



EC Policies on Smart Cities & Communities

ETSI Workshop: Smart cities and communities -
Standardization to meet citizen and consumer requirements

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Franck Boissière - Olavi Luotonen
Programme Officer
DG CONNECT
European Commission

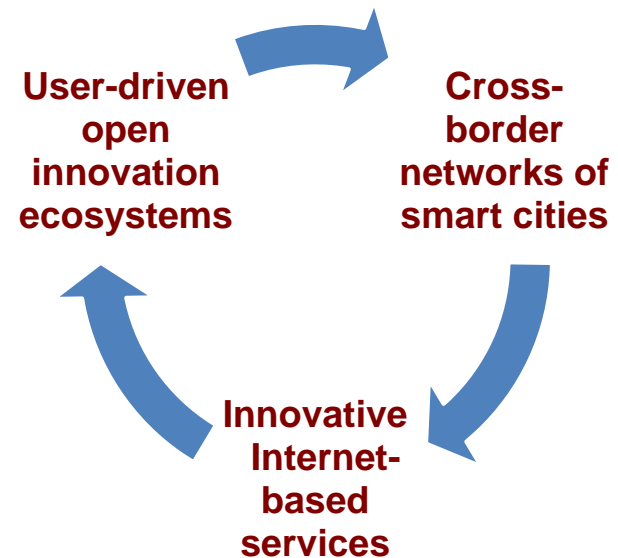
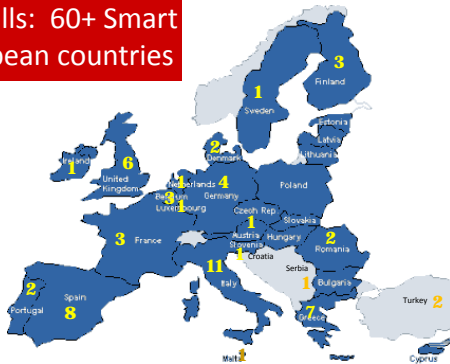


FIRE lady image by Turku Touring

Open Innovation for Future Internet-enabled Services in Connected Smart Cities

- 20+ experimental platforms projects, 50 M€ EU funding
- Boost deployment of Internet enabled services
- Real-life experiments by creative smart citizens

In CIP 2010-12 calls: 60+ Smart Cities in 20 European countries



Supported e.g. by the Competitiveness and Innovation Programme - EC, DG CONNECT, Experimental Platforms



City Service Development Kit

- *City lead pilots and replications - Focus on 3 domains*
 - Participation (e.g. FixMyStreet like)
 - Mobility (Multimodal application)
 - Tourism (tourism routes, events)

<u>City</u>	<u>Smart Participation</u>	<u>Smart Mobility</u>	<u>Smart Tourism</u>
Amsterdam	Pilot	Lead pilot	Pilot
Barcelona	Pilot	-	-
Helsinki	Lead pilot	Pilot	Pilot
Istanbul	-	Pilot	-
Lamia	Pilot	Pilot	Pilot
Lisbon	Pilot	-	Lead pilot
Manchester	Pilot	Pilot	-
Rome	Pilot	Pilot	Pilot



The EIP-SCC

European Innovation Partnership for Smart Cities & Communities



- ☐ 4,600 partners
- ☐ 370 commitments
- ☐ 31 countries

Deliver: scale, acceleration, & impact,...

Through: common solutions, an integrated approach, & collaboration

Focus on Energy, Transport and ICT

H2020

- Lighthouse projects (~100 M€/year; ~4 projects/year; total of ~500M/7 years)
- CSAs (Espresso, CityKeys, etc.)



EIP-SCC
European Innovation Partnership
on Smart Cities and Communities

By the end of phase 3 the PCP ensured SELECT for Cities had 3 platform solutions which went beyond the State-of-Art (SOA) for city dashboards...

SoA: Lean Consent Management

Select Innovation: Manage data owner's consent to leverage personal data lawfully.

SoA: Role based dashboards

Select Innovation: Personalised individual dashboards that can be created and shared by the user based on their needs.

SoA: Data widgets

Select Innovation: Dynamic visualisations (Inc. 3D) enabling users to drill down further into the data to individual sensor level and generate business intelligence.

SoA: Monolithic architecture

Select Innovation: Modular architectures for self healing and auto-scaling.



User-centric design optimised for any device

SoA: Proprietary systems

Select Innovation: Fully open source components using open standards to facilitate open innovation and reduce vendor lock-in.

SoA: Scripted chat bots

Select Innovation: Smart chatbots using Natural Language Processing capabilities for more personalised assistance.

SoA: Real-time information

Select Innovation: Future information. Predictive analytics enables city users to anticipate and mitigate situations before they arise.

SoA: Centralised transactions

Select Innovation: More secure decentralized transactions through blockchain to trace actions and provide cryptocurrency rewards of value.



IoT Large Scale Pilots



MONICA - Management Of Networked IoT Wearables – Very Large Scale Demonstration of Cultural Societal: Wearable devices containing sensors and actuators for massive scale applications. Europe (EU contr: 15M€, 28 partners in 9 countries)

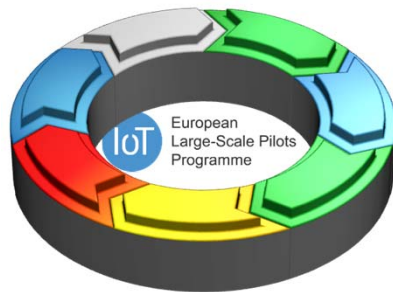


IoF2020 - Internet of Food and Farm 2020: Strengthen competitiveness of farming and food chains in Europe. Europe (EU contr: 30M€, 70 partners in 16 countries)

european-iot-pilots.eu



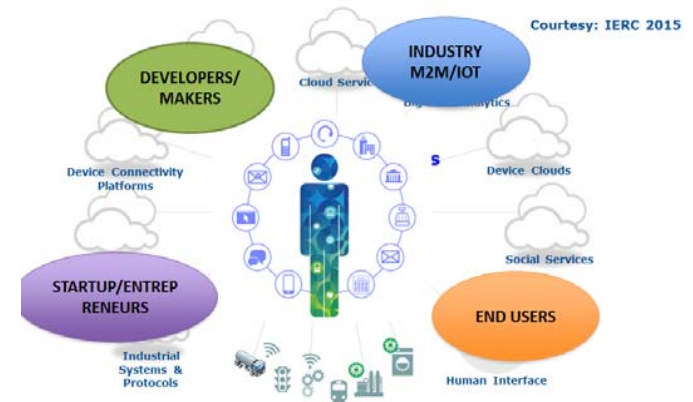
ACTIVAGE - ACTIVating InnoVative IoT smart living environments for AGEing well: Active and healthy ageing. Europe (EU contr: 20M€, 48 partners in 9 countries)



SYNCHRONICITY - Delivering an IoT enabled Digital Single Market for Europe and Beyond: Single digital city market for Europe (EU contr: 15M€, 33 partners in 9 countries)



AUTOPILOT - AUTOMated driving Progressed by Internet Of Things: Automated driving and infrastructure. Europe (EU contr: 20M€, 43 partners in 14 countries)



From Smart Cities to Smart Communities

Roberto Viola, Director-General, DG CONNECT, at the Connected Smart Cities Conference 2019, stated that to be successful and deliver a smart city that works for local communities, the concept of smart city needs to undergo a radical shift, moving:

- o **from cities to communities**
- o **from systems to ecosystem**
- o **from design to citizen empowerment**

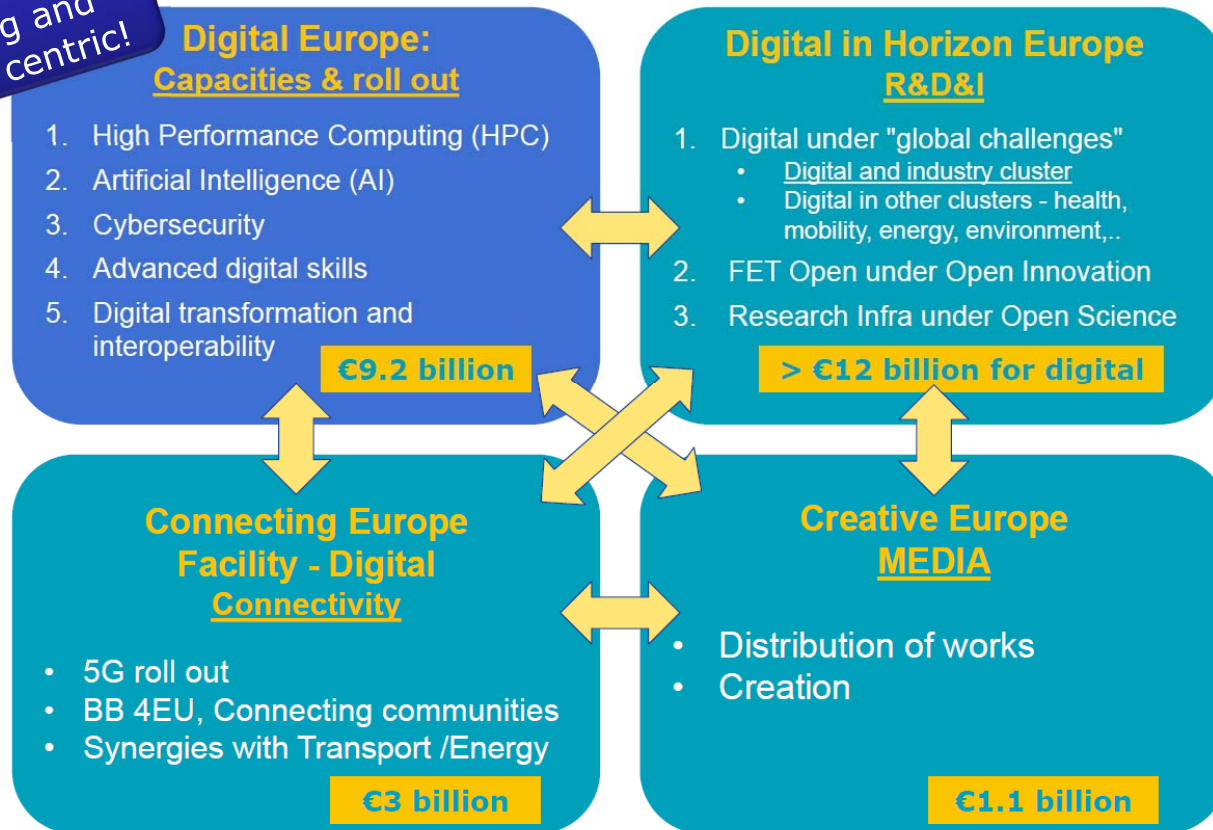
Cities & Communities will only succeed in the digital transformation, when citizens are actively included in the creation of new digital services.

(video at: <https://oascities.org/>)



DIGITAL IN THE NEXT MFF: OVERVIEW

Emphasis on
Scaling and
citizen centric!



Digital Europe Programme

As part of the next long-term EU budget (MFF 2021-2027), the European Commission proposed a new funding programme entitled Digital Europe Programme (DEP), which is part of the "Single Market, Innovation and Digital" chapter of the EU's long-term budget proposal. It builds on the Digital Single Market strategy and its main objective is to boost Europe's digital transformation to the benefit of citizens and businesses. The Commission's proposal foresees €9.1 billion over the period 2021-2027 to be spent on five areas:

- Supercomputers: €2.7 billion
- Artificial intelligence (AI): €2.5 billion
- Cybersecurity and trust: €2 billion
- Digital skills: €700 million
- Digital transformation of public administration and interoperability : €1.3 billion

(<http://www.europarl.europa.eu/legislative-train/theme-new-boost-for-jobs-growth-and-investment/file-mff-digital-europe-programme>)



“Climate-neutral and Smart Cities” Mission

Strategically, Horizon Europe will result in ‘Missions’ across a variety of vexing cross-cutting societal challenges in Europe, and a “Climate-neutral and Smart Cities” Mission is presently being shaped for the new programming period.

Cities and metropolitan areas are centres of economic activity, knowledge generation, innovation and new technologies. They impact upon the quality of life of citizens who live and/or work in them and they are major contributors to global challenges.

A mission in this area will help us meet the goals and targets set out by international policy frameworks such as the COP21 Paris Agreement, the UN’s Sustainable Development Goals (notably SDG11), the Urban Agenda for the EU and the Habitat III New Urban Agenda as cities play a key role in all of them.

https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme/mission-area-climate-neutral-and-smart-cities_en



For scale-up, cooperate in/with the networks

To join forces and share learnings, consider joining in or cooperating with the relevant networks for scaling up digital solutions in smart cities and communities, such as:

EU Committee of the Regions, see e.g. <https://cor.europa.eu/en/news/Pages/digital-europe-for-all-smart-digital-solutions.aspx>

EUROCITIES, see: <http://www.eurocities.eu/eurocities/forums/knowledge-society&tpl=home>

Open & Agile Smart Cities (OASC), see: <https://oascities.org/>

European Network of Living Labs (ENoLL), see: <https://enoll.org/>

Digital Transition Partnership Urban Agenda for Europe, see: <https://ec.europa.eu/futurium/en/digital-transition>





Role of global partnerships: the OASC example



150 cities in 30 countries

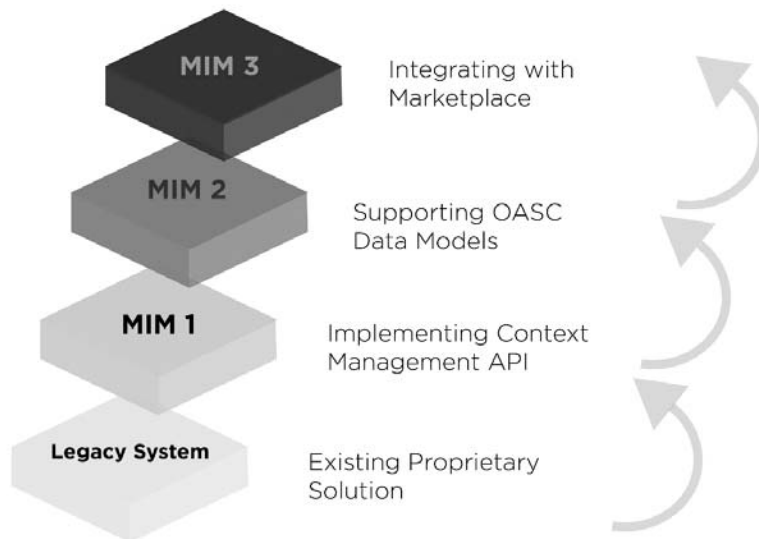
Global network of local networks of cities and communities

Standards-based innovation and procurement across sectors.



MINIMAL INTEROPERABILITY MECHANISMS (MIMs)

A roadmap based on existing standards and mechanisms, governed by cities, supported by suppliers and infrastructure providers.



SYNCHRONICITY

IoT Large-Scale Pilot on Smart Cities & Communities (15/20m€)

Set up to validate and mature the OASC MIMs at scale.

20 cities, 50 services – running on the same common technical ground.

Catalogue of validated services based on standards.



SynchroniCity Project Objectives

European
Commission

Goal: To develop a robust model for standards-based innovation and procurement of IoT- and AI-enabled services across domains.

Demonstrating the power of OASC MIMs.

Specific objectives:

1. Establish technical foundations
2. Establish marketplace enablers
3. Create reference zones
4. Pilot services that serve citizen needs
5. Establish ecosystem
6. Establish citizen-oriented methods
7. Establish holistic quantification of value
8. Provide insights into new business models
9. Transform city policy-making and planning

SYNCHRONICITY



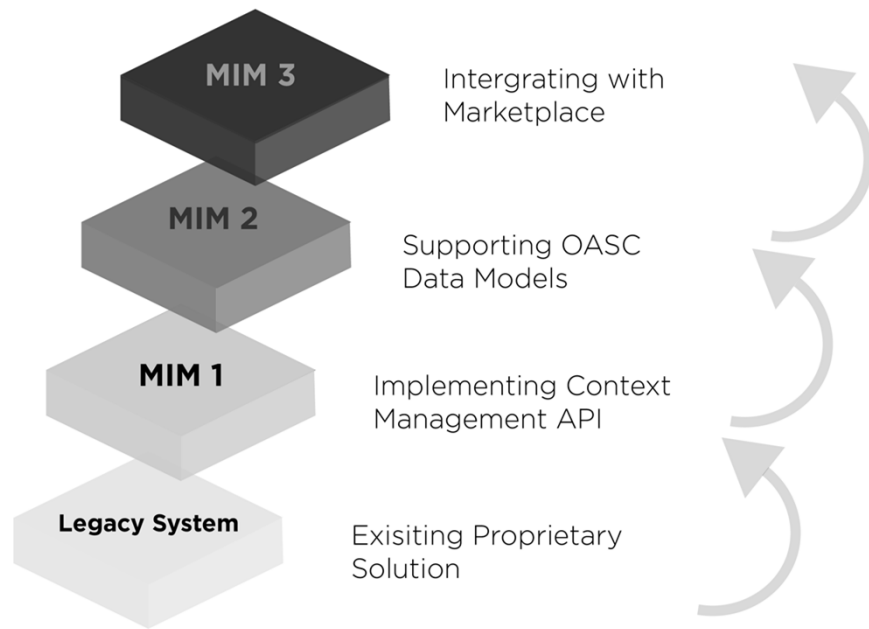
Core project: 20m€ · 40 partners

More information: synchronicity-iot.eu

Minimal Interoperability Mechanisms



European
Commission



MIM 1: Context Information Management Implementations:

- Orion (FIWARE)
- Scorpio (NEC)
- Djane (Sensinov)
- Obelisk (imec)
- TBC (Seongnam)
- TBC (ATOS)

MIM 2: Common Data Models

MIM 3: Ecosystem Transactions Management

MIM 4: Personal Data Management (proposed by Helsinki)

MIM 5: Fair AI (proposed by Amsterdam)

Supporting a Human-centric data economy



European
Commission



Source: High-level conference on Data Economy, Helsinki, 25-26 November:
<https://eu2019.fi/en/events/2019-11-25/high-level-conference-on-data-economy>

THE ROLE OF CITIES AND COMMUNITIES

Definition:
Smart Cities & Communities:
Effective integration of physical, digital and human systems in the built environment to deliver a sustainable, prosperous and inclusive future for its citizens.
(ISO/IEC/ITU)

Source: ITU-T Focus Group on Data Processing and Management for IoT and Smart Cities and Communities:
<https://www.itu.int/en/ITU-T/focusgroups/dpm>

FINNISH PRESIDENCY POLICY BRIEF



Source: ESPON:
<https://www.espon.eu/digital-innovation>

Declaration for upscaling digital solutions in Europe



European
Commission

Living-in.EU



JOIN, BOOST, SUSTAIN

Joining forces to boost sustainable digital transformation in cities
and communities in the EU

We, decision makers at all levels of government together with organisations and networks of cities and communities of all sizes¹, believe that strong cooperation through multi-level governance in the EU and co-creation with citizens are key to turning our cities and communities into smart and sustainable places where people enjoy living and working. We aim for an inclusive, digital Europe so that every community can enjoy the economic and social benefits of this transformation. Digital services, technologies, infrastructures and skills are all powerful means for achieving this goal.

Living-in.EU

The signatories agree on the following principles⁵:

- a citizen-centric approach;
- a city-led approach at EU level;
- the city as a citizen-driven and open innovation ecosystem;
- ethical and socially responsible access, use, sharing and management of data;
- technologies as key enablers;
- interoperable digital platforms based on open standards and technical specifications, Application Programming Interfaces (APIs) and shared data models.

The signatories commit to developing together sustainable measures to:

- Financial
- Technical
- Legal
- Education and capacity building
- Monitoring and measuring



Thank you for your attention!

Franck.Boissiere@ec.europa.eu

 Olavi.Luotonen@ec.europa.eu

