THE CHALLENGES OF SMART CITY IN THE CONTEXT OF GLOBALIZATION AND THE HEALTH CRISIS

Constantin-Marius PROFIROIU [a*], Carmen-Valentina RĂDULESCU [b], Sorin BURLACU [c]

[a] Bucharest University of Economic Studies, Romania
[b] Bucharest University of Economic Studies, Romania
[c] Bucharest University of Economic Studies, Romania

ABSTRACT
Studies have shown that the rapid evolution of technology is felt in the population, technology becomes over the years a thing fully integrated into the way we live. This technological evolution is also felt at the level of public administration, becoming clear that the digitization of public services, the automation of public transport, the improvement of air quality, etc. these are necessary things that the administration should do. Our research captures the advantages of developing a "smart city" strategy and implementing it in the provision of public services compared to using common practices without using technology as an aid for data collection but also for effective improvement.

KEYWORDS: *Smart City, health crisis*

1. INTRODUCTION

According to specialized studies, the city is defined as a human settlement, a complex locality with a large number of inhabitants and a high density, with multiple autonomous, commercial, industrial and cultural administrative functions. Until two centuries ago, cities were a less popular choice for people to live in because they were often dirty, unorganized, crowded and lacking in food, clean drinking water, these are some of the reasons why people chose to live in rural areas. where these problems were non-existent. Another reason why cities were not very popular was the economic reason because the vast majority of people worked in agriculture were few trades that could be done inside cities. With the industrial revolution the city was revolutionized and, for the first time in human existence, food procurement was no longer the main sector of labor, factories and factories began to be built in which a large number of workers had to be found who were paid more. rather than working in agriculture, this made people come to the urban environment for the first time. It has been observed that in recent years, since the twentieth century cities have begun to suffer from overcrowding most people moving from rural to urban areas, this has created new challenges to administrative systems that are responsible for the welfare of citizens living in the unit. administrative management. Urbanization thus becomes one of the most important social processes that influence economic and social development but also the state of the environment. (Baltac, 2015)
These challenges require new and creative solutions in order to be solved, being the moment when technological evolution helps to solve them. Data collection and analysis becomes much easier with the help of new technologies which can result in making the right decisions but also using them to automate certain public services.

* Corresponding author. E-mail address: *mprofiroiu@ase.ro*

2. THE IMPORTANCE AND RELEVANCE OF THE CONCEPT OF SMART CITY

Smart City is a term that should be much more present especially in those overcrowded cities where there are many social, economic, and health problems that can be improved through good practice of modernization and technology.

The role of the mayor's office is to formulate, adapt and impose strategies to facilitate citizens' access to information of public interest, public services that can be performed remotely, to personal documents that are currently issued only with the presence at the mayor's office but also the provision of the best quality public services in the most efficient and effective way possible.

The smart city in Baltac's vision (2015) is an urban area whose main priority is sustainable development and quality of life at the highest level for its residents by using information technology infrastructure together with social capital, the main reason for the introduction and use digital technology is to raise the standard of living for all residents, reduce the cost of public services and communication between local government and citizens to a very good quality. The main factor to be taken into account in the development of a smart city in the author's view is the digital infrastructure based on four important components: digital access, digital accessibility, digital content and training. These components refer primarily to equipping the population with devices capable of accessing the Internet and thus the official sites of local and central government in a secure manner, to which are added digital devices that are part of the city's infrastructure, among which can be listed : sensors for calculating the volume of traffic, sensors for public safety, for monitoring the environment of the volume of air pollutants or air quality and for the control of public services. Digital content is the component that provides access to digital services such as: issuance of documents, various payments for both individuals and legal entities, access to authorities and information. Digital skills are a necessary condition for the implementation of the concept of "smart city" because the population must know how to use all the new technologies that are introduced in order to facilitate access to various public services and not to create confusion and restrict their access. "A smart city is one that uses digital technologies in all its functions." (Baltac, 2015)

The Ministry of Communications and Information Society (2016) developed the Smart city guide for Romania where they listed the main areas in which Smart City type objectives should be found. These include: Finance, Governance, Housing, Health, Safety, Waste, Transport, Telecommunications, Urban planning, Water supply, Economics, Education, Environment.

3. THE MAIN CHALLENGES

The main challenges facing urban development in the opinion of Onescu (2016) are: general challenges category in which falls demographic, economic, or strong environmental pressures and specific challenges including the network of utilities, development of transport networks, spaces green.

Human settlements, more precisely cities, are a massive consumer of natural resources producing residues that cannot be assimilated or are assimilated in a long period of time that is beyond the natural capacity to regenerate the environment. Air pollution in cities is largely caused by vehicles that produce noise resulting in noise pollution, heavy metals, pollutants and heat pollution. Urban development should be focused on innovation in the areas of services and technology as well as social and institutional innovation in order to make cities attractive in the future by offering a special diversity but also to provide a high standard of living for all residents within it. .

4. URBAN PERFORMANCE THROUGH SMART CITY POLICIES

Urban performance does not only depend on the quality and size of the infrastructure consisting of roads, railways for trams, the connectivity of the city with other urban poles, subway, blocks of flats,

and green spaces but also increasingly the availability and quality of knowledge communication and social infrastructure. The concept of "smart city" has been introduced as a strategic device to bring together modern urban production factors in a common framework to highlight the importance and contribution of information and communication technologies (ICT) over the last 20 years to improve the competitive profile of a city. (Caragliu et al., 2011)

One way in which a city can evolve is to collect data in large numbers and from as many domains as possible, which provide information about the city and citizens who, following an analysis, provide answers to both the administration and the citizens. However, these data sets are often based on samples, which are generated automatically, the variation of the answers is often similar and does not always express the most accurate date. As a result, these data sets have been complemented by "small data" studies, including opinion polls, questionnaires, case studies, city audits, which capture a relatively limited sample of data that is highly concentrated over time, and space. These data collections and their analysis could provide a city administration with the information needed to understand and control a large urban space. In other words, massive data collection consists of massive, dynamic, varied, detailed, interrelated data with low collection costs, which can be connected and used in various ways to improve administrative decision-making. Such an increase in data collection is due to several technological developments, infrastructures in the field of information technology, different techniques and processes, which allow and lead by their rapid combination in daily practices to data collection and analysis. These include the widespread expansion of fixed and mobile devices; the development of ubiquitous computers and the ability to access networks and computing in many environments and on the go; incorporating software into all types of machines that make them " smart " and create a multitude of pure digital devices; extracting social and web applications. Advances in database design and information management systems, affordable data storage and new forms of analysis have contributed to the creation of new ways of collecting and analyzing data. Many city governments now use real-time analysis for a city's main functions and regulations. Perhaps the most common example is the movement of vehicles around a transport network, in which data from a network of cameras and transponders are returned to a traffic flow control center and to regulate the consequences of traffic lights and speed limits and to manage automatically sanctions for traffic violations. Similarly, the police could monitor the system of cameras and incident logs live, in order to effectively direct in real time the traffic on certain segments that are too crowded or an accident occurs. Data on environmental conditions could be collected from a network of sensors distributed in the city, for example the measurement of air pollution, water level or seismic activity. Data collection and analysis is a necessary process for implementing a “Smart City” strategy because current problems at the city level need innovative and creative ideas to be realized but also a well-defined database. (Rob, 2014)

Explanations of why traffic varies significantly from day to day, even if demand profiles are similar are few which creates a problem in mobilizing car resources to a particular route because it is not done in a way that covers the needs of citizens or is done cost too high and we believe that new systems lEFT data will provide us with the necessary information on which resources will be necessary without being too few or too many. Based on this information, clarifications will be made on future developments and investments. The severity of these effects is even stronger in the case of extraordinary events such as accidents, road construction, which can affect the peace and productivity of transport systems. (Traian, 2017)

To interact with the administration a phone connected to the internet is more than enough. To access a page, it is enough to know the name of the institution we want to interact with, accessing the page being enough to obtain and send information from the Public Administration. Electronic governance in Romania is a new practice The first project was carried out in 2003 which included digital governance, ie the provision of public services on online platforms but also electronic elections through the participation of citizens in the governing act. It is certain that the development of e-Government is influenced by five factors, among which are: technological infrastructure and

connectivity, the legislative environment that is well defined and as appropriate for development, training and education of the population, the vision of transposed e-Government in practice through development strategies and objectives. (Traian, 2017)

The importance of E-Government is also supported by Sunny and James (2009) being necessary for " smart " strategies to help strengthen urban development. It turns out that the facilities offered by the use of the internet can be very cost-effective for standard service providers with high demand volume for example access to information and at the same time improve the level of service and comfort for their users. . When comparing the cost of online banking with traditional counter services at a bank branch using the services of a cashier, there is a marked difference such as the need to travel personally to the bank for simple transactions between own and external accounts or checking the balance that can be accomplish in just a few minutes by accessing the online platform. This is an example of good practice used in the private sector which has shown that using the internet can improve customer interaction with the service provided by the bank. Administrative transparency becomes easier to apply through the internet and information technology because any project or initiative will have a personal page beforehand where it will be explained how it was chosen, the legislative framework and the allocated budget. Electronic voting is practiced in a few countries in the world at the moment, the main problems are those of citizens' insecurity about the integrity of the vote, the lack of skills needed to be able to cast their votes correctly without any influence.

Time efficiency is a current idea created because of the vicious circle in which the entire population began to be, we say that time is limited for certain things resulting in us rushing to complete them for the reason of starting others that we consider important as below we try to finish them as soon as possible. Transport is the main element for time efficiency, urban agglomerations affect all social categories, regardless of the mode of transport they choose to use either the personal vehicle or the public ones made available to citizens by the local administration.

Public transport should be one of the main priorities of the administration, which must provide the necessary infrastructure and vehicles. Smartphones with location systems can be used to create applications or update existing ones such as Google Maps where urban transport routes are available for all cities. These applications can calculate the fastest route depending on the current location, the volume of traffic and even the road infrastructure, they would be useful not only for the residents of that city but also for tourists (Benevolo et al., 2016).

Another “smart” approach to urban transport is presented by DeMaio & Gifford (2004) who consider the bicycle to be the ideal vehicle for the city, especially in short-distance travel conditions. The main advantages of using a bicycle are: it requires less infrastructure, the bike lanes being relatively small under one meter, they are cheap compared to the price of a car and also the maintenance costs, they do not pollute and offer the user the additional benefit of exercise.

A new way of transport " ride sharing " inside cities is provided by private companies being encouraged by the public authority through public funds and policies. Car sharing is a service that allows you to book a car enrolled in this program that you book through mobile applications then pick it up from the indicated location and then you can leave it in a parking lot and pay for the use made. The advantages of this new mode of transport are: reduction of urban congestion, reduction of public space occupancy, reduction of pollutant emissions and in general, a new method of using public transport. Government can choose vehicles that use this mode of transport, being able to choose vehicles with a rate of emission of CO2 reduced. Hybrid or electric cars are becoming a tool to reduce pollution inside cities (Benevolo et al., 2016).

The authors Badii et al (2019) expose the problem of connecting Information Technology with the transport infrastructure of the smart city, estimates indicate that by 2020 20.4 billion devices will be interconnected, which shows that we need to develop new tools to use of these devices, applying intelligent management. In the context of mobility and transport, data exchanged and managed by ICT devices, to the infrastructure in which local computing capabilities operate, can be used through a wireless device that collects data and extrapolates the data so that the results they process to

transpose the following actions: to signal both traffic participants and pedestrians about the speed limit on a certain section, to display the state of the road and traffic, to estimate the evolution of traffic based on previously gathered information, to provide indications about transport in common.
Control of the natural and built environment is one of the main factors involved in urban policies for the development and support of local communities, erecting buildings in an uncontrolled and random manner, without respecting the rules of compliance and integration is the most obvious and most common problem. chosen in the Romanian urban environment. The lack of criteria and studies at the time of design produce adverse effects on the urban image. Built heritage is one of the main priorities of cities that have discovered the economic and cultural potential, public administration is actively striving to save and preserve these buildings. There are two ways to update urban structures either by demolishing and replacing old buildings with new ones to ensure better land use efficiency or by rehabilitating existing ones, this practice reintroduces old buildings into the economic and cultural circuit. A city must be able to maintain a balance between old and modern buildings so as not to damage the city's cultural circuit. The most undoubted way, especially in the protected areas with many heritage buildings, is to make an insertion that harmoniously integrates the existing constructions (Benevolo et al., 2016).
The concept of Smart City as a means of improving the quality of life of citizens has become increasingly important in the public policy agendas, being mentioned for the first time a smart development on sustainable economic, social, educational areas at EU level in the Agenda. the Lisbon. (Ioniță et al., 2009)
However, a common definition of Smart City is not yet finalized and it is difficult to identify common global trends because demographic factors differ from country to country but also from region to region. Economic development and structural urban variables are particularly likely to influence the digital integration of the city, the geographical location affecting the strategy, and population density, together with the associated congestion problems, could be important components in determining implementation routes (Paolo et al., 2014).
An important factor in creating a Smart City strategy is economic development and urban structural variables, which are important and influence the way cities design their ways to and from digitalization. In this context, there is a dependency effect on the ways in which information and communication technology is spread, as richer cities and those with more libertine democracies have higher investments in areas that are related to the development of innovative capacities. A negative correlation was also reported between the scope of interventions in the hard and soft domains: cities that are more active in the areas aimed at improving their ability to "feel and act" through ICT systems are less likely to differentiate initiatives launched for soft domains related to human capital, cultural heritage and innovation (Paolo et al., 2014).
Current cities in the opinion of Paolo, Alberto, Corinna and Mangano (2014) are complex systems characterized by a massive number of interconnected citizens , businesses, businesses, different modes of transport, communication networks, services and utilities. Population growth and urbanization continue to raise a variety of organizational, technical, economic and social issues that can jeopardize economic, sociological, natural environment, built environment and decision - making by public administration. The rapid growth that many cities are facing has led to traffic congestion, pollution and increasing social inequality. In this context, new technology-based solutions are being sought, as well as new approaches to urban planning and life, which can ensure the future viability and prosperity of metropolitan areas. Due to obstacles that slow diffusion of ICT and the central role of political contexts, economic and cultural shaping how cities try to become smarter, we can expect that there is only one direction of smart city development in the world whole. The role of economic, urban, demographic and geographical factors in the smart city planning approach is investigated by analyzing the coverage ratio of public policies and smart city creation initiatives in relation to their scope.

The use of the Internet is a new paradigm that is rapidly gaining ground in the modern telecommunications scenario. Updating the Internet of Things (IoT) concept in the real world is possible by integrating several technologies ready to support new updates. The key components of IoT will be Radio Frequency Identification (RFID) systems, which are composed of one or more readers and several RFID tags. Labels are characterized by a unique identifier and are applied to objects. Readers trigger the transmission of tags by generating an appropriate signal, which is a query for the impossible presence of tags in the surrounding area and for receiving unique keys to which only they have access. Consequently, RFID systems can be used to monitor objects in real time. Therefore, they can be used in an incredibly wide range of application scenarios, from logistics to e-health and security. in terms of size, weight, energy consumption and radio cost can take us into a new era, where the above ratio increases the orders of magnitude. This will allow us to integrate radios into almost all objects and thus, to add to the world "anything" to the above vision, which leads to the concept of IoT (Atzori et al., 2010)

As Information and Communication Technology is not able to transform cities on its own without the support of human capital, the role of human capital in improving the city's living capacity has been studied. As such, initiatives leading to the creation of smart cities can also include investments in human capital aimed at supporting a city's learning and innovation capacity, by supporting and motivating local people in education and by improving their lives by attracting and keeping other valuable contributions from outside.

The infrastructure of smart cities must be correlated with their operation and operational planning through management, control and optimization. ICT is rapidly being incorporated into most of the city's communication and surveillance channels in terms of its infrastructure. Development of technologies to ensure equity, fairness and achieve a better quality of city life. Efficiency must be balanced with the requirement. New technologies tend to be polarized and divisive at many levels, and we need to explore how new forms of regulation in urban planning and transport, as well as economic and community development, can be improved using future technologies. The smart city offers, of course, the opportunity to close the digital divide, but it will also open up different divisions, and the challenges in the future will be to anticipate them (Batty et al., 2012)

Large cities often have a high population density, which may be another relevant variable in assessing trends around the world. Large and dense cities facilitate the flow of knowledge and ideas, putting more people in touch, facilitating social interactions and generating new and innovative ideas. However, above a certain threshold, population density and size lead to economic destabilization in many areas, such as transport, real estate, security and energy consumption. These economic destabilizations make dense cities less intelligent, but at the same time force the administration to find new and innovative ideas and introduce ICT-based initiatives aimed at alleviating the congestion problems induced by such economic destabilization (Paolo et al., 2014).

Challenges that urbanization presents the outline of a city are many, and in terms of combining the tools of ICT optimization becomes a real problem, however, should not exclude the human factor as the decider which is responsible for the classification of its field's priority based on their communities. Land allocation priorities for urban ecological coverage are usually neglected or easily negotiated in transition countries, which leads to a decrease in green space on the territory of an urban settlement. Urbanization without green spaces can cause many social and physical effects on its residents. An appropriate green index should be developed and incorporated to contain certain standards in urban planning, taking into account more than the size of the city. Urban green infrastructure is an indispensable part of urban planning, and its significance is exceptionally understood for preserving the natural quality and sustainability of the urban environment. Bio-parks, parks, gardens, recreation areas, informal green spaces such as waterfronts, green spaces surrounding historic sites, rail and road corridors and types of native vegetation are the urban green spaces of a city. Urban habitats such as abandoned industrial sites and overcrowded gardens are also green spaces. (Anguluri & Narayana, 2017)

The authors Kehua , Jie and Hongbo (2011) argue that globally we have a wide variety of devices and sensors that record spatio-temporal data can make a quick update in real time, this can allow the movement and reorganization of resources in an optimal way, such as organizing a public transport route according to the daily number of passengers. How to create a unified understanding of the multitude of data and to create solutions based on specific cycle data and real-time data is a technical difficulty but necessary in establishing the knowledge base of the smart city. The implementation needs the efficient support of the numerous municipal departments, the data collection being made from numerous points and domains, mainly the basic domains of the local public administration represented by the town halls. Extrapolation and data extraction must be based on a manual selection of those areas in which we want to pay more attention followed by an automatic computer analysis. As the smart city involves many economic sectors, industries and public sectors that it brings together in a common space , the beginning of the exchange of information between them and with the local administration is an essential point for the harmonious evolution of cities and their evolution .

5. CONCLUSIONS

Environmental sustainability is a fundamental determinant of the quality of urban life. The availability of green spaces is an important feature of any city not only of a city of intelligence, but green space is necessary for its development because it can generate many types of socio-economic benefits. As cities that actively invest in green space may face lower marginal costs for the further development of the Smart City initiative, designed to improve environmental sustainability, they may rely on more developed infrastructure than cities polluted with limited green space. Thus, although the costs of adopting transport, urban and urban intelligence initiatives may be higher, their relative advantage, as well as the effort made by local decision-makers to take initiatives to reduce pollution, may be more obvious, given their relevance. in public opinion and how it can and does influence the public agenda. Therefore, the administration of a city must try to understand these factors in order to outline appropriate strategies for their cities. To make a better selection of investment opportunities in periods of limited financial resources and to prioritize Smart City initiatives in different areas and sub-domains of potential implementation, given their ability to maximize the benefits associated with the specific competitive characteristics of a Smart City.

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