



ÖGNI POSITION PAPER SMART CITIES

Produced by the working group „Smart Cities“

in cooperation with

BECKHOFF
New Automation Technology

 **denkstatt**
create sustainable value

**DREES &
SOMMER**

1. The aim of this position paper

Although the term „Smart City“ is widely used, a clear definition is still missing. This allows for various interpretations. As a leading force in Austria’s sustainable real estate, we have already contributed to the discussion of „sustainable-construction“. With this position paper we want to provide a much needed input to specify the idea of „Smart Cities“.

The main aims of this ÖGNI position paper are:

- to clarify the position of ÖGNI on „Smart Cities“
- to make the term „Smart Cities“ more specific for the stakeholders of urban development
- to support and guide urban developers in their attempts to implement the Smart City concept
- to develop a basis for the certification of Smart Cities

2. How the position paper was developed

ÖGNI publishes position papers about pressing issues concerning the development of sustainable real estate. These solution-orientated position papers aim to encourage discussions about important topics among practitioners and experts. This way the ÖGNI position papers contribute to the implementation of sustainable real estate.

This position paper was developed between 2016 and 2017 by the ÖGNI working group „Smart Cities“ on the basis of a request by the board of ÖGNI. This working group integrated know-how and experience of representatives from business, academia, and administration. In October 2017 the board of ÖGNI published the position paper.

The paper will be updated and adjusted to new developments in regular intervals of one to two years and in a dialog with partners.

A Smart City stands for

Important comprehensive topics of the Smart City

- The Smart City takes into account sustainability, financial constraints, feasibility, affordability, regulations, developing norms and life cycle considerations in all its developments and actions. Additional focus is given to resilience towards climate change, urban climate, biodiversity, inclusion, and fairness.
- If the interdependencies between various sectoral topics are understood and taken into account, the Smart City will work in the long term.
- The Smart City generates the necessary supporting governance structures.
- The Smart City takes proactive approaches to overcome resistance. The Smart City communicates its qualities and achievements internally and externally and uses them for location and city marketing.

People and quality of life

- In a Smart City the focus is on people and their needs. All smart solutions contribute to the sustainable development of humans.
- The Smart City generates and supports structures that allow the following:
 - human interaction
 - the fulfilling integration into a functioning social system
 - the integration of the capabilities of individuals
 - room for individuality
 - diverse ways of living
 - to strengthen the ability to overcome crises (via social inclusion, integration and urban facilities)
- The Smart City provides accessible, affordable or free sharing offers, which are ecological and include all phases of life.

The City and its surrounding

- The Smart City considers areas outside of its administrative boundaries and takes into account interdependencies with neighbouring communes and their inhabitants.
- The Smart City has a comprehensive perspective, particularly in the following fields:
 - mobility
 - construction and green space
 - social infrastructure (education, health, medical services, culture, etc.)
 - technical infrastructure
 - economy
 - innovation
- Following these principles, the Smart City makes all decisions together with the neighbouring communes and targets a joint future development.
- The Smart City aims the establishment of institutionalized decision and financing structures for the whole city region.

Community and communication

- The Smart City communicates new developments at an early stage, invites stakeholders to contribute and decides in a transparent and traceable way.

Networking

- The Smart City provides an intensive exchange of knowledge and the network for the development, realization and utilization of innovative ideas and solutions.
- These networks support the interactions of
 - providers of knowledge and know-how
 - seekers of knowledge and know-how
 - solutions
 - seekers of solutions
 - institutions
 - initiatives
 - companies

Innovation and adaption

- The Smart City is progressive. It provides a positive long-term development in all areas through bold new ideas and flexible, intelligent and robust concepts.

Urban spaces / buildings / land uses

- The Smart City integrates and promotes communication, interaction, mixed uses, diversification and green space for the benefit of humans and nature.

Smartness in stock

- The Smart City cares for inherited assets and values (monetary, non-monetary, non-material) and tries to activate underused potentials in their life cycle.

Mobility

- The Smart City generates an interconnected, optimized and expanded mobility infrastructure to provide fast, convenient, safe and self-determined travel.
- By providing attractive sustainable modes of transportation, the Smart City minimizes individualized car traffic.

Resource efficiency and reduction of emissions

- The Smart City pursues closed material flows and tries to operate in a self-sustaining and climate-neutral way

Networked infrastructure

- Networked infrastructure implies activating synergies in the interaction between supply and demand

Technology (Design for all)

- The Smart City provides a simple and independently usable built environment (assets and services). New technologies are designed for specific needs of humans and provide a significant benefit for the people.

4.

The Smart City generates

Innovation for people

- progress
- better decisions
- ideas and solutions
- local, individualized solutions
- technology for the benefit of people
- clear frameworks

Prospects

- future security secured resources and security of supply survival
- climate protection
- opportunities to handle growth and decline constructively
- opportunities to strengthen local peculiarities

Quality of living

- community
- inclusion
- fairness
- improved quality of life
- more options
- opportunities for active participation
- vibrant urban life
- satisfied citizens in the long run
- space for individuality
- short distances and saving of time

Economic development

- locational advantages
- new business models and business opportunities
- jobs
- affordability
- balance of interests

5.

The Smart City challenges us

Management, governance and organization of the city

The Smart City requires the organization of politics and administration to achieve a sustainable and liveable city, that focuses on the human and its benefit.

Politics:

- securing connectivity and the ability for governance in the long term
- providing space for creativity and spontaneous actions
- when necessary, adjust standards to the benefits (as opposed to allow the benefits within the framework of the standards)
- create fair cooperation between central administration (city), decentral administration (district, neighborhood) and administration in the neighbouring communes

Administration:

- generate the necessary structures for the implementation of the Smart City concept in the city administration
- generate awareness among key actors of the city
- address challenging factors of the city proactively in the strategic planning
- establish strategic and integrated budgeting and communicate the economic benefits of the Smart City
- support implementation initiatives outside of the administration

Innovative infrastructure

The Smart City requires to adopt existing or outdated infrastructure to future standards

- establish interdisciplinary concepts and planning teams which consider all objectives of the Smart City
- implement a smart and flexible infrastructure, that can be operated in an open and adaptive way

Behavior and participation

The Smart City requires to get citizens on board this implies

- to generate awareness for sustainability and other objectives of the Smart City
- showing opportunities for implementations in people's everyday lives and support necessary behavioral adjustments
- online - calculators - szenario games
- „motivation points“
- attractive assets and incentives (Mobicard, Smartmeter, etc.)

Development and renewal of urban areas

The Smart City requires to develop and renew urban areas in a smart way

- systematically adapt the Smart City concept to urban areas
- view urban districts as an integrated and interdisciplinary construct and embed them into a smart concept. Important topics are:
 - social diversity and inclusion
 - easy participation in urban life
 - open and green spaces
 - structure of the built-up area
 - accessibility and avoiding barriers
 - utalization of the ground-levels of buildings
 - production and provision of energy
 - supply and waste disposal
 - mobility
 - mixed uses
 - solar radiation and sunshades

6. How we will cope with the challenges

For the successful transformation of a city into a smart city, its set of processes are significant. The city must adapt them early enough to be on the one hand capable to overcome future challenges and on the other hand, to be able to implement innovations and react to unpredictable developments. Decisive is the political will to implement smart and sustainable development.

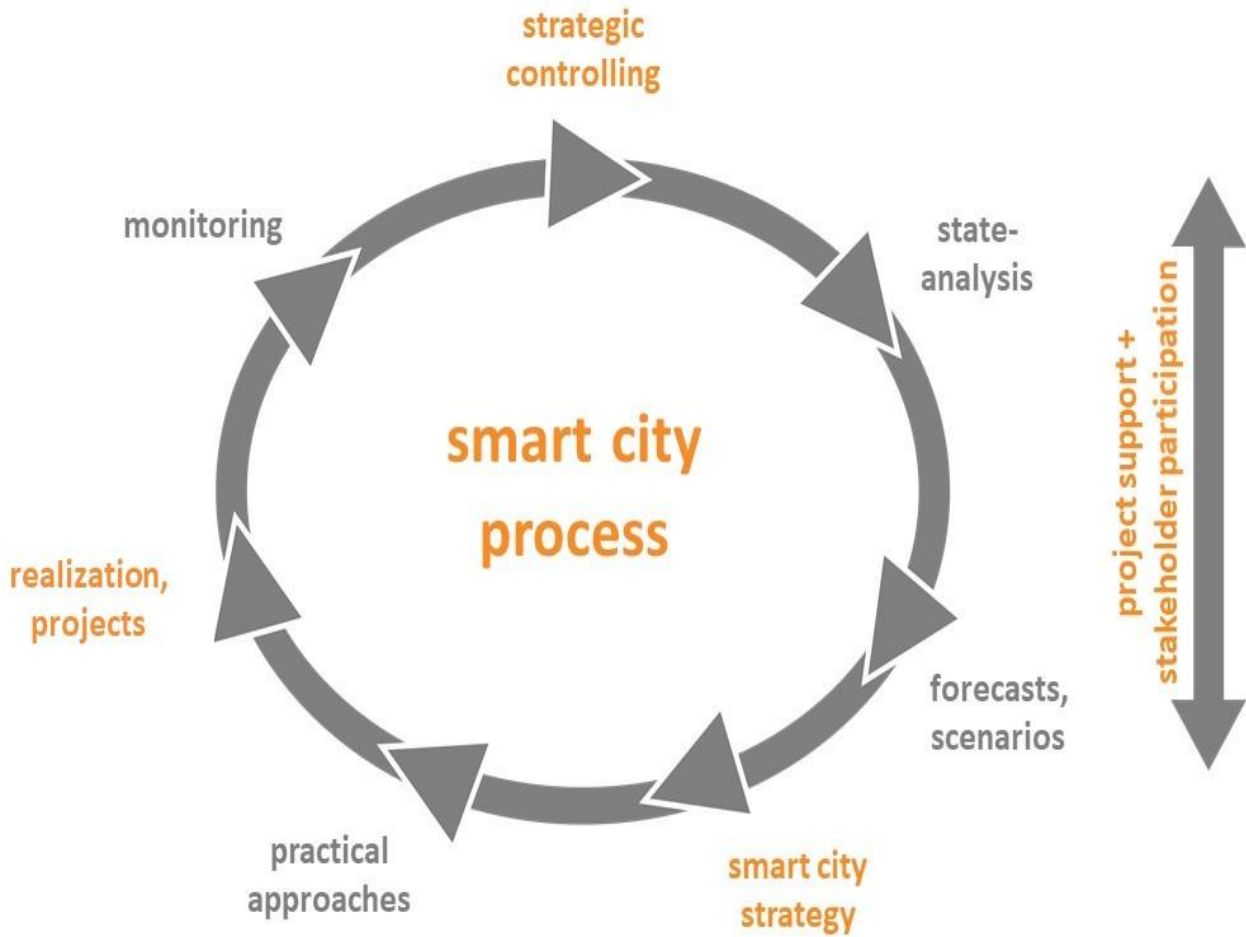
As an initial step it is advisable to analyze the city's strengths and threats in detail, in order to find specific and suitable solutions for the transition into a Smart City. Therefore, ÖGNI does not provide a checklist, but provides an individual, expert generated path towards a smart future. The following steps lead to success:

- define simple and easily understandable goals
- analyze the specific strengths and threats of the city with the support of experts
- if necessary, adapt the goals and find a broad consensus in the commune
- define specific topics and fields of action
- start implementing specific projects in cooperation with experts

Be open for new developments during this process and focus on the holistic system This can be supported by:

- an experienced, innovative and neutral external advisor supporting the process
- process monitoring with transparent criteria
- a broad participation of stakeholders

The following graph shows the Smart City process recommended by ÖGNI. It integrates the steps to success into a systematic and continuous improvement process:



7.

Suggestions for overcoming the challenges

Management and governance of the city

- Develop a Smart City strategy with clear Smart City goals with political commitment
- establish a strategic control system – consisting of decision, planning, implementation and monitoring – in the city administration to systematically implement the Smart City goals
- integrate the Smart City controlling into the political and administrative structures of the city
- implement the Smart City process with intensive participation of citizens and stakeholders

Innovative infrastructure

- Study national and international best practice cases and implement them adapted to the local context
- be courageous and open to test new solutions in pilot projects

Behavior and participation

- find ambassadors who are capable of communicate the topics in a clear and understandable way
- cooperate with young people and use them as multipliers
- combine complex topics with attractive and activating actions
- use innovative communication strategies to activate participants
- intervene if necessary and appropriate

Development and renewal of urban areas

- Quarter management
 - control neighborhood-based developments (benefits)
 - branding of the quarter
 - organize developer calls to coordinate the development in the neighborhood
 - mobility management (e.g. shared parking garages for the whole neighborhood, whose revenue contributes to the communal infrastructure and public spaces)
- implement a management of the groundfloor-level zones (coordinated governance via administration, marketing, special contracts, etc.)
- decentralized energy production connected to the overall network (Viertel Zwei, Västra Hamnen)
- value-based-planning

8.

How you can support ÖGNI

You can contact ÖGNI with all your questions concerning Smart Cities. With our network we provide access to a wide range of experts for questions, events and projects as well as additional tools like the DGNB quarter certificate and building certificates.

JOIN the DIALOGUE

We invite you to actively participate in our Smart City discussion. Please contact:



**ÖSTERREICHISCHE GESELLSCHAFT
FÜR NACHHALTIGE IMMOBILIENWIRTSCHAFT**

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