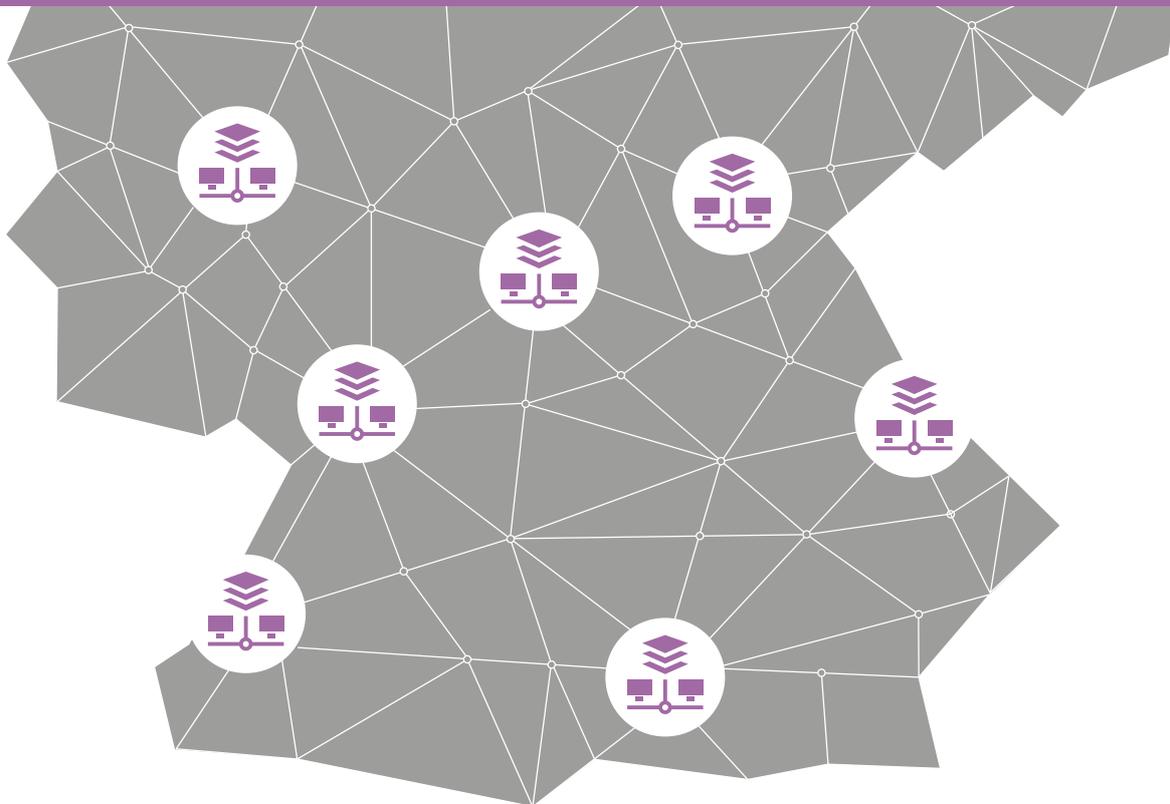


# Smart City Data Platforms

## Recommendations for a European Way



Recommendations for Representatives in Economy and Science within the Focus Group  
*Intelligent Networking of the Platform Innovative Economic Digitization of the Digital Summit*

[www.deutschland-intelligent-vernetzt.org](http://www.deutschland-intelligent-vernetzt.org)

# Smart City Data Platforms Recommendations for a European Way

The digital transformation of municipalities<sup>1</sup> (cities, communities and districts) is the decisive component for the future development in Germany as well as in the other member states of the European Union. It will help to increase the quality of life, provide location advantages and cope with the social challenges in a sociological, economic and ecological triad.

In this connection, municipalities of all sizes are increasingly pushing the development of new digital infrastructures and applications. And yet, Smart City Data Platforms are the central element which enables an intelligent networking of different technical systems towards a system of systems. Smart City Data Platforms are used for this orchestration, the secure and legally compliant data exchange controlled by rules as well as the comprehensive processing of data. They will form the basis of a local digitized society.

This long-time development is facing a trend-setting decision: Are all actors able to manage the digital transformation of the municipalities towards efficient Smart Cities and Smart Regions or will technical rag rugs emerge which cannot meet both expectations and requirements? Will the new digital platform infrastructures develop on the basis of European digital sovereignty, or will Smart City Data Platforms be installed whose technology and dependencies cannot be controlled?

The next large area of the digital transformation will open for municipalities. Municipalities, municipal enterprises, science and economy, especially the ICT (Information and Communication) economy are cooperating with the federal-, regional and municipal politics as well as the European framework. They are required and obliged to quickly develop the chances of the digital transformation within the municipalities and thereby protecting the citizens digital sovereignty as well as the country itself based upon the European value- and security standard.

**Based upon this analysis there is the urgent need for action to jointly stand up for the basic conditions of a digital transformation in the municipalities thereby especially paying attention to the citizens and countries digital sovereignty.**

**This paper is an invitation for all actors to participate actively in this process.**

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<sup>1</sup> In this document the term „municipality“ is used as a representative for local authorities, i.e. likewise for cities, communities and districts.

**Society, Economy, Environment – three Drivers for Smart Cities**

Intelligently networked cities and regions – Smart Cities and Smart Regions – are being established as a world-wide overall concept of the developing cities and regions development. The concept of the Smart City/Smart Region:

- helps to tackle and attenuate environmental and climate problems,
- offers possible ways of action to cushion effects of social developments like the demographic change,
- improves the quality of life and participation of local people,
- is a decisive factor for the achievement of equivalent and area wide living conditions,
- optimizes the location quality and provides a compensation of disadvantages for rural areas,
- strengthens the innovation capability,
- supports a citizen-oriented, reliable digital administration,
- promotes resilience, security, sustainability and resource efficiency to cope with the energy and traffic transition.



### **Innovation thanks to Networking and Data – Digital Services for the Public and Sovereignty**

The provision of digital services for the public means that a local community is understood as a file-driven unit. To a far greater extent than we can imagine today, we will depend on the access and the use of municipal data. To raise the intrinsic innovation potential, Smart City Data Platforms are required. These will have to be shaped in a way that the citizens' digital self-determination as well as the country's empowerment can be guaranteed.

Data sovereignty, security and data security, diversity and economic independence come to the fore to the same extent as the mastery of Smart City technologies. Among them: digital decision and evaluation competence, transparency and access to platforms and data rooms.

**In Germany, we will still be able to shape the development of Smart City Data Platforms in a self-determined way. Moreover, we will have the possibility to set trends and be successful as an attractive location internationally.**

### **Avoidance of Digital Borders – Open Digital Ecosystems instead of Local and Individual Solutions**

In Germany there is a lot going on – although, as compared to international standards, the approaches for Smart Cities and Smart Regions remain fragmented. They are using the benefits of platform economy such as scale effects, multi-dimensional network effects and reusability insufficiently. We are also facing the threatening, expensive and incompatible rag rug.

The reality of life for citizens, their mobility, access to information, health care, administration processes or social participation require a location-independent digital networking. The modern possibilities for movement and action of the citizens must not be restricted by virtual borders in data exchange. Furthermore, from an economic perspective, it is appropriate to reduce the costs sustainably by scaling the available solutions. Neither applications nor data platforms will have to be redeveloped or operated in the core in every municipality or region.

In line with security-, data security and operational requirements, the municipal digital sovereignty, the open, discrimination-free access, the interoperability as well as the portability of individual solutions for other municipalities can be better ensured on jointly supported platforms regarding quality as well as, at the same time, considerably more efficiently and cost-saving than by individual solutions provided by every municipality itself.

**Germany needs solutions, which combine the benefits of a platform-economic scaling and local innovation dynamics by means of a comprehensive, technically integrating approach. Smart City Platform Infrastructures can and should be available nation-wide by a technical federation in a municipality-comprehensive way.**

### **Remove the Obstacles for Implementation – Use Standards and help to develop them**

The public sector currently needs comprehensive digital competences to evaluate offers on the market and solutions in order to be able to master use them autonomously. The core competence of municipalities, however, is not the technical implementation but the development and provision of social basic conditions, which will have to be as good as possible as well as a high quality of life on-site. The obstacle for a technical implementation will therefore have to be considerably reduced for municipalities and regions. Only by that, municipal resources can be better focused, both personally and financially, on social goals and integration by concentrating on the citizens.

The use of global, open standards and semantics for Smart City Data Platforms is playing a key role. Hereby, not only uncertainty regarding technical decisions can be reduced, but also dependencies and monopolistic structures of the platform economy will be prevented. Moreover, a sustainable connectivity and data sovereignty can be ensured.

**For the maintenance of digital sovereignty in Germany, the economy and the public sector will have to engage formatively in international standardization of Smart City platform technologies and processes and ensure their consequent consideration and compliance.**

### **Responsibility for the Society – Smart City only works if we join efforts!**

The capability for implementing Smart Cities and Smart Regions requires a common ethic, legal and technical basic understanding for the benefits, possibilities and basic conditions as well as the potential risks of digital networking. Successful participation processes focussing on citizens demonstrate how a sustainable digital transformation can succeed taking along everyone and not leaving anyone behind.

In Europe, nobody is building Smart Cities and Smart Regions single-handedly. The implementation will have to be carried on many shoulders. Therefore, the cooperation of the most different actors from all areas and on all levels is required. The adaptation or redevelopment of legal and regulatory basic conditions is as necessary as the exchange of experiences and competence training. Basic requirements are a close cooperation of federal state and local governments as well as the thinking in a European framework, the development of recognized basic conditions as well as harmonized structures and processes.

**In order to build and implement such complex cooperation, a clear and strong Governance as well as technical-organizational control architecture is required. Available structures and processes from an inter-municipal cooperation should be used and strengthened.**

## Recommendations

In Germany and the European Union, we have the chance to demonstrate a way of digital transformation of municipalities. Thus, the shaping a triad of sociological, ecological and economic goals can be enabled. The European value and security standards form the basis maintaining the citizens digital sovereignty, the companies and the country itself.

Smart City Data Platforms will have to be designed in a way that meets the requirements for data sovereignty, data security and interoperability within the scope of the system of systems.

### How to shape this way together?

#### Our recommendations:

##### 1. Bringing about solidarity of all actors:

The implementation of superior platform infrastructures for Smart Cities and Smart Regions requires solidarity of all actors! A concentrated initiative of federal, state and local governments, economy and civil society should be established which can provide a cooperative scope of action and Governance structures for digital sovereign Smart City platform infrastructures.

##### 2. Establishing a holistic approach:

The Smart City overall concept will have to be anchored considerably stronger in the digital policy, be pushed forward emphatically and be supported by the required financial means. Since the implementation will only succeed if at least citizen orientation, municipal eco systems and technical know-how as well as a legal regulatory framework jointly create a stable basis.

##### 3. Pursuing a consequent standardization strategy:

In order to maintain the digital sovereignty in Germany, the social, ecological, technical and economic requirements for standardization will have to be acknowledged as fundamental. Politics in Germany and Europe should support and promote the national and international standardization efforts-, initiatives and bodies for Smart City Data Platforms considerably more intensively in the common interest than so far.

##### 4. Providing a precise framework for the use of data:

Open legal questions regarding the use of data, data ownership as well as regarding security reasons within the scope of data-controlled digital techniques also hamper the implementation of Smart City Platforms. They will have to be speedily clarified on a German and European level.

##### 5. Developing a coordinated incentive and support strategy:

The funding landscape at federal and states level will have to meet the requirements of a networked future more effectively. Funding- and incentive programs for the building and developing of Smart City Data Platforms will have to be better coordinated over all political levels and resorts. They shall pursue an integrated approach so that proprietary isolated applications can be avoided and the programs will take effect.



### **Smart City Data Platforms**

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### **Editor**

Digital-Gipfel

Platform Innovative Digitization of the Economy

Focus Group Intelligent Networking (Representatives of Economy and Science)

### **Contact**

Jens Mühlner

T-Systems International GmbH

[jens.muehlner@t-systems.com](mailto:jens.muehlner@t-systems.com)

[www.deutschland-intelligent-vernetzt.org](http://www.deutschland-intelligent-vernetzt.org)