# Infrastructure Mapping in Germany

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# We collect and supply data!

3.325 suppliers			
Telecommunications		Electricity	Gas
District Heating	Sewage	Transport	Local authorities





est. 2009

- To show possibilities for shared use of infrastructures in broadband expansion.
- To provide information about the location and availability of existing infrastructures that can be used for broadband expansion.
- To reduce costs.

# Some milestones



2009	The federal government's broadband strategy leads to the establishment of the infrastructure atlas by the Federal Network Agency - data delivery voluntary
2012	With Section 77a (3) TKG, the first authorization basis for data deliveries comes into force - WebGIS goes into operation at the end of 2012
2016	BCRD brings far-reaching changes in the Telecommunications Act - consultation for further development
2018	Commissioning of the extended infrastructure atlas
2020	Relaunch with a new interface and various new functions
2021	Implementation of the EECC





Local authorities (federal government, states, districts, cities and municipalities)

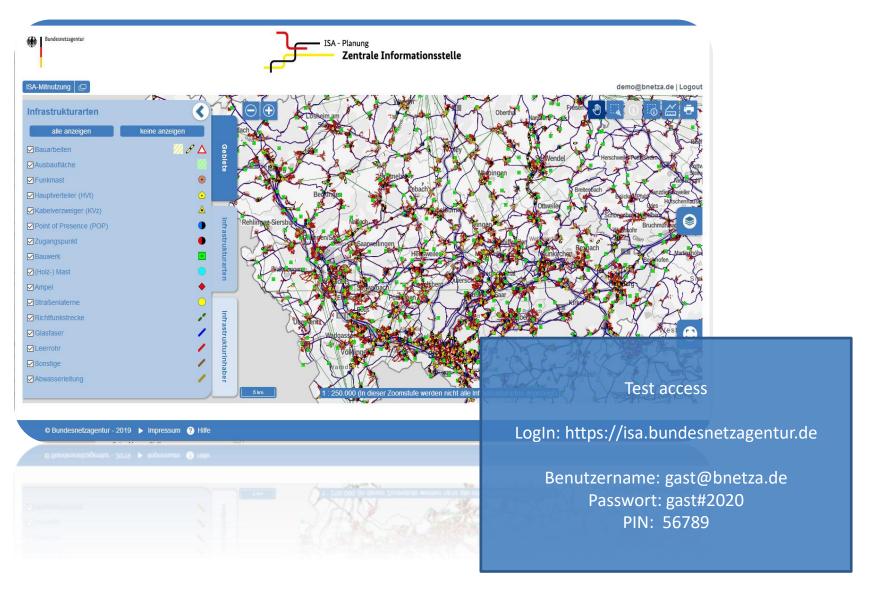
Owner or operator of public supply networks

Contractors (broadband competence centers or consultants)

Federal Ministry of Transport and Digital Infrastructure

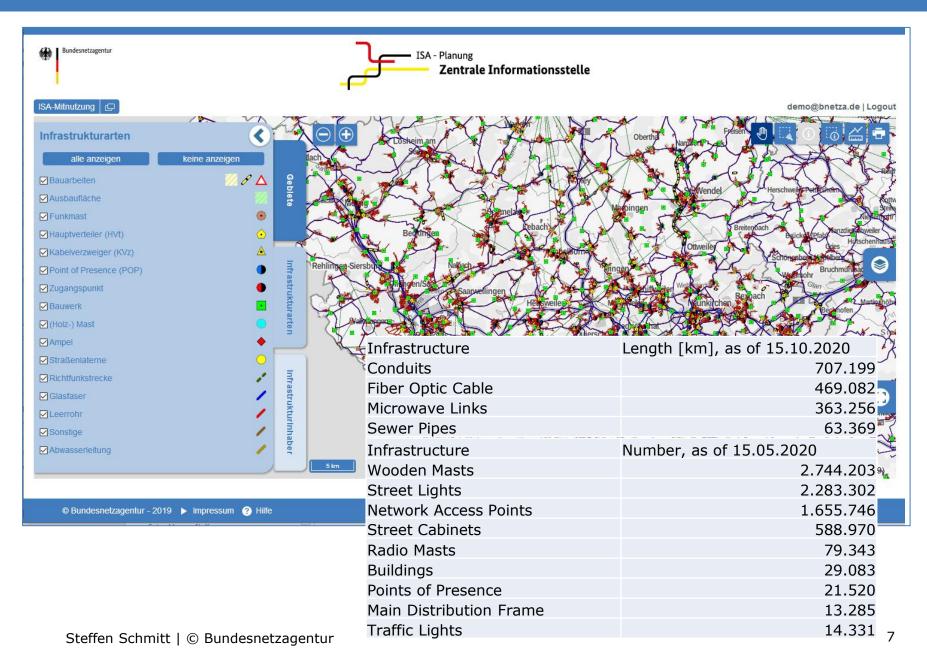
# Check it out! (Test data only)





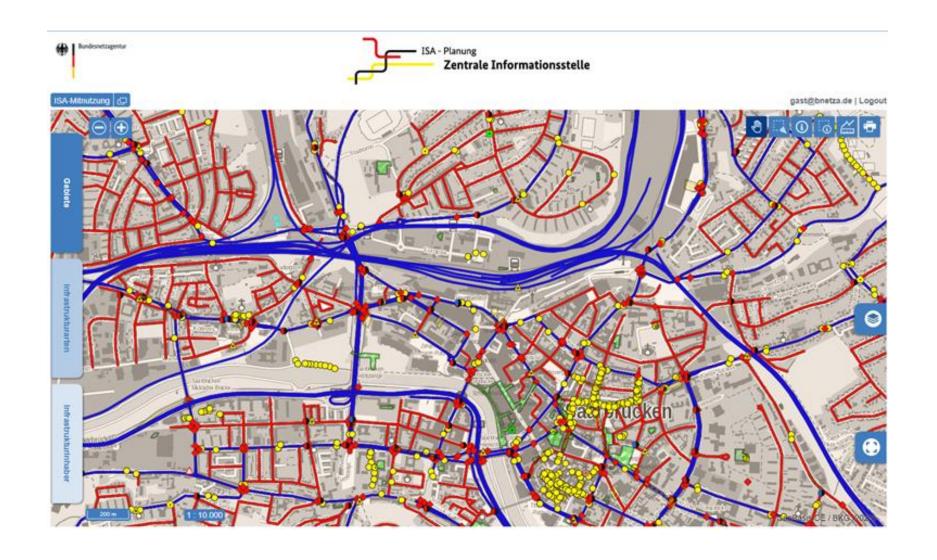
### Some pictures





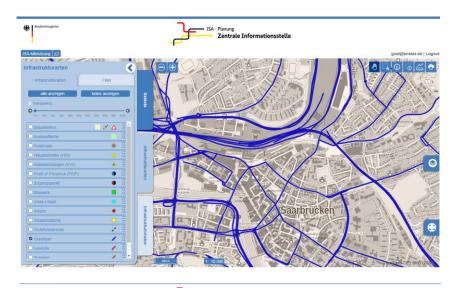
# Some pictures – Test data only

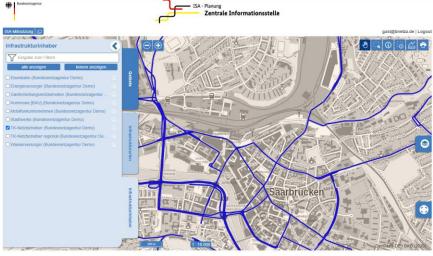




# Some pictures – Test data only











# Technical background



- The infrastructure atlas is a web-based geographic information system (web GIS)
- Map generation and presentation as an individual solution based on open source software components (Angular, OpenLayers, Geoserver)
- Data storage on relational database systems (PostgreSQL and Oracle Database)
- In future, access via an OGC-compliant WMS interface
- Germany-wide representation of:
  - approx. 7 million point infrastructures
  - 1.6 million kilometers of line infrastructure
  - increasingly also area infrastructures
- Representation takes place in the scale range from 1:1000 to 1:250,000



### ...the data situation...

- Many different systems and formats
- Heterogeneous data deliveries
- Industry-specific nomenclature and abbreviations
- Company-internal document systems that were not primarily designed for data export
- Systems that have evolved over time.
- Corporate mergers require the migration of different systems.

# Lessons learned - Keywords



#### Confidentiality

Company and business secrets demand high safety measures

#### Completeness

Get all relevant information

#### Intersectoral

Pool different industry sectors

#### Usability

Should be easy to use

#### Transparency

Deliver relevant information to where it is needed



# Any questions?

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