

SMART CITIES: INFORMATION AND COMMUNICATION TECHNOLOGY AND CITIZEN PARTICIPATION

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In 2015, the United Nations adopted the « *The 2030 Agenda for Sustainable Development* », a plan of action for people, planet and prosperity, with the ambition to meet seventeen sustainable development goals and one hundred and sixty-nine targets in the next fifteen years.

The goal No. 11 is about making cities and human settlements inclusive, safe, resilient and sustainable. The targets to fulfill this goal refer to three dimensions: social, economic and environmental.

To fulfill the goals of sustainable development, information and communication technologies play a fundamental role¹. The United

¹ My statement is based on the fact that from 2008 to the present, the United Nations recognized the potential of information and communication technologies in development in ten resolutions of the General Assembly:

- Resolution No. 71/212, General Assembly, “Information and communications technologies for development”, A/RES/71/212 (18 January 2017), available at: <https://undocs.org/A/RES/71/212>;
- Resolution No. 70/184, General Assembly, “Information and communications technologies for development”, A/RES/70/184 (4 February 2016), available at: <http://undocs.org/a/res/70/184>;
- Resolution No. 69/204, General Assembly, “Information and communications technologies for development”, A/RES/69/204 (21 January 2015), available at: <https://undocs.org/A/RES/69/204>; 66;
- Resolution No. 68/198, General Assembly, “Information and communications technologies for development”, A/RES/68/198 (15 January 2014), available at: <https://undocs.org/A/RES/68/198>;
- Resolution No. 67/195, General Assembly, “Information and communications technologies for development”, A/RES/67/195 (5 February 2013), available at: <https://undocs.org/A/RES/67/195>;
- Resolution No. 66/184, General Assembly “Information and communications technologies for development”, A/RES/66/184 (6 February 2012), available at: <https://undocs.org/A/RES/66/184>;
- Resolution No. 65/141, General Assembly, “Information and communications technologies for development”, A/RES/65/141 (2 February 2011), available at: <https://undocs.org/en/A/RES/65/141>;
- Resolution No. 64/187, General Assembly, “Information and communication technologies for development”, A/RES/64/187 (9 February 2010), available at: <https://undocs.org/A/RES/64/187>;
- Resolution No. 63/202, General Assembly, “Information and communication technologies for development”, A/RES/63/202 (28 January 2009), available at: <http://undocs.org/en/A/RES/63/202>;

Nations recognized that it is practically impossible for the world community to achieve these ambitious goals before 2030 if there is no paradigm change that incorporates the effective, widespread and inclusive application of technology and innovative ideas, understanding that one of the technological solutions for sustainable development are smart cities².

The purpose of this paper is to approach smart cities based on information and communication technologies and citizen participation. In particular, I will try to demonstrate the need to create a culture of citizen participation from the benefits that new technologies offer.

§1 – SMART CITIES

Smart Cities are innovative cities that use information and communication technology to increase the efficiency of urban services and operations and improve quality of life in ways that ensure economic, social and environmental sustainability³. Also, Smart Cities try to create new ways of managing the city in an integrated manner which include competitiveness, environment, urban planning, governance, and human development.

Competitiveness. It's characterized by the use of innovative solutions, the promotion of research and development, and creativity to multiply the possibilities of change, generating a greater impact on the variety of the economy. Also, to manufacture or develop products and provide services through the efficient use of available resources.

Environment. It's characterized by protecting and conserving natural resources, using renewable energies, promoting awareness and cultural change and reducing environmental risk and negative impacts, both for present and future generations.

Urban planning. The purpose is to ensure efficiency in services and urban areas, from contemplating the conditions and quality of urban space to facilitate the development of the same in the different areas: transport, housing, public space, green areas and recreational areas.

Governance. Includes the use of new technologies and innovation to optimize management, achieve greater efficiency, transparency, publicity, citizen participation and cooperation between the public sector and civil society.

– Resolution No. 62/182, General Assembly, “Information and communication technologies for development”, A/RES/62/182 (31 January 2008), available at: <http://undocs.org/A/RES/62/182>.

² Resolution No. 72/130, General Assembly, “Implementation of education for sustainable development”, A/72/130 (13 July 2017), recital 55, available at: <https://undocs.org/en/A/72/130>.

³ Resolution No. 72/257, General Assembly, “Science, technology and innovation for development”, A/72/257 (31 July 2017), recital 30, available at: <https://undocs.org/A/72/257>.

Human development. It's must guarantee the development of the educational system, the health condition of the people, the preventive system and the access to health, to mitigate to the maximum the risks of the people and of the public and private goods before acts of criminality, risk to the integrity physical and moral, equal opportunities, ensure physical integrity; promote inclusion and human rights.

In this paper, I will describe the last two dimensions from information and communication technology and citizen participation for two reasons.

First. Smart Cities can open in practical and real terms new spaces of social participation that enable an urban transformation and the new models of urban sustainability are not dictated only by capital, but reflect the democratic will of the citizens⁴.

Second. For a city to be truly smart it must use new technologies in different areas of the city and all citizens must have access to the same degree of participation in its development.

§ 2 – CITIZEN PARTICIPATION AND INFORMATION AND COMMUNICATION TECHNOLOGY

Citizen participation in public management is defined as «The process of social construction of public policies that, according to the general interest of democratic society, channels, responds to or expands the economic, social, cultural, political and civil rights of individuals, and the rights of organizations or groups in that are integrated, as well as those of indigenous communities and peoples.»⁵

Definitely, citizen participation is the direct and immediate involvement of citizens in the adoption of public decisions. It's content is much broader than the mere exercise of the right to vote, since it implies an active role of citizens in the day to day of state decisions.

On the other hand, citizen participation is a mechanism to control the functions of the branch of the State on the part of the citizens themselves.

In citizen participation the State and the citizens play a fundamental role. On the one hand, the State, should promote the participation of the citizenship by ensuring that all citizens have access to information and knowledge about the issues that will be addressed. Ultimately, e-participation highly depends on: a) a strong political commitment; b) collaborative leadership; and c) vision and appropriate institutional frameworks that ensure structured ways of engaging people, and guarantee that inputs provided become a

⁴ M. Hug and R. Ribera-Fumaz, "A critical review from the Urban Political Ecology of the Smart City concept in the Spanish State", *Political Ecology*, No. 47, Cities, June 2014.

⁵ Ibero-American Charter of Citizen Participation in Public Management, Approved by the 11th Ibero-American Conference of Ministers of Public Administration and State Reform Lisbon, Portugal, June 25 and 26, 2009.

meaningful part of the policy-making process⁶. On the other, the citizens, must have the will to debate on the proposed issues, have knowledge about the issues and about the means of participation and want to participate.

Also, citizen participation involves the involvement of the caretakers in decisions and state actions that are closely related to their development and the improvement of their own quality of life.

With new technological advances, the traditional approach of citizen participation has become more relevant. Said participation, for example e-participation, is part of a continuous process of autonomy, freedom, communication and constant development, which guarantees a more creative role of citizens and reduces common obstacles such as time and distance.

The application of information and communication technologies to citizen participation processes enables the development of the right of citizens to interact and communicate electronically with the State and provide greater agility and speed to meet the needs of citizens.

The importance of new technologies lies in the fact that they can contribute to sustainable development, create new means of access to public information and services, guarantee greater transparency of state actions, reduce time, distance and costs. However, there may be people who can't have access to this or the knowledge of how to use them.

The access to and use of information and communication technologies is essential to increase people's empowerment, including vulnerable groups. Therefore, countries should aim at providing quality access to ICTs in order for societies to fully benefit from e-participation⁷.

Enabling universal access to e-participation tools and increasing the capacity of governments at all levels to include the results of public participation into decision-making should become a strategic goal of public management innovation across the board⁸.

§ 3 – CITIZEN PARTICIPATION AND INFORMATION AND COMMUNICATION TECHNOLOGY

In the Argentine Republic, guaranteeing the right of citizen participation is a concern of the three branches of the State. In 1994, the National Constitution recognized that «The legislation will establish effective procedures for the prevention and resolution of conflicts, and regulatory frameworks for public

⁶ United Nations, Department of Economic and Social Affairs, *E-Government Survey 2016: E-Government in Support of Sustainable Development*, 2016, p. 78, available at: <http://workspace.unpan.org/sites/Internet/Documents/UNPAN97453.pdf>

⁷ United Nations, Department of Economic and Social Affairs, *E-Government Survey 2016: E-Government in Support of Sustainable Development*, 2016, p. 78, available at: <http://workspace.unpan.org/sites/Internet/Documents/UNPAN97453.pdf>

⁸ Ibidem.

services of national competence, providing for the necessary participation of consumer and user associations and interested provinces, in the control organisms. »⁹

In 2003, the General Rules of Public Hearings for the National Executive Branch¹⁰ were approved, in order to regulate the participation of citizens in public hearings, which established that they will not be binding on the State.

The national legislator recognized the right to citizen participation in different topics. Let's see some examples.

In 2002, the Law of Environmental Policy recognized the right to citizen participation in the preservation and protection of the environment through consultations or public hearings as mandatory instances for the authorization of those activities that may generate negative and significant effects on the environment¹¹.

In 2016, the Law of Access to National Public Information, in order to ensure the effective exercise of the right, promote citizen participation and transparency of public management, established that the subjects obliged to provide public information should facilitate the search and access to public information through its official website of the computer network, in a clear, structured and understandable way for those interested and trying to remove any barrier that hinders or hinders its reuse by third parties¹².

The Supreme Court of Justice of the Nation¹³ recognized the right to citizen participation of public gas service users as a result of an increase in the tariff schedule without having held a public hearing. The Court understood that: a) the participation of users of a public service is not satisfied with the mere notification of a fee already established; b) the hearings constitute one of the various forms of citizen participation, but they are not the only ones¹⁴; and that c) the constitutional text recognizes citizen participation in public decision-making with a broad content, translating a facet of social control that can be manifested in several different ways whose weighting has been left to the legislator, who must anticipate the mechanism that best ensures that participation in each case¹⁵.

In 2016, the modernization plan of the National State, proposed as an objective to provide citizens with the means, channels and opportunities necessary to express themselves, petition and participate actively in the public policy cycle, for example through

⁹ Article No. 42.

¹⁰ Decree No. 1172/2003, December, 2003.

¹¹ The opinion or objection of the participants will not be binding for the convening authorities; but in the event that they present an opinion contrary to the results reached in the public hearing or consultation, they must base it and make it public. Law No. 25,675, November, 2002.

¹² Law No. 27.275, September, 2016.

¹³ Supreme Court of Justice of the Nation, Center of Studies for the Promotion of Equality and Solidarity and others c/ Ministry of Energy and Mining under collective protection, August, 2016.

¹⁴ Recital 18.

¹⁵ Recital 11.

promoting the incorporation of new technologies that promote citizen participation in government affairs¹⁶.

Finally, in 2017, the Executive Branch, by Decree No. 891¹⁷ established that the agencies of the National Public Sector should provide the mechanisms for participation, the exchange of ideas, consultation, collaboration and democratic culture with the incorporation of these new technologies.

In effect, the public hearing is the means of citizen participation chosen by the Argentine Republic to allow and promote effective citizen participation and to confront in a transparent and public way the different opinions, proposals, experiences, knowledge and existing information on the questions put in consultation. But actually, do citizens participate? Let's see an example.

On November 15, a public hearing was held to inform and receive opinions from the community on the tariff adaptation proposal and its fundamentals, formulated by Agua y Saneamientos Argentinos S.A.¹⁸. At the hearing, fourteen (14) speakers presented, among them: 1) the representative of the Secretary of Infrastructure and Water Policy; 2) the president of Agua y Saneamientos Argentinos S.A.; 3) the Defender of the User of the Water and Sanitation Regulatory Entity (ERAS); 4) Ombudsman Office (among them, the municipality of Lanús, the province of Buenos Aires, the Autonomous City of Buenos Aires and the Argentine Nation); 5) mayors (of Almirante Brown and of the Matanza); 6) Associations of Users and Consumers (among them, the Association of Users and Consumers (DEUCO), the Civil Association Users and Consumers in Defense of their Rights, the Civil Association of Users and Consumers and the Free Consumers Association Cooperativa Limitada de Provision de Community Action Services) and 7) a representative of the GEN Party¹⁹. Among which, there was no citizen who does not belong to an Association of Users and Consumers or a State Branch.

But actually, why do citizens not participate? Some of the reasons may be the lack of knowledge, access or interest in the means of participation.

Although the call to the public hearing is made in the Official Gazette and in two widely circulated newspapers. It is a reality that people no longer read the Official Gazette, and if they read a widely circulated newspaper, they read directly the news that is of your interest. Therefore, citizens are not aware that a public hearing is held if it is not by the media that disseminate it.

Second. A factor that influences the attendance to the public audience is the day and time of celebration, since it was convened

¹⁶ Decree No. 434/2016, March, 2016

¹⁷ Decree No. 891/2017, November, 2017.

¹⁸ Resolution N° 41/2018, Secretariat of Infrastructure and Water Policy, October, 2018.

¹⁹ The complete record of the Public Audience is available at:

<http://www.eras.gov.ar/download/audiencia/Version-Taquigrafica-Audiencia-Publica-dia-15-11-18.pdf>.

for a Thursday at ten in the morning and most citizens can not move to the place of celebration because they must go to work. Therefore, time and space are two obstacles that hinder the participation of citizens in public additions.

Consequently, the biggest challenge facing citizen participation is that citizens participate, to achieve a “culture of citizen participation”, from ensuring that all the population has the necessary tools to participate in the adoption of state decisions.

It's in this context, where information and communication technologies become an indispensable tool to achieve greater citizen participation by making use of three advantages: time reduction, costs and distances which offer new and easier means of participation by allowing anyone from anywhere to take part in the adoption of a public decision.

§ 4 – SOLUTIONS TO CREATE A CULTURE OF CITIZEN PARTICIPATION

Considering the above, I'd like to propose three solutions in order to create a culture of citizen participation based on these new technologies.

First: Points of public access to information and communication technologies. States must ensure universal access to state services and activities, for example, by providing multiple points of contact. Although traditional media, such as state agencies, can reach a greater number of people, they involve the displacement of citizens towards them, which, as we saw in the case of public hearings, ends up causing a negative effect because citizens they do not move to the place where they are celebrated.

In the digital age, the State - as never before - has the possibility of approaching the citizen. The establishment of points of public access to information and communication technologies in places such as post offices, schools, libraries and archives, can provide effective means for ensuring universal access to the infrastructure and services of the Information Society²⁰, and with it the interaction between the State and the citizens.

Thus, public access points to information and communication technologies are effective means of overcoming the digital divide²¹

²⁰ International Telecommunication Union (ITU), specialized agency of the United Nations responsible for issues that concern Information and Communication Technologies, Declaration of Principles, World Summit on the Information Society, Document WSIS-03/GENEVA/4-S, (May 12th, 2004), recital 23, available at: <http://www.itu.int/net/wsis/docs/geneva/official/dop.html>

²¹ The term « digital divide » refers to the gap between individuals, households, businesses and geographic areas at different socioeconomic levels with regard to their opportunities to access information and communications technologies (ICTs) and to their use of the Internet for a wide variety of activities (Resolution No. 35/9, General Assembly, “Promotion, protection and enjoyment of human rights on the Internet: ways to bridge the gender digital divide from a human rights perspective”, A/HRC/35/9 (5 May 2017), recital 3, available at: <https://undocs.org/A/HRC/35/9>.

and reach segments of the population that are not at all familiar with Internet applications²².

Second: Digital literacy. Literacy and universal education are essential factors for creating a fully integrating Information Society, taking advantage of the new possibilities offered by information and communication technology. Digital literacy requires content and local services in a variety of languages and formats that are accessible to all people, who also need skills and capabilities, including media, information, and digital literacy to make use of information and communications technologies and keep perfecting them²³.

E-participation will require capacity development and training programmes for government leaders, public officials and for civil society, including digital literacy for vulnerable groups, and those who represent them²⁴.

For example, people with specific needs often face obstacles to the use of such technology. It is possible that people with a certain type of disability can not see the screens, hear the sound of the phone or use the mouse commands, the computer or a touch screen phone. These obstacles can be overcome when technology is accessible and affordable. Women, youth and indigenous peoples who are currently not connected often need basic and advanced training in digital literacy and learn to use information and communication technology for their social and economic empowerment²⁵.

Third: Technological preparation. New technologies must be adapted to the context and culture of each society. The technological preparation should incorporate the cultural and ethical aspects of each place where it is intended to be implemented. In this task, young people can help, either by adapting them to the environment and/or translating them into the local language, especially in marginalized communities.

Thus, the technological preparation and the models that are used to determine the degree of preparation can help to evaluate the possibilities offered by the technologies in different environments, since it is rarely possible to experiment in situ²⁶.

²² United Nations, Department of Economic and Social Affairs, *United Nations E-Government Survey 2012, E-Government for the People (2012)*, p. 103, available at: <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan048065.pdf>

²³ Resolution No. 70/125, General Assembly, “Outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society”, A/RES/70/125 (1 February 2016), recital 24, available at: <http://undocs.org/en/A/RES/70/125>.

²⁴ United Nations, Department of Economic and Social Affairs, *E-Government Survey 2016: E-Government in Support of Sustainable Development*, 2016, p. 78, available at: <http://workspace.unpan.org/sites/Internet/Documents/UNPAN97453.pdf>

²⁵ Resolution No. 72/189, General Assembly, “Promoting social integration through social inclusion”, A/72/189 (21 July 2017), recital 101, available at: <http://undocs.org/A/72/189>

²⁶ Resolution No. 2016/6, Economic and Social Council “Multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals: summary by the Co-Chairs”, E/HLPF/2016/6 (24 June 2016), recital 14, available at:

CONCLUSIÓN

Information and communication technologies are means to promote the approach of citizens to the State, achieve greater transparency, access to information and citizen participation. The new technologies allow establishing new ways to request the opinion of the citizens and increase the participation of the public in the realization, monitoring and evaluation of the governmental activities.

It is necessary that States take advantage of the potential of these new technological tools and create accessible and safe online spaces as platforms for the provision of services, public participation and the exchange of information and ideas. Also, that they adopt measures to ensure that all citizens have access and knowledge of electronic media, for example, by guaranteeing points of public access to information and communication technologies, digital literacy and technological preparation of society.

The first refers to using places such as post offices, schools and libraries as an effective means of guaranteeing universal access to infrastructure and services. The second implies basic and advanced training for the learning of how to use of these information and communication technologies. The third is that the use of new technologies according to the context and culture of the City.

In conclusion, the importance of guaranteeing access and knowledge to new technologies is that these are a means to create a culture of citizen participation, especially in the youngest citizens, which spend most of their time in the network, by allowing anyone from anywhere to take part in the adoption of a public decision.

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