

DO! SMART CITY'S ROADMAP TO DISSEMINATE AND OPERATIONALIZE THE CONCEPT OF SMART AND SUSTAINABLE CITIES IN CHILE

Aurora Sánchez, Universidad Católica del Norte
Valentina Mancilla, Universidad Católica del Norte

Abstract

The main objective of this case is to present the evolution of initiatives developed by Do! Smart City to the dissemination and articulation of actors in the smart and sustainable cities ecosystem in Chile. Do! Smart City supports the design and implementation of smart and sustainable city initiatives in collaboration with different city stakeholders. This organization, founded by Lorena Santana Reuss in 2016, aims to make the concept of smart cities visible and applied in Chile. The initiatives carried out a range of actions from fairs and round tables on city issues, congresses in the topic, and applied projects in some cities in Chile. The challenge presented in this case is how Do! Smart City has managed to articulate initiatives in the ecosystems of smart and sustainable cities (SSC) in Chile. It also presents the mechanisms used to integrate relevant stakeholders at the business and citizen level in actions oriented towards becoming a smart sustainable city with the best quality of life for those who live in it.

Keywords

Smart City, Smart Living, Sustainability, Smart Ecosystem, Chile

1. Introduction



CAPACITY

Co-funded by the
Erasmus+ Programme
of the European Union



DO! Smart city is a Chilean organization that was born with the purpose of sharing knowledge and increase the visibility of the smart city concept in Chile. Since 2016 DO! Smart city brings together specialists from the private and public sectors in different disciplines to discuss how cities in Chile, and mainly Santiago, are developing toward being a smart city. In addition to its primary objective, the activities of Do! Smart city focuses on building a smart city ecosystem, articulating contact networks, developing the smart city industry, and inspiring action (figure 1).



Figure
1:
Do!

Smart City objectives

With a focus on Smart Living and Social Sustainability, the organization has been facing problems to reach the different actors in the smart city ecosystem because of their lack of understanding and information regarding smart cities' issues. Do! Smart City has developed many successful activities in areas of communications and lately in supporting some cities to include smart services. Through its website (www.dosmartcity.com), it is possible to see the organization's main objectives.

2. Context/Problem

Lorena Santana, executive director of Do! Smart City, commented that in 2015 they went out to ask what was known about the smart city, and the truth is that no one knew the concept. Most people knew the smart tv, smartphone, or whatever else related to bike lanes. Then, “we realized that we had to start with the awareness of citizens regarding the issue, and then we had to contribute to the construction of this ecosystem.” In 2016, Lorena Santana began with the goal of increasing the knowledge about smart city issues, and the next step was the connection of all actors in this industry to increase the synergy to grow the ecosystem”.

CAPACITY

Co-funded by the
Erasmus+ Programme
of the European Union 

Miss Santana highlighted that International experience shows the need for a strategy and a vision for the city. Then, she said that around this is possible to build mobility and traffic systems, environmental solutions, recycling and pollution systems, energy efficiency solutions, urban planning, and many other initiatives that go around this strategy.

The founder of Do! Smart City pointed out that the organization has attempted to integrate actors in the city's ecosystem. This call included authorities, investors, leaders, business people, entrepreneurs, innovators, municipalities, academics, and the organized citizen in a unique organization that analyzes the smart city initiatives and generates solutions and responses to the problems that cities and citizens in Chile face. The organization's strategic concept has come out of a niche, and they understand that the role of Do! Smart City goes beyond connecting the Smart city ecosystem. Lorena Santana pointed out that currently Do! Smart City is focused on supporting the generation of projects that, using technology, transform cities and people. In short, she indicated that the organization is working toward having smarter and sustainable cities with better places to live. They envision cities in Chile where the experience of its inhabitants is positive in a broad sense. The drivers of the organization are:

- Digital transformation: Digital transformation is not only technology; it is the daily use of technology.
- Collaboration: Work with others, with all those who are inspired to action, to improve the functioning of cities.
- Innovation: Cities face complex challenges, such as climate change and local pollution, mobility, and productive models.
- Sustainability: Be committed to the 2030 Agenda and the Sustainable Development Goals.

One of the problems that the organization initially detected is that the quadruple helix of society (academy, companies, public sector, and civil society) does not work in a coordinated way. This difficulty produced a lack of synergy in the ecosystem and the inefficient use of resources. On the other hand, there is an absence of strategies within public organiza-

CAPACITY

Co-funded by the
Erasmus+ Programme
of the European Union 

tions, leading to the implementation of solo projects without a common thread, losing chaining possibilities.

Dilemma

The main problem that the organization is facing today is the question of how to raise awareness, train, and mobilize actors to make projects successful in the territory. They also want to find common objectives and approaches among academia, companies, and public institutions, mobilizing them around a development and transformation strategy.

There is a big gap in Chile regarding the needs of the Smart City projects and the technical capabilities of people since there are no specializations or programs to train the future professional in the area. The problem is at the level of technology implementation and data management. Most initiatives face the lack of the necessary expertise in the generation and analysis of data to and from citizens affecting the decision-making process and the efficient use of resources.

Considering that the implementation of Smart city strategies is long-term, short-term political interests have buried initiatives that had mobilizing and transformative potential. There is an absence of government public policies that mobilize financial and institutional resources around investment and coordination efforts. This situation is observed, especially between Regional Corporations and Municipalities.

Lorena, and the professionals at Do! Smart City, had the dilemma of the next stages in the organization development (see figure 2). They have the option of deepening the work with regions in which they do not yet have a presence or intensifying their work to address, with a more significant number of services and initiatives, the need for cities in the central part of Chile. Also, Do! Smart City wondered about the best partners to address this challenge in the future.



Figure 2: Lorena Santana, Head of Do! Smart City

3. Case development

The beginning of Do! Smart City was very promising when the first congress was held. The initiative had excellent visibility with the participation of relevant actors in the city. The activity was widely covered, and results were disseminated to all the stakeholders in the city. This initial work was an essential stake in building the necessary ties for further actions with the system's actors and achieving its goals. The lack of communication and common goals between actors diffculted implementing an organization's vision like Do! Smart city that was independent of the providers of technological solutions and government bodies. However, Lorena Santana was clear about the contribution of her organization to the efficiency of the ecosystem. Then, Do! Smart City decided to join the actors through a two-phase initiative plan.

The first phase was named **awareness**, in which the organization seeks to align knowledge and concept, so that all actors understand the same thing. This stage was the organization's primary focus, building an ecosystem supporting all participants' connections spontaneously. The year 2016, Do! Smart City starts developing a massive 3-day event that sought to socialize the concept of smart cities, promoting its benefits, potentials, and international experiences. This event included a congress in parallel with a fair, using actively the space they had. On the last day of this first version, activities that in-

CAPACITY

Co-funded by the
Erasmus+ Programme
of the European Union 

cluded various actors in the ecosystem were carried out aimed at the community together with the help of the company “Aguas Andina”, who wanted to raise concerns about water efficiency in the country. These actions were oriented to build a shared vision for a smart city with the community's point of view.

The year 2017, initiatives such as competitions, technical tables focusing on project lifting, and workshops were added to the event. Do! Smart City started developing projects in cities to include the Smart City concept in the conversations and became a relevant actor in the ecosystem. One of the most prominent cases has been coordinating the counseling carried out by Cozumel Island to support Easter Island to implement technologies and strategies that help them become a Smart Island.

The second phase, **implementation**, began when the organization saw the need to bring the Smart City concept to regions focusing on addressing the existent territorial gaps. In 2018, Do! Smart City materialized this vision with the support of the National Chamber of Commerce. That same year, the organization recognized the need to support the generation of territorial development projects and their implementation. At this time, Solange Arredondo joined the organization. She was a professional with vast experience in the design and operation of projects. Then, the organization started seeking to activate new services oriented to support municipal initiatives in the field. This initiative was called "Reimagine the City," beginning activities in 2019. The main objectives of these initiatives in the second phase of DO! Smart City was to popularize and bring the concept of smart cities to interested agents, and teaching them how to implement the concept and all issues related to it. The initiative was installed among the actors in the ecosystem. Now, it was time for action (See annex 1).

Product line

The services offered by Do! Smart City began with events that were part of the communication action necessary to link the inhabitants of a territory, joining product lines that addressed the need for training and coordination.

CAPACITY

Co-funded by the
Erasmus+ Programme
of the European Union



For 2019, Do! Smart city has four product lines in physical and digital format. Those lines may be combined depending on the nature of the territory:

- A smart city for everyone: academy that delivers courses, seminars, webinars.
- Let's talk about City: focused on promotion and awareness by developing events, newsletters, and technical tables.
- G Cities: The platform coordinates and activates the ecosystem through workshops, business wheels, and match up.
- Reimagine the City: strategic consultancy of the territory that implements diagnostics, studies, and projects.

In the year 2020, DO! Smart City surveyed 23 Municipalities belonging to Chile to collect information regarding the changes or implementations that each territory considers necessary to be able to transform. The areas of analysis included; Strategy, competitions in local governments, Match Offer- Demand, Public-Private Agreements, Citizens with new skills.

According to the municipalities surveyed, the most important characteristics a city should have are (see figures 3 and 4):

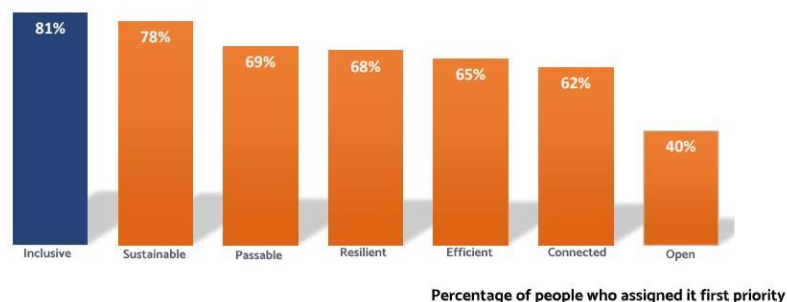
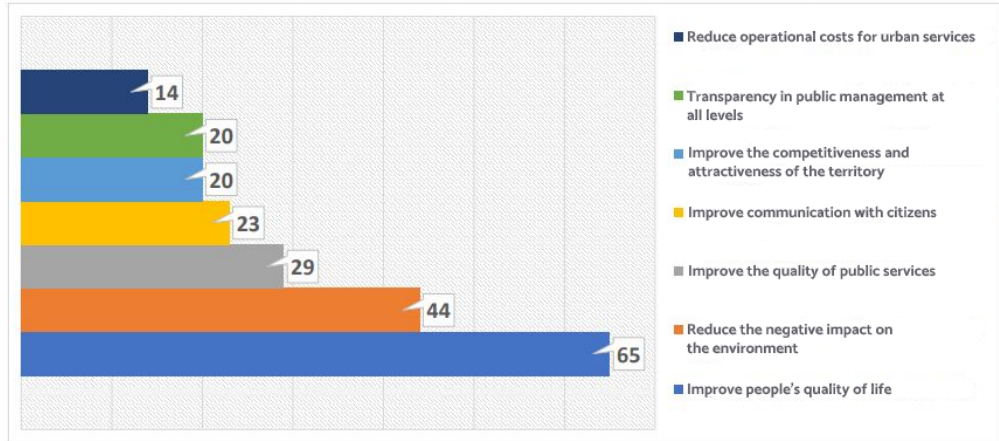


Figure 3: Important features that a city should have
(Source: Do! Smart City survey 2020)



Each person selected the 3 most important

**Figure 4: What a good management of a city should do
(Source: Do! Smart City survey 2020)**



4. Closing the case

Do! Smart City has positioned itself as the first space, non-governmental, in Chile that brings together all the actors that must be present to implement Smart city projects; company, government, academy and citizenship. This is an independent organization that maintains international alliances with institutions of five continents that allow them to deliver instances for reflection, learning, and materialization of action. Do! Smart

CAPACITY

Co-funded by the
Erasmus+ Programme
of the European Union



City's success is due to its independence, with no political or private companies' interest. Besides being an organization that gathers the actors in the ecosystem and never closes its doors aiming for synergies in the system.

Some numbers that show the organization's work in favor of the development of its objective are:

- Seven thousand seven hundred seventy-five critical players connected to the network.
- Forty-eight municipalities with access to new solutions.
- 85 public sector-linked companies.
- Four regions activated.
- Four hundred forty-five professionals trained in person and digitally.
- US\$ 400M in investment in broadcast and media.
- Forty-eight women experts who are visible.
- Six international entities under Convention.

The next challenges for Do! Smart City are the exploration of other countries at the Latin American level and the development of alliances with a strategic partner that could allow the implementation of more and new services, all in favor of achieving sustainable social development and smart living.

5. Attachments or Appendixes



Figure 5: DO! Smart City 2018

CAPACITY

Co-funded by the
Erasmus+ Programme
of the European Union



Figure 6: Lorena Santana and Solange Arredondo

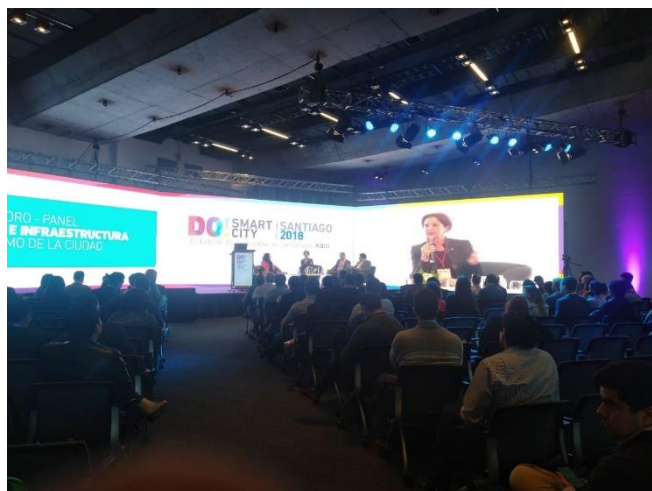


Figure 7 :DO! Smart City 2018

CAPACITY

Co-funded by the
Erasmus+ Programme
of the European Union



Figure 8: DO! Smart City 2017: Let's talk about Smart Cities



Figure 9: DO! Smart City round table in Santiago, 2018



Figure 10: DO! Smart City fair 2017

References

- Citoyens. (2017, August 30). DO! Smart City apuesta por ciudades inteligentes del mañana. *Citoyens*. Retrieved from <https://citoyens.cl/do-smart-city-apuesta-por-ciudades-inteligentes-del-manana/>
- Codexverde. (2018, June 29). Energía, medio ambiente, movilidad e infraestructura serán los temas de Do! Smart City Santiago 2018. *CodeVerde*. Retrieved from <https://codexverde.cl/energia-medioambiente-movilidad-e-infraestructura-seran-los-temas-de-do-smart-city-santiago-2018/>
- Corporateit. (2019, August 5). DO! Smart City Santiago 2019 abordará “El Poder de la Ciudad”. *Corporateit*. Retrieved from <https://www.corporateit.cl/index.php/2019/08/05/do-smart-city-santiago-2019-abordara-el-poder-de-la-ciudad/>
- Mascontainer. (2019, August 6). Lorena Santana de Do! Smart City: “En Latinoamérica hay distancias grandes con respecto a ciudades inteligentes que ya están reconocidas”. *Mascontainer*. Retrieved from <https://www.mascontainer.com/lorena-santana-de-do-smart-city-ciudades-inteligentes-en-latinoamerica/#:~:text=pesada%20TECTOR%20Evo-,Lorena%20Santana%20de%20Do!,inteligentes%20que%20ya%20est%C3%A1n%20re>

CAPACITY

Co-funded by the
Erasmus+ Programme
of the European Union



conocid-

as%E2%80%9D&text=Esos%20actores%20son%20el%20ciudadano,privado%20y%20e
l%20mundo%20p%C3%BAblico%E2%80%9D.