



JOINING FORCES TO BOOST DIGITAL TRANSFORMATION IN EUROPE'S CITIES AND COMMUNITIES

“Collaborate, Empower, Sustain”

We, the EU, national, regional and local decision makers together with the main organisations, networks and initiatives of cities¹, believe in a strong European cooperation between all levels of government in the EU to achieve a better uptake, further enhancement and upscaling of a citizen-driven digital transformation in cities and communities.

Europe's digital transformation happens locally. With about 75% of EU citizens living in urban areas, cities and communities are hubs of growing collaboration and innovation. They are innovation ecosystems where governments, researchers, businesses and citizens are joining forces to design, develop, test and operate smart and sustainable solutions.

In the past few years, we have seen different EU and city initiatives² moving the smart city agenda forward and achieving new levels of collaboration and innovation. A significant number of EU-funded projects, including the lighthouses and large-scale pilots, have produced considerable results, supporting cities and communities in the quest to become more resource efficient while also delivering better public services. This declaration builds on the declaration of the Digital Cities Challenge initiative signed in December 2018, by the mayors of the cities participating in the initiative. Through the declaration cities commit to cooperate on digital transformation and smart growth³.

¹ EURO CITIES - the network of major European cities; OASC - Open and Agile Smart Cities; ENoLL - European Network of Living Labs, EIP SCC - European Innovation Partnership on Smart Cities and Communities; DTP UA - Digital Transition Partnership of the Urban Agenda for the EU.

² E.g. the EIP-SCC, the Digital Cities Challenge, the Digital Transition Partnership of the Urban Agenda of the EU, SCIS, Urban Innovative Actions, URBACT and the EU Cohesion Policy.

³<https://www.digitallytransformyourregion.eu/sites/default/files/2018-12/Digital%20Cities%20Challenge%20Declaration%20of%20Cooperation.pdf>

This declaration is in line with the “Digital Europe for all” strategy proposal⁴ from the Committee of the Regions (CoR) which aims to enable regions, cities and all the local communities across the EU to benefit from the Digital Single Market. This strategy supports the sharing, scaling up and measuring of success of digital solutions at the local and regional level.

Despite the high level of investments and activities the impact on society across Europe in terms of a citizen-driven digital transformation remains limited. Replication and a large upscaling of innovative digital solutions in cities are not happening. This undermines the EU’s and cities’ ability to effectively tackle urgent challenges, including the growing urban populations, climate change, security and social inequalities, while leveraging economic growth for all ecosystem players, including SMEs.

It is time to join forces to boost upscaling of digital solutions so that at least 300 million citizens can benefit from better quality of life by 2025.

A Common Agenda for upscaling digital solutions

1. We agree on the following principles for Europe’s digital transformation

- Citizen-centric approach

Europe’s digital transformation is a process to be developed for and with people. Ensuring sustainable urban mobility, energy efficiency and sustainable production, accessible housing, waste management and good digital public services, while creating quality and qualified jobs and making a more equal and inclusive society are at the core of smarter cities. Citizens play a central role in developing and implementing smart city strategies and solutions. Connecting and engaging with citizens while empowering them to be part of policy making and co-creation of solutions is key for successful smarter cities and communities.

- A city-led approach at EU level

The EU strategic cooperation to boost upscaling recognises the importance of a city-led approach. Being the level of government closest to citizens, local authorities are best placed to understand the needs of citizens and to coordinate an integrated approach that connects local, regional, national and European ecosystem players.

- Technologies as key enablers

Technologies are a means rather than an end for the digital transformation of our cities. It is the combination of the most advanced technologies and the simplest solutions that make our cities smarter.

- Socially responsible access, use, sharing and management of data⁵

A vast quantity of digital data is produced every day. Those data must be used responsibly while also taking care of protection of data and citizens’ privacy. Misuse of data including

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<https://ec.europa.eu/digital-single-market/events/cf/digital-assembly-2019/item-display.cfm?id=23696>

⁵ See EURO CITIES principles on citizen data (<http://www.eurocities.eu/eurocities/documents/10-principles-for-good-data-WSPO-BAQBGU>) and the Cities Coalition for Digital Rights <https://citiesfordigitalrights.org>

unauthorized data sharing, reselling customer data or biased algorithms that reinforce social inequalities are practices to fight against. Digital data must solely be used in the public interest to improve decision making and ensure better public services. Local governments support practices and initiatives that foster a better use and management of data, including the once-only and the privacy by design principles, to improve people's life in cities and communities.

- The city as a citizen-driven innovation ecosystems

Cities and communities are the ideal real-life testing ground for digital solutions. They are in a position to lead or support the orchestration of stakeholder participation ensuring active citizen-involvement in a co-creation environment. Cooperation and ownership, by all stakeholders, through a process of open innovation is vital for the success of Europe's digital transformation.

- Interoperable urban platforms with open standards, APIs and shared data models

Urban platforms are the 'operating systems' of smart cities services and are needed to handle the growing range of stakeholders and data across various sectors. Interoperable urban platforms promoting open standards, open APIs, and shared data models are crucial to remove barriers such as vendor lock-in and non-interoperable proprietary protocols. Interoperable urban platforms are essential for innovative and cost-effective solutions across all Europe as they create open and interoperable ecosystems and they can be extended to function as spaces for creative experimentation.

2. We recognise the existing successful digital solutions

EU funded and local pilots as well as supporting actions and partnerships have produced standards, mechanisms, services, guidelines and tools to enable interoperability of urban platforms, with a strong impact locally and significant EU added value, including:

- **SAREF⁶**: The Smart Appliance/Anything REFerence (SAREF) ontology, an ETSI/OneM2M standard, is a shared model of consensus that facilitates the matching of existing assets, such as standards, protocols, and data models. It consists of base ontology and extensions for the sectors including one for cities (SAREF4CITY). A combined city solution based on SAREF and NGSI-LD has been successfully piloted in the SynchroniCity project.
- **OASC Minimal Interoperability Mechanisms (MIMs)⁷**: The MIMs are universal tools for achieving interoperability of data, systems and services between cities and suppliers. Implementation can be different, as long as crucial interoperability points in any given technical architecture use the same interoperability mechanisms. They are vendor-neutral and technology-agnostic, meaning that anybody can use them and integrate them in existing systems and offerings;
- **Urban Platforms**: Open standards and open source components such as the EIP-SCC DIN SPEC 91357 Reference Architecture Model Open Urban Platform (OUP)⁸ developed in collaboration with the EU project Espresso, the SynchroniCity

⁶ <https://www.etsi.org/technologies/smart-appliances>

⁷ See OASC Minimal Interoperability Mechanisms:

<https://oascities.org/wp-content/uploads/2019/06/OASC-MIMs.pdf>

⁸ <https://www.din.de/en/about-standards/din-spec-en/wdc-beuth:din21:281077528>

Reference Architecture⁹, and the FIWARE Reference Architecture¹⁰, support cities and communities to remain agile and avoid vendor lock-in.

- **Mobility Data Portal**¹¹: the mobility data portal is a tool to collect and connect together mobility data in a multimodal dataset and making them available through standardised interface and under a public-private contractual arrangement. The MDP operates as a unique access point to the city's multimodal data and services.
- **Humble Lamppost**¹²: With the goal of deploying 10 Million Smart Lampposts to save energy and costs across EU cities and accelerate their digitalisation, the *Humble Lamppost* project serves as an example of joint procurement and cooperation among the EIP-SCC Action Cluster.
- **The CEF Building Blocks**¹³: The Connecting Europe Facility (CEF) programme has developed a set of generic and reusable Digital Service Infrastructures (DSI), also known as building blocks. Currently, there are eight building blocks: Big Data Test Infrastructure, Context Broker, Archiving, eDelivery, eID, eInvoicing, eSignature and eTranslation. The building blocks can be combined and used in projects in any domain or sector at European, national or local level.
- **SynchroniCity Catalogue**¹⁴: One of the EU-funded IoT Large-Scale Pilots, SynchroniCity has developed jointly with cities, industry, and SMEs, a catalogue of scalable IoT- and AI-enabled services for cities and communities across sectors;
- **OrganiCity Playbook**¹⁵: The EU-funded project OrganiCity has provided a toolkit to kick-start citizen-centric co-creation of digital, data-driven solutions in cities and communities;
- **CITYKeys KPIs**¹⁶: The project has developed and validated, with the aid of cities in the EIP-SCC, local key performance indicators (KPIs) and data collection procedures for the common and transparent monitoring as well as the comparability of smart city solutions across European cities.
- **Smart cities guidance package**: the guide supports local governments to plan and manage smart city projects. While making available existing knowledge, experiences and findings, the guide provides insight into obstacles frequently met during implementation and explore what it takes to scale up and replicate.

We commit to joining forces

We commit to working together to tackle the barriers to interoperability, replication and upscaling of digital solutions in Europe.

As city and community mayors and leaders we commit to:

1. Use the existing and above listed standards such as SAREF and Minimum Interoperability Mechanisms (MIMs) to achieve interoperability of data, systems, and services between cities and suppliers around the world;

⁹ <https://synchronicity-iot.eu/tech/>

¹⁰ <https://www.fiware.org/developers/>

¹¹ www.optocities.com -

[http://www.optocities.com/fileadmin/user_upload/documents/dissemination/OPTICITIES - Transferrability Handbook web.pdf](http://www.optocities.com/fileadmin/user_upload/documents/dissemination/OPTICITIES_-_Transferrability_Handbook_web.pdf)

¹² <https://eu-smartcities.eu/sites/default/files/2018-03/EIP%20Humble%20Lamppost%20v1.pdf>

¹³ <https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/Building+Blocks>

<https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL>

¹⁴ <https://synchronicity-iot.eu/>

¹⁵ https://organicity.eu/wp-content/uploads/2018/06/Organicity-Playbook_2018-1.pdf

¹⁶ <http://nws.euocities.eu/MediaShell/media/CITYkeysD14Indicatorsforsmartcityprojectsandsmartcities.pdf>

2. Using a common marketplace to share data and digital services and solutions among cities and communities;
3. Contributing to a joint investment plan among cities to adopt and implement at large scale common existing digital solutions in Europe.
4. Testing efficient common procurement practices to reduce costs of investments in successful digital platforms;
5. Launching pilots to test the DESI local¹⁷ indicators to measure the benefits for citizens, businesses and other stakeholders;
6. Developing citizen-centric strategic design approaches as a new competence for public sector intermediaries and policy makers. This will help the development of the needed digital skills and technical capacities;
7. Developing a common cross-domain approach to design and implement smart and sustainable local solutions;

To consolidate the efforts on a European level, the European Commission will:

1. Strengthen investments in local digital transformation from EU funds and programmes;
2. Optimise the synergies among EU funds as well as between EU and national funds;
3. assessing the legislative measures to provide a common European framework for the development of cross-domain digital solutions for cities and communities;
4. Provide a common marketplace and accompanying measures for cities and communities to share and re-use common solutions, practices and knowledge;
5. Facilitate and coordinate activities including knowledge sharing, communication, dissemination and consultancy provision, to upscaling successful digital solutions.

To facilitate the process, the Member States will...

1. Develop task forces to actively look for opportunities and intermediate collaboration between stakeholders;
2. Facilitate the coordination of initiatives and activities among cities and communities.
3. Put in place existing or additional resources to enable the upscaling of digital services and solutions.
4. Make available to local level National key enablers including data, infrastructures, services and legislation such as: eID schemes, portals...

¹⁷ The Digital Economy and Society Index (DESI) is the composite index that summarises relevant indicators on Europe's digital performance and tracks the evolution of EU member states in digital competitiveness <https://digital-agenda-data.eu/datasets/desi/visualizations>