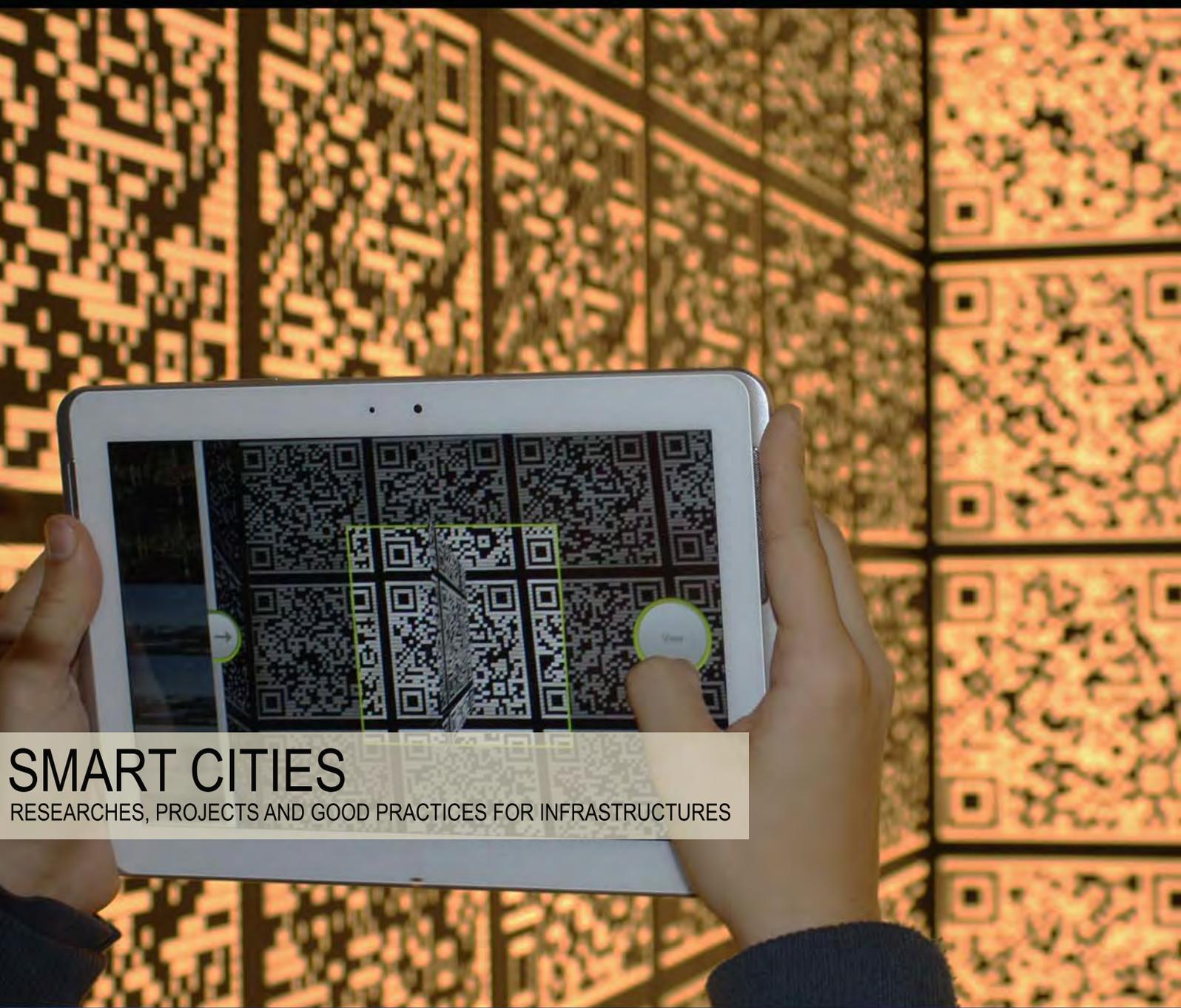


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The concept of "Smart City", providing a the solution for making cities more efficient and sustainable has been quite popular in the policy field in recent years. In the contemporary debate, the concept of smart cities is related to the utilization of networked infrastructure to improve economic and political efficiency and enable social, cultural and urban development.

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SMART CITIES

RESEARCHES, PROJECTS AND GOOD PRACTICES FOR INFRASTRUCTURES

SMART CITIES: RESEARCHES, PROJECTS AND GOOD PRACTICES FOR INFRASTRUCTURES 3 (2013)

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Editorial correspondence

Laboratory of Land Use Mobility and Environment
DICEA - Department of Civil, Architectural and Environmental Engineering
University of Naples "Federico II"
Piazzale Tecchio, 80
80125 Naples
web: www.tema.unina.it
e-mail: redazione.tema@unina.it

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SMART CITIES: RESEARCHES, PROJECTS, AND GOOD PRACTICES FOR INFRASTRUCTURES 3 (2013)

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EU SMART CITY GOVERNANCE

CARMELA GARGIULO^a, VALENTINA PINTO^b, FLORIANA ZUCARO^c

^aDepartment of Civil, Architectural and Environmental
Engineering (DICEA) - University of Naples Federico II
e-mail: gargiulo@unina.it
URL: www.dicea.dip.it

^{b,c} TeMALab – University of Naples Federico II
e-mail: ^b valentina.pinto@unina.it, ^c floriana.zucaro@unina.it

ABSTRACT

In recent years European Commission has developed a set of documents for Members States tracing, directly or indirectly, recommendations for the transformation of the European city.

The paper wants to outline which future EU draws for the city, a future often suggested as Smart City. This aim is achieved through an integrated and contextual reading of addresses and strategies contained in the last documents elaborated by European Commission.

Although the three main documents (Cohesion Policy 2014-2020 of European Community, Digital Agenda for Europe and European Urban Agenda) face the issue of the future development of European cities from different points of view, which are respectively social cohesion, ICT and urban dimension, each of them pays particular attention to urban and territorial dimension, identified by the name of Smart City.

In other words, the paper aims at drawing the evolution scenario of Smart Cities that can be delineated through the contextual reading of the three documents. To this end, the paper is divided into three parts: the first part briefly describes the general contents of the three European economic planning tools; the second part illustrates the scenarios for the future of the European city contained in each document; the third part seeks to trace the evolution of the Smart City issue developed by the set of the three instruments, in order to provide the framework of European Community for the near future of our cities.

KEYWORDS:

Smart Cities, urban development, cohesion policy, Digital Agenda, Urban Agenda, ICT

1 THE EU 2020 FRAMEWORK FOR ACTION

This section describes the main contents of three strategic documents for urban and territorial development as they deal with issues of extreme importance for the future of the European cities: the legislative proposals for EU Cohesion Policy 2014-2020 which promotes integrated urban policies and defines the financial and operational tools necessary for their implementation; the Digital Agenda (2010) which looks at urban and regional development in terms of digital infrastructurization of the territory with the aim to exploit the economic and social potential of ICT; the Urban Agenda (2011), which provides the recommendations for strengthening the role of cities and relocating the urban question at the center of the European Union development strategies. It is worth noting that although the European Commission has in recent years developed several documents that deal with the theme of Member States future growth, for instance the program for research and innovation Horizon 2020, the paper describes the ones that pay particular attention to urban and regional planning.

Before proceeding with the description of the document contents is considered appropriate to classify them within the broader framework of action that the European Union intends to implement by 2020. The European policy framework for the next decade is defined by the strategy launched in March 2010 "Europe 2020, a strategy for smart, sustainable and inclusive growth¹": its five major objectives identify the goals that EU intends to achieve in 2020 and the seven Flagship Initiatives² represent the path that the Commission, together with Member States, will follow to implement them. The development of this strategy is closely linked to the financial planning of EU as the Flagship Initiatives not have their own budget, and their realization depends on effective coordination and management of different financial resources both at European and local level (EP, 2012). In this context on June 29th 2011, the European Commission adopted a proposal for the new multiannual financial framework 2014-2020: "A budget for delivering the Europe 2020 Strategy" in which the Cohesion Policy plays a pivotal role as it provides both operational and financial tools needed to implement the initiatives promoted by Europe 2020. The Cohesion Policy, as defined in the Treaty on the Functioning of the European Union (2008), has as its objective the strengthening of its economic, social and territorial cohesion in order to reduce the disparities between the levels of development of the various regions and to promote equal opportunities among citizens. To achieve this objective, the Cohesion Policy provides specific financial tools, the so-called Structural Funds:

- the European Regional Development Fund (ERDF), which supports the regional and local development through co-financing of investments in areas such as research, development and innovation, ICT, energy, transport infrastructure and sustainable urban development;
- the European Social Fund (ESF) aimed at promoting the employment, education and training, social inclusion, as well as improving the efficiency of public administration;
- the Cohesion Fund (CF), which supports projects in the energy sector, relating to energy efficiency and the use of renewable energy; it is addressed to the Member States whose per capita GDP is less than 90% of the EU average;
- the Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF) respectively for the development of the agriculture and fisheries sector.

¹ COM(2010) 2020

²Innovation Union; Youth on the move; Digital Agenda; Resource Efficient Europe; An industrial policy for the globalisation era; An agenda for new skills and jobs; European platform against poverty

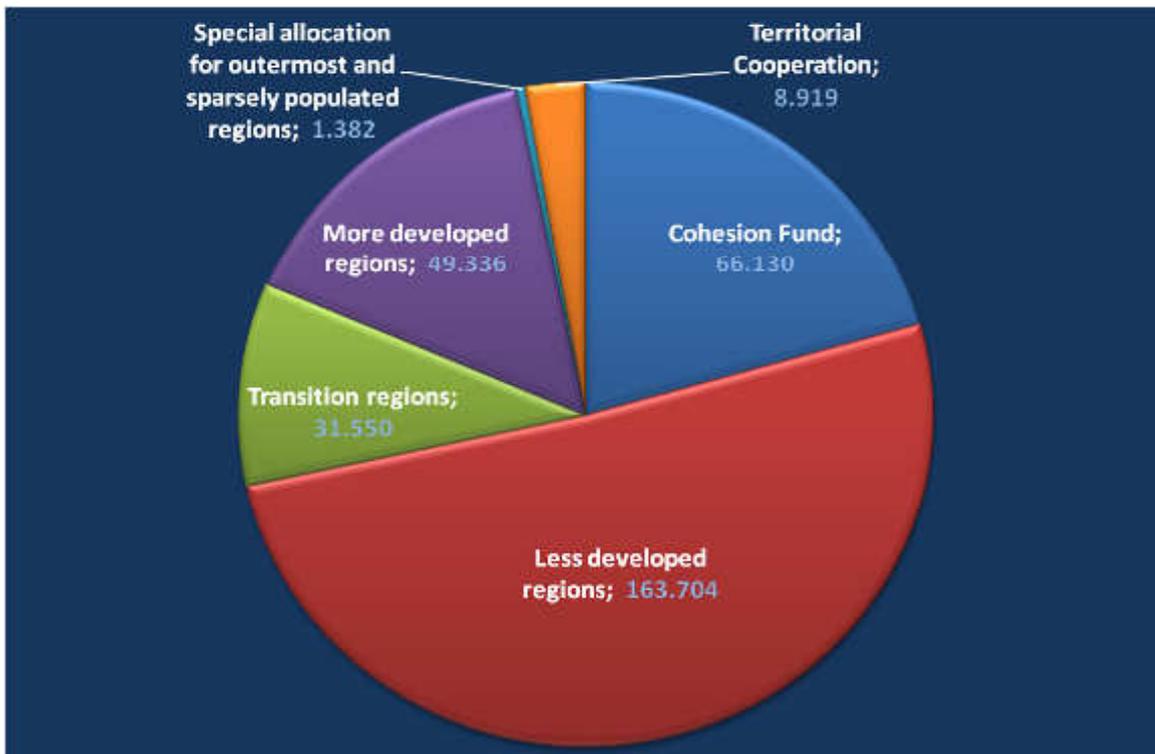


Fig. 1 - Total allocations of Cohesion Policy 2014-2020 (million €, 2011 prices), amounts subject to final adoption of MFF and sectoral legislations

The legislative proposals for the social, economic and territorial cohesion policy³ consists of: a regulation setting out common rules for the Structural Funds⁴ and three specific regulations for the ERDF, the ESF and the CF⁵. The Structural Funds are grouped together into a "Common Strategic Framework" (CSF) in order "to maximise the contribution of the CSF Funds and to provide clear strategic direction to the programming process at the level of Member States and the regions" (EC, 2012a). At the same time, the CSF is set up to facilitate sectoral and territorial coordination of Union intervention under the CSF Funds and with other relevant Union policies and instruments.

The directions for use the CSF Funds at the national level will be established by each Member State within the so called "Partnership Contracts" to be concluded with the EC for the period between 1st January 2014 and 31th December 2020. The Regional Operational Programmes of the single funds will be implemented at the regional level on the basis of the Partnership Contracts. It is worth focusing on the terms used to characterize the three operational tools proposed as they represent the key concepts of the new Cohesion Policy. The Common Framework is defined as "strategic" because it provides a strategic direction to the funds programming process in order to facilitate the sectoral and territorial coordination of EU interventions. At the national level is emphasized the concept of "partnership" between the different parties involved at various levels of planning (regional and local authorities, economic and social actors, non-governmental organizations, etc.). In the overall framework of Cohesion Policy, the partnership process is considered to be a priority so that in order to support its development the EC provides for a European Code of Conduct on Partnership (ECCP) which will lay down a framework within which the Member States shall pursue implementation of the partnership principle (EC, 2013a). Finally the "operational" tools are delegated to

³ COM(2011)615; COM(2012)496; SWD(2012) 61

⁴ COM(2012)496

⁵ COM(2011) 614; COM(2011) 607; COM(2011) 612

regional and local authorities in order to ensure the necessary flexibility to meet their local needs and to give sufficient attention to local specificities. This approach strengthens the local level compared to the previous programming cycles and it aims at greater synergy and coherence of individual POR within the national strategy.

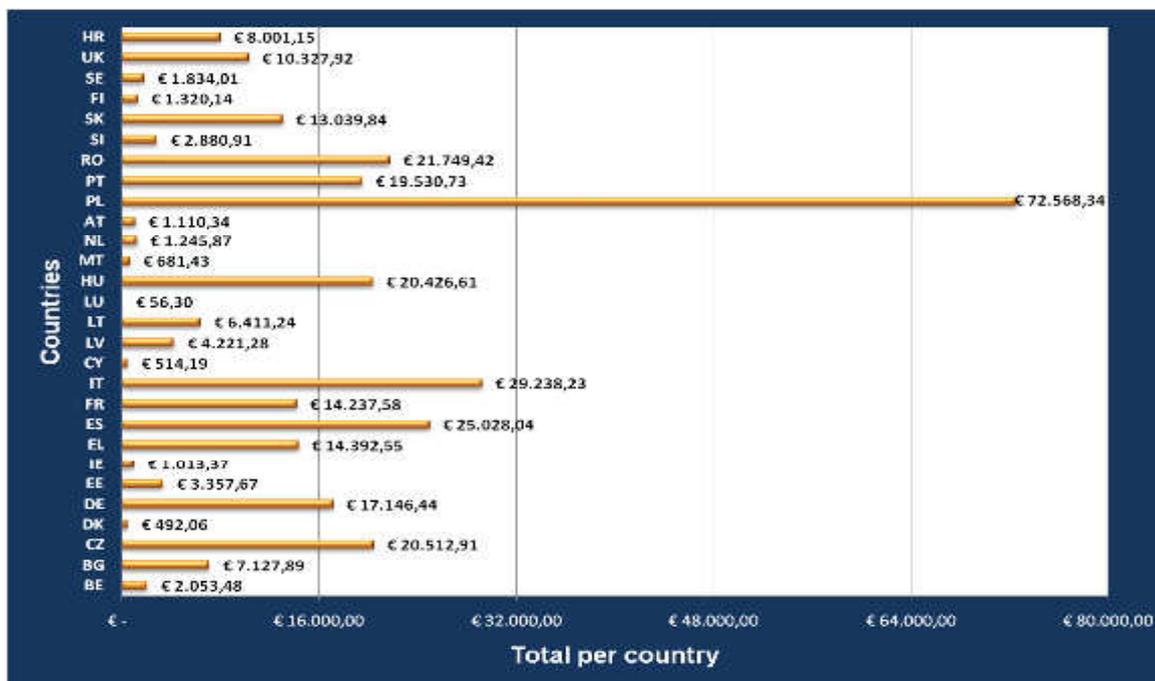


Fig. 2 –Total allocations of Cohesion Policy 2014-2020 (million €, 2011 prices) for each Member State referred to July 2013

The main innovations introduced by the Cohesion Policy 2014-2020 are the focus on results, a greater use of conditionality and the coordination among CSF Funds and with other relevant Union policies and instruments (EC, 2012a). With regard to the first point, the new EU Cohesion Policy assigns a primary role to the process of monitoring and verifying the results; for this reason the Commission plans to concentrate the new programs on a limited number of priorities and to define a set of indicators to assess the progress made towards the achievement of the programs objectives. In addition, in order to focus more on results the proposed programs and instruments introduce the principle of conditionality that will take the form of both so-called ex ante conditions that must be in place before funds are disbursed, and so-called ex post conditions that bind the provision of additional funds to the achievement of pre-established results. The lack of progress will also rise to the suspension or cancellation of funding. The European Commission plans to assign the 5% of the cohesion budget to the most virtuous Member States and regions, during the mid-term performance review planned in 2017 and 2019.

The Commission's proposals have, therefore, adopted the principle defined by the Barca Report (Barca, 2009) according to which "the multi-sectoral nature of place-based development policy requires horizontal coordination and reciprocal commitment at every level of government. Contracts, both vertical and horizontal, and conditionalities for the granting of funds are a defining feature of multilevel governance".

A "policy of conditional transfers" is then re-launched according to which the transfer of resources shall be subject to ex ante conditions in order to ensure that the provided funds have the conditions to exert maximum benefit, and at the same time, it depends also on the achievement of certain objectives (ex-post conditions) (Regione Molise, 2013). The importance assigned to the coordination of Cohesion Policy with other Union policies and instruments came from the need to address two issues that the EC has had to deal

with in the planning of economic resources for 2014 -2020: on the one hand, the reduction of the available funds compared to previous cycles (340 Million Euros⁶, about 8,3% less than in the period 2007-2013) and, on the other, the economic crisis that limits the possibilities of co-financing of the Member States. As a matter of fact, “the lack of synergies between different policy instruments related to overlapping thematic fields was one of the main reasons of the Lisbon Strategy failure” (EP, 2010). To this end there are new coordination mechanisms that provide for the involvement of the managing authorities responsible for other CSF Funds to avoid overlap, the establishment of e-governance, as well as identifying areas of intervention in which the Funds may be combined in a complementary manner. To maximize the contribution of the CSF Funds for a smart, sustainable and inclusive growth, the Cohesion Policy also provides that Member States identify how their programs can contribute to achieve the Europe 2020 and the Flagship Initiatives objectives, thereby avoiding the duplication of efforts and taking full advantage of the possibilities of combining different instruments to support individual projects.

Europe 2020	Thematic objectives of the CSF	Structural Funds	Reference to other relevant Union policies and programs
Smart growth developing an economy based on knowledge and innovation	1) Strengthening research, technological development and innovation	ERDF and EAFRD	Horizon 2020 Smart Specialization Platform Joint Programming Initiatives ESFRI Innovation Union Flagship Initiative
	2) Enhancing access to, and use and quality of information and communication technologies		Horizon 2020 Connection Europe Facility Digital Agenda for Europe
	3) Enhancing the competitiveness of SMA and of the agricultural and fisheries and aquaculture sector		Small Business ACT EU Project for SMA
Sustainable growth promoting a more resource efficient, greener and more competitive economy	4) Supporting the shift towards a low-carbon economy in all sectors	ERDF and EAFRD	Energy saving Directives Strategic Energy Technology Plan Energy Roadmap 2050 European Emission Trading Scheme, NER 300 Programme, LIFE Climate change White Paper LIFE
	5) Promoting climate change adaptation, risk prevention and management		Water, Waste and Air Quality Directives LIFE
	6) Protecting the environment and promoting resource efficiency		Nature 2000 Resource Efficient Europe FI Creative Europe
Inclusive growth fostering a high-employment economy delivering social and territorial cohesion	7) Promoting sustainable transport and removing bottlenecks in key network infrastructures	ERDF	Connection Europe Facility Horizon 2020 Resource Efficient Europe Transport White Paper 2011
	8) Promoting employment and supporting labour mobility	ERDF, EAFRD, ESF	Employment Guidelines 7 2020 Program for Social Change and Innovation Erasmus for all
	9) Promoting social inclusion and combating poverty		Program for Social Change and Innovation Erasmus for all Asylum and Migration Fund
10) Investing in education, skills and lifelong learning	Erasmus for all		
	11) Enhancing institutional capacity and an efficient public administration		

Fig. 3 –The UE CSF Funds 2014-2020: thematic objectives grouped on the basis both of Europe 2020 priorities and relationship with European Funds and policies.

To provide guidelines on how to coordinate Cohesion Policy with the Flagship Initiatives, the European Parliament has prepared a study entitled “How to integrate the EU flagship initiatives into Cohesion Policy” which shows that although the proposals of Cohesion Policy are oriented towards the coordination among the CSF Funds and the Europe 2020 objectives, “flagship initiatives are currently only sporadically integrated into the legislative proposals for the 2014-20 Cohesion Policy Framework” (EP, 2012).

⁶ Expressed in constant 2011 prices.

In the draft of the CSF, the Digital Agenda⁷ is one of the four Flagship Initiatives explicitly mentioned in the thematic objective 2 “Enhancing access to, and use and quality of information and communication technologies”. This objective is directly attributable to the thematic priorities of the Digital Agenda:

- encouraging investments in the development of infrastructure networks;
- developing digital contents and services to improve the quality of life of citizens and businesses through easy access to online learning (e-Learning), teaching (e-Education), administration (e-Government) and health (e-health).

Digital Agenda identified 101 specific policy actions structured in 7 domains: the digital single market, interoperability and standards, trust and security, fast and ultra-fast internet access, research and innovation, digital literacy, skills and inclusion and ICT-enabled benefits for EU society. To effectively implement the 101 actions, the European Commission plans to fund them with the resources allocated in the budget proposal for the Multiannual Financial Framework (MFF) for the period 2014-2020 (COM (2012) 784). The economic resources to draw upon are related to four types of the CSF Funds: ERDF, ESF and EAFRD.

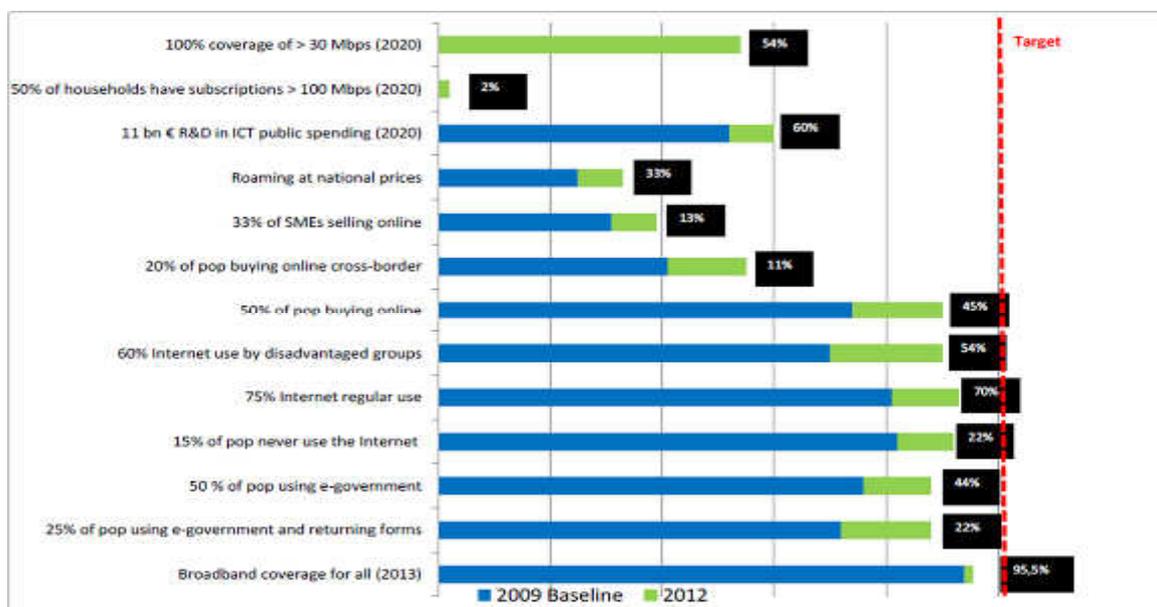


Fig. 4 – How the EU scores on the Digital Agenda targets

The help of the ERDF is primarily oriented to support the development of next generation access networks (NGA), e-Government and ICT applications that can help to overcome some of the biggest challenges for the next decade as the reduction of carbon emissions and the energy efficiency improvement. ESF provides instead financial support to promote the use of ICT and to contribute actively to the development of digital literacy. Investments in ICT within the EAFRD are geared mainly to improve the accessibility, utilization and quality of ICT in rural areas through the extension of broadband infrastructure and the promotion of digital skills among farmers, the managers of forests and rural companies. Progress on implementing the Digital Agenda is measured in the annual Digital Agenda Scoreboard. The last Scoreboard, assessing overall impact on the basis of the key performance targets, has been published in June 2013, reporting on the progress of those actions between June 2012 and May 2013 (Pinto, Mazzeo, 2013). As can be seen in Figure 4 almost all targets are about to be achieved. During the past three years, the use of the network has increased steadily, especially among the most disadvantaged groups and the coverage of broadband network is almost

⁷COM(2010) 245, COM(2012) 784

complete. Network users use increasingly internet to make their purchases online, but also to take advantage of eGovernment services. Currently, CE has completed 61 of the 101 actions, while eight have been erased and the remaining 32 are nearing completion. To align the technological and innovation possibilities with a better and more inclusive governance, the European Parliament proposes the definition of a European Urban Agenda⁸ giving the city a major role in the design and implementation of the future European Cohesion Policy. The proposal submitted by the resolution of 23rd June 2011, points out that “local elected authorities have direct political accountability in terms of strategic decision-making and investing public resources” and that “in order to reach the goals of the Cohesion Policy and EU 2020 Strategy there must be obligatory involvement of local elected bodies in the strategic decision-making process, close involvement in drawing up operational programmes and broad use of the option of subdelegated responsibilities in the implementation and evaluation of the Cohesion Policy” (EP, 2011). Urban Agenda is in fact the “urban dimension” of European Cohesion Policy, that represents the tool through which European Union intends to coordinate urban policies of the Member States by focusing on a bottom-up approach, which, according to some authors, better reflects the orientation of the Smart Cities of the future (Siegle 2012). In other words, through the Urban Agenda, European Parliament defines the path to follow, in order to achieve a multi-level bottom-up governance that supports the development of innovative technological infrastructure contained within the European Digital Agenda. This proposal invokes the thought of some scholars about smart cities: “the essence of future smart city is based on the idea of coordinating and integrating technologies that have been still developed separately from each other but have clear synergies in their operation and need to be coupled with a bottom-up approach” (Papa, Gargiulo, Galderisi, 2013). European Parliament proposes to concentrate on three objectives for the development of the urban dimension: firstly supporting urban areas to develop their basic physical infrastructure as a prerequisite for growth, by focusing both on the economic diversification and energy and environmental sustainability; secondly helping urban areas to modernize their economic, social and environmental characteristics, through smart investments in infrastructure and services based on technological progress closely related to national, regional and local needs; thirdly redeveloping urban areas by recovering industrial sites and contaminated lands. The achievement of these goals during the next planning cycle 2014-2020 assumes that the different administrative authorities involved, cooperate in order to:

- develop a multi-level governance aiming at a greater involvement of regional and local authorities and of society in the design, implementation, communication and evaluation of urban development strategies;
- promote the training of urban and local authorities that provide information on the programs and initiatives of urban policy;
- resort to a “smart urban development” by exploiting the great potential of modernization of infrastructural investments through intelligent technologies;
- steer the planning process towards an “integrated strategic” dimension, in order to facilitate local authorities in the transition from an approach in terms of individual projects in an intersectoral one; for this purpose European Parliament “calls on Commission to make legally binding integrated urban planning when projects are co-financed with EU funds”;
- initiate new partnerships between the public and private sectors and innovative strategies for urban infrastructural development in order to attract investment and stimulate the economy.

⁸2010/2158 (INI)

2 THE SMART CITY IN THE EUROPEAN UNION DOCUMENTS

This section discusses the scenarios for the future of the European city proposed by each document, with the aim of identifying specific references to issues of urban development and the Smart City. Although in most cases there is not any explicit reference to the term "smart city", the forecasts of city development contained both in the guidelines and recommendations of the European documents are clearly related to those aspects that many authors identify as characterizing factors of the Smart City. Digital Agenda objectives, aimed at improving the quality of life of citizens and businesses through the development of the economic and social potential of ICT, are connected to the vision of Smart City proposed by Batty: "a city in which ICT is merged with traditional infrastructures, coordinated and integrated using new digital technologies" (Batty, 2012). Urban Agenda approach for the coordination of urban policies of the Member States aims at the integration across all levels of governance, as well as the mentioned bottom-up approach proposed by Siegle. In this regard, Nam and Pardo also stated that "coordination of policies across all levels of governance is of vital importance to innovation in a city" (Nam and Pardo, 2011).

A direct reference to territorial issues is made by the Cohesion Policy that, for the first time, in 2009, introduced the territorial dimension in its denomination, as a necessary completion to the objectives of economic and social cohesion. This decision demonstrates the EC willingness to focus on cities and urban areas that effectively come under European Union competence, thanks to both the Treaty on the Functioning of the EU (2008) and the Treaty of Lisbon (2009). The proposals contained in the package of regulations of the Cohesion Policy 2014-2020 related to the field of urban development are mainly oriented to promote integrated policies for sustainable development: "the multiple dimensions - environmental, economic, social and cultural - of urban life are intertwined, therefore a positive urban development can only be achieved through an integrated approach" (EC, 2011).

The main suggestions made to this end mainly concern the adoption of integrated investment strategies oriented to a more strategic and holistic approach: "Such an approach is especially important at this time, given the seriousness of the challenges European cities currently face, such as specific demographic changes, the consequences of economic stagnation in terms of job creations and social progress, and the impact of climate change" (EC, 2011).

Among the five funds within the Common Strategic Framework, the ERDF is aimed at supporting sustainable urban development at regional and local levels. From reading the investment priorities of the ERDF, the main features of the future European city that can be drawn are: a city characterized by a high quality and affordability to innovative communication technologies, based on a low-carbon economy in all sectors, promoting investments specifically related to the adaptation to climate change and the smart and sustainable urban transport, investing in research and innovation and promoting the employment and social inclusion. The tools that the EC introduces to strengthen the territorial dimension of Cohesion Policy are the following:

- Integrated Territorial Investments (ITI) represent a simplified financing, through which EU allocates 5% of ERDF resources for integrated actions for sustainable urban development. It is a new delivery mode to bundle funding that allows to "draw on funding from several priority axes of one or more operational programs" (EC, 2011). Indeed, ITI can associate together different funding linked to strategic objectives, in order to facilitate the implementation of an integrated strategy for sustainable development in a specific territory;
- an Urban Development Platform, comprising 300 cities based on a list prepared by Member States in their Partnership Contracts to promote both the creation of networks between cities and the exchange of territorial good governance practices within the EU;

- innovative urban actions subject to a ceiling of 0,2% of the total ERDF allocation. The innovative urban actions shall be urban pilot projects, demonstration projects and related studies of European interest.
- Cohesion Policy also provides a different allocation of funds in relation to GDP per capita, through the identification of three types of regions, in order to allow a balanced development between different European regions: more developed regions whose GDP per capita is higher than 90% of EU average; transition regions, with GDP per capita is between 75% and 90% of EU average, less developed regions whose GDP per capita is below 75% of EU average.

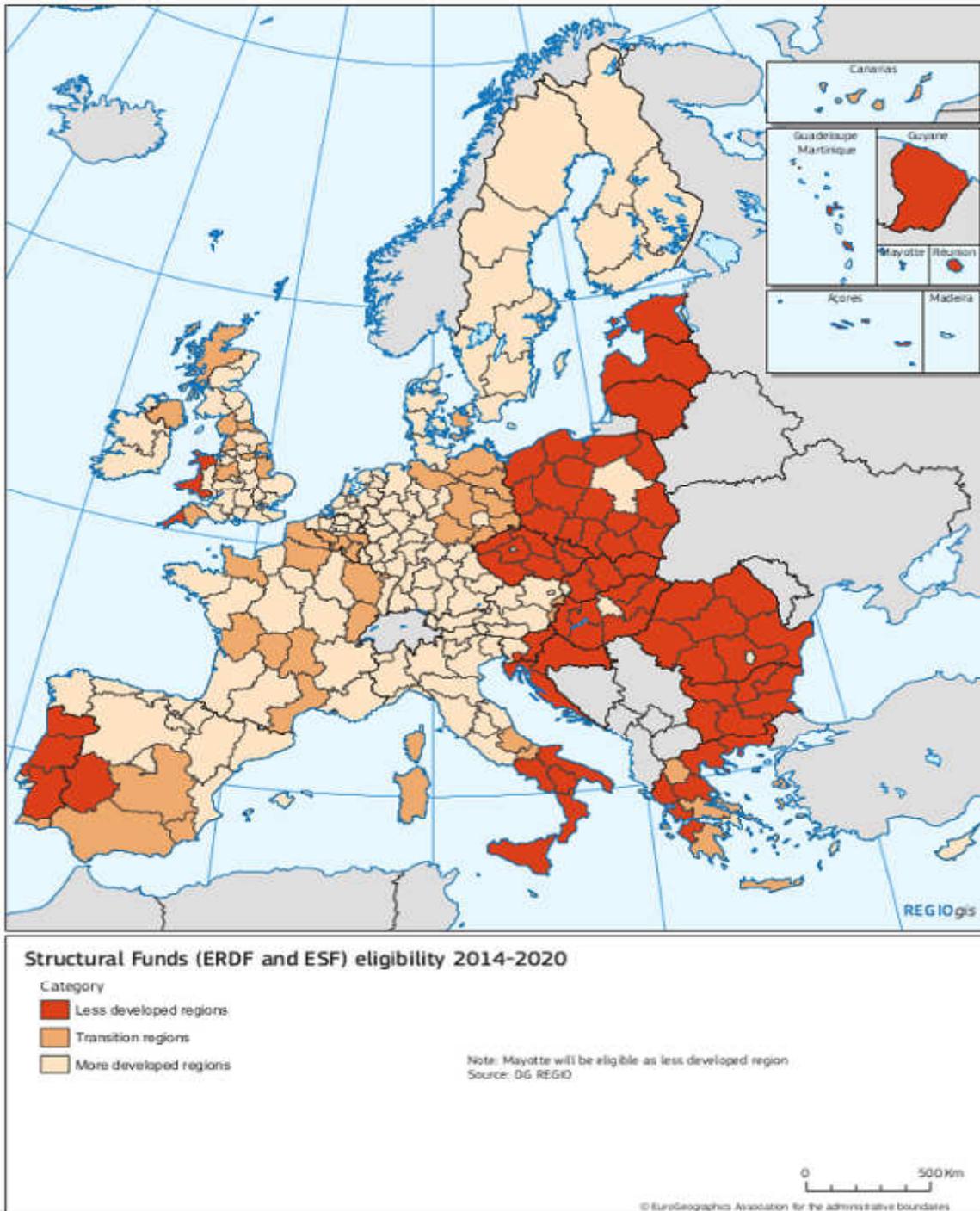


Fig. 5 – Classification of Member States in more developed regions, transition regions and Less developed regions

For each type of region Cohesion Policy allocates different rates of funding depending on the sectors where these regions should focus mainly: research and innovation (R&I) and competitiveness of small and medium-sized enterprises (60%) represent the main investment sectors for the more developed regions and transition region, while only 20% has been allocated for energy efficiency and renewable energy. These rates increase to 44% and 6% respectively for less developed regions.

The condition ex-ante for the investment support in research and innovation (R&I) and in information and communication technologies (ICT) is represented by the smart specialization. This concept has received more and more attention by EU policy for growth and economic development; in fact, in 2005 some documents drawn up for the development of the Lisbon Strategy, referred to the smart specialization as an element to enhance the competitiveness of regions (D. Foray, David PA, Hall B., 2009). The objective of smart specialization is the sustainable economic growth of the regions through a more efficient use of structural funds, by joining efforts in the field of innovation support, and increasing synergy between EU policies and national and regional ones.

The application of smart specialization is aimed at defining regional strategies for the enhancement of those sectors in which the single territories are able to excel. Regions and Member States must draw up a document oriented to: outline the strategy for smart specialization, identify the specializations that are more consistent with their own resources and capabilities and define public and private investment expected, especially related to research and innovation technology. In order to delineate their strategies, policy-makers can refer to the European platform supporting research and innovation, the Smart Specialisation Platform (S3Platform), which promotes collaboration among different administrative authorities and EU researchers and collaborates with international agencies such as the OECD and the World Bank. The main goal of this tool is to fill the innovation gap between Europe regions: according to the EU Regional Innovation Scoreboard, just one in ten invests 3% of its GDP in R&I and the percentage of innovative SMEs differs greatly from country to country.

The future of European cities outlined in the Digital Agenda is instead a future based on the development of economic and social potential of ICT. Goals contained in the Digital Agenda are geared to stimulate innovation and economic growth and improve citizen and company quality of life through a better health care, safer and more efficient transport, a cleaner environment, new communication opportunities and easier access to public services and cultural content. According to EC "the development of high-speed networks today has the same revolutionary impact that the development of electricity networks and transport had a century ago" (EC, 2010).

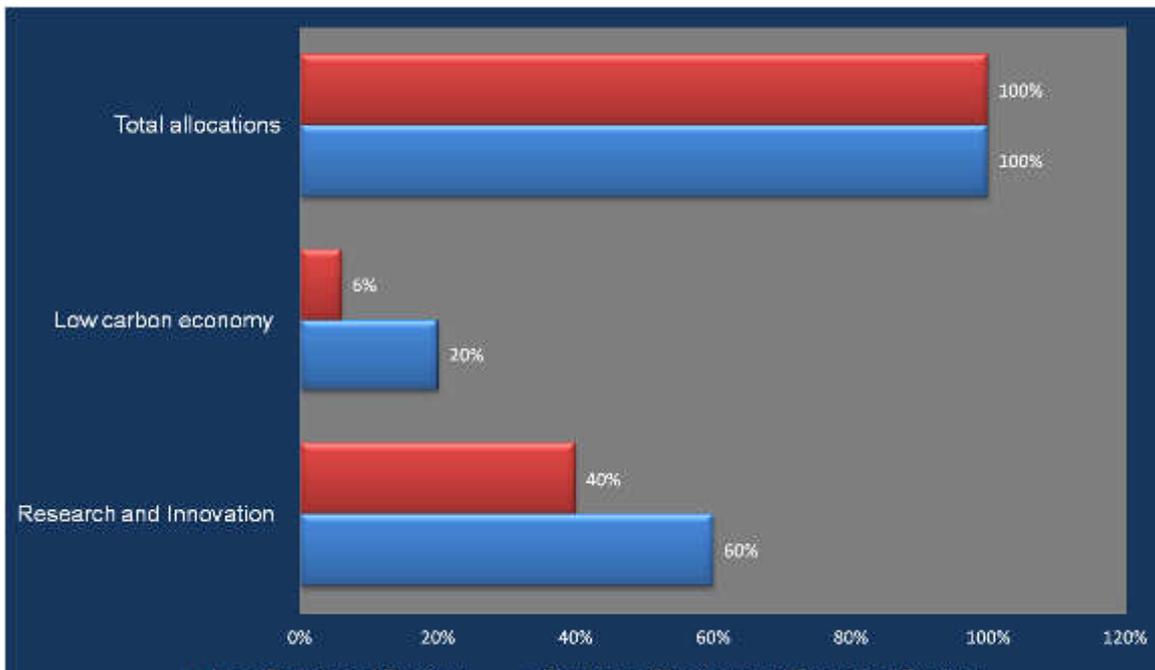


Fig. 6 – Concentration of ERDF proposed for 2014-2020

European cities to be more competitive in the near future should to be characterized by:

- e-government services, (administrative procedures, electronic public procurement, public health, etc.) available to all European citizens to reduce cost and time and to encourage participation;
- intelligent transport systems (ITS) to reduce congestion and energy consumption;
- large-scale spread of smart grids and meters, zero energy buildings and intelligent systems for managing street lighting, in order to achieve energy saving goals and reduction of greenhouse gas emissions.

The EC considers appropriate to promote cooperation between the ICT industry, other sectors and public administrations in order to accelerate the development and widespread use of ICT based solutions for smart grids and meters, near zero energy buildings and intelligent transportation systems.

The ICT sector in fact provides these organizations for the modeling, analysing, monitoring and visualizing tools to assess the energy performance and emissions of buildings, vehicles, companies and cities. Smart grids, however, need to have a knowledgement and a social capital who knows how to operate, in order to prevent that a lack of expertise by users in the field of computer literacy could be an obstacle to the development of this potential.

To this end, this EU document considers essential “to educate European citizens to use ICT and digital media. This calls for multi-stakeholder partnerships, increased learning, recognition about digital competences in formal education and training systems, as well as awareness raising and effective ICT training and certification outside formal education systems” (EC, 2010). In order to support awareness raising activities, EC has established the European Week of Digital Skills.

Among the three documents analyzed the Urban Agenda represents explicitly the urban dimension of EU policies. The prototype of the city targeted to a smart, sustainable and inclusive growth is a city that invests in infrastructure and services based on technological innovations, its priorities are closely related to the specific national, regional and local needs, as well as energy and environmental sustainability.

Therefore according to Urban Agenda the future urban and territorial development of Europe should:

- be based on a multi-level governance;
- sub-delegate to local authorities for the adoption of strategic decisions and investment of public resources;
- focus on integrated strategic planning, facilitating local authorities in the transition from an approach in terms of individual projects to a cross-sectoral approach, “with greater strategic depth in order to enhance their potential for endogenous development” (EC, 2011);
- start new partnerships between the public and private sectors in order to attract investment and stimulate the economy.

The importance of this document within the European urban and regional policy framework is to recognize urban areas as places and drivers of change and to reformulate the objectives and policies of the European Union in key of urban development.

3 EU GOVERNANCE ACTIONS ORIENTED TO SMART CITY

Over the past decade EU's efforts have been focused on solving specific problems (climate change, air pollution, etc.), in order to improve life in the Member States; the urgency to afford these issues is strongly linked to the entity of their effects, on the one hand, and to the increasing public attention, on the other hand. The realization that the development of effective actions of resolution requires the integration between different aspects, so far dealt with individually, has allowed EU to consider as fundamental the territorial dimension and, therefore, to give city a privileged role within Community policies and programs.

For this reason, EU has defined the strategy and the objectives that wants to achieve by 2020 basing on integrated and coordinated actions at the urban scale and these targets are well-established not only at European level but at Member State level too. Europe 2020 strategy represents the first attempt to sort and organize the set of Community policies related to different sectors of intervention.

EU has recently started to get out of a sector-based logic, by adopting one that is more effective and commensurate with the multi-dimensionality and complexity of problems that has to face: the consequence of the transition to a holistic and systemic approach, therefore, has had as consequence the emergence of the urban question as a priority issue.

In addition to feel the need to “work” in an integrated manner to curb the negative effects of numerous phenomena in place, the awareness that the roots of many problems should be mainly found in the functioning and organization of urban systems has come up.

In other words, the step that EU is trying to accomplish is to propose new forms of urban development and governance in order to prevent the problems that until now have been solved *a posteriori*. This process is still at an early stage as many aspects of urban development have not been determined yet, and, for example, there is not any definition at EU level of “territorial cohesion”. Actually, the most interesting aspect for scholars and urban planners is the recognition of the central role played by the city in the process of economic and social growth of European Union. Even though cities are the places where problems such as unemployment, pollution, poverty and segregation are more pronounced, at the same time they are defined as “the engines of the European economy”, are regarded as “catalysts of creativity and innovation” and have a crucial role “in the implementation of the Europe 2020 Strategy” (EP, 2011).

Although the scientific debate on Smart Cities is still underdeveloped, the aspects that EU considers essential within its urban and territorial development policy can be defined by referring them both to the debate on Smart Cities so far developed, and sectors and applications that industries and companies tag as Smart.

Therefore is still premature to expect that at the European level “urban development” is meant a “smart” development; this adjective is, in fact, most commonly used to denote single elements of the urban system

(transport infrastructure, ICT and energy), rather than the overall organization of the city. Based on this consideration, we tried to identify features and governance actions oriented to connote the city as smart, through the integrated reading of EU documents. According to the literature, it is possible to define a set of fundamental factors which make a city smart: technology (infrastructures of hardware and software), people (creativity, diversity, and education), and institution (governance and policy). Given the connection between the factors, a city is smart when investments in human/social capital and IT infrastructure fuel sustainable growth and enhance a quality of life, through participatory governance (Nam and Pardo, 2009).

Most these features are contained in the three documents analyzed and their integrated reading allows to extrapolate the four main actions, listed below, that European cities should be undertaken in the near future, in order to achieve a smart, sustainable and inclusive growth:

- adopting models of multi-level governance through the distribution of responsibilities between different government and institutional levels;
- promoting integrated urban policies by adopting a holistic and strategic approach;
- focusing on new information and communication technologies (ICT) in order to provide citizens for new media opportunities and easier access to the public and cultural contents;
- ensuring a sustainable territorial development based on the efficient use of resources.

According to the model proposed in the first action, the highest levels of government establish general development guidelines and wide discretion is left to the lower levels (Sabel and Zeitlin, 2008). In this way the development actions can more easily adapt to specific and urban settings that, it is hoped, should also coordinate horizontally all subjects and local institutions that play a decisive role in the identification of citizen preferences of specific territories (Barca, 2009). The multi-level governance has been mainly developed in the domain of EU cohesion policies that support the active role of governments and local communities in the direct management of the interventions. In this regard, in particular, the Urban Agenda emphasizes that the “local needs” are the “European priorities” and that multi-level governance “properly functioning” and a high participation of regional and local authorities can lead to the success of urban development policies.

The second action refers to the integration both of interventions in urban and economic resources made available by the EU, that are indispensable for their implementation. EU gives cities the opportunity to design and implement strategies fully integrated by providing multi-fund operational tools and cross-financing. If “the city is time and space”, as stated in Cohesion Policy document, the integration should take place both at spatial level (region, metropolitan area, district) and at temporal level, combining short and long term strategies depending on the specificity of the actions. In addition, a strategic approach to plan urban development scenarios should be adopted, starting from the specific characteristics of each urban area and sharing the development prospects with the several actors involved on the basis of partnership principle. Finally, the definition of policies should require a holistic approach suited to the complexity of urban areas; this kind of approach would mitigate not only the negative externalities produced within urban systems, but also would reorganize the urban system through a more effective network of relationships between the elements that compose it, in order to act on the causes rather than the effects.

According to the third action great attention should be paid to some peculiar characteristics that since the beginning of the scientific debate have featured a smart city. The main difference between a smart city and a “sustainable city” is the use of ICTs (Papa, Gargiulo, Galderisi, 2013) which may derive from the fact that the concept of smart city has begun to attract interest when the ICTs first reached a wide audience in European countries (Nijkamp et al, 2009). Unlike those who believed that ICTs would have replaced social relations and created an intangible space alternative to the physical, evidence have exclusively revealed the

complementary nature of these technologies to the functioning of urban systems. Thus, ICTs are a support tool to the development of human activities and their use, as well as reaffirmed in the Digital Agenda, is aimed at improving the quality of life of citizens, thanks to greater efficiency and speed of services that these technologies are able to offer. Following this approach, within the objectives of Digital Agenda there is not only the digital infrastructurization of the Member States but also the activation of a process of digital literacy so that “social background or skills are not a barrier to the development of potential” offered by ICTs. The city is “designed and equipped as a great functional and territorial infrastructure to support the society and economy of the country” (Niger, 2012), and the role of ICTs is not to erase the relationships and social exchanges but rather to make the basic services more affordable and more efficient such as education, health, transport, etc. As well as the machines have not replaced the man during the industrial revolution, ICT cannot replace “analog” interactions, but only make things easier.

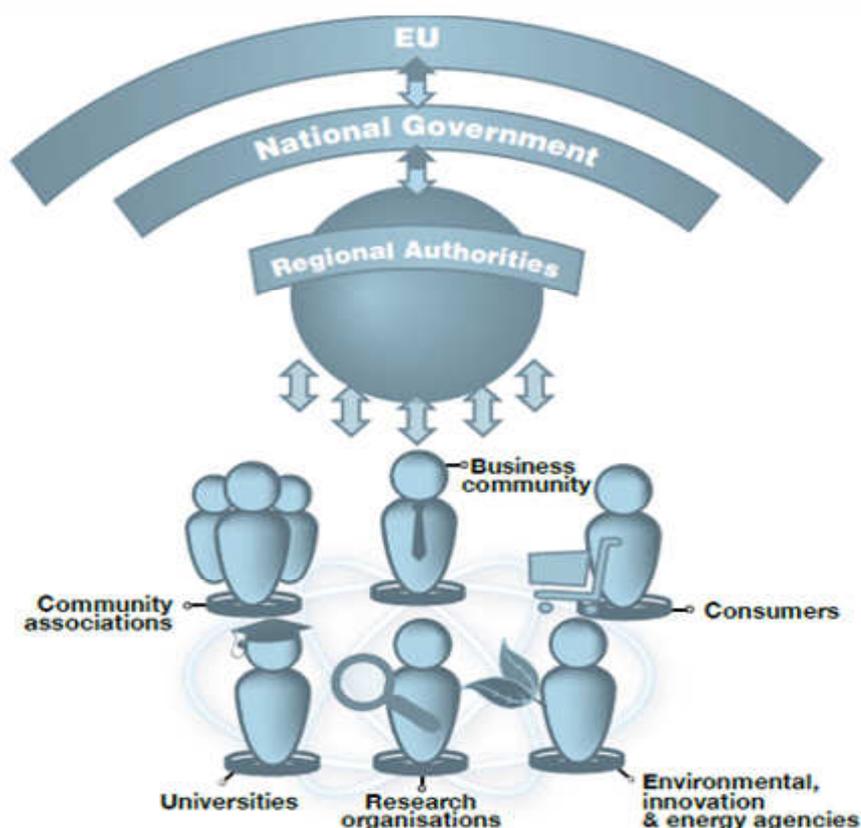


Fig. 7 – Connecting regional actors for the promotion of sustainable growth

Finally, the fourth action of sustainable growth is one of the three priority areas on which the Europe 2020 Strategy is based on, and is oriented to promote a more efficient economy in terms of resources through the deployment of smart grids and green technologies, carbon emission reduction of and improving energy efficiency. It is clear that the achievement of sustainable growth objectives is closely linked to the concept of technological innovation seen as “the key to succeeding in the de-coupling of growth from environmental degradation and consumption research” (EC, 2012b). At the same time technological innovation is the factor that allows to link the environmental and economic goals permitting that smart and sustainable growth can occur hand in hand. EU privileges regional and local levels to connect the sustainable and smart development, thanks to technological innovation. Local actors have, in fact, a greater knowledge of the territorial specificities and can therefore propose specific guidelines on how to prevent and adapt to

environmental challenges. To this end, among the investment priorities at local level, ERDF take into account investments in infrastructure providing basic services to citizens in the areas of energy, environment, transport and information and communication technologies (ICTs). Urban Agenda also notes that cities can make a substantial contribution to the fight against climate change, for example through intelligent systems for local public transport, energy refurbishment of buildings, and a sustainable urban planning that minimizes distances from work, from urban infrastructure, etc..

Moreover, the Urban Agenda as well as the Digital Agenda, draws attention to the great potential of ICT in order to deal with climate change, reduce energy consumption and improve transport efficiency. ICT, in fact, “may promote structural change towards products and services that require a more limited use of resources, towards the realization of energy savings in buildings and electricity networks and more efficient and less energy-intensive intelligent transport systems” (EC, 2010a).

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AUTHORS' PROFILE

Carmela Gargiulo

Associate professor of Urban Planning Techniques at the University of Naples Federico II. Since 1987 she has been involved in studies on the management of urban and territorial transformations. Since 2004, she has been Member of the Researcher Doctorate in Hydraulic, Transport and Territorial Systems Engineering of the University of Naples "Federico II". She is Member of the Committee of the Civil, Architectural and Environmental Engineering Department of the University of Naples "Federico II". Her research interests focus on the processes of urban requalification, on relationships between urban transformations and mobility, and on the estate exploitation produced by urban transformations. On these subjects she has co-ordinated research teams within National Project such as Progetto Finalizzato Edilizia - Sottoprogetto "Processi e procedure" (Targeted Project on Building – Subproject "Processes and procedures), from 1992 to 1994; Progetto Strategico Aree Metropolitane e Ambiente, (Strategic Project Metropolitan Areas and Environment) from 1994 to 1995; PRIN project on the "Impacts of mobility policies on urban transformability, environment and property market" from 2011 to 2013. Scientific Responsible of the Project Smart Energy Master for the energy management of territory financed by PON 04A2_00120 R&C Axis II, from 2012 to 2015. She is author of more than 90 publications.

Valentina Pinto

Engineer, Ph.D. student in Hydraulic, Transport and Territorial Systems at the University of Naples Federico II. Her research activity at the Department of Civil, Building and Environmental Engineering (DICEA) is aimed at defining new approaches to the study of cities and new tools and strategies for managing urban transformation oriented to the integration between land use and mobility planning for sustainable development.

Floriana Zucaro

Engineer, Ph.D. student in Hydraulic, Transport and Territorial Systems Engineering at the University of Naples Federico II. Her research activity is focused on the integration of land use planning, sustainable mobility and energy saving policies in urban contexts.