



# SMART CITY PROJECTS IN HAMBURG –

## OVERVIEW AND CHALLENGES

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# Strategy "Digital City"

- Improve the quality of life in the City
- Increase the economic attractiveness

Digital Government Services

Hamburg Open  
Online University

Public WiFi

**Traffic**  
 Autonomous Driving  
 Cycling Concepts  
 eMobility  
 Parking Management

**Infrastructure**  
 Charging Stations  
 Light Poles  
 Sensors

**Data & Services**  
 Open Data  
 Crowd Sourcing  
 Standards

**Transparency**  
 Transparency  
 Law (HmbTG)  
 Citizen Participation

**Environment**  
 Renewable Energies  
 Optimization (Routing,  
 multiple use of vehicles)  
 Smart Grids

**Smart Home**  
 Energy Efficiency  
 Networked Appliances  
 Consumer Electronics  
 IT Security

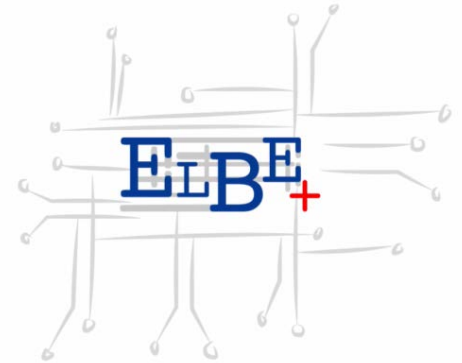


## ELBE+

Electronic processing of cables and line requests for Hamburg (Dozens of providers)

- Reduction of cable and line damage
- Cost reduction through faster, more precise and standardized workflows (for multiple pipeline operators)
- Optimisation of building site coordination and administrative approvals

Outlook: Combination with other connected processes (e.g. request for excavation) → Once Only Principle



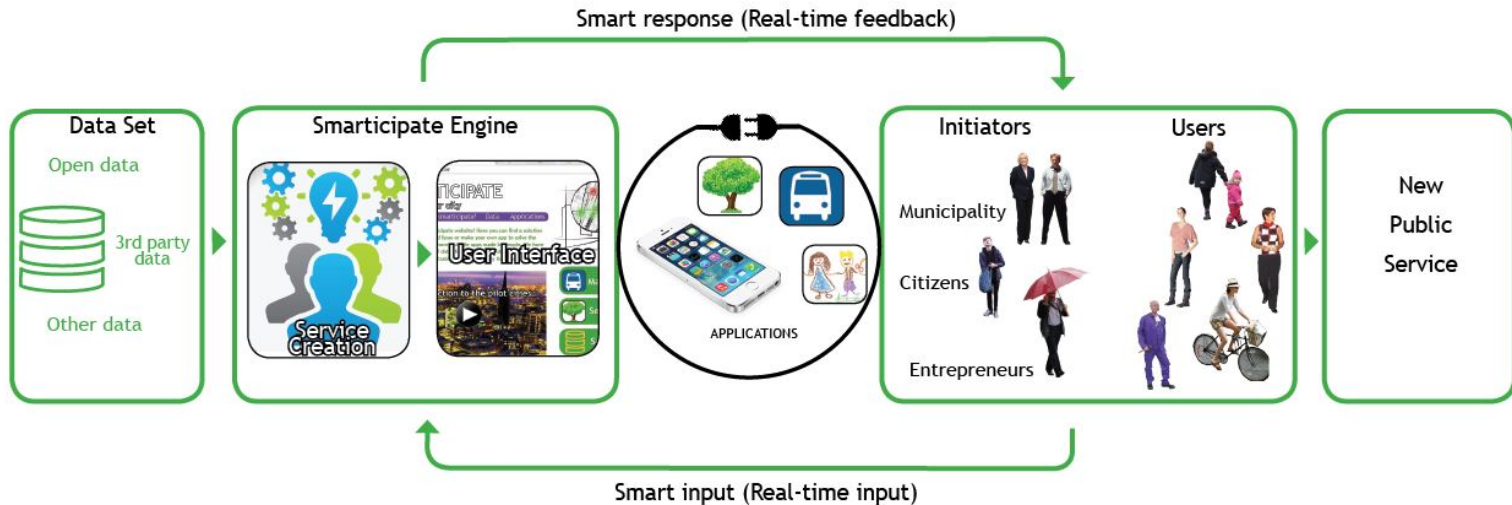
[www.elbe.plus](http://www.elbe.plus)

# Smart City Projects in Hamburg (selection) II



## Use Open Data for Realtime Feedback

- Proposal is immediately evaluated
- Citizen is informed about the quality of the proposal





## Lighthouse Project: **Transition of EU cities towards a new concept of Smart Life and Economy**

City development project with focus on energy, mobility, citizen participation and retrofitting

<https://www.mysmartlife.eu>



## **Sound and security applications for large, open-air events in the city**

MONICA deploys a cloud-based platform, wirelessly connecting and handling several IoT-enabled devices.

<http://www.monica-project.eu/>

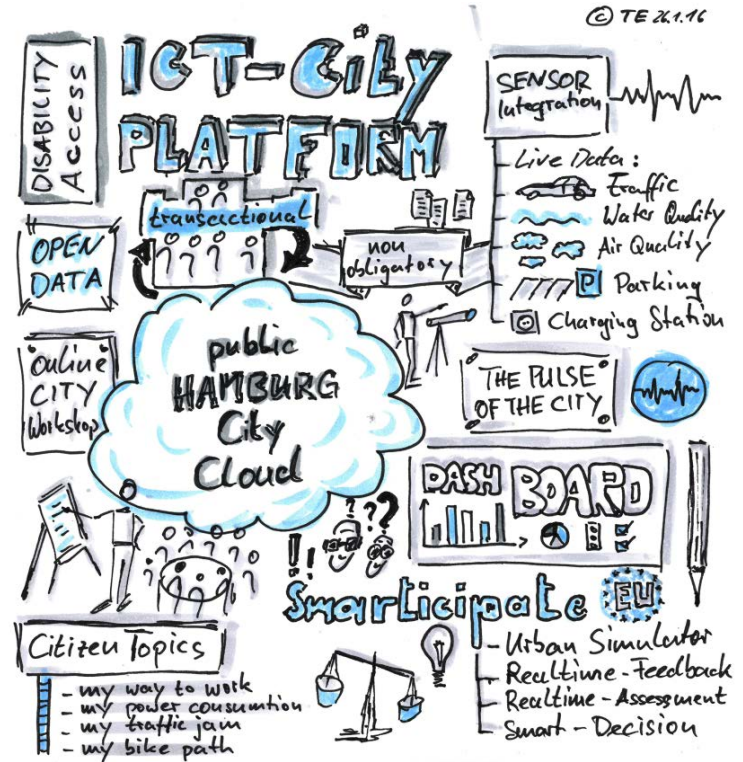
Projects smarticipate, mySmartLife and MONICA funded by the European Union, Horizon 2020

# What has this to do with INSPIRE?

# What is the next step after INSPIRE?



## URBAN PLATFORM

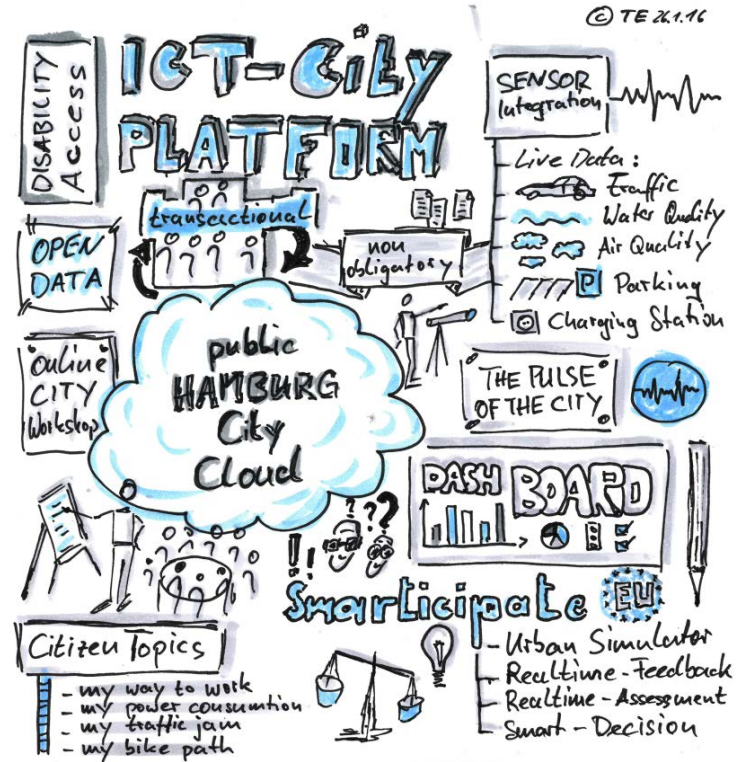






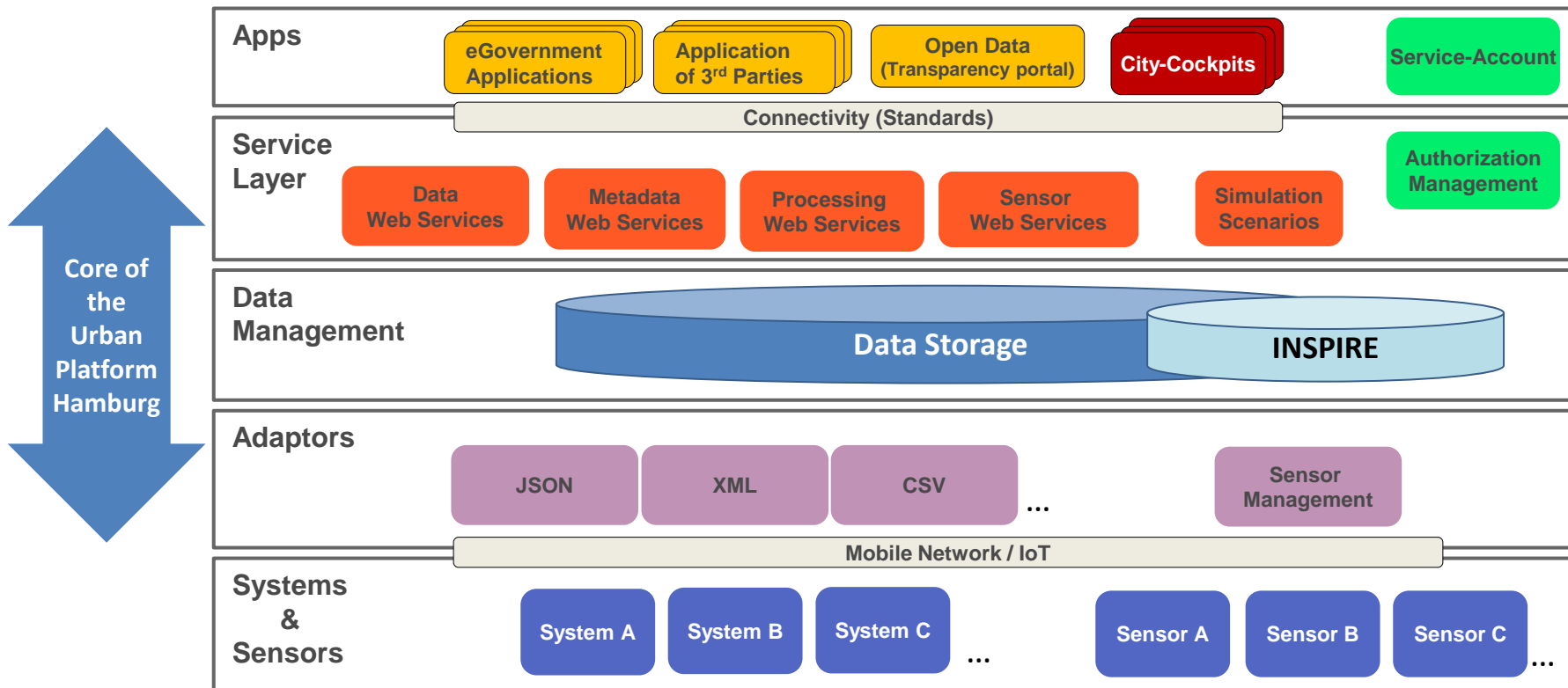
## Is a Conceptual Approach

- That connects existing and future IT systems or IT services (not only the knowledge of each other but exchange data)
- That uses interactive processes for logical and analytical analysis to prepare or assist in decisions





# Hamburg Urban Platform (Architecture)



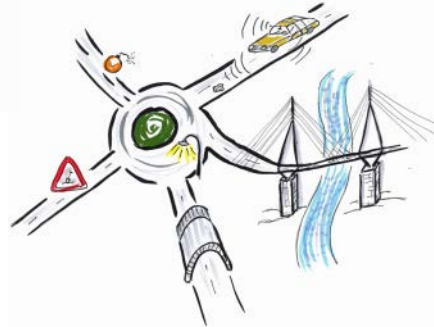
# Urban Platform: From Data to Knowledge

Providing Data



e.g. City Dashboards

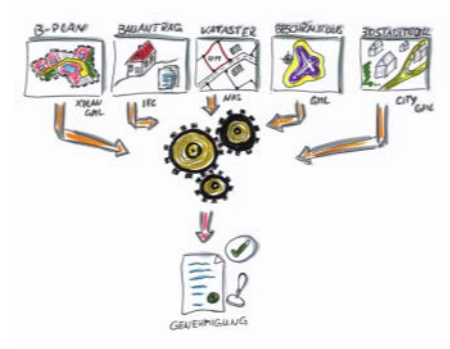
Providing Knowledge



e.g. Navigation for cyclists

Decision Making Assistance

e.g.  
Building Permission  
Procedure





# Challenges

- Transparency (→ Open Data) ✓
- Standards (→ OGC, INSPIRE, ...) ✓
- Extension of the SDI approach to all Urban Data
- High Performance Computing (HPC) and Big Data Analyses and Applications
  - Integration of Sensor Data
  - Real time Feedback and Simulations
  - Artificial Intelligence for Decision Assisting
- Integration of and linking with citizen-generated data



**THANK YOU!**

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