



Improvement of Land Administration Data and Services

Measures to meet customer requirements

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Content

- ◆ Drivers for change
- ◆ New requirements for land administration data
- ◆ A new approach for market transparency
- ◆ Use of AI algorithms for improvement of cadastre
- ◆ Conclusions

Paradigm Shift

European requirements (PSI, EU Data Strategy)
Changing customer needs

New national legislation (OZG)
Environmental aspects (land cover, land use...)

Digitization
Disruptive Technologies

Legal Framework

- A European Strategy for Data Brussels, 19.2.2020 COM(2020) 66 final
- EU Directive on Open Data and the Re-use of Public Sector Information
- German Law on Improvement of Online Access to Administrative Services – OZG (2017)

Core Requirements for Land Administration Data

- Open data
- Updating mechanisms
- Quality improvement
- Distribution of data and algorithms through portals and platforms
- Easy use of geodata on mobile devices
- Appropriate API's
- E-Government, Interoperability
- Market Transparency

Example Market Transparency



Transparent data and mathematical models

Real-time availability instead of (long) update-cycles

Easy to handle on mobile devices

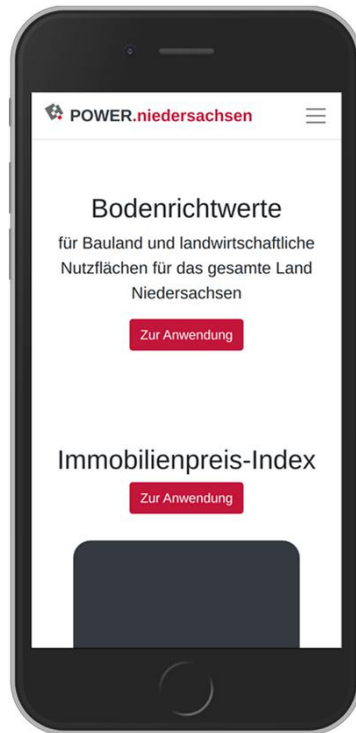
Participation in data acquisition and model development

Agile development for new thematic and spatial submarkets

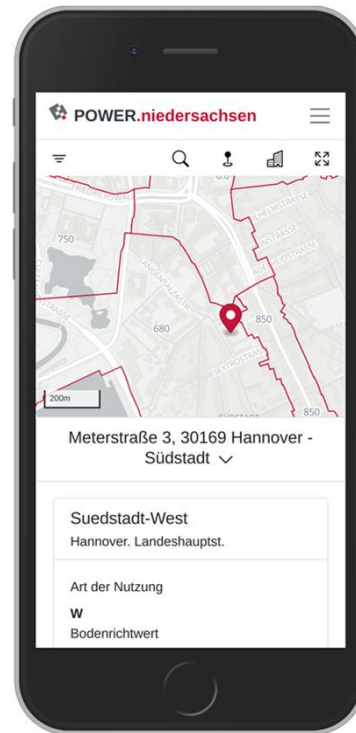
Certification of data sources and models by officials

...

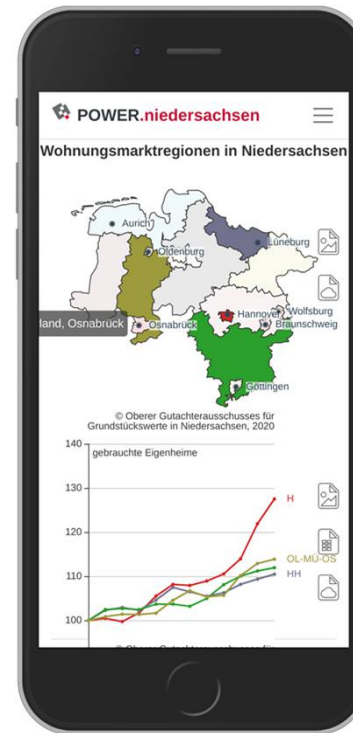
BORIS Mobile



Portal



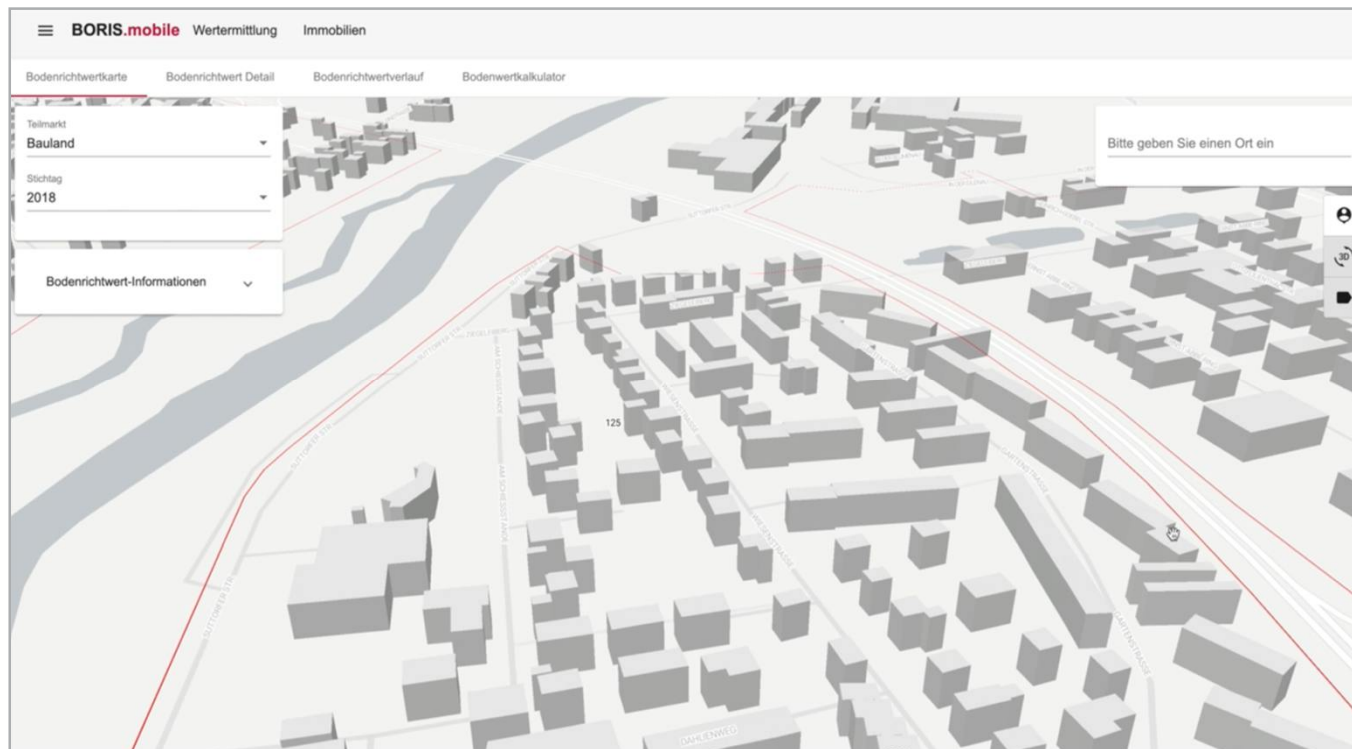
Value Zones



Property price index

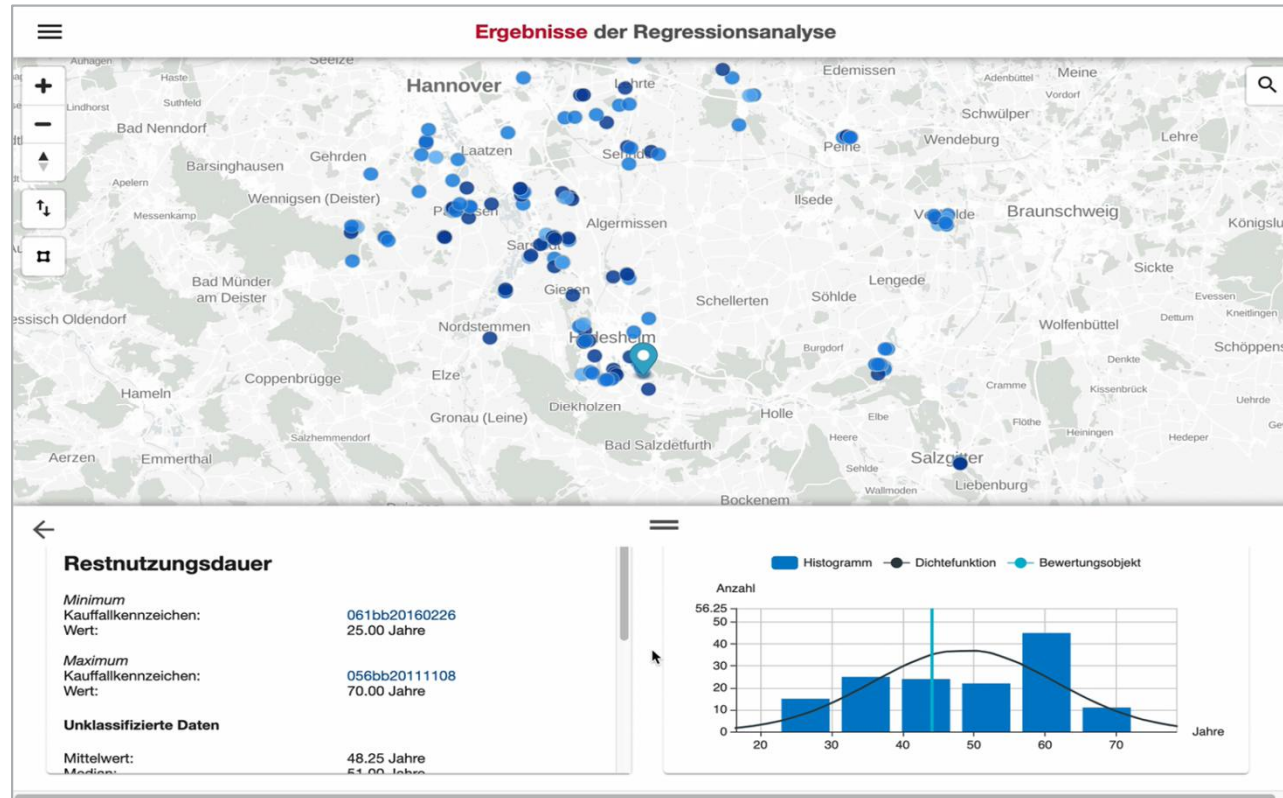
Questionnaire

Valuation Map (Vector Tiles)



Source: LGLN

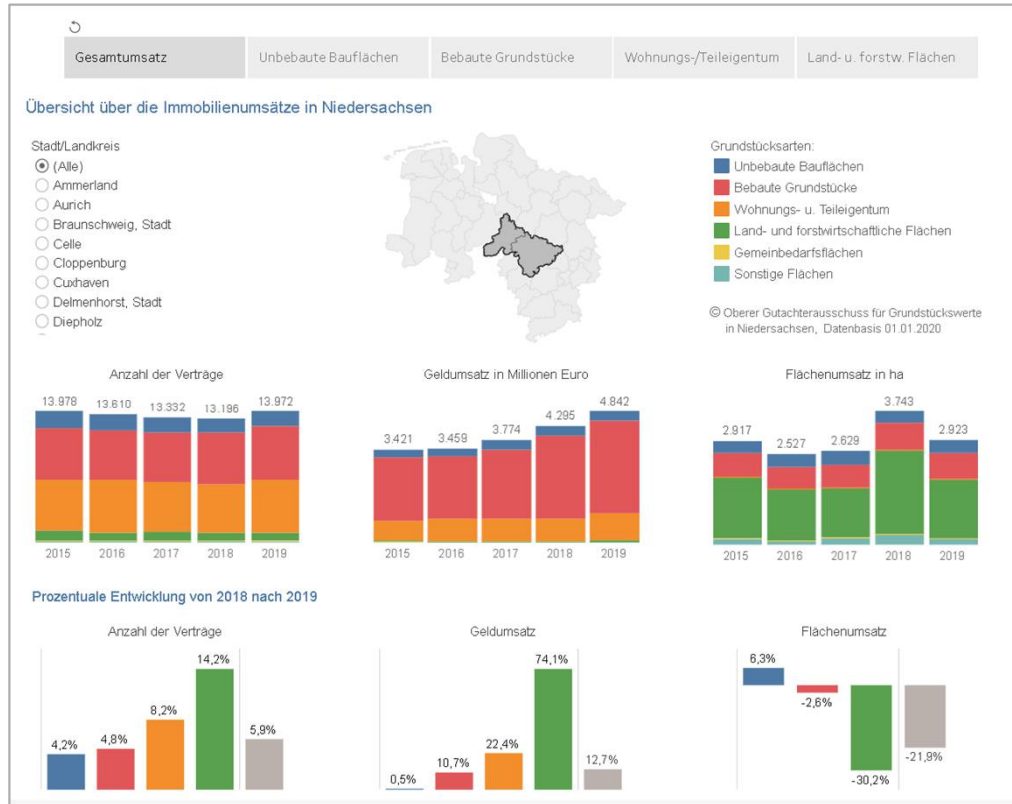
Mobile Application



Source: LGLN



Statistics

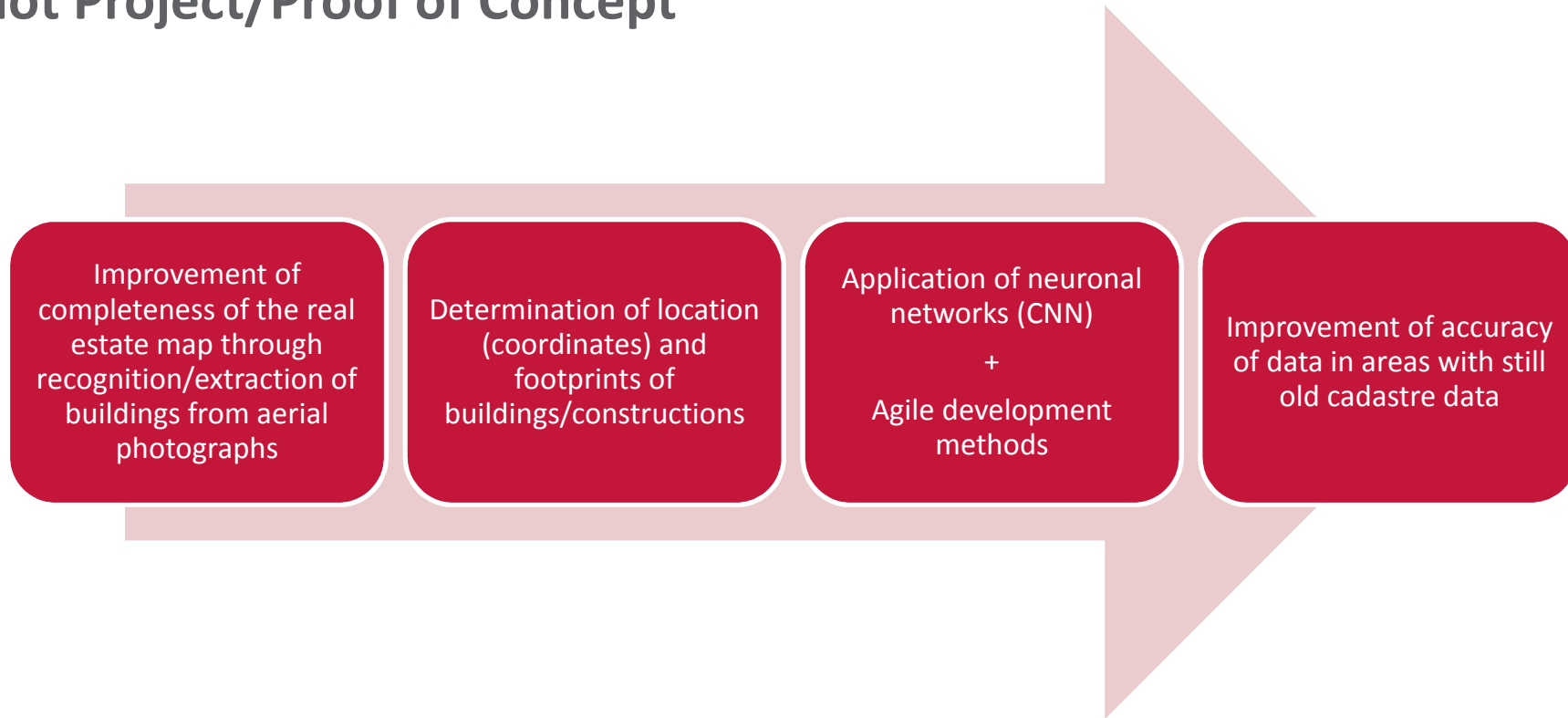


Source: LGLN

Editor for Crowdsourcing

Source: LGLN

Artificial Intelligence and Cadastre Pilot Project/Proof of Concept



End-to-end Pipeline



1 Building detection



2 Segmentation



3 Calculation of shift vectors

Source: LGLN

Project Phases

Phase I: Proof of concept

Phase II: Extension of building detection to the total area of Lower Saxony, Web interface

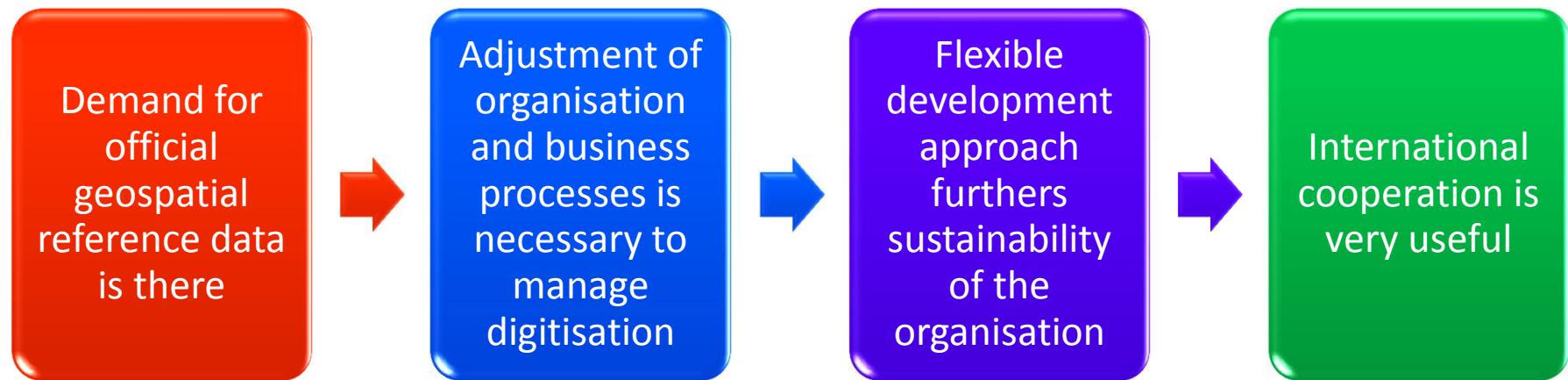
Phase III: Calculation of shift vectors

Phase IV: Homogenisation component integrated into the end-to-end pipeline

Consequences

- Digitisation as well as new legal and customer requirements for official geodata mean a paradigm shift
- Change management is necessary
- Mix of different professional skills and profiles is needed
- Capacity building is a critical success factor.

The Bottom Line





**Thank you very much for
your attention!**