Governing Urban Data

Joint Innovation Program for Digital City Leaders

Alanus von Radecki, 25. Jan. 2019

DEALING WITH URBAN COMPLEXITY

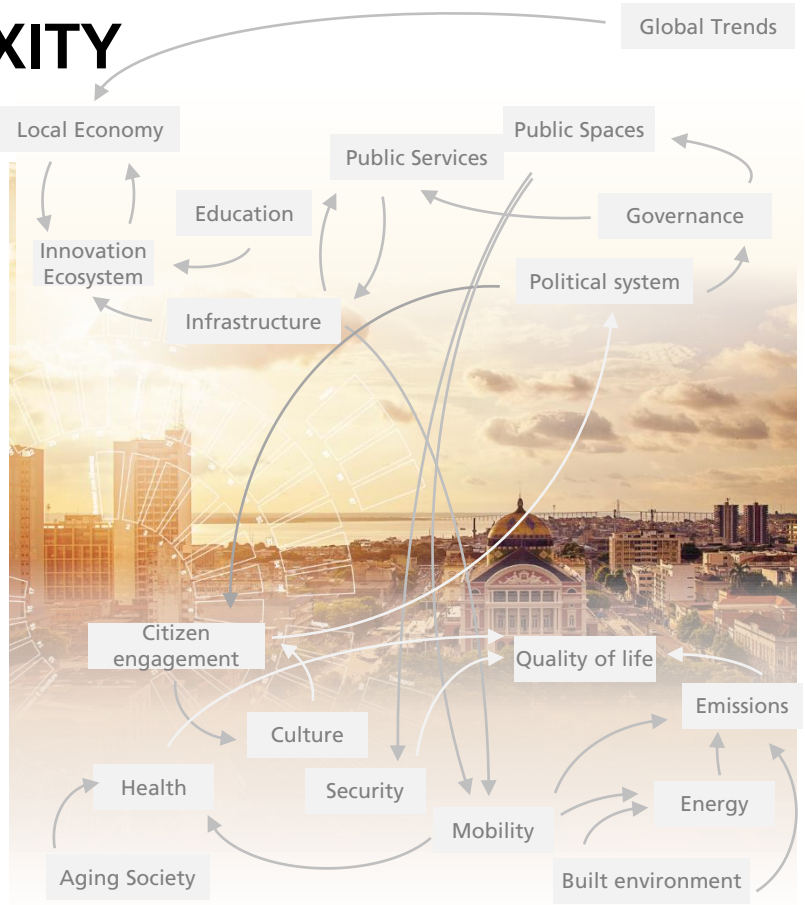
URBAN DEVELOPMENT IN THE 21st CENTURY

Never has urban development been as complex as today. Numerous internal and external factors need to be aligned to develop livable, resilient, sustainable and inclusive cities:

- Global trends like **climate change**, **migration** or **shifts in demography** increasingly need a local response.
- The **great digital transformation** changes organizations, economies and personal lives. Cities need to actively shape it.
- **Technological innovations** help us create smarter cities – but the pace of innovation is incompatible with traditional urban development cycles.

THE GOAL: MAKE CITIES FUTURE-PROOF

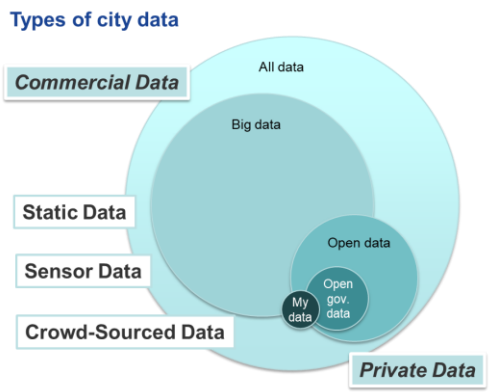
Our Mission at Morgenstadt is to make cities future-proof. We perceive cities as complex adaptive systems and work between cities, businesses and research to define local pathways of innovation and urban development. By linking **technological innovation**, **urban development** and **social and ecological premises for sustainable and inclusive cities**, Morgenstadt helps create cities that are ready for the future!



DATA IS BEHIND IT ALL – FRAUNHOFER CONNECTS URBAN CDOs

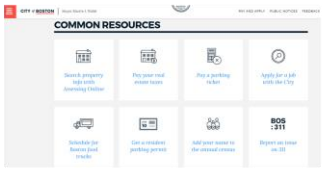
Cities across Europe need to manage the digital transformation in order to achieve sustainable growth, provide better services to their citizens and spend their money more wisely. **The management of data is the key for the digital transformation of our cities**. Yet, this is a completely new challenge for public authorities and city administrations – all cities need to find their way through a complex transition process that involves policies, organizations, hardware, software, skills and financing models.

Fraunhofer invites CDOs, CIOs and practitioners of the digital urban transformation to join a moderated dialogue platform on the governance of urban data in order to facilitate the daily work of each of them. Expert contributions and the dialogue with likeminded colleagues from across Europe help take better decisions, apply the right tools and speak with a strong voice to national and EU policymakers and industry.



- Civil Complaint Data
- Transportation Data
- Infrastructure Data (Lights, Waste bins etc.
- Census Data
- Social Media Data
- CCTV
- Backend City Data
- Third Party Data
- …


Digital maps



Digital city services


Real-time information


Data-based city applications

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Urban Data Governance – a triple challenge

Balancing public and private interests in data

Urban data governance is the process of decision making about data-related issues that impact questions of common good, business value and civil society. **Data governance is therefore value- and policy driven and lies beyond the mere management of data.**

At the core of urban data governance lies the question of what cities can do in order to **govern data in the best interest of their citizens and the public without jeopardizing potential business opportunities** that lie within urban data sets.

This eventually leads to a fundamentally new form of public-private partnerships with **data as an instrument of power and wealth** for which we don't yet have the right governance instruments

Financing Smart City Investments

Although significant investments have been channeled into data-driven city solutions in more than 35 lighthouse cities across Europe, there are still significant gaps when it comes to mainstreaming investments into smart city solutions. They can be summarized into two main obstacles:

- The **lack of adequate financing vehicles** to reflect shared public and private returns of smart city solutions.
- The **complexity and the innovative character of smart city solutions** which is still translated into higher risks for investors.

We are in need of **a cost-benefit model** that would help us calculate the social, economic and environmental RoI of an investment into a data-driven solution.

Creating urban data markets

Open city data platforms have not been able to spur significant value creation in our cities. Increasingly we realize that refining and managing urban data is costly and of uncertain value and outcome.

City data exchange and trade platforms have started to emerge as a consequence in order to allow for a more economic approach to working with data in cities. They link suppliers and procurers of datasets in order to overcome the challenge of open data platforms.

Yet, these platforms too, lack a key prerequisite: a sound proof of the urban value behind the datasets. As could be seen with the Copenhagen Data Exchange – platforms that merely exchange datasets (even with price-tags attached) do not manage to spur enough traffic and business, **as long as they are detached from the actual context of the data**.

Urban Data Governance – little is happening

The main focus is on Smart Solutions & Data Systems

Whilst the EU Smart Cities Initiative is putting strong emphasis on technology-based and data-driven development of smart city demonstrators and urban data platforms, little emphasis is put on governance models, business model innovation, finance and digital transformation pathways for cities and urban societies.

Although the existing Smart City Initiatives are very important, they really need to be thought of as an initial impulse for developing a more profound understanding of the relationship between data and a sustainable and future proof development of our cities. We need to look at the issues beyond technology; the complex ecosystem of people, processes, data, finance, politics and stakeholders that make up a Smart City. We need a new governance system for urban data!

First initiatives develop

While most cities are still embarking on their journey towards a digital transformation there are first initiatives that are starting to ask more fundamental questions:

- **How can we measure the value of data?**
- **How can we create a level-playing-field for local SMEs and global digital leaders?**
- **Which criteria help us decide whether or not to publish a dataset?**
- **When should we pay for data and when not?**
- **How can we achieve balance between public investments in digital infrastructures and private returns from data?**
- **Etc**

LONDON DATASTORE

THE GOAL: Create Data–Value-Cases for urban solutions

Data – Value Case

certified

1. Required data-sets, data agents & quality standards
2. Necessary data-infrastructure & data exchange provisions
3. Cost-Benefit Analysis for local impact of solution
4. Revenue sharing / win-win between data-providers & consumers
5. Operation model

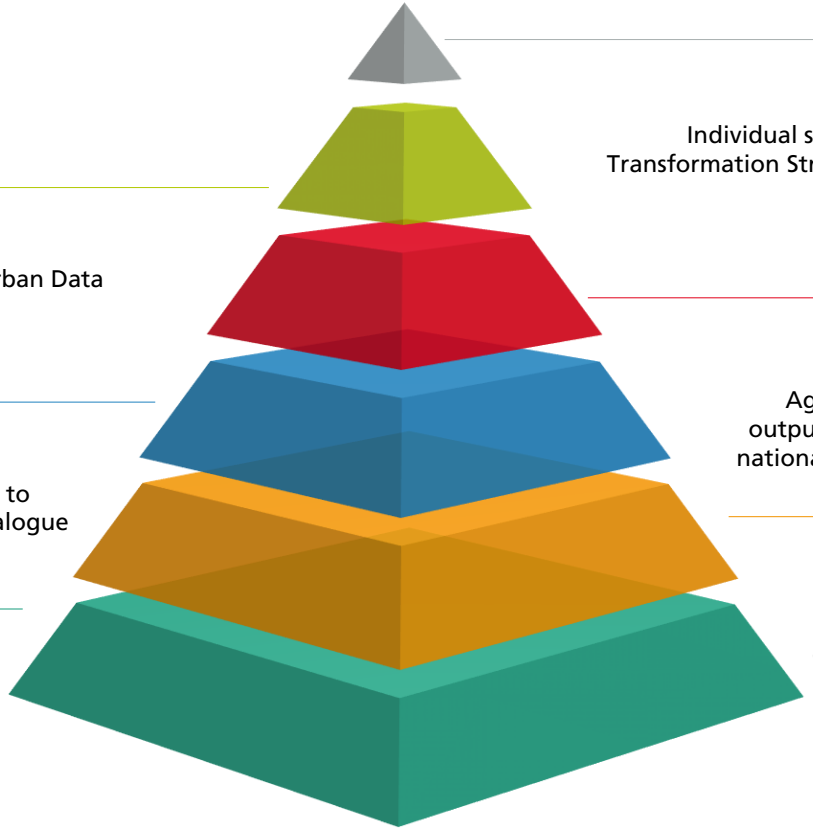
THE PROPOSAL – Transformation Dialogue for Cities

EXPERT SUPPORT

Individual support for Urban Data Strategies / Digital Transformation Strategies. Easy access to a large community of experts and consultants.

PROJECT DEVELOPMENT

Development of joint projects to drive Urban Data Governance and application for funding.



POLICY MAKING

Aggregation of demands, requirements and outputs into policy papers for adressing EU and national policy makers. Dialogue with EU-bodies and initiatives.

INNOVATION NETWORK

Regular physical meetings of participants to exchange progress and best practices. Dialogue with multipliers and research.

MODERATED DIALOGUE

Exchange and dialogue around key challenges, ideas and best practices in the area of Urban Data Governance.

CDO FORUM

Online Community for CDO's, CIOs and city managers in the area of urban data governance and innovation

THE FRAME – Innovation Network Morgenstadt

Universität Stuttgart
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THE INNOVATION PARTNERSHIP

- „Urban Data Governance“ becomes a dedicated research theme within the existing Fraunhofer Innovation Network „Morgenstadt“
- A separate online dialogue platform for CDOs, separate meetings and in-person workshops & roundtables link the „Urban Data Governance“ group of city representatives.
- The network is managed by Fraunhofer. The content of the discussions and workshops is aggregated into joint publications, events and project applications.
- Costs: 15.000 EUR per City

ACTIVITIES

STATUS QUO

- Assessment & comparison of Urban Data Governance in participating cities:
- Structures, processes, plans platforms in use
- Challenges & demand for action

USE CASES

- Identification of use cases with high priority for all involved partners.
- Research & structuring of Best Practices in EU & on global level.

DATA-SETS

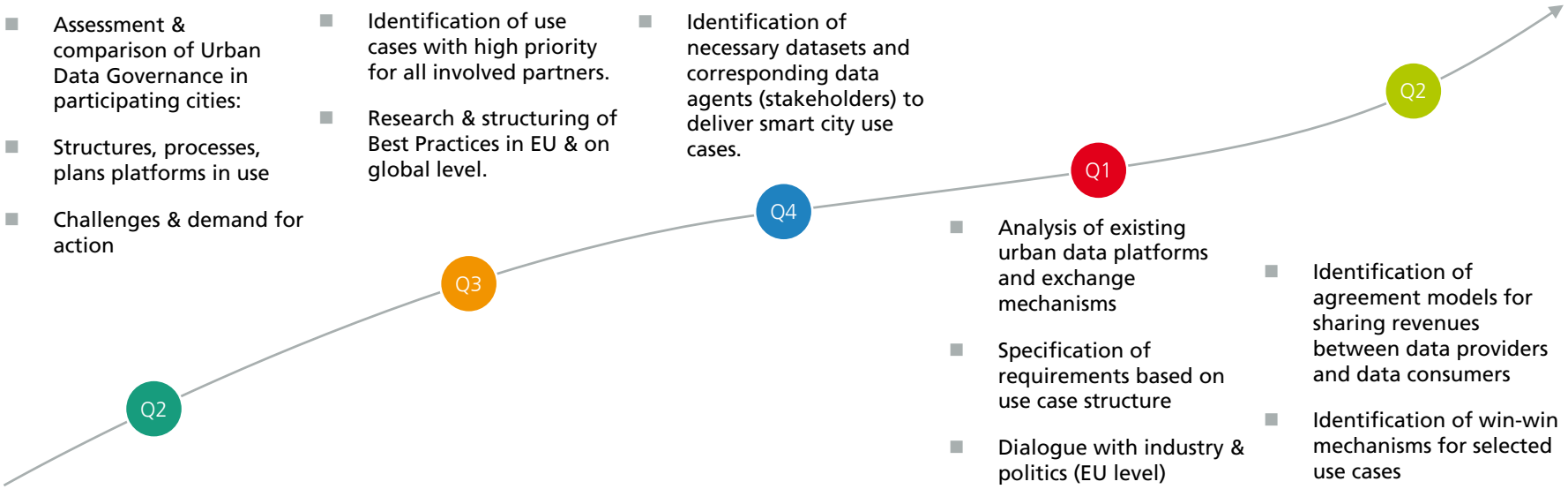
- Identification of necessary datasets and corresponding data agents (stakeholders) to deliver smart city use cases.

DATA EXCHANGE

- Analysis of existing urban data platforms and exchange mechanisms
- Specification of requirements based on use case structure
- Dialogue with industry & politics (EU level)

REVENUE SHARING

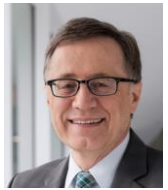
- Identification of agreement models for sharing revenues between data providers and data consumers
- Identification of win-win mechanisms for selected use cases



EXPECTED RESULTS

- Requirements for data sets, data architectures and data providers at solution level.
- Blueprint agreements & smart contracts for data exchange with city stakeholders and 3rd parties.
- Context-responsive cost-benefit analysis of Smart City investments: tools that help asses under which circumstances a certain investment in data will make sense in a given city.
- Strategies & guidelines for managing urban data platforms and for moderating the digital transformation between citizens, local companies, utilities and the municipality



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