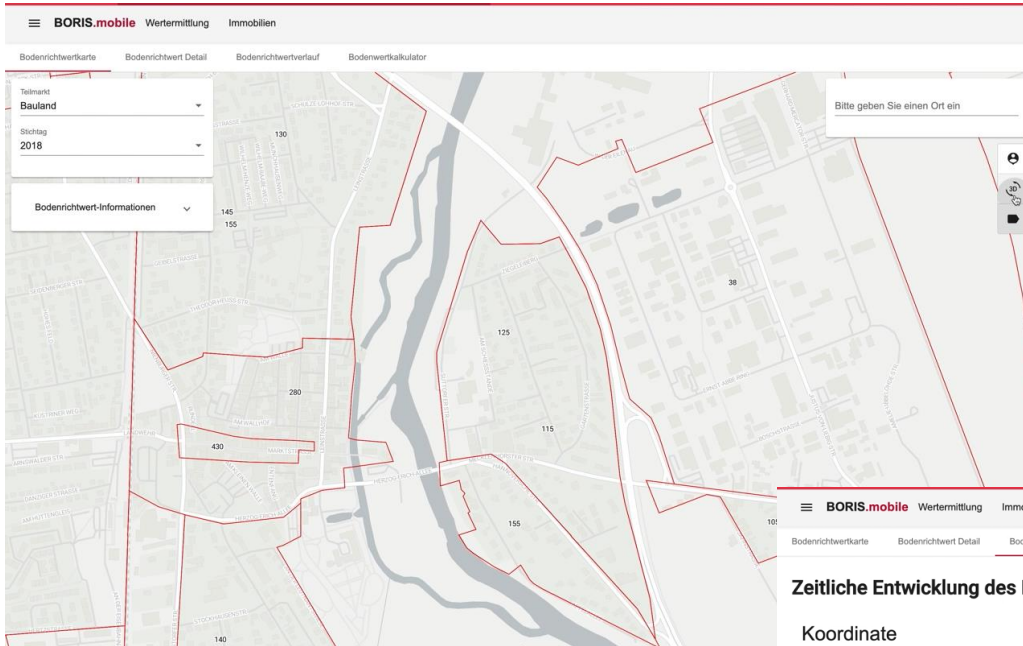
# Basic Visualisation



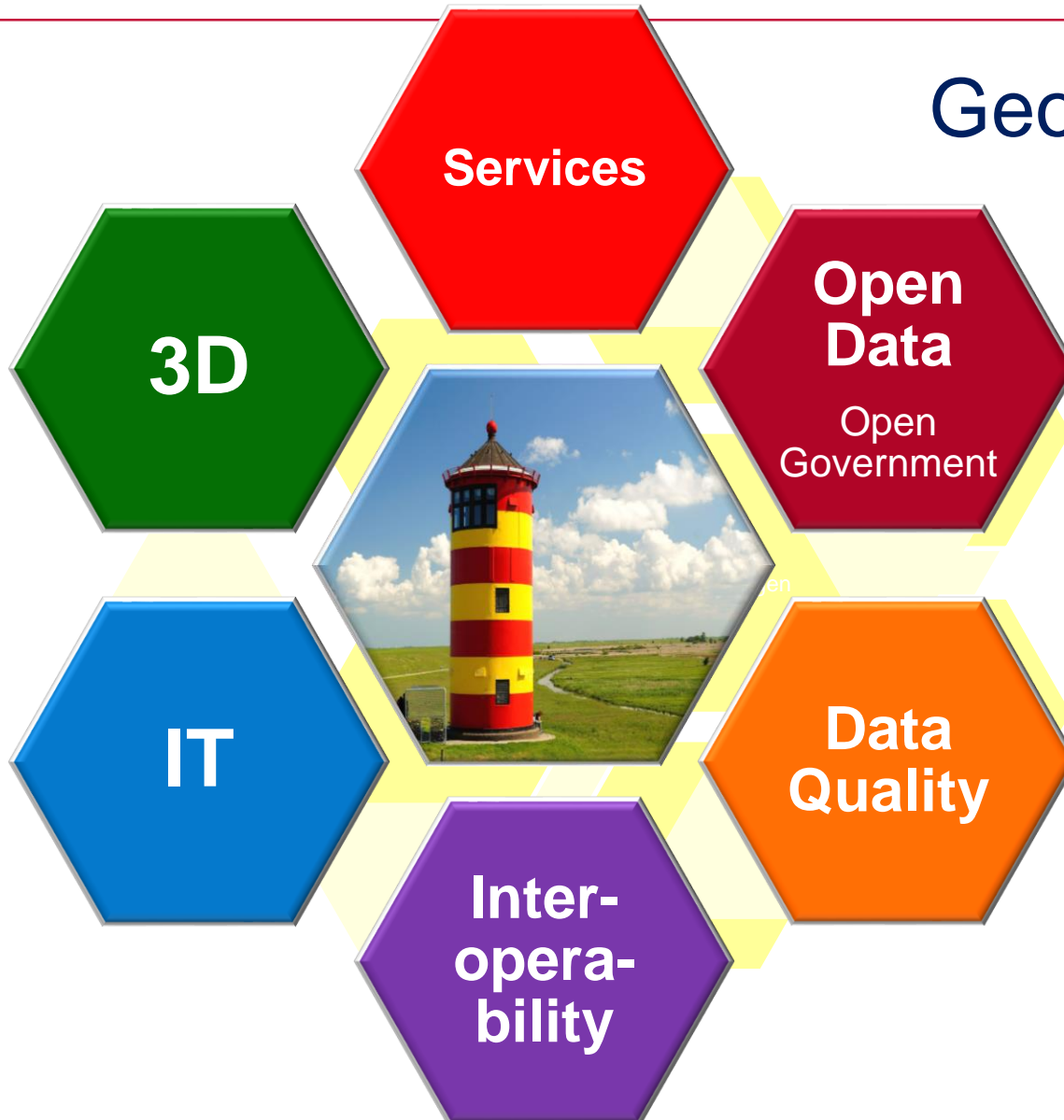
# Improved Services



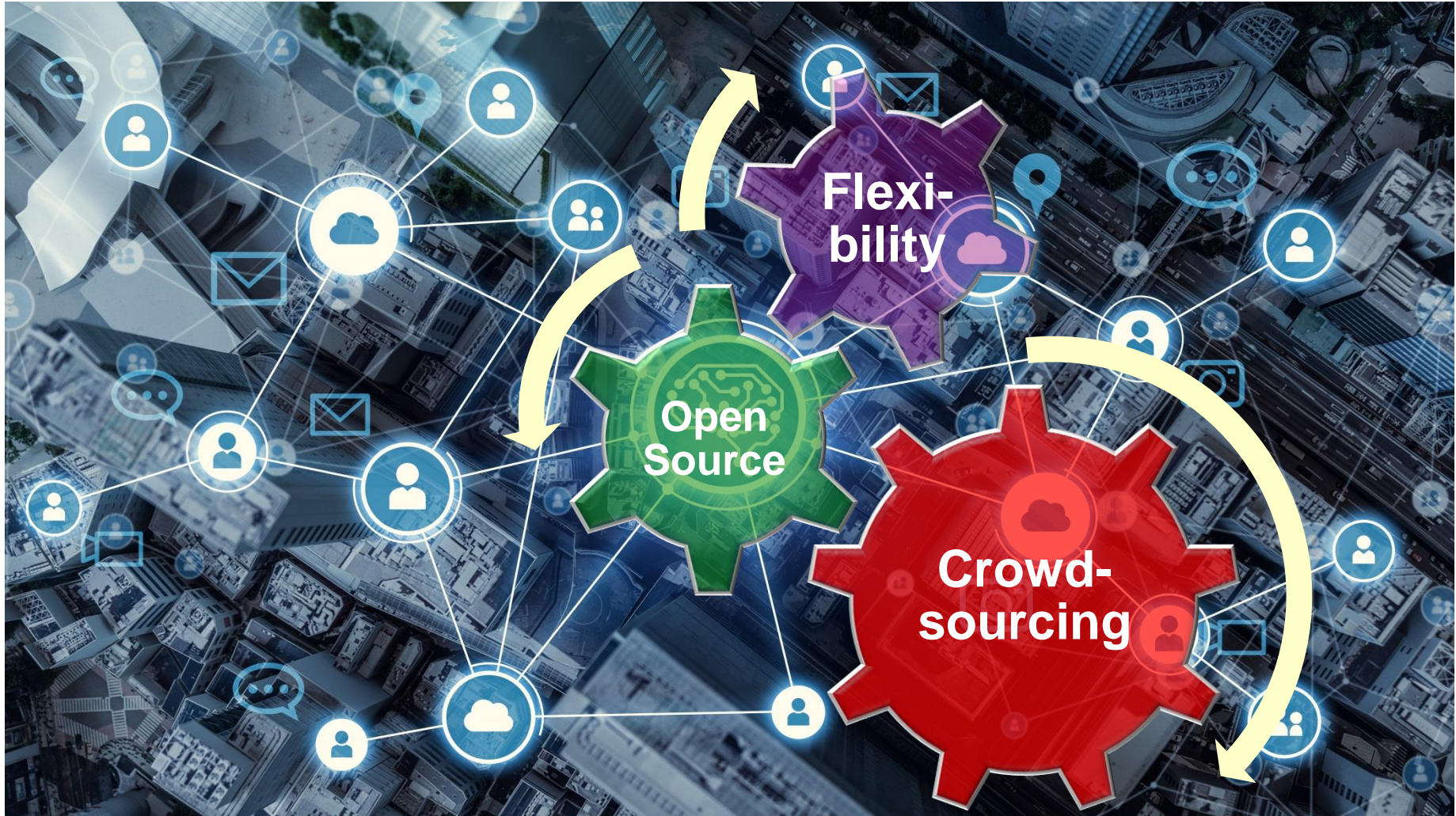
# New Zoning



# Geospatial Data

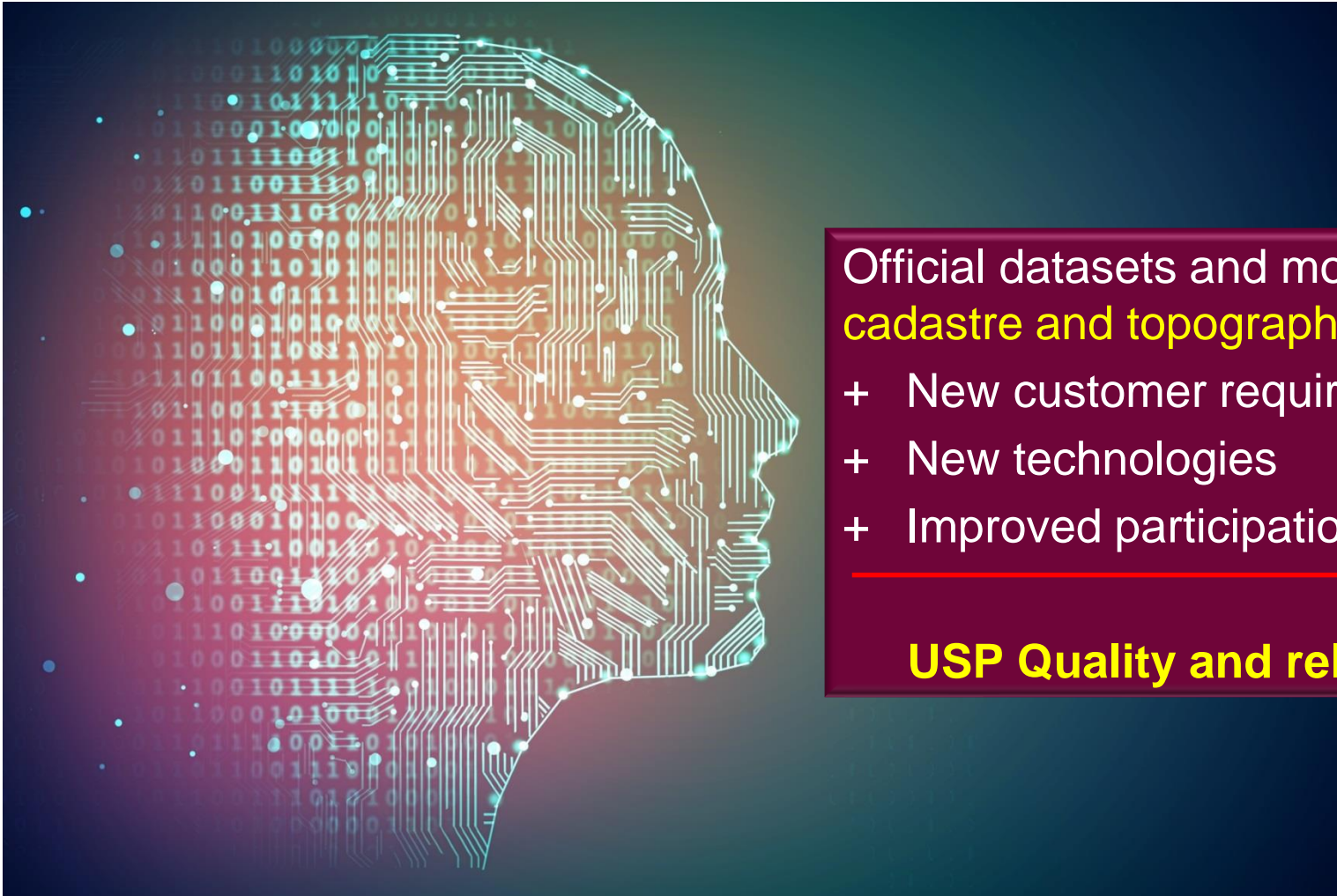


# Development Principles





# The Bottom Line



Official datasets and models for  
**cadastre and topography**

- + New customer requirements
- + New technologies
- + Improved participation

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**USP Quality and reliability**

‘The greatest danger in times of turbulence is not the turbulence; it is to act with yesterday's logic.’

Peter Drucker