

SMART CITIES AS SUSTAINABLE INNOVATION ACTORS

- Insights from and for Austria

TAKEAWAY FOR AUSTRIA

- The Austrian target is to become energy autonomous by 2050
- Smart City measures require a mix of different financing instruments and models, and both, public and private stakeholders must be involved
- Smart Cities in Austria want to have an automated platform which ensures resource-efficient operation and quick evaluation

TARGETING SUSTAINABLE GROWTH

The global crisis definitely made an earmark on the European countries. The majority of the countries are still struggling in finding ways to recover their respective economies.

European governments face many challenges at all levels and are pushed to look for novel solutions under times of restricted budgets and resources. Demands for international competitiveness make societal challenges even more complex to solve.

Cities have been recognized to be important economic actors. They can contribute to initiatives and long-term projects that build new innovation ecosystems which in turn can open new opportunities and perspectives.

SMART CITIES TARGET GROWTH AND DEVELOPMENT

The smart city concept is particularly promising in this respect. It promises competitiveness and economic growth through highly educated talent, high tech industries and pervasive electronic connections. Creating conditions for continuous learning and innovation is a prerequisite for achieving smart cities.

In order for European countries to be able to achieve Europe 2020 targets of employment, innovation, climate change, energy and poverty, progress in smart cities would be very desirable.

AUSTRIA FOCUS ON PUBLIC-PRIVATE PARTNERSHIPS AND TO MEASURES FOR OPEN EVALUATIONS OF SMART CITIES

This policy brief looks at how the concept of smart cities relates to sustainable innovation and public participation. The brief compares smart city policies and initiatives in 12 European countries in doing so. Then it compares how progress on smart cities in Austria relates to progress in the other 11 countries.

The policy brief argues that while public participation is recognized as a central element in smart cities, there should be more emphasis on sustainable innovation. Concerning Austria attention should be paid to public-private partnerships, and to measures for open evaluations of Smart Cities.



BACKGROUND

SMART CITIES FOR SUSTAINABLE INNOVATION AND PUBLIC PARTICIPATION

Smart city projects support growth and city development by applying information and communication technologies as well as involving public and private stakeholders. Due to the growing importance of smart cities, this policy brief will look at them from the perspectives of sustainable innovation and public participation. These are key objectives of the CASI project which develops a common framework for assessment and management of sustainable innovation and considers public participation in doing so.

CASI provides an overview of the European Union's strategic priorities and relevant policies, with a focus on innovation for addressing the Horizon 2020 grand challenge "Climate action, resource efficiency and raw materials." It further identifies and brings together relevant European and national policy debates and their specific policy outputs within the framework of sustainable innovation with impacts at national and regional levels.

SMART CITY POLICIES AND INITIATIVES IN AUSTRIA

ANNUAL CALLS FOR PROPOSALS FOR TECHNICAL AND SOCIAL INNOVATIONS

The Climate and Energy Fund Initiative on Smart Cities was founded by the Austrian National Assembly in July 2007. It helps the Federal Government implement sustainable energy supply, reduce greenhouse gas emissions and realise the climate strategy and has developed into an important initiator for Austrian climate policy.

EUR 150 MILLION ARE AVAILABLE FOR EACH CALL

Each year it has up to EUR 150 million available to fund climate protection projects and to promote sustainable energy supply. The fund's vision for implementation of 'smart city' or a 'smart urban region' major demonstration and pilot projects in which technical and social innovations are used and combined in an intelligent way. Since 2010, there are annual calls for projects to achieve the Climate and Energy Fund's main strategic objectives, which are:

- i) using urban regions as test bed for intelligent, networked, and integrated solutions for sustainable generation and distribution of energy,
- ii) **achieving optimization of the individual system/system solution** by viewing technical and social systems as total systems through interaction and networking. Thematically, **buildings (building complexes), energy grids, supply and disposal, urban mobility** as well as **information and communication technologies** are regarded as relevant fields of action,
- iii) **generating added value compared to individual systems/system solutions** through the creation of interfaces – with regard to structure, organization, technology, processes, methods etc.

In Austria the larger cities (Vienna, Austria's largest city with around 1.75 million inhabitants and 2.64 in the wider city area, and Graz, Austria's second largest city with around 265K inhabitants) expecting to grow still further (Vienna expects to have 2 million inhabitants by 2050) focus heavily on smart city initiatives. The main aspects are about reduction of GHG emissions (zero emission concepts, renewable energy



sources, energy efficient mobility) by mainly technological innovation though Graz' strategy has some more thoughts on sustainable citizen lifestyles.

I LIVE GRAZ – smart people create their smart city

VISIONS FOR SUSTAINABLE LIFESTYLES

Graz is the second largest city in Austria with a steady increase in inhabitants. Due to the location in a basin Graz has climatic disadvantages. The protected location of the city allows no exchange of air particularly in Winter. In the course of the "I LIVE GRAZ" project, 7 + 1 indicators necessary for achieving a Smart City were recorded. In the action fields Economy, Society, Ecology, Mobility, Energy, Facility management (comprising supply and disposal), indicators were defined, and in the action field Urban planning, strategies for the future urban development of Graz towards a "zero emission" city were elaborated.

Vision until 2020: Graz has established itself as a Smart City with a high level of urban quality of life and as a centre of innovation, technology, and services of international standards, ranking among the top ten of Europe's medium-sized cities.

AMBITIOUS ACTION PLAN

Vision until 2050: Graz has become a dynamic, prosperous, and leading medium-sized European city, in which the highest quality of life has been achieved. Thanks to consistently pursuing Smart City strategies, awareness raising and active participation, the city has managed to reduce resource and energy consumption and pollutant emissions almost to Zero Emission City level. 100% of total energy required is produced by local renewable energy sources. As a research, quality and business location, Graz has become an international benchmark for value creation by means of urban technology.

Action plan for 2020 in various areas

Urban planning:

- i) Implementation of the Demo project SCP-Graz Mitte (Graz Centre),
- ii) targeted control of the urban development,
- iii) systematic monitoring and on-going analysis of the Demo project SCP Graz Mitte (Graz Centre),
- iv) Initiation of further Smart City quarters (Living labs).

Citizen participation and awareness raising:

- i) Target group-oriented citizen's information and participation with diverse mix of tools and methods,
- ii) accompanying district management for district development projects,
- iii) Focal campaigns, training and coaching for sustainable lifestyle.

Economic incentives:

- i) Promotion of implementation of Smart City quarters,
- ii) Promotion of green economy company set-ups,
- iii) Initiation of investment funds to finance infrastructure measures



Legal conditions:

- i) Urban development agreements with investors governing Smart City target qualities/indicators assume the form of secondary legislation,
- ii) Elaboration of land planning and legal specifications for future investors in Smart City quarters,
- iii) Demand for legal amendments by Styria Province, e.g. embodying the Smart City objectives in the Styrian Land Planning Act.

Organisational development:

- i) Formation of the municipal core team, an overarching project management team, and set-up of internal municipal communication,
- ii) Establishment and continuation of co-operation with partners,
- iii) The city as a model: definition of binding standards,
- iv) Motivation of all staff in the “House Graz”,
- v) Creation of a monitoring and evaluation system for all Smart City agendas (annual report with development of energy use and greenhouse gas emissions)

Due to its cross-disciplinary project approach, the I LIVE GRAZ project has led to new solutions and furthermore to the “Smart City Graz” strategy. This strategy is the basis for a smart and comprehensive future-oriented urban development in Graz. First submissions of pilot projects in national and international programs have already been made. In the target area Graz Mitte (Graz Centre), implementation of Smart City pilot projects is intended to enable the application of additional innovative urban technologies and systems and thus trigger the development of the whole district in the direction of a smart sustainable neighbourhood.

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Smart City Wien — towards a sustainable development of the city

CROSS-SECTIONAL APPROACH

Smart City Wien is a long-term initiative by the city of Vienna to improve the design, development and perception of the federal capital. Smart City Wien looks at a cross-section of the city, covering all areas of life, work and leisure activities in equal measure, and includes everything from infrastructure, energy and mobility to all aspects of urban development.

FRAMEWORK FOR LOCAL PROJECT APPLICATIONS

End of March 2011 the City of Vienna applied for the call for proposals of the Austrian Climate and Energy Fund entitled “Smart Energy Demo – FIT for SET” with the “Smart City Wien” project. The “Smart City Wien” project is a process planned to be implemented over several years, in which the key players relevant to the city’s development (institutions, businesses, single initiatives and research institutions) will design and implement a road map for 2020 for Vienna’s energy-efficient and climate-friendly urban development. This vision for the future of the city is to be turned into reality by 2050 by means of demonstration projects which will be or already have been created around this application. The “Smart City Wien” project constitutes the framework for project partners and stakeholders wanting to submit and implement their projects with the support of the City of Vienna under the “Smart Energy Demo” and “SET Initiative” programs.

FOCUS ON REDUCTION OF GHG EMISSIONS

It is now coordinated by Municipal Department 18 – Urban Development and Planning (MA 18) with the support of TINA VIENNA Urban Technologies & Strategies GmbH (project management), a Wien Holding company, as well as with Municipal Department 20 – Energy Planning (MA 20). Additional project partners include Wiener Stadtwerke Holding AG (Vienna Public Utilities), Wien 3420 Aspern Development AG, Siemens AG Österreich, the Austrian Institute of Technology, the Österreichische Forschungs- und Prüfzentrum Arsenal GesmbH (Arsenal Research Centre), raum & kommunikation GmbH, the Vienna University of Technology and the Energieinstitut der Wirtschaft GmbH (Energy Institute for Business).

The objectives of Smart City Vienna are:

- Significant reduction in emissions (CO₂, greenhouse gases) and, as a result, achievement of the EU climate protection targets. Long-term objective: a zero emission city, zero emission buildings as standard
- Significant reduction in energy consumption. Long-term objective: nearly zero energy standards in new and existing buildings by 2020
- A significant increase in the use of renewable sources of energy (e. g. in public buildings)
- Raising of awareness in the wider public about responsible use of resources (energy, water)
- An active role for citizens (from consumers to prosumers) in the context of control of additional areas of daily life
- Multi-modal transport systems with the development of the public transport network, better networking between individual transport carriers and a significant reduction in individual forms of motorised transport
- International positioning of Vienna as an example of a European environmental city and as a leading European centre for research and technological development



Action Plan for 2012-15

The Action Plan is divided into ten action packages, which are basically divided into the following areas:

- Citizen participation
- Urban modernisation
- Promotion of renewable sources of energy in the city
- Spatial energy planning and energy networks
- New mobility concepts and land-use management for transport

After the Smart City Wien project has been completed, a comprehensive activation process in Vienna will include the spheres of business, research and administration— but first and foremost also Vienna’s citizens— into the city’s efforts to become a smart city.

The experience gathered during the current Smart City Wien project have shown that the large industrial and research institutions involved are also financial partners and want to be even more so in the future.

A special advantage of the Smart City Wien project is its focus on spatial urban development, with the aims of increased energy efficiency and enhanced climate protection. Therefore, the Smart City Wien process, the resulting future vision for Vienna’s energy management and climate protection efforts and the related pilot projects to define a new, “smart” development approach for Vienna will be closely connected with the development of Vienna’s new urban development plan.

The components of Vienna’s smart city initiative include a large number of already existing Viennese programmes, measures and organisations; in addition to the city administration and the enterprises of the city of Vienna, this also involves the areas of business, industry and research as well as Vienna’s citizens.

**SMART CITY WIEN
PROJECT’S FOCUS ON
SPATIAL URBAN
DEVELOPMENT**

INSIGHTS FROM EUROPEAN POLICY ACTIONS

This section looks at policy actions in 12 European countries, which have been chosen according to relevance and representativity by CASI experts. Three dimensions of sustainability emerge in smart city policy actions: ecological, economical/technological, and social sustainability. For instance, Smart City Wien focuses on ecological (reduction of GHG emissions), City Deals in the UK focuses on economic/technological (through boosting local economies) and the Poznan Citizen’s Budget on social sustainability. (See Appendix 1 for brief and separate CASI policy briefs for more detailed descriptions of the selected policy actions).

The target areas of the selected policy actions relate mostly to

- ICT and ICT related issues;
- energy issues;
- intelligent transport and
- society and social structures and services.

**ECOLOGICAL, ECONOMIC/
TECHNOLOGICAL AND
SOCIAL SUSTAINABILITY**



Smart city policy actions take place at local, regional and national levels. Most actions can be seen to target incremental change in mainstream policies, while some promote more radical or far reaching targets (such as Leuven Klimaatneutral aiming for climate neutrality and MOBI.E supporting the introduction of electric vehicles in Portugal).

**ECOLOGICAL
SUSTAINABILITY NEEDS
MORE ATTENTION**

Ecological sustainability and public participation are in the focus of the CASI project. Based on the selection of cases by CASI experts, it can be observed that smart city policy actions in some countries focus more on economic/technological or social than ecological sustainability. In only few countries is the selected smart city policies' main focus on ecological sustainability.

**PUBLIC PARTICIPATION
CONSERVATIVE**

Public participation can be one-way communication such as information disseminated from policy makers to the public. More active public engagement would require two-way or multi-way interaction. In most of the selected policies, public participation is primarily directed one-way and can be considered to target incremental, conservative or mainstream engagement. Public participation is conducted as an active dialogue between the policy action and the public in a minority of the cases.

**LOOK FOR GOOD
PRACTICES**

There are, however, also innovative and ecologically sustainable smart city policies in the selected European countries. Active smart policies should see ecology to be in the core of sustainability and include two-way citizen participation. Communication with all stakeholders is crucial in a successful implementation of an ecologically sustainable policy action. Examples of such best practices are highlighted in Appendix 1.

AUSTRIA IN A EUROPEAN PERSPECTIVE WITH RECOMMENDATIONS FOR POLICY-MAKERS IN AUSTRIA

**AUSTRIAN SMART CITY
PROJECTS: FOCUS ON
MOBILITY, URBAN
PLANNING AND
ENERGY EFFICIENCY**

In Austria smart city projects have thus far focussed on the issues of mobility, urban planning and energy efficiency. There is a further a larger set of projects in which specific ideas and concepts were applied on a small scale just a part or smaller area of a city, e. g. Vienna is planning a sustainable and smart city in a city with the "Seestadt Aspern" project, which happens to be the largest urban development project in Europe. A rough overview can be taken from the following list:

- 21 projects with a focus on mobility
- 17 projects with a focus on urban planning
- 11 projects with a focus on energy efficiency and smart grids
- 28 projects with pilot initiatives for specific parts or areas of the city

**STRONG EMPHASIS ON
LOCAL CONTEXT**

Within the smart city initiative of the *klima+energie fonds* the research project "Smart City Profiles" was funded to work out profiles of existing and planned smart solutions in Austrian cities and a set of indicators for smart city measures. The results from this project shall be helpful to all cities and municipalities in planning energy efficiency and other smart city solutions. The "smartness" of this set of indicators is that the specific local context is heavily taken into account thus pointing out the elements which are most adaptable and scalable for other cities and municipalities to take into consideration as a kind of guideline.



This set of indicators was developed with feedback from and participation of 25 cities and in reference to existing indicator sets such as the *Ranking of European Medium-sized Cities* and the *Green City Index*. A set of 21 indicators focussing on climate protection and energy efficiency in 5 urban planning sectors:

1. buildings & housing infrastructure
2. traffic & mobility
3. technical infrastructure
4. economy & population
5. politics, administration, & governance

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FURTHER READING AND REFERENCES:

<http://www.stadtentwicklung.graz.at/cms/beitrag/10195417/4631044/>

Graz: I LIVE GRAZ - smart people create their smart city. Blue Globe Report SmartCities #19/2012. Retrieved from: <http://www.klimafonds.gv.at/assets/Uploads/Projektberichte/Smart-Energy-Demo---FIT-for-SET-1.-Ausschreibung/BGR192012K11NE2F00034Grazv1-0.pdf>

Vienna: Smart City Wien – towards a sustainable development of the city. Blue Globe Report SmartCities 1/2012. Retrieved from: <http://www.smartcities.at/assets/Projektberichte/Endbericht-kurzfassung/Endbericht-K11NE2F00030-Wien-kurz-dt-engl-v1.0.pdf>
<https://smartcity.wien.at/site/>
<http://www.smartcitygraz.at/>

CASI: PROJECT DESCRIPTION

PROJECT TITLE: Public Participation in Developing a Common Framework for Assessment and Management of Sustainable Innovation (CASI)

COORDINATOR: ARC Fund, Bulgaria: Zoya Damianova.

CONSORTIUM: The CASI consortium consists of 19 partners representing 12 European countries. Country correspondents extend the reach to 28 countries.

FUNDING SCHEME: Coordination and support action, funded under the 7th Framework Programme of the European Community, SCIENCE-IN-SOCIETY-2013.1.2-1.

DURATION: 42 months, 1/2014-6/2017

BUDGET: 4.5 M€, 428 person months

WEBSITE: www.CASI2020.eu

REFERENCE: Schwarz-Woelzl, Maria; Wollner, Maximilian; Kaarakainen, Minna; Matschoss, Kaisa; Repo, Petteri; Tregner-Mlinaric, Anita (2014). CASI Policy brief: SMART CITIES AS SUSTAINABLE INNOVATION ACTORS, Insights from and for Portugal. www.CASI2020.eu



APPENDIX Smart city policies and initiatives in 12 European countries, CASI highlights indicated with

Country	Policies and initiatives	Sustainability	Public participation	Observation
Austria				
LIVE GRATZ	Setting the framework for initiatives and urban planning to develop a smart city with the participation of its inhabitants.	Vision of a zero emission city in the fields of energy consumption & production, vision of a city with innovation driven knowledge-based workspaces, vision of an average ecological footprint of 1,4 gha of each Graz citizen.	100% target group participation/involvement and transparent communication, city quarter management with high citizen's participation planned, trainings and coaching for citizens adapting sustainable lifestyles.	Austria focuses on zero or low emission technological innovation for smart city development of its large and still growing cities.
Smart City Wien 	Significant reduction of GHG emissions in housing, mobility, energy consumption & production, awareness raising in city population, positioning Vienna as a leading EU environmental city.	Energy consumption reduction, use of renewable energy sources, multi-modal transport system with strong public transport and little motorised individual traffic.	Citizen participation and active role of citizens as prosumers planned.	Austria focuses on zero or low emission technological innovation for smart city development of its large and still growing cities.
Belgium				
Stadslab2050	Creating an innovation platform to support and enhance innovation in the city of Antwerp.	Sustainability in particular from social and environmental perspectives.	Citizens, business, government, and academics are gathered on the platform.	A number of cities in Flanders have announced the ambition to become sustainable and climate-neutral cities. Therefore, platforms are set up where stakeholders can innovate, experiment and bring about concrete actions.
Smart Energy Cities Network	Sharing innovation experiences among cities to speed-up the process to a smart city.	Sustainability from environmental, social and economic perspectives.	Academics, government, citizens (end-users), business are involved in the development GIS-energy maps and a city dispatch system.	Out of a social need to improve energy efficiency and mobility issues, concrete technological experiments are initiated.
Leuven Klimaatneutraal	Working together in the city of Leuven to reach the target of climate neutrality by 2030.	Sustainability in particular from social and environmental perspectives.	Academics, government, citizens, business gather in working groups and the parliament.	
Bulgaria				
E-governance in Bulgaria	Development and launch of 50 administrative e-services for citizens and enterprises in Sofia Municipality financially supported by Operational Programme Administrative Capacity, co-funded by the European Social Fund.	The project has the potential to improve the access of citizens to municipal services, thus, it increases the social sustainability of the provided services. In addition, it can promote democratic governance by facilitating the provision of feedback by citizens and enterprises to the municipality on the various e-services and initiatives. From an economic and environmental perspective, the municipality can significantly	The project can promote democratic governance by facilitating the provision of feedback by citizens and enterprises to the municipality on the various e-services and initiatives.	

		improve the efficiency of used resources in the provision of the respective services.		
Development of high-speed broadband access in Bulgaria	Through building a critical, protected, secure and reliable public ICT infrastructure" launched by the Bulgarian Executive Agency for Electronic Communication Networks and Information Systems.	The project has the potential to contribute to improving the overall economic and environmental sustainability of the targeted regions. Providing an access to high-speed broadband connection to individuals and enterprises leads to improved efficiency in using natural and economic resources as well as increased innovation capacities in various sectors of the regional economy. From a social point of view, ensuring broadband access to individuals reduces the digital divide in the country.	Access to broadband internet increases the opportunities of citizens to participate in various online and offline initiatives.	
Czech Republic				
Smart City Project	Policies and initiatives – fostering sustainable improvements and positioning of Czech public and private sector companies on national and international arena.	Businesses contributing to social sustainability and green economic growth.	Wide range of interested stakeholders involved in debates that are largely publicised by the media.	The smart city project focus on sustainable development of main areas of economy while improving competitiveness.
The Transport Policy of the Czech Republic for 2014 – 2020 with the prospect of 2050:	Supporting the development of intelligent transport systems based on the principles of competitiveness, with consideration to its socio-economic impact as well as impact on public health and the environment.	Intelligent urban transport contributing to socio-economic and environmental sustainability.	End user is the main focus of the policy for whom transport needs must be recognised.	Improving the competitiveness of the Czech Republic and the mobility of citizens.
Denmark				
Smart City Network	Smart city experiences within the network are described here (in Danish): http://mbbl.dk/by/smart-cities/smart-city-erfaringer . See policy 2 for a more detailed description of a smart city initiative related to the network.			
The Municipalities of Copenhagen and Aarhus: Open access to data.	Web portals administrated by the Municipality administration	A major share of the data available on the portals is information on transport, trafficable infrastructure and resource management. The intention of the Municipality administrations is that the data will be used by external actors to solve environmental and climate problems in the	By sharing information/data generated by the Municipalities the platforms creates the possibilities for citizens to be engaged Involves citizens in urban planning projects.	

		cities. The project shows the potential sustainable solutions to be reached by making the access to information open to the public/ external stakeholders/ experts/ entrepreneurs.		
Finland				
Witty City & Innovative City	Providing people with better living and working environments; bringing new products and services on the market.	Sustainability in particular from social and economic perspectives..	Considers of consumers and workers in innovation initiatives. Democratic process in municipal reform	Finland focuses on innovation and municipal reform.
Municipal reform PARAS	The aim is to develop municipal structures, the arrangement of services for a broader population base, collaboration between municipalities on service arrangement and provision, and new working practices.	Aim is to improve public services and municipalities. This will increase social sustainability of services.	Reform will increase interaction and discussion between citizens and officials. Democratic process in municipal reform.	
Intelligent city within Fintrip	The aim of the network is to develop the top know-how of the transport, produce innovations and respond to the information needs of the policy makers	Sustainability from ecological, social and economic perspectives.		
Germany				
InnovationCity Ruhr	Realising a climate-adapted urban redevelopment whilst safeguarding the industrial location. The concrete aim is to cut the CO2 emissions by half and thus to increase the quality of life.	Focus on climate-optimized city redevelopment, especially energy-efficient restoration of buildings and implementation of energy saving technologies.	During the master plan process. Instruments: "activation postcards", online form, "citizens' and development workshops" => knowledge about inhabitants' needs regarding energy issues and possible approaches.	Due to Germany's federal and decentralised governmental structures it is not easy to identify a general approach in the field of sustainable cities. There is a wide range of initiatives mostly on Federal State and municipal level. Nevertheless, the federal government offers a funding programme for municipalities as well as public, social and religious institutions. It aims at an 80-95% reduction of CO2 emissions until 2050 compared to the rate of emissions in 1990 and focuses on the following aspects: 1) Consulting for municipalities just starting with their climate protection efforts; 2) climate protection concepts and – management; 3) funding of a position dealing with climate protection matters, and 4) energy saving models in schools and kindergartens.
Roadmap 2020 within the dynaklim network	Climate change adaption of conurbations and their environs, six subgoals: Roadmap 2020, Networking and Knowledge Management, Water Management, Innovation and Competitiveness, Financing and Organisation, Politics, Planning and Administration.	Focus on climate adaptation.	Development of scenarios and approaches from a civil society perspective, development of a public relations approach for awareness raising of climate adaptation.	
Klimaschutzplan NRW (climate protection plan North Rhine-Westphalia):	Climate protection by greenhouse gas reduction within a lawful frame for Federal State Institutions and stimulation for initiatives of public administrations, enterprises, science and civil society.	Targets on greenhouse gas reduction up to 50% until 2020.	Broad participation of civil society and experts, 400 participants in workshops and a broad dialogue between stakeholders of a science, economy, administration, civil society.	

Italy				
The Italian Digital Agency – Agid and ANCI	<p>In 2012, the Italian Digital Agency (Agid) was established, which role is to coordinate actions related to the promotion of ICT technologies in the Public administration, representing efficient services' supply to the citizens and companies.</p> <p>Establishment and promotion of a national observatory managed in collaboration with the Forum PA, which aims to provide the guidelines for the construction of the Smart City for all Italian Municipalities, through collection of best practices and repository of applications (ANCI).</p> <p>Smart cities and community programme:</p>	<p>Inter-connections among national systems as well as exchange of information and tools with EU countries and beyond shall contribute to strengthening of current e-services provided to citizens and companies with more projects incoming. Structuring of projects for cities. (ANCI)</p>	<p>The end users of the above noted services are citizens and companies.</p> <p>Established collaboration of ANCI being the national agency with Italian municipalities.</p>	<p>The constitution of the digital home, the incentive mechanisms for e-procurement, the promotion of Intelligent Transport Systems, digital Education, Justice and Healthcare contributes to the development of "Intelligent Community."</p> <p>Establishment of a system of measurement based on statistical indicators related to the status and trends of economic, social, cultural and environmental conditions of smart communities and of the quality of life of the citizens (ANCI).</p>
Smart cities and community programme	<p>In the framework of Smart Cities, in 2012, the Ministry of Education, University and Research (MIUR) launched two programmes that provided funding in the amount to EUR 200 million for the "Smart cities and communities" and "Social Innovation" projects aiming at convergence regions.</p>	<p>Until now, the Ministry has funded 8 projects focusing on particular topic related to the Smart city concept, which confirms its dedication and commitment.</p>	<p>The programme has been implemented involving actors at national and regional level.</p>	<p>Above noted projects will contribute to development of Italian convergence regions.</p>
"Renewable energy and ICT for sustainable energy" – programme:	<p>The programme aims to explore and experiment a coordinated set of innovative solutions to make cities sustainable from the point of view of energy and environment. To achieve this goal, the project is based on the widespread use of renewable energy sources (and related storage technologies and energy management) and extensive use of ICT technologies for advanced management of energy flows and making the city's services energy-efficient.</p>	<p>The coordinated set of innovative solutions to make cities sustainable from the point of view of energy and environment have been introduced and shall be achieved through the widespread use of renewable energy sources (and related storage technologies and energy management) and extensive use of ICT technologies for advanced management of energy flows.</p>	<p>The technologies have been developed by CNR through the Smart Services Cooperation Lab of Bologna and visible Research Area of CNR in Bologna at the Smart Cities Test Plant.</p>	<p>The project has been implemented in 3 Italian municipalities investing in the technology and equipment approximately EUR 1 million.</p>
Poland				
Poznan Citizens Budget	<p>Involving citizens in the process of choosing the local important initiatives to be financed by the city.</p>	<p>Sustainability from social perspectives.</p>	<p>Democratic involvement of citizens in the initiative.</p>	<p>Poznan city is working on the wide involvement of the citizens in the local initiatives.</p>
Electronic card of Poznan Agglomeration	<p>Implementing Information and Communication Technologies to ensure the better living of citizens.</p>	<p>Sustainability from economic perspective.</p>	<p>Initiative for the citizens.</p>	<p>Common initiatives of communes located next to each other gives a lot of synergies and upgrade the quality of life of the citizens.</p>
Portugal				
Electric mobility	<p>Promoting the introduction of the electric</p>	<p>Electric vehicle is considered as</p>	<p>It considers the end users' needs and involvement of local</p>	<p>Electric mobility is a growing trend</p>

programme – MOBI.E	vehicle in the country.	one of the measures that could most help reduce greenhouse gas emissions and atmospheric pollution, while at the same time stimulating economic growth.	authorities which are integrating efficient vehicles in their fleets.	that will be increasingly implemented in more cities in Portugal.
PlanIT Valley – Smart city of the future (Paredes)	The development of a smart city in Paredes will provide an entire system to optimise energy efficiency and reduce urban congestion with intelligent infrastructures and continuous monitoring to allow adjustable flows for electricity, water, transport and public roads.	This initiative will allow implementing and testing innovative measures to optimize energy efficiency that could be potentially replicated in other locations.	It enhances the involvement of innovative organisations and citizens, to actively participate in the success of different measures implemented.	New and innovative solutions to improve sustainability and energy efficiency will be conceived thanks to this type of initiative.
InovCity - Intelligent energy grid (Évora) 	InovCity is the first urban area in Portugal to hook up to the intelligent energy grid, promoting energy efficiency, microgeneration and electrical mobility.	The implementation of intelligent energy grid will contribute to have a more efficient and sustainable country by optimising energy systems, lowering CO2 emissions and reducing use of fossil fuels.	This initiative enhances the participation of end users, citizens, municipalities and companies.	New and innovative solutions to improve sustainability and energy efficiency will be conceived thanks to this type of initiative.
Slovenia				
Ljubljana Smart City	Smart city summarizes all activities that aim to improve quality of life and improved urban services using advanced technologies and environmentally acceptable measures. On the same site combine two views, both are equally important for achieving environmental objectives: 1) institutional measures local authorities and 2) environmentally friendly behaviour of individuals.	Approach toward sustainability is done by 7 main objectives: 1) noise reduction, 2) reduction of CO2 emissions, 3) increasing the share of public transport, 4) increasing green spaces, 5) increasing the share of non-motorized traffic, 6) establishment of traffic management, 7) protecting the most vulnerable road users	Public participation is stimulated by different sub projects using web 2.0 based tools starting with. My Eco poster, E-postcards, colouring games, Ambassadors of Smart City, Photo-contest- feel Ljubljana, Instagram Challenge, An You are Ljubljana, - collecting the ideas and proposals for pushing quality of life in Ljubljana (http://www.ljubljana.pametnomesto.si/sodelujte/ljubljana_si_ti) Through the project 15 different polls were published on different topics Ljubljana and other cities, Quality of life in the Ljubljana, Agents of change, Reducing the environmental impact, Environmental change, Consumption of electricity, Green Energy, Eco-efficient buildings, Water, Effective public buildings, Environmentally friendly heating, Efficient use of devices, Transport, Thickening tax, Waste	Observation of the Ljubljana, Smart city project is done by European smart cities project which dealing with medium sized cities and their perspectives.
United Kingdom				
City Deals	Empowering city authorities to unlock the full potential of their cities by giving cities the powers and tools they need to drive local growth and also unlocking projects and initiatives that will boost local economies.	Government announced the establishment of a foresight project on the future of Cities which will inform policy development and different approaches to developing future cities.	The 'City Deal' means that more decisions on how money is spent in each city on skills and transport for example will now be made by local businesses and partners who understand what is needed in the region.	The UK is focused on rolling the policy out a further 20 cities in addition to the original 8.
The Future Cities Catapult	Provides a global centre of excellence on urban innovation, a place where businesses, universities and city administrations come together to develop solution to the future needs of cities.	The futures and best practice programme within City Deals will highlight what "great" will look like for sustainable and future-proofed cities.	Based in London the centre will allow businesses, academia, investors and cities to collaborate, get expert support and draw experience from health, transport, energy and public safety sectors.	The UK £150 million project will help cities become smarter and more forward looking.
Future Cities	Is an ambitious £24million programme which will demonstrate how technology can make	Future Cities Demonstrator Programme: TSB is fully	Future City / Glasgow is a collaboration between public and private sector agencies providing a range of services to the city.	The project will help inform future city policy.

Demonstrator Programme	life in the city smarter, safer and more sustainable.	committed to a future cities strategy.	They include Glasgow City Council, Police Scotland, housing providers, NHS Greater Glasgow & Clyde, universities, energy providers and Scottish Enterprise.	
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Each participating country expert provided 1 – 3 most relevant and representative cases as examples of policy actions concerning smart cities. Cases were collected during April 2014. The content of the smart city related policy actions was analysed and compared according the sustainability of the policy. Sustainability was seen to include three dimensions: social, ecological and economic sustainability. Ecological sustainability and public participation are in the focus of the CASI project. More detailed descriptions are available in separate CASI national level policy briefs at www.CASI2020.eu