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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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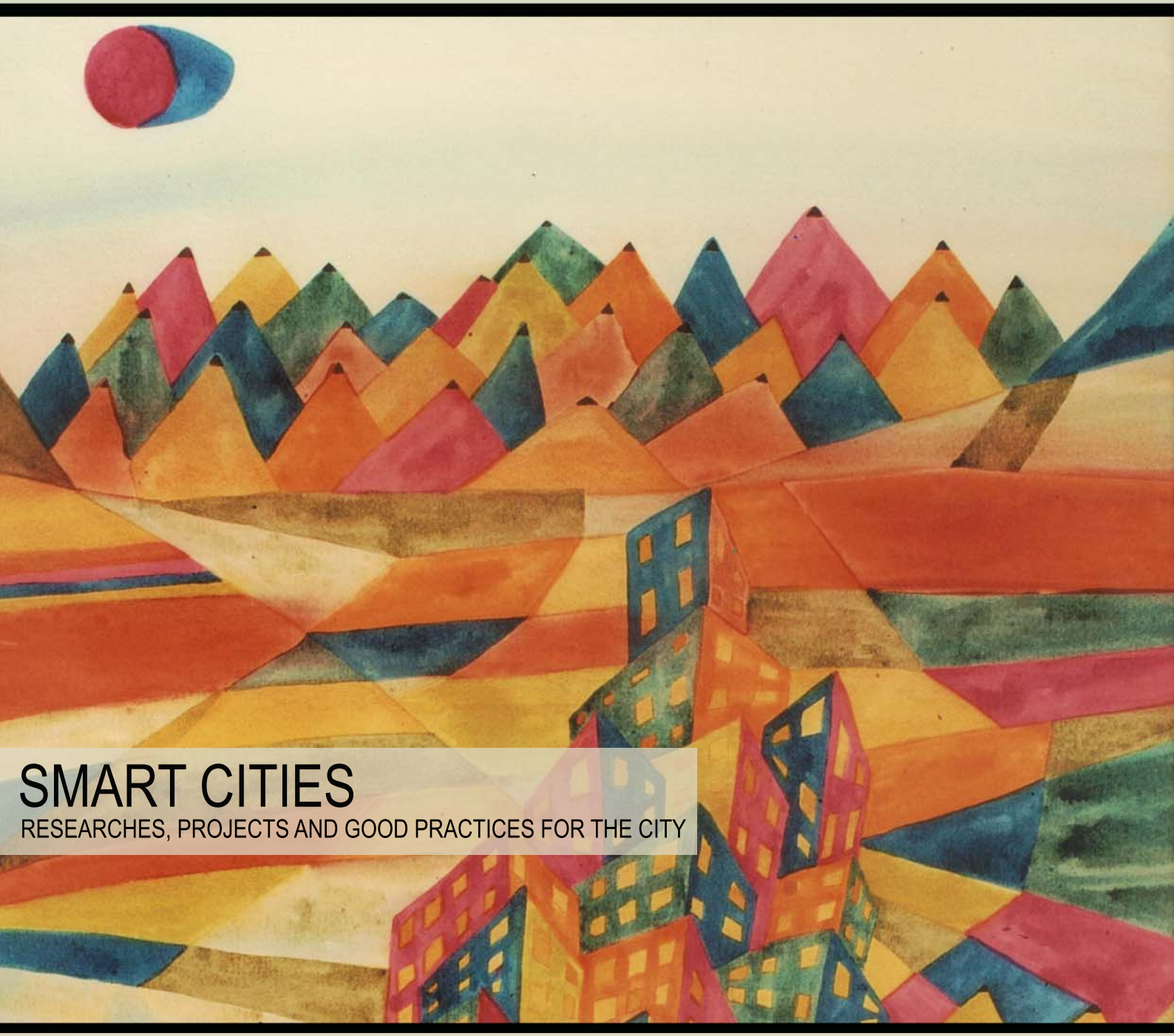

SMART CITIES

RESEARCHES, PROJECTS AND GOOD PRACTICES FOR THE CITY

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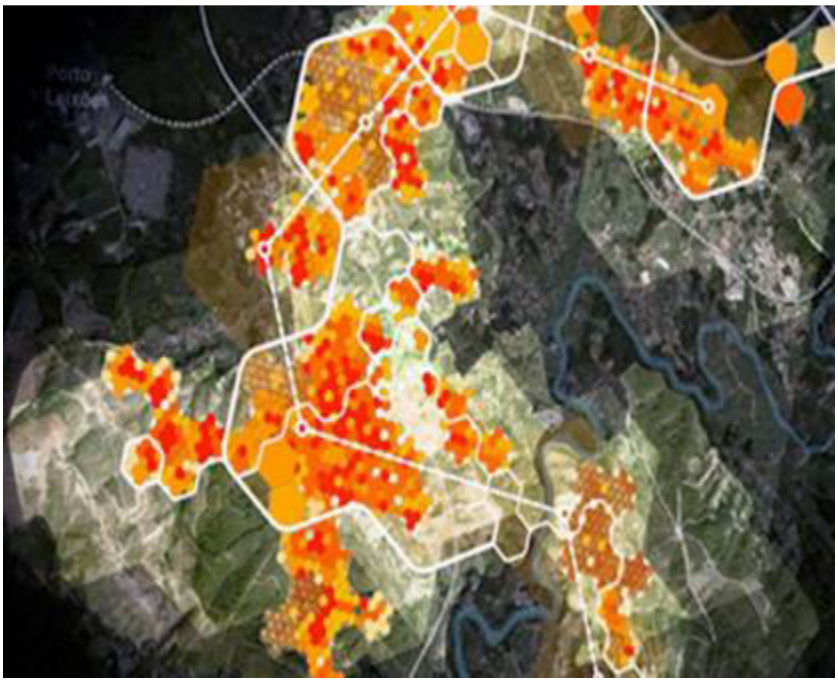

EUROPEAN STRATEGIES FOR SMARTER CITIES

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ABSTRACT

Cities and regions must tackle the challenges set by the radical change in our society and in our economy, aiming to develop effective public policies and boost their managerial, evaluation and planning skills. Therefore, it is essential to put a new idea of city at the centre of the smart strategies in order to bring policies back to their former central position, since technologies alone cannot generate welfare and prosperity. We are in a new phase of urban growth centred on the economy of services characterized by widespread digital technologies and new innovative organization patterns, which encourage the participation in the civic policy processes through the realization of structures to share information and data so as to define intervention policies. The most recent studies and trials about innovation and competitiveness, such as the examples illustrated in the present work (Amsterdam, Paredes, Aarhus and Gent), show a growing interest in measuring the relationship between innovation and economic growth at various territorial levels, key factors in conceiving inclusive smart strategies, linked to principles of sustainability and territorial cohesion, and building smarter cities. In the light of these remarks, the article is divided into three main parts: the first part is focussed on the above-mentioned central issues of the international debate; the second part examines four significant European initiatives; the third part draws preliminary conclusions and directions for further research.

KEYWORDS:
European cities; ICT; Innovation; Participation; Smart strategies for sustainability.

1 CITIES, SUSTAINABLE DEVELOPMENT AND INNOVATION: CHALLENGES AND OPPORTUNITIES OF A COMPLEX AND FUNDAMENTAL RELATIONSHIP

On a worldwide scale, cities and regions must tackle the challenges set by the radical change in our society and in our economy, aiming to develop effective public policies and boost their managerial, evaluation and planning skills.

According to data of the United States Department of Economic and Social Affairs, in 2007 for the first time in human history, 50% of the entire global population lived in urban areas, while only a century ago this figure stood at 13%, and it is now predicted to reach 69% by 2050. Besides, with a population share of just above 50 % but occupying less than 2 per cent of the earth's surface, urban areas concentrate 80 % of economic output, between 60 and 80 % of energy consumption, and approximately 75 % of CO2 emissions (European Union). Therefore, cities have to cope with negative effects of urbanisation and international division of labour (urban sprawl and spatial disparities, congestion and pollution, social issues and distressed areas) but, they also have to produce proactive actions to improve and sustain their competitiveness position and foster agglomeration economies.

The urban paradox is evident in the hard and conflicting coexistence of dynamic growth and social exclusion in urban regions. This may be overcome thanks to strategies and common actions aimed at pursuing an urban and territorial competitiveness based on the key factors of environment quality and multilevel governance, and at implementing urban policies within a regional and national framework, which may involve all the citizens and enhance potential and peculiarities of the different urban areas (OECD and China Development Research Foundation 2010).

The phenomenon of urbanization is of the utmost importance in relation to the global and local interactions between population, environment and development, to such an extent that any reflection concerning the elaboration of possible sustainable development patterns leads to wonder about the future of cities. In the last two decades these have turned into increasingly important decision-making and strategic centres owing to the growing role that services and finance play in the world economy (Sassen, 2012). Therefore, the governance of the new cities should be based on a strategic development vision which takes into account both the global space of flows and the local one of physical spaces, with a view to finding a dynamic balance between the contradictory expressions of the values and interests of the numerous subjects living and operating in them. Thus, it is necessary to aim at the enhancement of urban common assets and at the creation of technological infrastructure which may connect people and objects, integrate information, foster social inclusion and improve the quality of urban life. This is why data, their accessibility and their reliability are of particular significance in the smart city. Moreover, the way data are used to study the city and plan urban policies in a perspective of collaboration with the citizens (CITTALIA-Fondazione ANCI Ricerche) is not a minor aspect, either. Cities must take upon themselves the difficult task to combine needs, resources and expertise by means of an adequate planning and, at the same time, play an active role within international networks. In short, accessibility and reliability of data as well as the way these are used must be oriented in such a manner as to discover and appraise the city itself, thus enhancing civic culture and social capital.

If the enormous potential of modern technologies the smart city can rely on should only be applied to reduce pollution or accelerate the use of information to have access to services, without aiming first at job creation and, consequently, at wealth creation, we will soon have to cope with the contradiction of a far better and healthier but also poorer and weaker city to live in. Meanwhile, this view of the future cannot disregard the ever-growing inequalities within the cities and must inevitably concentrate on the reduction of gaps, related not only to technology, but above all to the unequal possibilities of access reserved to the various social classes.

Some local governments are particularly active in the diffusion of their urban management practices (urban governance flows) through cooperation and, in promoting this exchange of practices, they intervene in global governance and act as network-makers or sub-nodes of the global governance network. Furthermore, on an international level, many cities are pursuing the goal to become "smart", in the broadest sense of the concept with its multiple structuring elements - smart economy, smart people, smart governance, smart mobility, smart environment, smart living –, by working in synergy with local public and private actors to build a project and operational platform which enables them to produce high technology, reduce building energy consumption, promote clean transport and improve the overall quality of life of its inhabitants focusing on low CO2 emissions. In many cases (CITTALIA-Fondazione ANCI Ricerche, 2012), ICT tools have been used successfully in order to improve liveability, boost townspeople's participation and upgrade their use of urban areas. Similarly, innovative research has proved capable of attracting investments in order to create real knowledge and sustainable cities through green innovation. Anyway, it is essential to put a new idea of city at the centre of the smart strategies in order to bring policies back to their former central position, since technologies alone cannot generate welfare and prosperity. Local leadership, integrated planning and a rich social fabric go hand in hand, the social capital being able to produce an added value for the cities. The main point is not introducing new sensors in the cities so much as better using the existing ones with a view to implement an efficient data management system within an organized pattern aiming at joint work between administration and citizens. We are exactly in a new phase of urban growth centred on the economy of services characterized by widespread digital technologies and new innovative organization patterns, which encourage the participation in the civic policy processes through the realization of structures to share information and data so as to define intervention policies.

The path towards the building of the economic and social vocation of an intelligent city cannot be traced any longer by few people operating on their own, although they are influential; in fact, citizens should be increasingly involved in those policies where they play both the role of receivers and the role of (co)producers.

2 EUROPEAN UNION'S POLICIES FOR SMART AND INCLUSIVE GROWTH

Although, according to the Mercer 2012 Quality of Living Survey, European cities represent over half the cities amongst the top 25 in the ranking, the global economic and financial crisis has meant that Europe is faced with some serious structural challenges, which can only be addressed by profound structural reforms and renewal and by a comprehensive and joint effort to construct smart, sustainable and inclusive growth.

Since, as everybody knows, the current economic, financial and debt crisis has a serious effect on local and regional budgets, coordination between European, national and local policies and their financial support are to be considered more important than ever.

The surveys carried out by Europe 2020 monitoring platform offer a great variety of examples of policies pursuing the aim of a sustainable growth. Most of them focus on targets 20-20-20 (reduction of emissions, reduction of energy consumption and wider use of renewable energies); others aim to provide additional indicators which could contribute to leading local and regional authorities towards a greater growth and more jobs in a low-carbon society, including the estimate of the carbon dioxide footprint of a community. Several cities belonging to Covenant of Mayors are now working out or putting into effect action plans linked to sustainable energy. In the field of industrial policy, some projects aim to improve the business environment through the provision of services oriented towards an environmentally-friendly growth; for instance, other actions concern water management to protect coastal areas against inundation and provide fresh water even through the recovery of rainwater. Thus, policies, strategies, experiences adopted at a local

and regional level belong to a wider strategy at European level promoting the interaction between the Horizon 2020 Programme and the CSF funds, in order to develop Smart Specialisation Strategies at the regional level and to reinforce the interaction between research and innovation agents and businesses on the ground.

The most recent studies about innovation and competitiveness show a growing interest in measuring and illustrating the relationship between innovation and economic growth at various territorial levels, key factors in conceiving inclusive smart strategies, linked to principles of sustainability and territorial cohesion. Regional innovation, in particular, has been placed at the heart of the 2020 strategy as Europe's competitiveness and capacity to create new jobs depends on driving innovation in products and services. It is also the best means of successfully tackling major societal challenges, such as climate change and energy efficiency (European Commission, 2012).

The European Commission's proposals for the 2014-2020 programming period invite Member States and regions to unlock the power of innovation by drawing up comprehensive research and innovation strategies for smart specialisation, that has been proposed as a pre-condition for using European Regional Development Funds (ERDF) for the next programming period. The aim is to catalyse a strategic process, whereby each Member State or region identifies those knowledge-based investments that are most likely to deliver growth and jobs and to do this through a broadly-based process of direct stakeholder involvement, including knowledge providers and entrepreneurs in the regions. Such entrepreneurial discovery process is about working with the business sector to identify the specific actions needed to upgrade existing clusters through Research, Technological Development & Innovation (RTDI) investments. It is also about creating an environment in which entrepreneurs have an incentive to explore the economic potential in those domains that have been identified for a region as being the most promising. The smart specialisation conditionality and the reinforced partnership during all stages of programming and implementation of the Structural Funds that goes with it, is essential to deliver better performance and more impact for the Funds.

In October 2011 plenary session, as requested by the Polish presidency of the Council of the European Union, the Committee of the Regions (CoR) adopted an opinion entitled The Role of Local and Regional Authorities in Achieving the Objectives of the Europe 2020 Strategy where, among the main recommendations, the 'triple helix' concept for a partnership between the academic world, businesses and local authorities represents a model for a coherent development of regions and cities. European programmes and current actions, at urban and regional level, concerning different thematic areas (innovation policy, digital agenda, climate change, social inclusion), implement the European strategy's three priorities of smart, sustainable and inclusive growth.

Ultimately - thanks to the formulation and implementation of smart strategies changing the Cities and Regions of tomorrow into platforms for smart and sustainable development, innovation, democracy, cultural dialogue and diversity - cities and regions can successfully face the numerous and complex challenges they have to cope with in order to preserve and increase their standard of prosperity in an ever-changing reality characterized by a global economic crisis and by many other critical factors: States coming to the rescue of banks; ageing populations threatening the competitiveness of our economies and the sustainability of our social models; downward pressure on costs and wages; the challenges of climate change and increasing energy dependence; and the Eastward shift in the global distribution of production and savings, and, above all, threats of terrorism, organized crime and the proliferation of weapons of mass destruction hang over us (European Union, 2010).

3 THE CITIES AS LABORATORIES OF INNOVATION: A COMPARISON OF EUROPEAN EXPERIENCES

A great number of European cities are doing their utmost to become smart, much has been said about this subject as well as several initiatives have been taken at European level to point out the features of a smart city. "Smart cities & communities European innovation partnership (SCC)" (European Commission 2012) is among these. It is a partnership across the areas of energy, transport, information and communication with the objective to catalyze progress in areas where energy production, distribution and use, mobility and transport and information and communication technologies (ICT) are intimately linked and offer new interdisciplinary opportunities to improve services while reducing energy and resource consumption and greenhouse gas (GHG) and other polluting emissions. This initiative will be restricted to a couple of demonstration projects which will be carried out in association with the cities. Starting from the observation that almost three quarters of Europeans live in urban areas consuming almost 70% of the EU's energy, smart urban technologies can make a major contribution to tackling many urban challenges through better provisioning and less waste. That is why for 2013 alone, € 365 million in EU funds (compared to 81 million in 2012) have been earmarked for the demonstration of these types of urban technology solutions. Currently many obstacles limit the potential of innovative smart technologies, for example high technological risk, difficulties over uncertain returns on investment or regulatory difficulties. In practical terms, EU will help to establish strategic partnerships between those industries and European cities to develop and roll out the urban systems and infrastructures of tomorrow. Projects will receive funding mainly in the construction sector and in urban mobility. Moreover, analyzing the ideas at the heart of the theoretical debate on smart city, it is worth considering a "bottom-up" concept of smart cities in which citizens themselves take steps to improve the life of the city. The promoter of this concept is the American scholar Henry Jenkins, professor at University of Southern California. He proposes the idea of a "new civic ecology" that not only focuses on the transmission of information but that takes into account rituals that reinforce a sense of social and cultural belonging. He says: "Civic ecology is the way citizens shape the information that circulates and how they use it for decisions. This can come about on various levels depending on how the tools of communication are used" (Jenkins 2006). To achieve the hoped-for scenario, it is necessary to maximize the circulation of important and credible information and make citizens more aware of it and willing to use it firsthand. In Italy, a response to the exciting experiments mentioned by Jenkins can be seen in proposals for the reconstruction of L'Aquila, where the goal was to encourage projects and "bottom-up" ideas to help revitalize the city of Abruzzo destroyed by the earthquake.

In this work some examples of smart cities are taken into account since they share the prevalence of two main aspects making them smart: technology and participation. These aspects were also highlighted for their significance in SCC partnership and within the concept of "civic ecology" by Jenkins. Then, in the four analyzed cases, these two main aspects are applied to achieve different specific goals. Three of these cities – **Amsterdam**, **Aarhus**, **Gent** – are located in Northern Europe and one of them, **Paredes**, is in Portugal. The use of highly innovative technologies characterizes all the cities. As to Amsterdam, these technologies focus on CO2 reduction; as to Paredes, they aim at urban regeneration and development; whereas in the case of Aarhus, the innovative technologies propose patterns of business and policies whose results everybody can benefit from. Finally, in the case of Gent, technologies are applied in order to consolidate the instruments of e-democracy and e-participation aimed at strengthening cooperation between citizens and general government (CITTALIA-Fondazione ANCI Ricerche 2012).

The city of **Amsterdam** (Amsterdam Smart City, http://amsterdamsmartcity.com/) has developed the initiative Amsterdam Smart City, a unique partnership between businesses, authorities and the people of

Amsterdam whose goal is to reduce CO2 emissions by means of a package of actions carried out over the urban area. Technologic innovation and improvement of the quality of life go hand in hand in the strategy of this initiative.

Fig. 1 Amsterdam Smart City, location of the main projects

Amsterdam has always been concerned about the issues of urban sustainability, and has chosen to concentrate not only on mobility and urban regeneration, but also on energy and technology efficiency in order to foster a bottom-up approach to share policies and actions. The results of *Amsterdam Smart City* actions will also help to achieve the goals of New Amsterdam Climate, the intervention plan which will reduce CO2 emissions by 40% within 2025 through targeted projects in private building and transport sectors and in the planning of urban spaces. Although the numerous projects in progress are all aimed at reducing urban emissions, they can be divided into three different types. All the types involve the citizens favouring the knowledge of their private consumptions for learning to manage them better. All the projects have found large consent from the citizens. The first includes energy management actions aimed at enabling the residents to become more aware of their private energy consumption. This is the target of *West Orange* and *Genzenveld* projects, the former involving four hundred homes and the latter five hundred homes, which have been provided with new energy meters with an additional energy feedback display containing tips and guidelines to improve their energy consumption at home. The Smart Challenger project, on the contrary, is an attempt to spread a greater awareness of energy consumptions among the employees of local companies through the use of new technologies. Moreover, thanks to the *Ship to Grid* project, about two hundred stations have been set up so that vessels may be connected to the electric grid for power when docked. Thus, ship's devices are supplied by a clean source of energy with no need for polluting diesel generators. A second type of projects is aimed at promoting autonomous energy supply. For instance, *Onze Energie* is fostering a collaborative energy supply for the residents of North Amsterdam, who, by joining the programme buying low shares, can buy green energy generated by windmills that are situated in the surrounding areas. This assures considerable savings and involvement in the decision-making process of the local consortium, which aims at supplying 20% of local households with green energy. Numerous energy supply initiatives have concerned public and private buildings, combining design and technological innovation in order to improve energy performances in the wide built heritage of the Dutch capital. The introduction of

the Fuel Cell Technology stands out among these interventions: it has replaced the traditional fossil fuel plants in a 17th-century building leading to over 50% emission savings. Following this pilot action, the intention is to extend this system to a large number of private buildings enabling them to generate the energy they consume. Finally, the *Utrechtsestraat Climate Street* initiative aims at reducing CO2 emissions through the action of forty entrepreneurs from the homonymous neighbourhood, who have contributed to mapping emissions and to progressively installing Smart meters and Smart plugs to reduce consumptions. At the same time, the installation of energy-saving lighting systems in the streets and at the tram stops has contributed to making public spaces energy-efficient. This case and those mentioned above share a common thread with the other actions of Amsterdam Smart City: citizens' participation, which has found its visibility in the transformation of Utrechtsestraat into the first sustainable and participatory commercial street in Europe.
Through the initiative *Living PlanIT*, the city of **Paredes** (http://living-planit.com/default.htm) has relied on the most innovative technologies to become an open-air laboratory of urban development which is obtaining results, to be exported all over the world, but also decisive effects on the quality of life of its citizens. Located only 15 kilometres from Oporto, Paredes has been for long time the focus of ambitious initiatives of cultural and economic revitalization related to its nature of cluster of design and creativity. Digital connectivity is an extra key factor for the development and the competitiveness of its territory, which boasts a growing number of public spaces with wireless connection and a marked sensibility of its citizens to innovation and sustainability. The city has embarked on the challenge to upgrade the city according to the logic of the software industry rather than to the traditional approaches of town planning. In fact, by 2015, it will become the first urban centre in the world completely connected to a network of one hundred million sensors managed by a smart control system that will allow to replan development and competitiveness on an absolutely new basis. The sensors will enable to bring the information about the operation of all urban services online in order to improve the management of the different sectors by the municipal administration and to develop completely new services.

Fig. 2 Through the initiative PlanIT, Paredes will become an open-air laboratory of urban development

The project has been carried out by a team of engineers, town-planners and computer scientists and has been defined as a "living laboratory", which is ready to implement and experiment in the field with a series of excellence solutions to be exported in next-generation smart cities. Citizens will be involved directly because the advanced system of sensors will not work only in common spaces but will also connect private households with each other, so that they will be able to manage their heating and energy consumption systems more efficiently. Like all the other urban infrastructures, the system of sensors will not be applied only to new buildings but it will also contribute to improving the efficiency of the already existing ones. However, new buildings will enjoy the most significant advantages, above all on an economic level.

The city of **Aarhus** (http://www.stateofgreen.com/Profiles/City-of-Aarhus), the last city in Denmark to pursue the traditional union between innovation and sustainability for its own urban development, has founded its smart strategy on citizens' involvement. Its ambitious objective to become completely carbon neutral within 2030 is common to other similar plans implemented by big and small cities in the Scandinavian country. Yet, in no other case has sustainability been so strongly supported as in the tradition of innovation of its urban context, which develops in different sectors of local life: from energy supply to research clusters. Aarhus has combined entrepreneurial and scientific fabric with civic participation in order to focus the urban development of the future on symbolic facilities, which also physically represent meeting points for the local business and scientific communities. *Smart Aarhus* aims to promote a bottom-up participation in the definition of innovative development strategies to be carried out in its various neighbourhoods. The project objective is to favour the constant sharing of information between citizens by proposing a real "digital revolution" where new technologies back up sustainability. The interdisciplinary character of the concept of smart city proposed by Aarhus is the reason of its uniqueness: the Danish city has chosen not to focus only on the implementation of a technological model, but, above all, on a business and policy model enabling local authorities and businesses to use information technologies in solutions which may benefit citizens, companies and policy makers. The actions of participation and innovation, which have been pursued in Aarhus, will be an example to follow for other cities in Europe and around the world. In order to implement this mix of actions, Aarhus relies on the active participation of the local energy businesses which have made this part of the country one of the world leaders in clean energy generation. In fact, the city has a unique position in the global market of wind power and is one of the world's major research centres on this subject. The historic bonds of collaboration between businesses, suppliers, scientific communities and local administration are a crucial precondition for the development of new projects of smart cities. A significant example of this collaboration is the technological campus of Katrinebjerg, which is located in the north western area of the city and is conceived not as a scientific campus isolated from the urban context, but as an integral part of the urban fabric, a constantly evolving cluster which aims to become a "world-class environment" for technological businesses. The cluster, which already hosts a significant number of businesses and research institutes in the field of new technologies, aims to become an incubator of ideas regularly involving users and experts in innovation in a continuous cooperation with other companies situated in the rest of the territory. To facilitate international exchanges, to better support the investors who wish to back local research and development projects and to network local businesses and research institutes are the priorities of this smart neighbourhood which revolves around one of the world's top 100 universities. However, the Smart Aarhus of the future will be represented by *Navitas Park*, a facility that will stand in the port area of the city and will host various schools, highly specialized in the sector of technology and engineering. It keeps the bond with the city business community intact with a view to reasserting the importance of research for the future development of the whole urban context. Therefore, Navitas Park aspires to become the beacon of the future smart city, a centre characterized by state-of-the-

art spaces for learning, innovation and entrepreneurship, a model and inspiration for students, researchers, teachers and local entrepreneurs.

The Belgian city of **Gent** (Ghent, Gand) (http://www.gent.be/gentincijfers/) has bet on its citizens' empowerment and involvement to improve the quality of the urban life through crowdsourcing. To achieve an increasingly green economy and to give rise to an open and transparent society, which can be fuelled by smart citizens' creativity, is the goal this city aims to pursue by 2020. Furthermore, thanks to its university and over sixty-six thousand students, Gent is the biggest university city in Belgium and a springboard for innovation and technological research. The strength of the strategy pursued by the city consists in its citizens: smart citizens for smart city. In fact, the goal of Gent smart strategy is to encourage the citizens' participation in the implementation of innovative projects for the city digital development (smart engagement) and of green policies for the reduction of urban emissions (smart environment), by relying on sustainable mobility and urban security (smart mobility). These goals are achieved above all through digital platforms. As a matter of fact, in April 2011, Gent administration, in a partnership with IT businesses, launched the crowdsourcing platform "My digital idea for Ghent". The project has been conceived as a web 2.0 platform where users are asked the question: "How can ICT make it even more pleasant to live in Ghent?". Citizens, businesses and organizations have uploaded their projects, voted and commented on the proposals submitted by other users. The objective was to gather the citizens' opinion on how new technologies can be applied to daily life with the purpose of defining concrete projects to be carried out in the city. Gent has chosen crowdsourcing to start a process of citizens' collaboration and involvement in the digital development of the city. This tool is increasingly establishing itself as a means for the promotion of a new business model in which a company or a public institution demands the development of a project, a service or a product to people who are organized in a virtual community. It is a system ensuring mutual advantages: for businesses, it is a new model of open enterprise; for private actors, it gives the possibility to offer their services on a global market; for public institutions, it is a form of collaboration with citizens. Gent smart initiatives are part of the European project "Smartip-Smart Metropolitan Areas Realised Through Innovation and People", whose goal is to spread the use of new ICTs in all the European cities, starting from five pilot cities (Gent, Manchester, Cologne, Bologna and Oulu) and directly involving citizens.

4 CONCLUSIONS

Cities are where some of the world's most pressing challenges are concentrated: unsustainable resource and energy consumption, carbon emissions, pollution, and health hazards. Yet, cities are also magnets attracting hundreds of millions of people in search for economic opportunities and hope for a better future (UNEP 2011). Today's still-difficult economic environment requires not losing sight of long-term competitiveness fundamentals amid short-term urgencies (World Economic Forum, 2012). More competitive economies tend to be able to produce higher levels of income for their citizens by betting on closely interrelated fundamental pillars, among which, besides the strictly economic ones, the following play a crucial role: *Institutions* (their quality plays a key role in the ways societies distribute the benefits and bear the costs of development strategies and policies); *Infrastructure* (well-developed infrastructure integrates the national market, cheaply connecting it to markets in other countries and regions); *Health and primary education* (a healthy workforce is vital to a country's competitiveness and productivity); *Higher education and training* (their quality is crucial for economies that want to move up the value chain beyond simple production processes and products); *Technological readiness* (it measures the agility with which an economy adopts existing technologies to enhance the productivity of its industries, with specific emphasis on its capacity to fully leverage information

and communication technologies (ICT) in daily activities and production processes for increased efficiency and competitiveness); *Innovation* (it is particularly important for economies as they approach the frontiers of knowledge and the possibility of integrating and adapting exogenous technologies tends to disappear). However, it is above all the development of social capital that plays a crucial role in the development of diversified and knowledge-intensive local economies. Social capital relates not only to education and skills, but also to the ability of people to trust each other, to be willing to cooperate, to engage in social networks and dialogues, as well as to be pro-active regarding challenges and sharing common goals. It is vital for the development of entrepreneurship and small business creation.

The comparison of all the projects carried on to make European cities smart reveals that the term "smart" still lacks political weight. So far, though starting from different backgrounds, in its various European experiments, the smart city has always been considered as a city able to supply services with the highest technological content. Today, instead, new semantic horizons are looked for, as it has been realised that the correlation between a technology-centred city and prosperity is not so univocal (Europe 2020 monitoring platform). The city is not only the optimization of the individual's performance or the perpetuation of the family social status. The city is a space of potentially subversive solidarity; it is the experimentation of diversities reconciled by citizenship; it is the place where opportunities are not merely equal, where they are rather occasions to make people more or less equal.

Europe is facing 21st-century challenges with an ambitious economic policy aimed at pursuing a smart, sustainable and inclusive economy. Such a policy is based on three mutually reinforcing priorities, which are indispensable to deliver high levels of employment, productivity and social cohesion (European Commission, Europe 2020). Moreover, it considers that urban competitiveness is mainly driven by endogenous factors and that performance in the productivity level of urban regions is strongly associated with economic specialisation, as well as human and physical endowments.

The city is the place where culture made up of products is consumed, but where culture made up of intellectual, spiritual, artistic and technical contents is produced. This goal is also part of the challenges looming ahead of Europe and on which Horizon 2020 research programme will invest 85 billion Euros over the next few years. This investment will be partially devoted to the research on smart cities (Barresi & Pultrone, 2012). Therefore, cities and territories must face a challenge, which is more cultural than economic, through smart strategies able to turn them into actual driving forces behind sustainable development, thanks to actions aimed to improve the quality of the citizens' life and, at the same time, to relaunch their city brand on an international level. Nevertheless, in order to build better cities, technologies alone are not enough: if there is no content behind and inside technology, cities remain dumb areas. In order that they may become smart for all, in the strictest sense of the term, cultures of justice, knowledge and politics are needed, which do not have to be smart: they only have to guarantee Justice, Knowledge and Politics.

NOTE

Within this article, resulting from some joined-up thinking, the contributes of each author are also clearly distinguished as follow: "Cities, Regions, Sustainable Development and Innovation: Challenges and Opportunities of a Complex and Fundamental Relationship" and " European Union's Policies for smart and inclusive growth "(G. Pultrone); "The Cities as Laboratories of Innovation: a Comparison of European experiences" (A. Barresi); Conclusions (joint work, A. Barresi and G. Pultrone).

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Fig. 1: "Amsterdam Smart City", http://www.urenio.org.

Fig. 2: "Through the initiative PlanIt, Paredes will become an open-air laboratory of urban development", http://inhabitat.com/microsoft-jumps-on-board-portugals-mega-smart-city-plan/#13603222116561&66199::resize_frame|61-151.

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