#connected in Europe: City Follows Data
How Municipalities Find their Strategy in the Age of Data

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Agenda
City follows Data

1	**Check-in and Welcoming**

2	**Introductory presentation**
3	Workshop 1**: Data Management Office**
4	Workshop 2: **Data Sovereignty**

5	**Conclusion**, open questions and outlook

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What for?
Municipal Data Strategies

Let us take the example of electric scooters in public spaces.

Photo by Ernest Ojeh on Unsplash

What for?
Municipal Data Strategies

- Data-Driven Decision Making makes public spaces more attractive.

- Structured data exchange can be used to create parking zones for e-scooters.

- City of Paris has created parking zones for micro mobility based on mobility usage data by TIER Mobility.

Watch this video to learn more
https://urban-digital.de/kommunen-mikromobilitaet-regulieren-daten/

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Challenges and Opportunities
Municipal Data Strategies

improving municipal services

digital divide

data-driven decision-making

lack of data exchange (within local governements)

increasing digitization in all areas of life

lack of standards

data protection

data governance

lack of data literacy in municipalities

business intelligence for efficency

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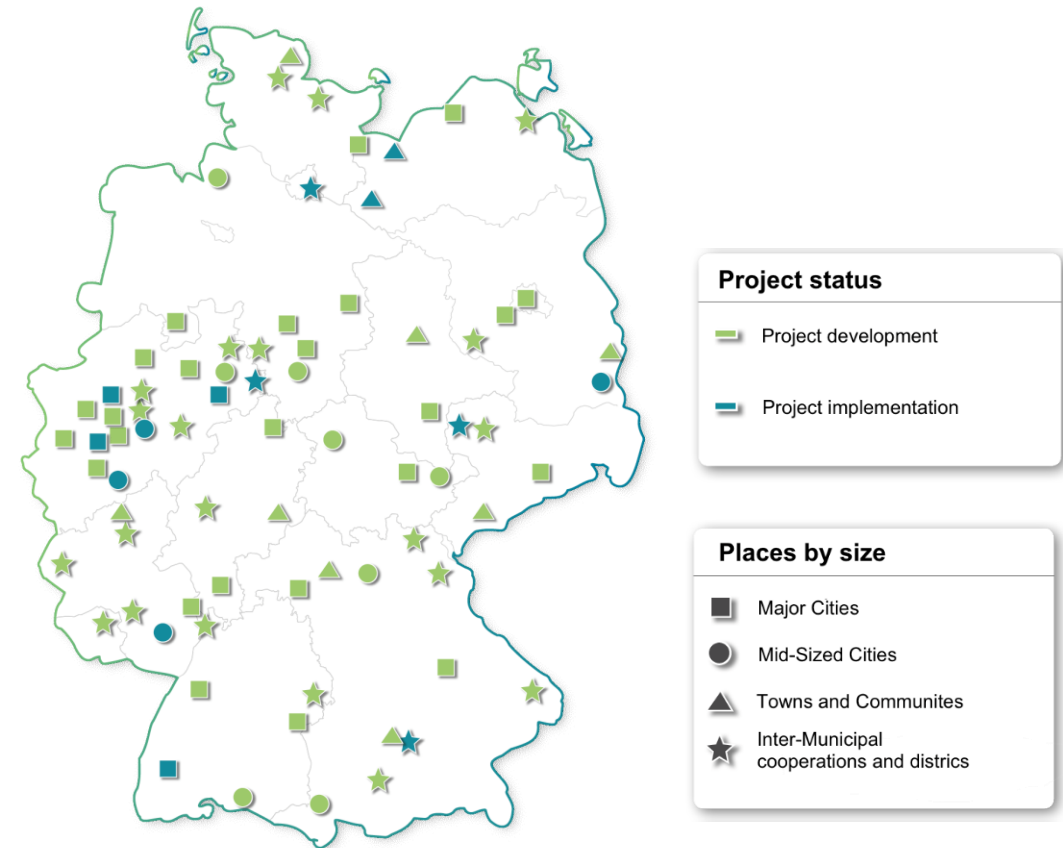
Definition
Municipal Data Strategies

A municipal data strategy is the **strategic concept for the usage of internal and external urban data** to achieve the municipality's goals. The data strategy describes the municipality's **data management and cooperation** with external stakeholders regarding **technological, organizational, ethical and legal perspectives**.

- data protection
- data sharing
- role management

- IT security
- data models
- ethical principles

- cloud strategy
- open data   …
- data literacy

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Smart Cities made in Germany – Model Projects Smart Cities
Coordination and Transfer Office

- Funding of pilots and projects for a **sustainable and common good-oriented digital transformation in municipalities**

- Creating of an **innovation network** of
  - 73 model projects
  - Major and Mid-sized cities, towns and communities and inter-municipal cooperations and districts

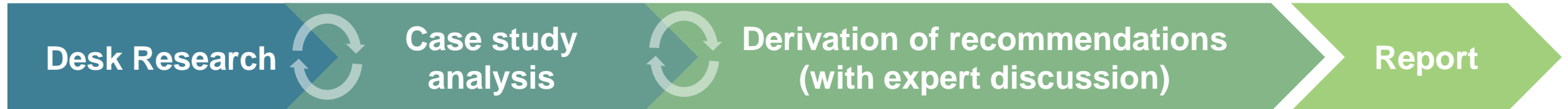- Program support by **coordination and transfer office (KTS)**

Project status

- Project development
- Project implementation

Places by size

- ■ Major Cities
- ● Mid-Sized Cities
- ▲ Towns and Communites
- ★ Inter-Municipal cooperations and districs

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Municipal Data Strategies
Aim and Approach of the Study

Aim of the study: to investigate strategic approaches to data strategies and their institutional and instrumental implementation – within the city administration or in collaboration with external partners

Approach:

| Desk Research | Case study analysis | Derivation of recommendations (with expert discussion) | Report |

Case Studies
Selection and methodology

Methodology: interviews with municipal data officers from cities that have already developed a data strategy

Case studies:

Germany:	Europe:	International:
• Soest • Mönchengladbach • Wolfsburg • Oberhausen • Bielefeld • Bad Hersfeld • …	• Vienna • Barcelona • London • Helsinki • The Hague	• Toronto • Singapur

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Municipal Data Strategies
Structure of the results

Structure of the results and the recommendations: from the case studies and interviews we derived general recommendations for creating a municipal data strategy as well as targeted recommendations for four key aspects of a data strategy

General recommendations for the creation of a municipal data strategy			
Data Sovereignty	Data Literacy	Data Responsibilities	Data Collaborations

Deep Dives

Deep Dives
Structure

Main Room (Plenum)		Break-Out Sessions
Deep Dive 1: Data Responsibilities		
1) Short introductory presentation with one example form a case study	2) Two break-out sessions to discuss the topic of Data Management Offices & Data Collaborations (random allocation of participants)	
Deep Dive 2: Data Sovereignty		
1) Short introductory presentation with examples form different case studies	2) Two break-out sessions to discuss the topic of Data Sovereignty (random allocation of participants)	
Conclusion, open questions and outlook		
1) Short summary of the discussions 2) Open questions and outlook		

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Deep Dive 1: **Data Responsibilities**

**Deep Dive: Data Responsibilities**
Definition

Data responsibilities serve as an organizational framework with conditions for data use. They must be established within the municipality in order to implement the data strategy permanently.

Clearly defined responsibilities help to

- ensure data quality and interoperability of systems,
- to coordinate continuous data maintenance,
- and to refine data for technical decisions in order to increase municipal performance

Deep Dive: Data Responsibilities
City of Soest
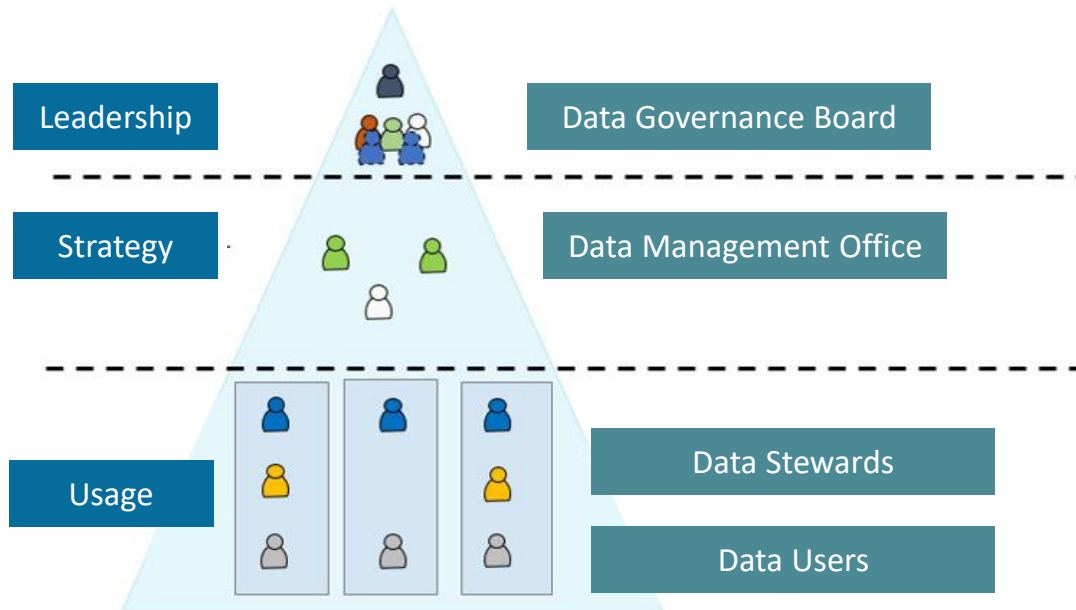
Central roles in municipal data management

- a top management governing board for data management

- data managers / a central data management unit

- data coordinators / data stewards in the departments

- data users / consumers to apply

Leadership		Data Governance Board
Strategy		Data Management Office
Usage		Data Stewards
		Data Users

© City of Soest, p.9 in Data Strategy published in 2021; simplified illustration

Deep Dive: Data Responsibilities
Discussion

- What can municipalities learn from digital companies in terms of data responsibilities?

- How are data responsibilities organised in your municipality / organisation?

  - Do you have data managers or -stewards?

  - Which data-based solutions are you using?

  - Who is responsible for the data/cloud infrastructure?

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Deep Dive 2: **Data Sovereignty**

Deep Dive: Data Sovereignty
Definition and central recommendations

Data Sovereignty describes competency and the authority to proactively use data in a self-determined manner.

Aim: Strengthen municipalities in their different functions, such as…

…users of data

….providers of data

…clients in digital projects.

Smart City: In the context of smart city data sovereignty mainly focuses on data collected in public spaces, e.g., movement or environmental data.

Central recommendations to ensure the municipal data sovereignty:

Anchoring data sovereignty in the procurement process — 1

Define central contractual regulations and (technical) requirements — 2

Targeted use of cloud technologies and other (critical) data infrastructure — 3

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Deep Dive: Data Sovereignty
Central recommendations and examples

1 Anchoring data sovereignty in the procurement process

Case Study: **Barcelona**

– Central set of **data sovereignty clauses** as part of all (relevant) procurement contracts, e.g.:

– All **data collected** in the course of collaboration with private contractors must be **handed over to the municipality** in machine-readable format and are **legally considered public property**.

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Deep Dive: Data Sovereignty
Central recommendations and examples

2 **Define central contractual regulations and (technical) requirements**

Case Study: **Soest**

- Soest is currently developing a Smart City App
- **Open standards in the tender:** Requirement of a FIWARE interface to exchange data has been defined in the tender
- The open interface enables the data exchange, e. g. about events, between the Soest Smart City App and existing data infrastructures (the urban data platform)

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Deep Dive: Data Sovereignty
Central recommendations and examples

3 Targeted use of cloud technologies and other infrastructure

Case Study: **The Hague**

Examples for decision aspects and parameters for suitable infrastructure:

– Information security
– Role-based access management
– Use of open source stacks in applied software (avoiding lock-in effects)
– Differentiation between types of data suitable for cloud or on premise solutions

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Deep Dive: Data Sovereignty
Discussion

- Is data sovereignty a priority in your municipality? Why?

- What does data sovereignty mean for your organisation? Are there goals regarding data sovereignty defined in your organisation?

Replication and Scalability:

- Do you think approaches (like the ones of Barcelona, Soest and The Hague) could be replicated in your municipality?

Conclusion, open questions and outlook