SMART CZECHIA: AN INTEGRATED APPROACH TOWARDS SMART CITIES

Report - Webinar for Czechia, 28 July 2020

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The webinar **SMART Czechia: An Integrated Approach towards Smart Cities** was held on **28 July 2020**. It was organised by the EUKN on behalf of the Czech Ministry of Regional Development, as part of the EUKN ‘Thinking Beyond the Crisis’ series. The goal of this webinar was to engage representatives of Czech cities and European experts in a discussion on the SMART Czechia concept. This is a strategic document that has been drafted by the Czech Ministry for Regional Development to respond to the pandemic and, in particular, its impact on local authorities.

This report, produced by the EUKN Secretariat, covers the presentations given during the meeting and the final discussion, offering insights into the SMART Czechia concept and the role of smart city approaches in tackling the impact of the pandemic.

To consult the programme and the presentations from this webinar, you can visit the dedicated page on the EUKN website.

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**About the EUKN**

The European Urban Knowledge Network (EUKN) EGTC is the only independent, Member State-driven network in the field of EU urban policy, research and practice. The EUKN supports its members with strategic knowledge and advice on urban matters. The EUKN delivers strategic knowledge to its members through tailor-made activities, network-wide activities and external activities. The EUKN has been closely involved in the establishment of the Urban Agenda for the EU and the global New Urban Agenda, and has been actively supporting the further development of these strategic agendas through events and research.

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Welcome on behalf of the Czech Ministry of Regional Development
Věra Karin Brázová, Head of Urban Policy and Strategies Unit

Ms Brázová opened the webinar explaining the rationale behind the event. In the context of the COVID-19 crisis and in the perspective of economic turndown, the Czech Ministry for Regional Development (MMR) has been undertaking research to understand what strategies they can implement at the national level to support cities in the long-term. To this end, the Ministry has started collecting examples of local emergency solutions from across the country.

A few interesting learnings and actions for the national level have emerged:
1. To work in an integrated way in the public administration, avoiding silos;
2. To support cities to be more resilient, especially via smart approaches;
3. To boost Czech businesses and startups, and encourage local governments to collaborate with them;
4. To invest in smart solutions as enablers for cities to become more resilient and bounce back economically, as shown by the unprecedented wave of digitalization over the past few months.

Building upon these learnings, MMR drafted recommendations for other Ministries and compiled them into a comprehensive national strategy for supporting smart solutions at the municipal and regional levels: the SMART Czechia concept.

Welcome by the EUKN
Mart Grisel, Director EUKN

Mr Grisel referred to the COVID-19 crisis as a major game-changer for cities and then explained the EUKN's initiative ‘Thinking Beyond the Crisis’. Through this initiative, the EUKN aims to help its members to deal with the after-effects of the crisis via a series of activities exploring the impact of COVID-19 on cities and envisaging national level strategies to support cities and regions in their long-term recovery.

The SMART Czechia webinar - the first of this series - was designed to explore these topics and, in particular, the role of smart solutions. It addressed questions such as: what does COVID-19 mean for smart cities? And, in this new context, how can we find a balance between social equity, smart technologies, innovation, and economic development?

After explaining the webinar programme, Mr Grisel launched a poll to find out whether the participants were familiar with the SMART Czechia strategy: 55% of the participants answered yes, 29% ‘no’, and 16% ‘to a certain extent’.

Keynote speech: Vienna’s smart city approach
Dominic Weiss, Head of Smart City Agency, Urban Innovation Vienna

Mr Weiss gave a compact and holistic overview of Vienna’s smart city approach, reflecting also on how it could be affected by the COVID-19 crisis. He first gave the audience a warning: that governance issues can hinder the effective implementation of ‘brilliant solutions’ developed by experts and civil servants.

Mr Weiss presented the four pillars of Vienna’s smart city approach: 1) green spaces, 2) public ownership of all infrastructures, 3) eco-mobility, and 4) affordable housing.
Elaborating on the concept of eco-mobility, Mr Weiss emphasised the importance of supporting smart approaches that are local and embrace a city's unique strengths and weaknesses. For instance, ‘Vienna has never been a cycling city and is not willing to become one’. As a result, the Viennese public administration invested in the existing strong public transport culture, making it one of the pillars of its smart approach. Mr Weiss also drove home the pivotal importance of the 4th pillar: access to affordable housing. Around 60% of Viennese citizens live in flats totally or partially owned by the city - and this is ultimately what makes living in Vienna extremely affordable. As Mr Weiss explained, ‘if you offer your citizens a very high quality of life for a very affordable price, it is no longer about IoT or fancy grids. Smart housing is smart living!’.

Mr Weiss then explained how Vienna’s Smart city framework (Figure 1) was created. In 2014, the city decided to use ‘smart’ as a buzzword around which they could create a framework and implementation guidelines, ‘just like Czechia is doing now with the SMART Czechia concept’. This framework became the Smart City Paper, which was signed by the city council as a strategic and binding document that every government department and company had to work towards. Mr Weiss highlighted that cooperation between cities and the national level has been also key to the implementation of smart solutions. In Austria, a Memorandum of Understanding has been signed between the national level and the country's ten major cities. As part of this, they all meet once a month to discuss the cities’ interests and concerns, enabling the national government to gain a better understanding of cities’ needs and better define national priorities.

Mr Weiss also offered an interesting insight into Vienna’s response to the COVID-19 crisis. He emphasized the pivotal role that Austrian decentralisation in general and Vienna’s unique status as a city-state played in enabling the city to act promptly when the crisis hit. For example, the city government was very quick to implement a series of smart solutions for home-working and home-schooling as soon as the lockdown period began. Indeed, ‘150 million was invested in just one month to implement home office systems for government-owned companies. We did a lot for our local entrepreneurs to give them the right support to be ready for this crisis’.

To conclude, Mr Weiss focused on some smart city project examples from Vienna, which he used to elucidate a number of recommendations for the Czech Ministry:

1. **Establish public-private partnerships** - Mr Weiss referred to these partnerships as ‘the future of smart cities when it comes to financing’. He shared the example of the Aspern Smart City Research (ASCR), a joint venture with Siemens where the company could test its technologies with real users, using the infrastructures of the city of Aspern. He also noted that many of the most innovative social enterprises in Vienna are government-owned companies. This way, they have the freedom to experiment while maintaining a focus on the common good.

2. **Focus on legal competences** - Mr Weiss stressed the fundamental importance of providing adequate legal support to safeguard cities’ interests and establish the right contracts with private
companies, when establishing public-private partnerships.

3. **Involve your citizens** - The city of Vienna encourages citizens to invest in the city’s infrastructures. For example, the city government’s project *Citizens Power Plant* invites citizens to invest their savings in local renewable energies, instead of simply putting them in the bank.

4. **Focus on social innovation** - While the city of Vienna is not the strongest when it comes to using participatory budgets, it is beginning to offer them to citizens via calls and juries, in recognition of the fact that ‘it is a good investment - a quick and easy win’. This allows citizens to shape their own city and improves government-population relations.

### Smart cities: part of the Czech urban policy

**Věra Karin Brázová, Head of Urban Policy and Strategies Unit**

Ms Brázová thanked Mr Grisel for the introduction and pointed out that the public good needs to be the primary focus of any public administration. She then specified her presentation’s main goal: to give some context about how the SMART Czechia concept was conceived from the Ministry’s perspective.

The smart city concept represents one part of the Czech ‘urban development mosaic’ (Figure 2) and, in this respect, efforts have been already dedicated to this topic. However, the Ministry would like to incentivise these efforts and move towards a more ‘cross-cutting way of implementing and tackling this topic’. They aim to adopt a more holistic approach towards the smart city concept and use it as an instrument to foster integrated urban development in Czech cities. The Ministry adopted a specific methodology to develop the SMART Czechia concept, involving activities of sharing knowledge and best practices as well as funding research and innovation.

Coming back to the opening ‘warning’ of Mr Weiss about the problem of implementation, Ms Brázová reported that the Czech Ministry is investing in pilot projects to transform ideas into actual solutions, in an attempt to combat this issue. Two example pilot projects were mentioned:

1. **Supporting 5G in Five Cities** - Five cities were selected, based on submitted proposals, to be part of a support programme for 5G technology pilot projects.

2. **A Systematic Approach to Financing Smart Solutions** - This project is supported by the EU Commission and carried out in cooperation with the Netherlands’ VNG. It aims to establish a functional, sustainable and inclusive national platform to promote the implementation and financing of smart solutions in the public domain. Ms Brázová noted - ‘what we hope to see is an increased investment in key areas to improve public services via smart solutions, going forward’.

Ms Brázová closed her speech by highlighting the importance of embedding new developments at the EU level (New Leipzig Charter, Urban Agenda for the EU, European Urban Initiative), national strategic documents, and the lessons learned from the COVID-19 crisis into the SMART Czechia concept.

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**Context**

- **Smart Cities** = one of the Ministry’s competencies (under regional development / urban development)

- From a part of a "urban development mosaic" to a cross-cutting issue

**Figure 2: Czech urban development mosaic**

*Source: Presentation of Věra Karin Brázová for the SMART Czechia webinar (2020).*
Ms Bízková underlined the high privatisation of services in the Czech Republic as being the key difference between the city of Vienna and Czech cities, noting that the latter have significant limitations in becoming ‘smart’ due to this. While in Vienna, data is publicly owned and available, Czech municipalities often do not have access to the data they need, owned by the private service operators.

The goal of the SMART Czechia concept is strongly anchored in the idea of sustainable urban development and aims to provide high quality of life for all citizens, from the biggest city to the smallest village. The development process of the document, which was finished in February 2020, involved an additional and final review to integrate the lessons learned from the COVID-19 crisis.

The high fragmentation of the Czech Republic and its dispersed population distribution presents challenges in terms of infrastructures and public services. After the lockdown, there was an increased awareness of the need to deploy smart and innovative solutions to tackle these challenges. These can be seen as ‘the railway of the present’, both in terms of their revolutionary nature and their potentiality to make good public services available to everyone within the Czech decentralised system. Through this, Czech citizens would no longer be forced ‘to move to a place that they don’t call home’ to pursue high quality of life.

Ms Bízková mentioned two key action-learnings that emerged from the crisis:

1. **To enhance local entrepreneurship** to increase both the competitiveness of the country and the well-being of its citizens.
2. **To optimize the utilisation of available resources** by adopting smart solutions.

Coming to the SMART Czechia concept itself, Ms Bízková explained that the Ministry (MMR), to avoid providing a static definition of the ‘smart city’, defined the concept using **seven principles**. These are: 1) change of direction, 2) Resilience, 3) one measure with more equivalent approach, 4) short distances, 5) cooperation to achieve effective solutions 6) cohesion and complementarity, and 7) evidence-based solutions relying on open data and transparency.

To conclude, Ms Bízková presented the **structure** of the SMART Czechia concept (Figure 3), which was conceived under the umbrella principle of resilience. It rests upon three pillars:

1. **People and communities** - The government needs to provide certainty to the citizens that they will be taken care of;
2. **Local Economy** - The government should support a decentralised, energy-efficient and circular economy that supports start-ups and innovative businesses;
3. **Environment for life** - The government should promote the use of infrastructures that are environmentally-friendly - such as green and blue infrastructures - to protect nature and provide good living conditions for citizens.

After thanking Ms Bízková for the rich presentation, Mr Grisel closed the first part of the meeting with a third poll. The question ‘to what extent you think it is important to have such a national level umbrella strategy’ was answered as follows: 2/3 ‘yes’, almost 1/3 ‘to a certain extent’, and only 6% ‘no’.
# The Overarching Concept

## Resilience
**Through SMART solutions for municipalities, cities and regions**

**Components:**
1. Public administration is a service to people (digitisation)
2. SMART solution as a basic principle of integration (Czechia without digitally excluded localities)
3. Common solutions
4. Partners at home and abroad (brand of innovative Czech Republic)

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## The Three Pillars

### A: People and Communities
**Resilient Czechia**

**Components:**
1. Education as a basis for quality of life
2. Social and health services in every place
3. Social resilience
4. Quick response

### B: Local Economy
**Rich Czechia**

**Components:**
1. Entrepreneurship as a natural part of the life of a municipality, city and region
2. Prosumers - citizens and municipalities as partners of energy suppliers
3. Raw materials and “raw materials” in the circular economy
4. ICT infrastructure - a basic prerequisite for the success of digitisation

### C: Environment for life
**Green Czechia**

**Components:**
1. Environment for quality life in municipalities, cities and regions
2. Natural infrastructure in strategic and spatial planning
3. Green and blue infrastructure of cities and municipalities of the future
4. Transport infrastructure and mobility adapted to people

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*Figure 3: Structure of the SMART Czechia concept Source: SMART Czechia English summary, EUKN Secretariat (2020).*
Mr Štěpánek opened by mentioning the Czech admiration for the city of Vienna and the quality of its governance. He specified that the Czech University of Prague provides support to the Czech Ministry by developing methodologies centred around governance and innovation.

Like Ms Bízková, Mr Štěpánek mentioned the rather peculiar geography of the Czech Republic. The challenge, from his perspective, is to design services for the country’s large number of municipalities, engendering sustainable cities and a higher quality of life in both cities and the rural periphery, all while avoiding unstructured suburbanisation. Smart solutions can help here but rigid building regulations often restrict the ability of architects and urban planners to implement them.

Continuing on the topic of architectural design and urban planning, Mr Štěpánek showed two pictures of housing settlements. The first (Figure 4) depicted a suburban area close to Prague, which was once agricultural land and has recently been transformed in a low-density residential area. Czech citizens are moving away from city centres to these kind of peri- and suburban areas because housing in cities like Prague has become too expensive. Referring to this picture, Mr Štěpánek corroborated Mr Weiss’ previous words that ‘smart housing makes a smart city’. Without it, people are simply displaced further and further outside the city. Beyond urban planning and architecture, sufficient access to affordable housing is key as it ‘can offer social innovation as well as quality of life and of the physical environment’.

The second picture (Figure 5) depicted an extremely dense urban area built at the beginning of the XIX century. The high-density represents the smart character of Prague as ‘density is essential. It brings prosperity and competitiveness, and this is where people want to live’. The real challenge for architects and urbanists is to find a way to smartify cities without destroying their architectural value, which can be even more important than technology.

Another aspect covered by Mr Štěpánek was the important influence that administrative frameworks have over the adoption of smart approaches. Mayoral approaches are very diversified in the Czech Republic and this affects how smart solutions are adopted, implemented, and endorsed by citizens. Thus, a coherent and national approach to what ‘smart’ really means is needed, in order avoid it remaining an
empty buzzword. In this respect, partnerships should be created between the national government and mayors.

Additionally, public administration must support cities’ experimentation in sectors where failure is a risk. Smart cities cover several sectors and in some of them the market can fail. Participatory funding provided by the government is a possible solution here.

**Collaborative practices in Europe**

**Daniela Patti, Director of Eutropian**

Ms Patti underlined the crucial importance of national level support, at this point in time, to respond to the COVID-19 crisis. She then shared her appreciation for the SMART Czechia concept and presented the two core points of her presentation: 1) collaboration as a way of being smart and 2) public administration as a platform to enable cities to develop in an inclusive and collaborative way.

Eutropian’s platform Cooperative City ran a series of webinars throughout lockdown, exploring what was happening around Europe in the highest peak of the COVID-19 crisis. The most prominent issue to emerge out of this series was the huge social and economic crisis that countries are now facing. In this context, social entrepreneurship and the social economy should be prioritised and invested in to ensure that no-one is left behind in the recovery. Ms Patti reminded the participants: ‘we have worked for many years to ensure sustainable inclusive development and we have to build on this now’.

Ms Patti then provided some concrete recommendations for the SMART Czechia document:

1. Make the social economy, in the broadest sense of the term, the red thread of the strategy and the means to achieve its goals. Investing in the local economy and working with local actors is crucial since ‘where you choose to invest your money will affect where the wealth is produced’.
2. Build on existing efforts and frameworks, such as the Urban Agenda for the EU. The UEAU and its three pillars – Better Regulation, Better Knowledge, Better Funding – highlight the importance of avoiding siloed working.
3. Ensure that the three pillars of the strategy are interconnected - be smart and create synergies among the pillars to foster collaboration.
4. Make two elements more prominent in the document: 1) the issue of space, and 2) labour conditions. The latter are generally a national competence; thus, the SMART Czechia concept is a ‘wonderful chance’ to make sure good labour conditions and rights are an integral part of smart city development.

**Nice: the smart and sustainable metropolis**

**Alain Chateau, Smart City Project Director/Head of Metropolitan Centre of Excellence, Metropole Nice Côte d’Azur**

Mr Chateau started his presentation by giving some background about how and why the Nice metropolis decided to become ‘smart and sustainable’. For more than a century, the economy of Nice centred around tourism and agriculture. In 2018, the mayor of Nice, Christian Estrosi, decided that it was time to diversify the economy to stimulate further economic development and ensure resilience. Without any industrial heritage, Nice was forced to focus on innovation for economic growth, leading the city to develop a smart city strategy.
The Nice Métropole (Figure 6) is a cluster of 49 municipalities, with Nice as the largest of these. Most of the population live in densely populated urban areas, taking up only a fraction of the whole region. It is a very heterogenous territory; as a result, it is challenging to distribute services throughout the area. The territory also lacks a diversity of assets. Thus, the smartest solutions to these issues would be those that respond to these challenges and weaknesses and turn them into innovation opportunities.

After this introduction, Mr Chateau shared a few key learnings from Nice’s smart city experience:

1. **Territorial data is a patrimonial asset** and this data needs to be shared in order to fuel the entrepreneurial and academic local ecosystem.

2. Public administration needs to **control the data lifecycle**: this is why Nice adopted and built their own centralized management system/platform, based on an open standards framework, to guarantee data and systems security. This also meant that the platform can be replicated by other territories.

3. There is no way that local governments can innovate alone: they need to create an **ecosystem of innovation** with a network of actors who foster innovation together (including SMEs, citizens, and academic institutions). To thrive, this ecosystem requires an ad-hoc, experimental environment and a methodology for collaboration. Cities can benefit from private-sector innovation by offering themselves up as ‘living labs’. Thanks to its territorial diversity, Nice is the perfect place for companies to test innovative solutions that they can later replicate and sell.

A new smart city paradigm has recently began to emerge for the Côte d’Azur, partly due to the COVID-19 crisis. This new paradigm rests upon:

1. **Decentralisation and devolution** – many cities in France were expecting support from the national government during the crisis, but all they got was compassion. To improve public-service efficiency and responsiveness, the central government needs to devolve key responsibilities and funds to local administrations.

2. **Decarbonisation** – environmental sustainability should be an overarching concept within any smart city strategy.

3. **Digitisation** – you need to open up your data to the public to foster innovation, even if doing so is a complex process. Data is the cornerstone of the local economy, as well as of the social and urban life.

Ultimately, Mr Chateau highlighted that, when it comes to creating a smart city or regional strategy, governments need both to ‘think big’, adopting a holistic perspective, and ‘act small’, taking little steps to produce results quickly.
Final comments from speakers and participants

Nikolaus Summer, Senior Expert at the Smart City Agency, Urban Innovation Vienna, intervened to share his thoughts on the SMART Czechia concept. Firstly, he underlined the similarities between the Czech Republic and Austria. Like Czechia, Vienna has one big metropolitan area and a variety of smaller rural areas. Vienna also took an overarching, holistic approach to smart city development.

Secondly, Mr Summer focused on the key learnings that Vienna can offer Czechia:

1. **Manage complexity via good governance and monitoring** - It is crucial to monitor progress constantly in order to capture what is happening on the ground and manage complexity.

2. **Beware of target conflicts** - With such complex strategies, topical interrelations and target conflicts are common. COVID-19 has also exacerbated target conflicts at the city level (e.g. compact cities vs. social distancing; e-governance services for the elderly vs. lack of digital inclusion; home and remote-working vs. lively, dense cities and neighbourhoods). It is crucial to take such interrelations and conflicts into account when developing a smart city strategy.

3. **Focus on implementable projects** - To ensure that all this innovation can be transferred from smaller cities to bigger ones, and vice versa, complexity needs to be reduced by focusing on specific projects. It is important to first understand which are the ‘must haves’ and which are the ‘nice to haves’, and then to identify who will be in charge of implementing the various elements of the project.

4. **Measure the social impact** - Vienna studies and monitors the social consequences of its technological innovations, looking at how citizens are actually using the proposed smart solutions.

On the topic of public-private partnerships, **Mr Chateau** stressed that many governments are not cautious enough and forget to specify data collection methods and accessibility while defining contracts with private service operators. It is really important to standardise the data format across solutions and to use or create your own platform to easier access and visualise data. This infrastructure is needed because otherwise you could have available data, but be unable to use, control or share it.

**Lucie Nenckova** mentioned that in Czechia there have been some new activities related to open data at the national level, but municipalities, especially the smaller ones, do not know how to use and benefit from this data. Responding to Ms Nenckova, **Mr Grisel** highlighted the importance of capacity building.

**Leonard Walletzký**, researcher at the Masaryk University, emphasized the complexity of publishing data. The data not only need to be collected but also regularly updated: old data is obsolete data. Smaller cities do not have the resources to publish and update data on their own, so they need to create partnerships and cooperate with each other, as well as with other organisations.

**Closure on behalf of the Czech Ministry of Regional Development**

Věra Karin Brázová, Head of Urban Policy and Strategies Unit

Ms Brázová thanked the speakers and the organisers for the insightful meeting. Wrapping up she mentioned the need to focus on the social economy and social innovation, as well the importance of the economic dimension, as important lessons from the webinar. She then referred to the **COVID-19 crisis** as a window of opportunity to rapidly test and implement innovative solutions. As she emphasised, ‘it is our responsibility to seize this window and build more resilient cities’.