



Smart Cities Study 2019

International study on
the situation and future trends
in Smart Governance



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Juan Mari Aburto, Mayor of Bilbao

I am pleased to present the third edition of this “Smart Cities Study,” prepared by the UCLG Community of Practice on Digital Cities. A study that aims to provide information on strategies and different projects that cities around the world are launching to advance the key aspects of a “smart city.”

This third study focuses on “Smart Governance,” perhaps one of the least addressed areas in Smart Cities’ studies and events, but which is in my opinion a fundamental area in which cities around the world must focus our efforts on.

If we want to be successful in creating Smart cities, we must also be able to integrate all of its citizens.

Therefore, solidarity and inclusion policies must be elements that configure the smart city. But we need to go one step further. We need to not only work for all people, but also work with all people. In this sense, smart governance means taking full advantage of the participation and collaboration of citizens and key city stakeholders. All of this must always come with maximum transparency and rendering accounts to the citizens as a whole about the activity that local governments develop.

The smart city must also incorporate the advanced management component. We need to plan more and better, looking forward to the future and taking into account the global trends that, sooner or later, will affect us in each city. We need to know to be able to anticipate. And we need to evaluate what we do, to know if we are generating sufficient public value or if it is necessary to reformulate our policies and programs.

On the road to this smart governance, technologies are a clear ally. Let’s take advantage of them and put them at our service, at the service of improving the quality of life of those who live and work in our cities.

Finally, I would like to reiterate the will of the cities participating in the study and of the group of cities that participate in the UCLG Community of Practice Digital Cities, to share our knowledge and our experiences with other cities. Only by working and learning together can we achieve the goal of continuing to improve every day.



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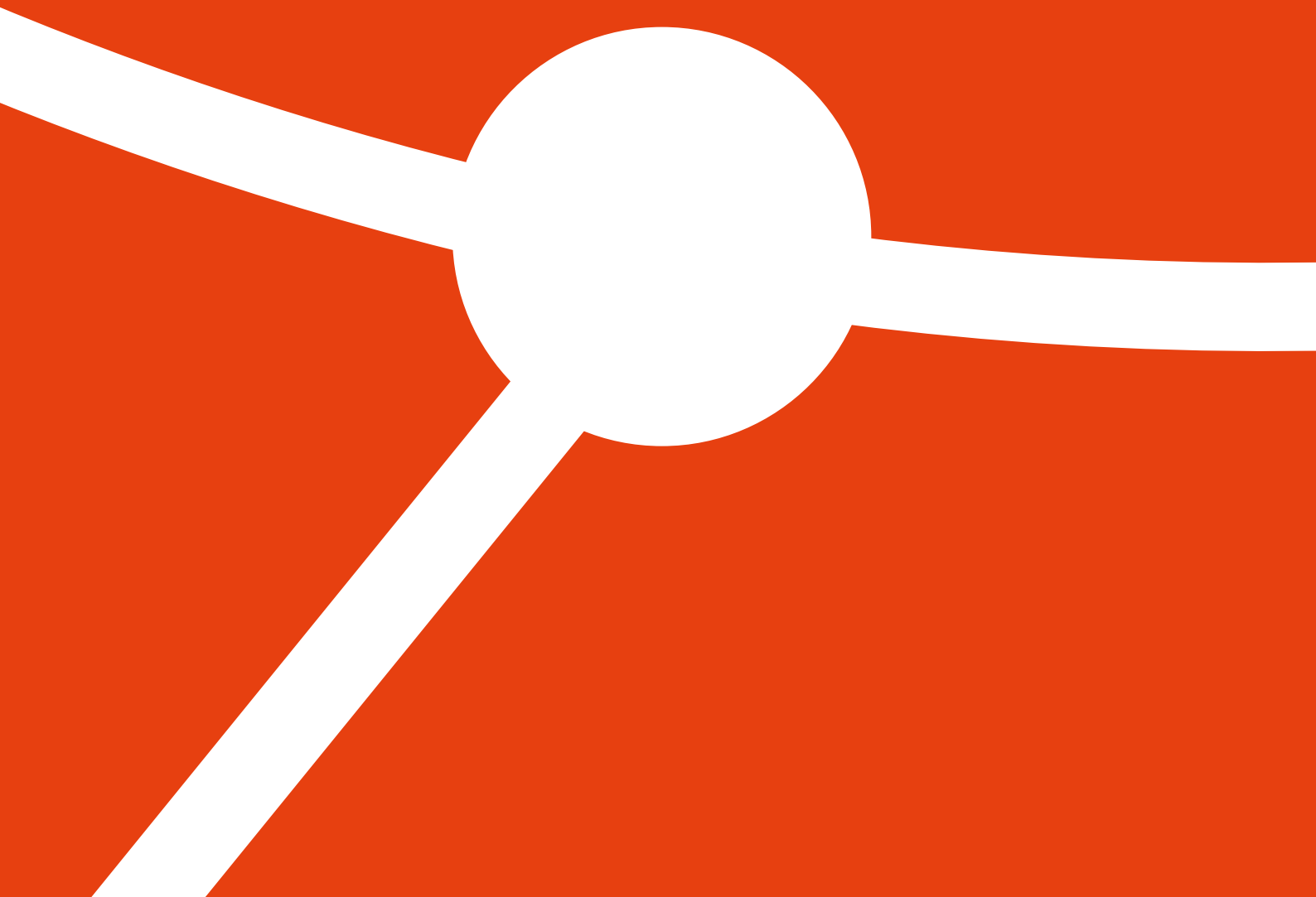
Conclusions

The right way to continue working



Smart Cities

Levers of global sustainable development



The background is a high-angle, sepia-toned photograph of a dense urban area, likely a city like Paris, showing numerous buildings and streets. Overlaid on this is a large white graphic element consisting of a central circle and two lines extending upwards and outwards, resembling a speech bubble or a stylized letter 'A'.

The context

The Information and Knowledge Society

Since the 1990s, the development of the Internet and Communication Technologies has led to the more or less widespread birth of initiatives aimed at creating spaces for communication and information exchange by communities at a local or regional level.

The first experiences often arose spontaneously and circumstantially, as a forum composed of members of certain groups in order to discuss common issues. This phenomenon was first seen in the United States, and later move to Europe and Asia.

Local Authorities are aware of the importance of key elements, such as the fast development of information and communication technologies (ICTs), innovation and knowledge, taking place during the last decades, to guarantee social and economic progress in the territory.

A process of change at such enormous proportions and a climate of uncertainty about the resulting social model demands that the Local Authorities (LA), as the public stakeholders closest to the public, provide an adequate response, especially in terms of taking advantage of opportunities offered by technology and new knowledge to generate progress and improve its citizens' living conditions.

The UCLG Community of Practice Digital Cities

2005

The 2nd Summit of Cities and Local Authorities on the Information Society took place in Bilbao and the UCLG Committee of Information Society was created.

In the framework of the process of global reflection on the Information Society promoted by the UN, the “2nd Summit of Cities and Local Authorities on the Information Society” was held in Bilbao in 2005. The concrete results were a Declaration and Plan of Action, the Local Digital Agenda, where Local Authorities pledged to share digital development and solidarity with other cities and regions in order to advance in the achievement of municipalities and inclusive cities and to intensify the use of ICT as tools for development.

In order to carry out these objectives, the UCLG Committee of Information Society was created that same year, seeking to promote the development of a common vision and dynamics among local governments in this area.



2005

2009

2009

The members of the Committee and the UCLG World Council approved to replace the denomination of UCLG Committee of Information Society by the Committee of Digital and Knowledge-based Cities

In November 2009, in addition to continuing the work carried out to share digital development in solidarity with other cities and regions far from this objective, the Committee was given a broader scope, based on the search for competitive excellence of local governments through knowledge management and innovation in cities.

To this end, the members of the Committee and the UCLG World Council approved replacing the name "UCLG Committee of Information Society" with "Committee of Digital and Knowledge-based Cities", more in line with the new objectives set and the Commission's work.

The UCLG Committee of Digital and Knowledge-based Cities sought to create an efficient cooperation network made up of Local Authorities to take advantage of the opportunities offered by new information and communication technologies (ICT), innovation and knowledge, to then share, assimilate, and adapt them to local needs and create new opportunities for cities.

In 2016, a reflection process was initiated at UCLG concerning its operating structure, which resulted in the creation of a new consultation mechanisms structure composed of Political Councils, Commissions, Working Groups, Practice Communities and Forums.

Taking into account this new structure, it proposed converting the Committee of Digital and Knowledge-based Cities into the "Community of Practice Digital Cities" whose work is still led by the City of Bilbao, with a new, more practical approach. One of the key activities of the Communities of Practice on Digital Cities, in addition to educational meetings about the key issues of Smart Cities and collaboration with other international institutions that work on issues related to "Smart Cities," is the periodic development of the Smart Cities Study. A study on the situation, needs and trends in relation to the different levers that hold the potential for sustainable development and smart transformation of a city.

2016

The Committee of Committee of Digital and Knowledge-based Cities becomes the "Community of Practice Digital Cities"



2016

The concept of Smart Cities goes far beyond the use of technologies



Smart Cities as key to global sustainable development

Currently 55% of the people in the world live in cities. According to recent UN reports, it is estimated that this proportion will increase to about 70% by 2050, so we are getting closer and closer to making global sustainable development fundamentally dependent on proper management of urban growth.

In this sense the strategy is to deploy mechanisms that allow for the development of sustainable cities from three axes:

1. Economic sustainability.
2. Environmental sustainability.
3. Social sustainability.

This need to provide new solutions in cities, together with the emergence of new technologies, gave rise to the concept of Smart Cities.

Smart Cities do not have a universal definition as of today, but there are certain key issues that none of the definitions can avoid, such as the search for a better quality of life, efficiency or sustainability.

The concept of a Smart City is evolving. Although historically it has been mainly associated to the use of technologies to improve the different areas of city management (mobility, administration, health, education,...), being “smart” does not refer to a characteristic of the city itself, instead it refers to using technology as “a tool” to respond to the challenges that cities face.

“Smart” is associated with the ability of a city to create well-being for its citizens, not only through the improvement of public services, but also through the involvement of citizens in decision making. Today, citizen participation, the creation of a city in collaboration with its citizens, is one of the key issues that should characterize a Smart City if it wants to be called as such.



A city can be considered as “smart” when investments in human and social capital and communication technologies and infrastructures actively foster sustainable economic development and a high quality of life, with wise resource management exercised through an open and excellent government.

Another characteristic of smart cities is the ability to generate ecosystems populated by the different stakeholders and the generation of value through their interaction. This is also included in the EIP-SC European Innovation Partnership on Smart Cities and Communities, which indicates that “Smart Cities should be considered systems of people who interact and use energy flows, materials, services and financing to catalyze sustainable economic development, resilience, and a high quality of life. These flows and interactions become “smart” through the strategic use of ICT infrastructures and services in a transparent urban planning and management process that responds to society’s social and economic needs.”

Thus, from the multiple definitions for Smart Cities, we can extract a series of characteristics that make them smart, a series of keys that define them, within which technology is an ally, but, as we will see, not the only one.

All these characteristics have somehow a common objective: the generation of value for citizens and the rest of the stakeholders that live in the city (companies, knowledge stakeholders, other institutional stakeholders,...). And, in turn, these stakeholders are those that constitute the starting point to develop the joint work necessary for this generation of value.



Key features of a Smart City



Innovative



Creative



Effective



Efficient



Advanced



Participatory and collaborative



Transparent



Sustainable



Inclusive



Integrative



Able to generate value and wealth for citizens



With a high degree of satisfaction of its residents



Oriented to continuous improvement



Takes advantage of technological opportunities

At the service of a new concept of citizenship: smart citizenship

As we have previously discussed, Smart City's definitions have gone from technology-centric to citizen-centric.

Even the concept of citizenship itself is also going through its own transformation process. When we talk about citizenship, we are referring to a concept that is moving away from what has traditionally been the recipient of public management (the "user" or even the "managed") and that moves closer to concepts such as "client" and even, in a more advanced stage of good governance, to the concept of "collaborator" (or "co-creator").

In its "client-citizen" aspect, citizens manifest (or don't, but the city must be able to detect them) their needs and demands, and local policies must be oriented towards their satisfaction, for at least high priority needs and demands. However, it is also important to recognize the existing limitations (economic, competitive, to achieve a real impact,...) to respond to these needs and communicate them transparently to its citizens.

As a "collaborator," smart citizenship goes one step further: it actively participates in municipal management.

For this, it can report shortcomings and problems, provide suggestions, propose solutions, vote for alternatives... All this facilitated by the opportunities offered by new technologies.

When we talk about citizenship and its evolution towards the concept of collaborator, we do not only refer to people, but also associations or entities that unite citizens and the business environment that generate employment and wealth in the city.

Thus, the major demands reported by citizens in recent years mark the context in which the present study is registered. There are also other factors, such as macro-trends that affect society from an economic and social point of view, or budget constraints, which force cities to do better, "do more with less", and get ahead of the future.

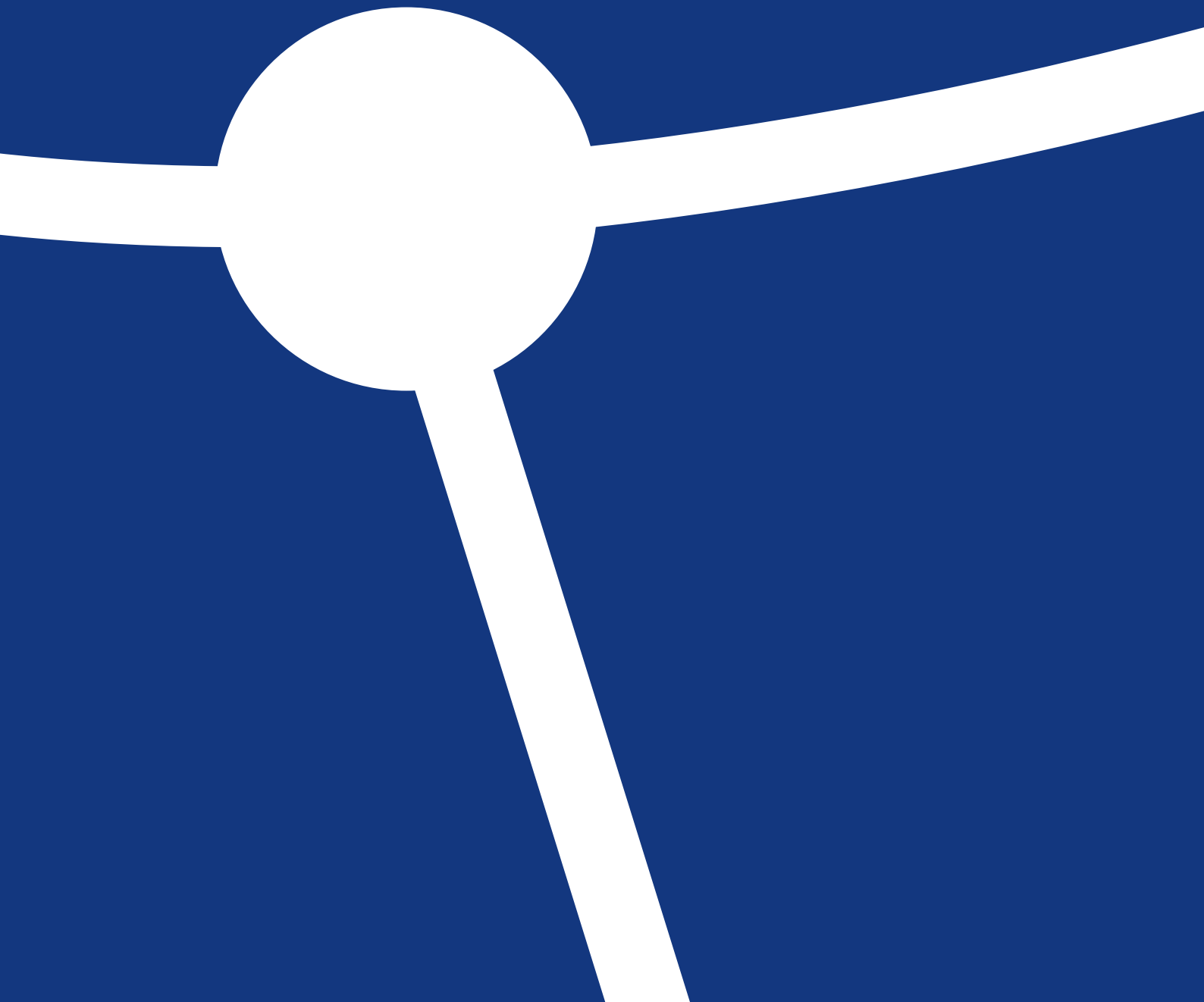
Evolution of the concept of citizen in the Smart City





Study 2019

Smart Governance







Smart Governance

At the center of Smart Cities

As it is reflected in the evolution of the definition of Smart Cities itself, a city will not be “Smart” if it does not incorporate “ways of doing” that are “Smart.” That is, if “Smart” mechanisms are not deployed in its operations (or governance) of the political and technical teams in charge of the cities and of the other relevant stakeholders that live and operate in them, Smart solutions can hardly be obtained in key areas for the city such as mobility or economic development.

That is why this study is based mainly on the idea that Smart Governance is not only one of the axes of a Smart City, but is a fundamental lever for the development of the other axes. From the first edition of the Smart Cities Study, in which all the axes of a Smart City were introduced, more specific studies have been carried out focusing on key levers of a transversal nature. Thus, the present study tries to obtain a more detailed vision of the keys to the concept of Smart Governance, given its growing importance for cities.

Smart Governance has been chosen not only to expand on an area of Smart Cities, but also because it is considered a key area due to its capacity to transform the rest.

Smart Governance implies anticipating changes, anticipating the future, planning, measuring, redefining, supporting and collaborating with citizens and key stakeholders in the city’s ecosystem, using data for decision-making, and evaluating the policies deployed, among others.

All of this is applicable to other areas of smart city management. **If it is governed intelligently, it can achieve an intelligent economy, intelligent mobility, an intelligent environment, intelligent services... In short, being at the service of and promoting intelligent citizenship.**



Aim Of The Study

Discuss, in detail, the key areas on smart governance and its main areas of action, analyzing the situation and opportunities of smart governance as a key to the transformation of Smart Cities and identifying success stories.



1

Obtain an overview on the degree of open government development and advanced strategic management in cities

2

Identify the key issues and trends in each of the areas of open government and advanced strategic management at the local level



3

Identify the key elements

that can be a brake or constitute facilitating elements for the development of these areas at the local level

4

Disseminate good practices

that can serve as a reference to other cities to advance the concept of “Smart Governance”

Methodology

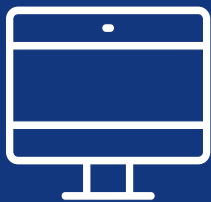
In order to understand the cities' current situation, a questionnaire was created asking about the key areas that characterize Smart Cities and an information collection form was designed.

24 cities participated in the study, mostly members of the UCLG Community of Practice Digital Cities.

To inform the members of the Community of Practice of this study and to encourage them to participate by completing the information collection form, the following dissemination channels were used:



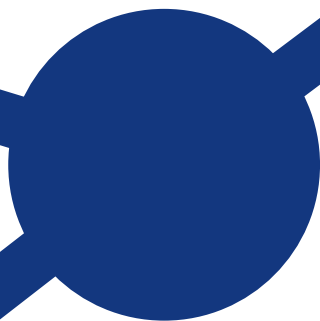
Sending informative circulars
to the member cities of the Community



Creating an information section
on the Community's website



Publishing news on
the Community website



**Dissemination to members
through circulars** sent from
UCLG and UCLG regional
sections

The cities that have participated in the study

Mexico

Mérida
Tequila

Guatemala

Guatemala

Costa Rica

Cartago

Colombia

Bogotá
Medellín

Chile

Talca

Argentina

Pilar
San Antonio de Areco
Villa Gesell

Brazil

São Paulo

Spain

Barcelona
Bilbao
Córdoba
Cuenca
Santander
Villanueva de la Serena

France

Limoges

Italy

Turin

Denmark

Viborg

Sweden

Malmö

Finland

Lappeenranta

Jordan

Amman

South Africa

Ngaka Modiri Molema

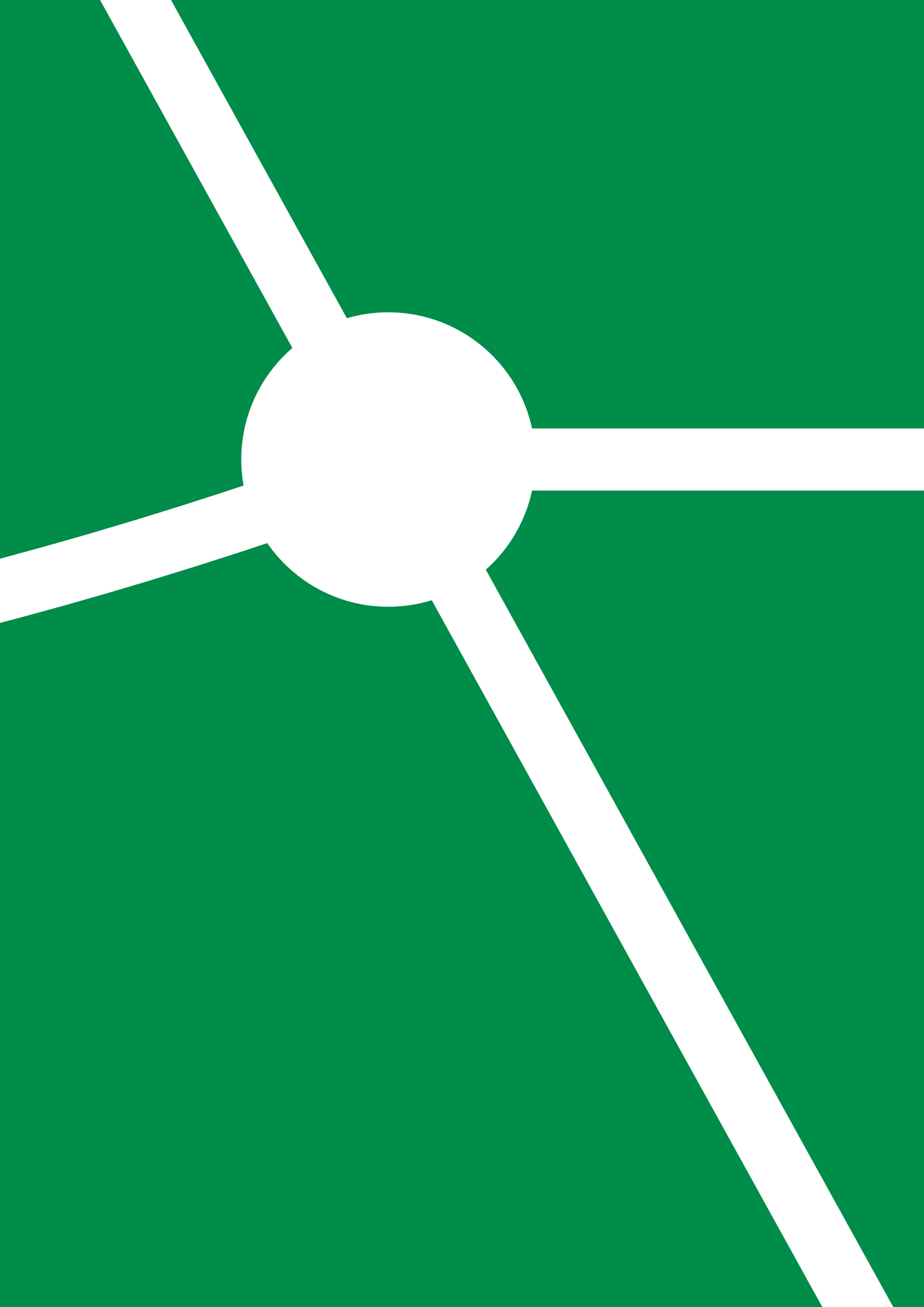




Current situation and main trends in Smart Governance



3



What is a smart government like?

The term “Governance” refers to the decision-making process and their implementation, involving actors and generating formal and informal structures that allow making, executing and evaluating decisions.

In order to effectively fulfill this mission, it is necessary to act as a good government, that is, applying legality, with equity, making effective and efficient use of resources, transparently, promoting consensus, and addressing the challenges with maximum speed and co-responsibility with the common good.

Smart Governance goes beyond the values marked by Good Governance. Although they are the basis on which smart governance should be sustained, **it is about going further to open it up, and through an advanced strategic management that allows a clearer identification of needs and a more accurate response to the city’s management challenges in the short, medium and long term.**

Smart Government, a way of governing capable of analyzing, anticipating trends, planning and evaluating its policies, in collaboration with citizens and key stakeholders in their environment, and that is supported intelligently by technology to collect and analyze the necessary data for decision making.



Proactive
and forward looking



Open to cooperation and transparent

Committed to sustainable development

Accessible and close

Results-oriented with efficacy and efficiency criteria

Agile

Smart decision-making and the identification and planning of strategic aspects for cities, this vision of the present and the future ultimately leads to a greater value added to citizens and a more sustainable development of cities, the great challenge of society today.



So much so that Sustainable Smart Cities are in themselves one of the 17 Sustainable Development Goals (SDGs) of the United Nations. Moreover, as a result of their capacity for vision and resolution, Smart Cities favor the achievement of the rest of the Sustainable Development Goals of the UN 2030 Agenda on Sustainable Development: the reduction of poverty, the decrease of inequalities, progress in efficient energy, in water quality, in the quality of education, in equality, in decent work and sustainable economic growth,...



Sustainable Development Goals



1. No Poverty



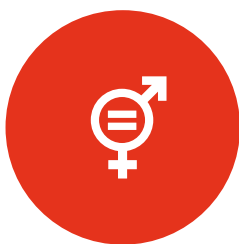
2. Zero hunger



3. Good health and well-being



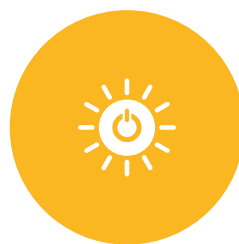
4. Quality education



5. Gender equality



6. Clean water and sanitation



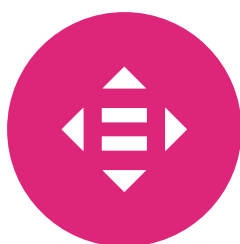
7. Affordable and clean energy



8. Decent work and economic growth



9. Industry, innovation and infrastructure



10. Reduced inequalities



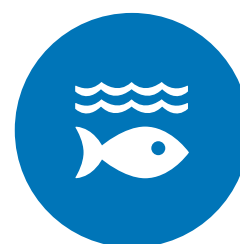
11. Sustainable cities and communities



12. Responsible consumption & production



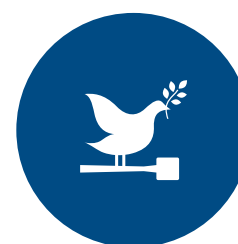
13. Climate action



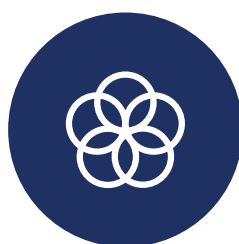
14. Life below water



15. Life on land



16. Peace, justice and strong institutions



17. Partnerships for the goals

SUSTAINABLE DEVELOPMENT GOALS

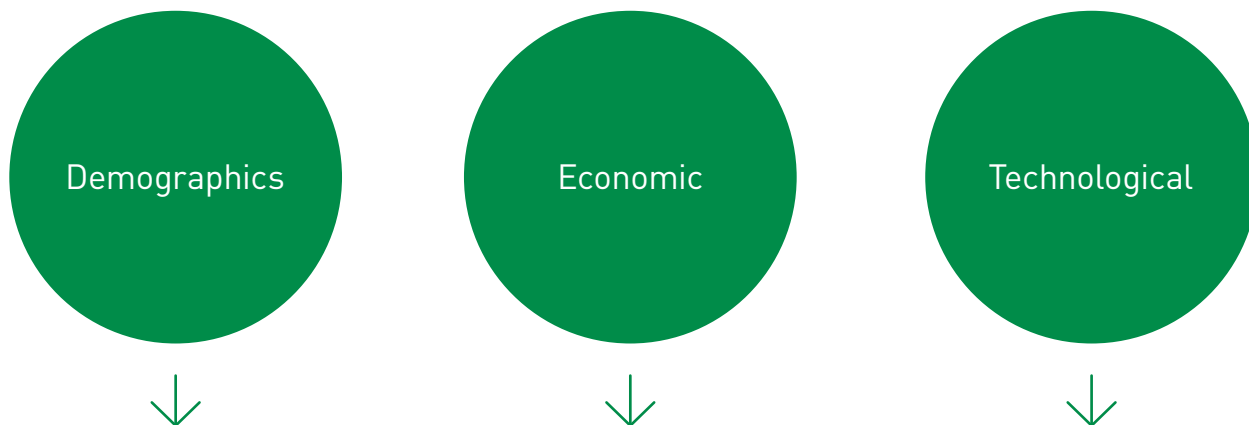


Thus, although the present study is structured in two main axes of intelligent governance (open government and advanced strategic management), the following illustration shows that it is not two independent axes, but a way of operating with a transversal character.

This way of working, Smart Governance, is based on making use of a wide variety of inputs for decision making, and deploys processes that result in the implementation of initiatives, services, programs and policies more aligned with the needs of citizenship and business, always taking into account emerging trends and future challenges.



Macro-trends that impact the reality of cities



It is necessary to give an answer through intelligent governance

Inputs

- Data
- Trend analysis and future scenarios
- Citizenship Vision
- Vision of the key stakeholders of the city's ecosystem: companies and social agents
- Vision of other institutions

Key processes

- Transparency
- Public participation
- Public-Private Collaboration
- Opening data
- Multi-level governance
- Strategic planning
- Results monitoring and measurement
- Assessment of public policies

Output

- Policies
- Services
- Programs

Facilitating technologies: Cloud, Big Data, IoT,...



- Competitive economy
- High level and needs adjusted education
- Social cohesion and reduction of inequalities
- Developing and attracting talent
- Sustainable mobility
- Energy efficiency
- Financial sustainability
- Committed citizenship
- Quality of life



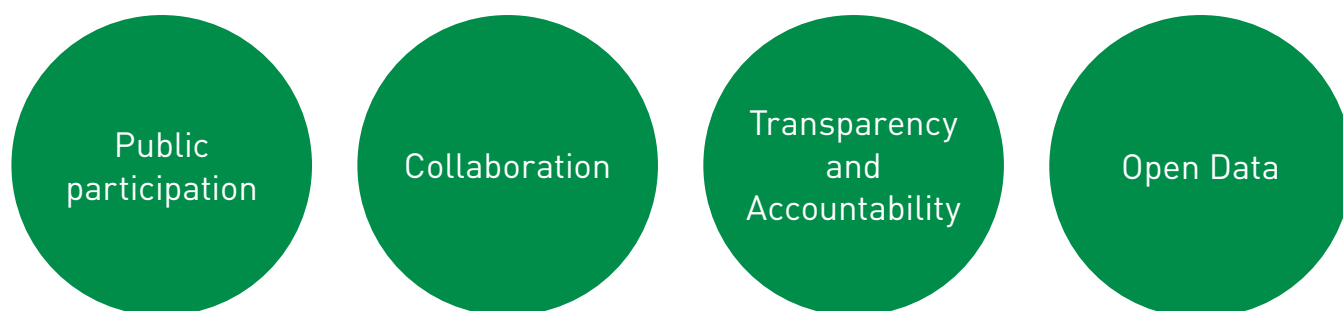
In order to deepen these aspects, as we said before, **the present study is structured in two main areas in which the key issues of smart governance are integrated: Open Government and Advanced Strategic Management.**

However, it is worth mentioning that, in some way, in addition to knowing how to take advantage of the potential of a large number of tools for decision-making and to deploy collaboration processes, participation and measurement of results, a smart government is

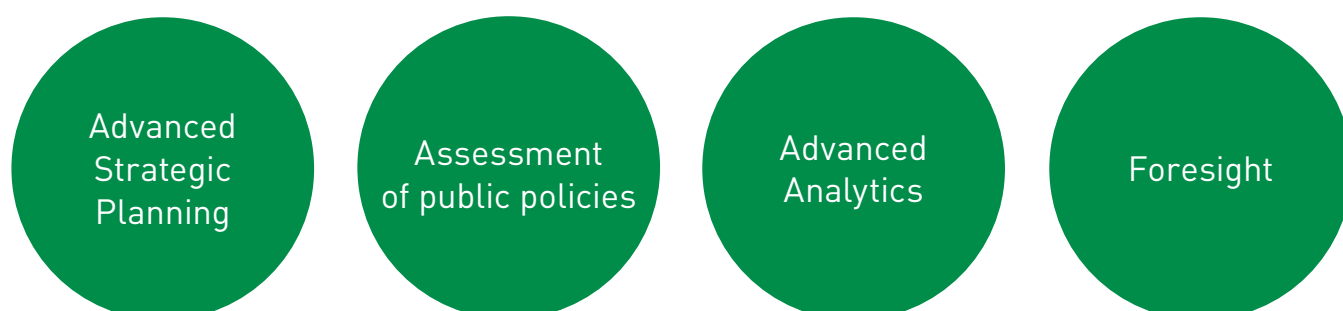
characterized by acting in accordance to principles or values of a transversal nature that favor management to be open and advanced. Some of these issues are in themselves axes or areas of action (for example transparency), but in turn they must be present and impregnate any process and project deployed and led by local management.

Smart Governance

Open Government

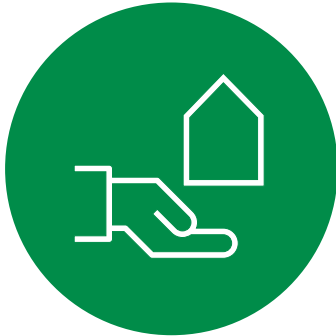


Advanced Strategic Management



Principles and values of Smart Governance

Although it is a transversal aspect, delving into these values and determining how to incorporate them into a city's operations requires specific practices. Practicing reflection, planning and internalization.



Integrity. Improves the ethical infrastructure of public organizations.



Citizen participation. It enriches a representative democracy and is essential in public management.



Transparency and responsibility. required accountability. It means making public information available in a precise and accessible way.



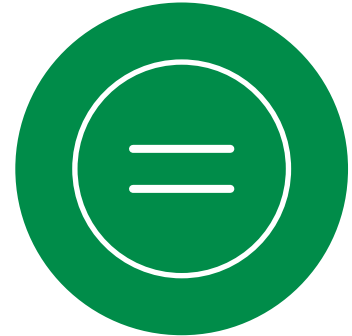
Ethical conduct of the institutional positions and public employees, who must be oriented towards public service, which entails commitments of a personal nature, of institutional quality to achieve the aims of the organization and commitments to its citizens.



Principle of legality, which implies full compliance with current regulations.



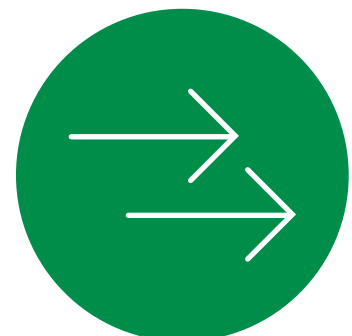
Long-term focus



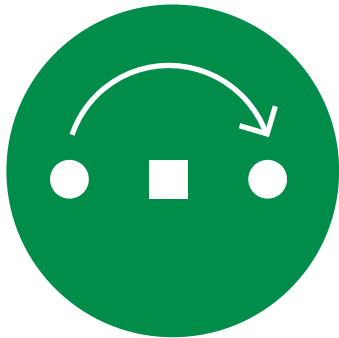
Equity, which ensures that all its members feel that they are part of the community and enjoy the opportunities to improve or maintain their well-being.



Innovation and a spirit open change



Efficacy and efficiency in management, which means that the procedures used lead to the necessary results and impacts, using the resources available in the best possible way.



The capacity of anticipation and reaction



Leadership and coordination capacity of the key stakeholders of the city's ecosystem to maximize the generation of social value.



Consensus, which requires mediation between the different interests of society to achieve sustainable human development.



✓ Best practices

In terms of principles and values for intelligent governance, the “**Bilbao City of Values**” project deserves mention: an initiative that aims to generate a space for analysis, dialogue, reflection and collaborative work between institutions, social entities, companies, communication media, educational centers and citizenship for the promotion of a framework of shared values in the city of Bilbao.

For this, as a point of departure, they have worked together with citizens to identify those attributes that are considered priority for the people and stakeholders who live and develop their activity in the city. After different joint reflections, in 2018 the Bilbao Charter of Values was approved. This Charter includes values of smart governance, as well as others of a more sectoral nature: respect for human rights, equality between women and men, social justice, solidarity, diversity and inclusion, commitment, environmental sustainability, effort, identity, coexistence, co-responsibility, honesty, health, enthusiasm, trust, creativity and participation.

Once these values have been defined, the city of Bilbao has drawn up a plan, a roadmap for their development in terms of raising awareness and incorporating these shared values into the daily life of the city of Bilbao, both by the City Council and its citizens.



Open Government

Transparency
and accountability



Collaboration

Participation

Open Data

Open Government represents a management style in which, on the one hand, citizens and key stakeholders have a much more active role and collaborate with the government in the design and implementation of policies to respond to the city's problems and generate value for it; and, on the other hand, in which the Local Administration facilitates these processes through a more transparent management and generating opportunities for collaboration, previously fostering a context of trust. All this supported by new technologies that allow us to move faster towards this objective.

The Open Government Partnership - OGP defines this as "the process that unites governments and civil society to promote transparency, empower citizens, fight corruption and take advantage of digital technologies to improve governance."

Key features of a city that manages according to the principles of open government

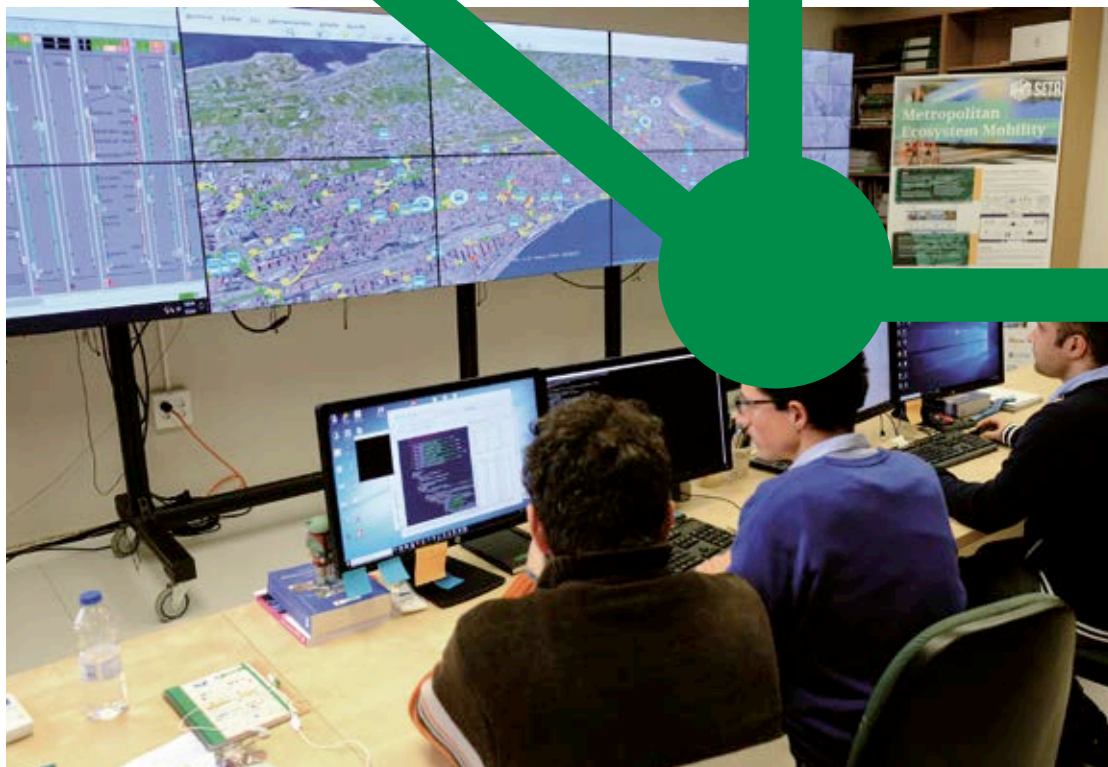
Transparent

Collaborative

Participatory and
Multi-directional

Communicative





Main lines of action within the framework of Open Government

Although openly governing is a way of operating, there are 4 major axes or key areas of action which a Local Open Government Strategy should be oriented: transparency and accountability, citizen participation, collaboration and open data.

Public participation

Collaboration

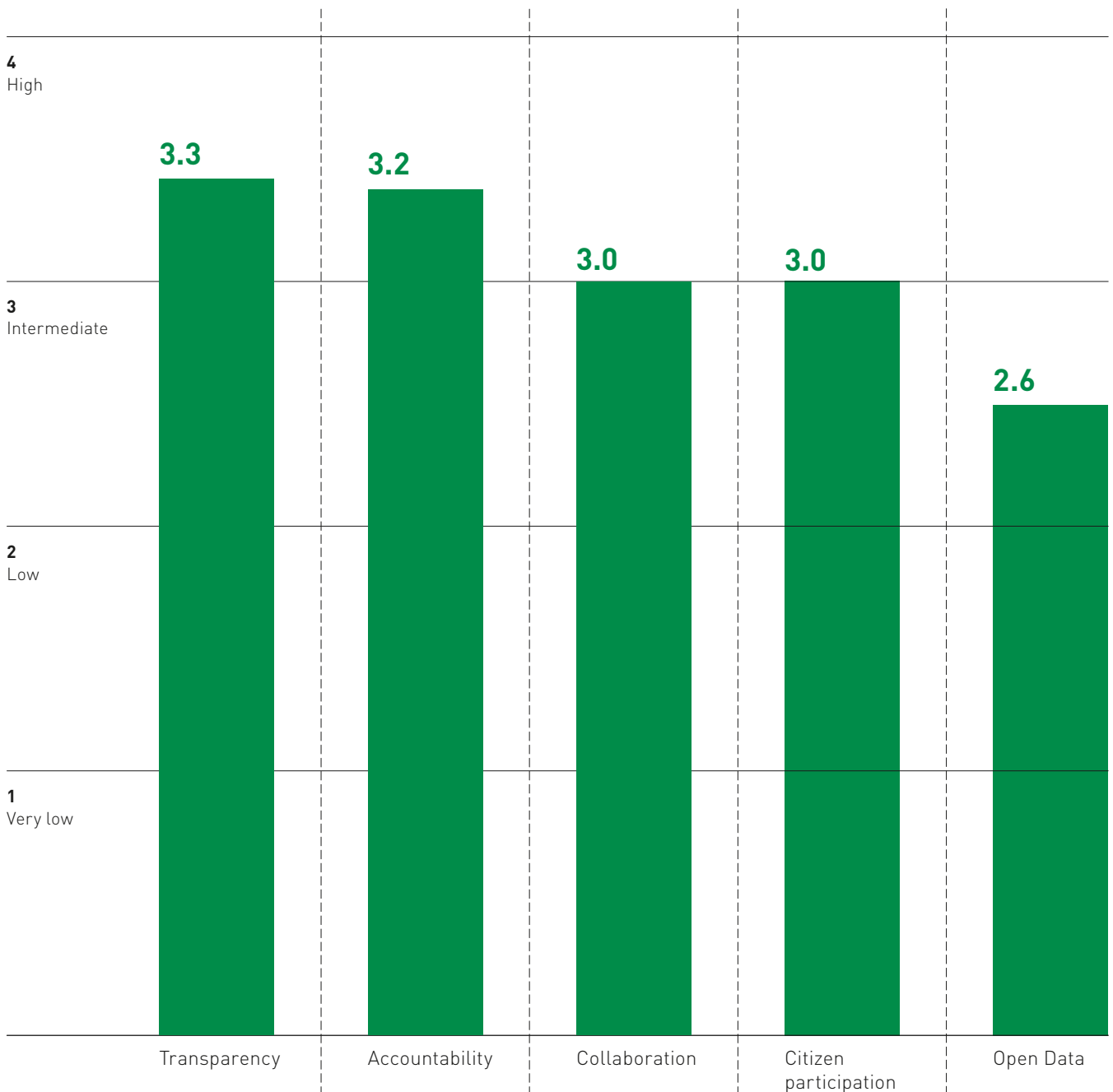
Transparency and Accountability

Open Data

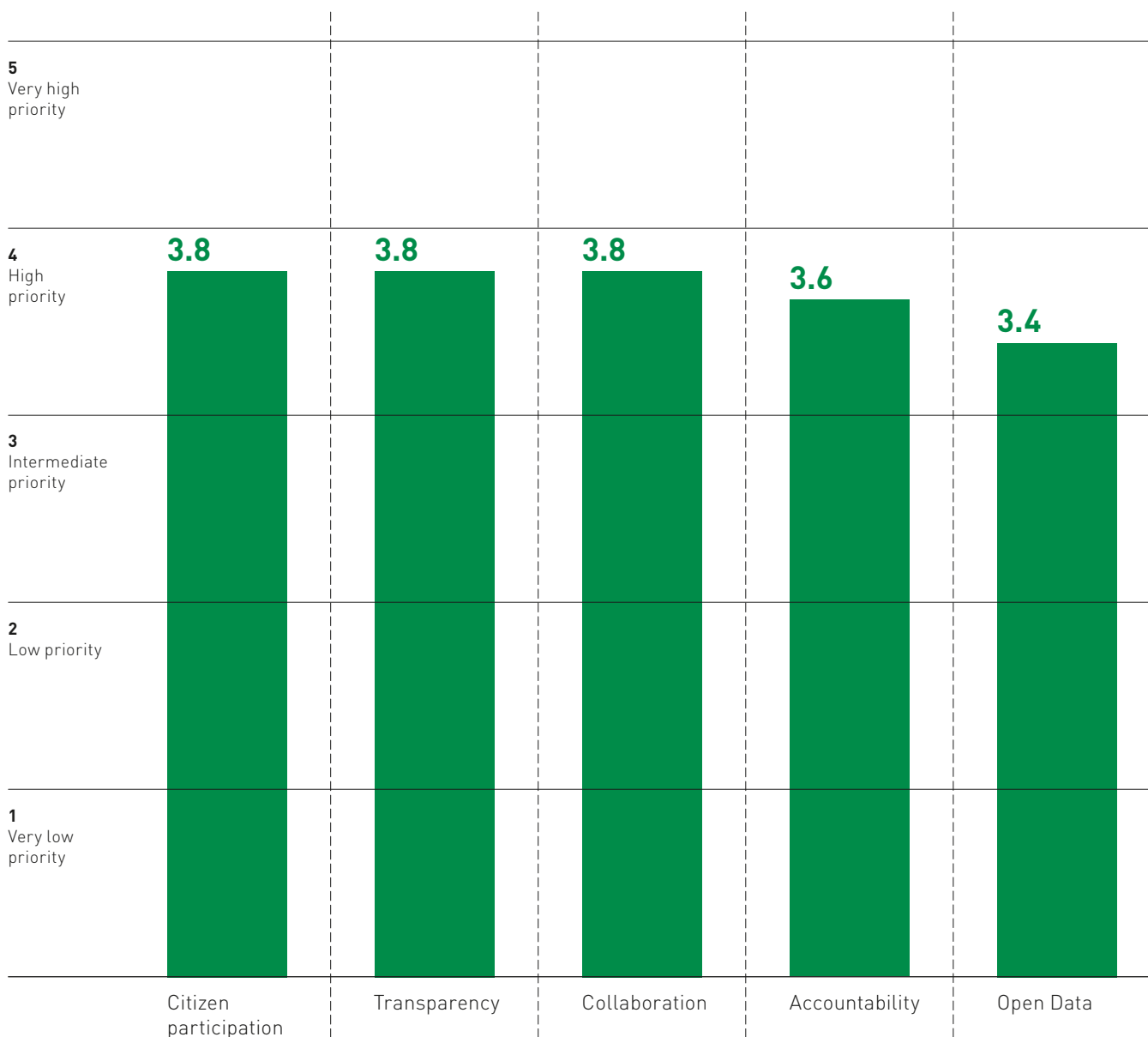
Although these are relatively familiar lines of action for cities, there is a difference in the degree of their development, with transparency being the most developed area according to the cities participating in the study, and Open Data as the one to most develop. When asked to rank the priority for advancing in the different areas of Open Government, the cities participating in the study highlight citizen participation, transparency and collaboration with a similar degree of importance.

In this regard, it is worth highlighting the importance of citizen participation, transparency and public-private collaboration as key axes for the development of Smart Governance in the coming years.

Current average development level of Open Government areas



Degree of prioritization for development of Open Government in the next 5 years



In order to take the right actions for the development of these axes, one of the key tools that a city should have is the Open Government Strategies or Plans, since open government also needs to be planned, based on actions, and evaluated to improve experiences in this area and adapt to citizens' and stakeholders' needs. Open Government Plans are an essential tool to structure the activity in this area and ensure compliance with the objectives set.

In this regard, it should be noted that, although it is true that most cities carry out activities in Open Government, it is less common for this to happen based on formal planning. In fact, among the cities participating in this study, only 48% have this tool.

Only 1 in 2 cities participating in the study has an Open Government Plan.

In order to develop the different fields of work that are included in the framework of Open Government, there are a number of tools or key issues that favor, or even are indispensable for the achievement of the objectives pursued within the framework of Open Government:



Conceptualization.

Understanding the keys in the Open Government framework and the capacity to develop the strategic priority lines.



Political commitment.

As a new government scheme, it is essential that government leaders promote it through explicit mentions. It is important to note that this commitment requires a change of culture and management strategy in public administration. An Open Government model also drives organizational change, as public officials must get used to the transparency and openness of their actions, and they must also make collaborative work their main working method.



Training of technical teams.

Until now the technical profiles of the administrations were mainly directed towards services and areas of city management. In order to develop open government, it is necessary to train professionals in this area, so that they are able to innovate in the deployment of their tools and activities.



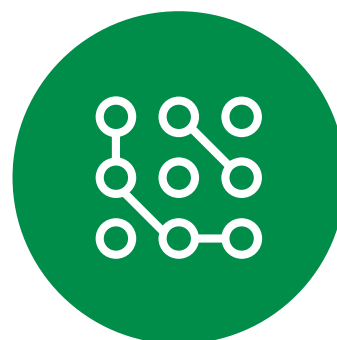
Citizen awareness and promotion of spaces for consultation, participation, collaboration and co-creation.

It is essential that citizens acquire awareness of their role in collaboration with the local administration and that their proactivity is encouraged. For this, it is necessary to develop mechanisms that allow civil society and the Local Administration to work together to solve problems, through virtual or face-to-face spaces, promoting inclusion as much as possible. As participation deepens, progress is also required in the deployment of appropriate incentives for joint work with civil society.



Adequate regulatory framework.

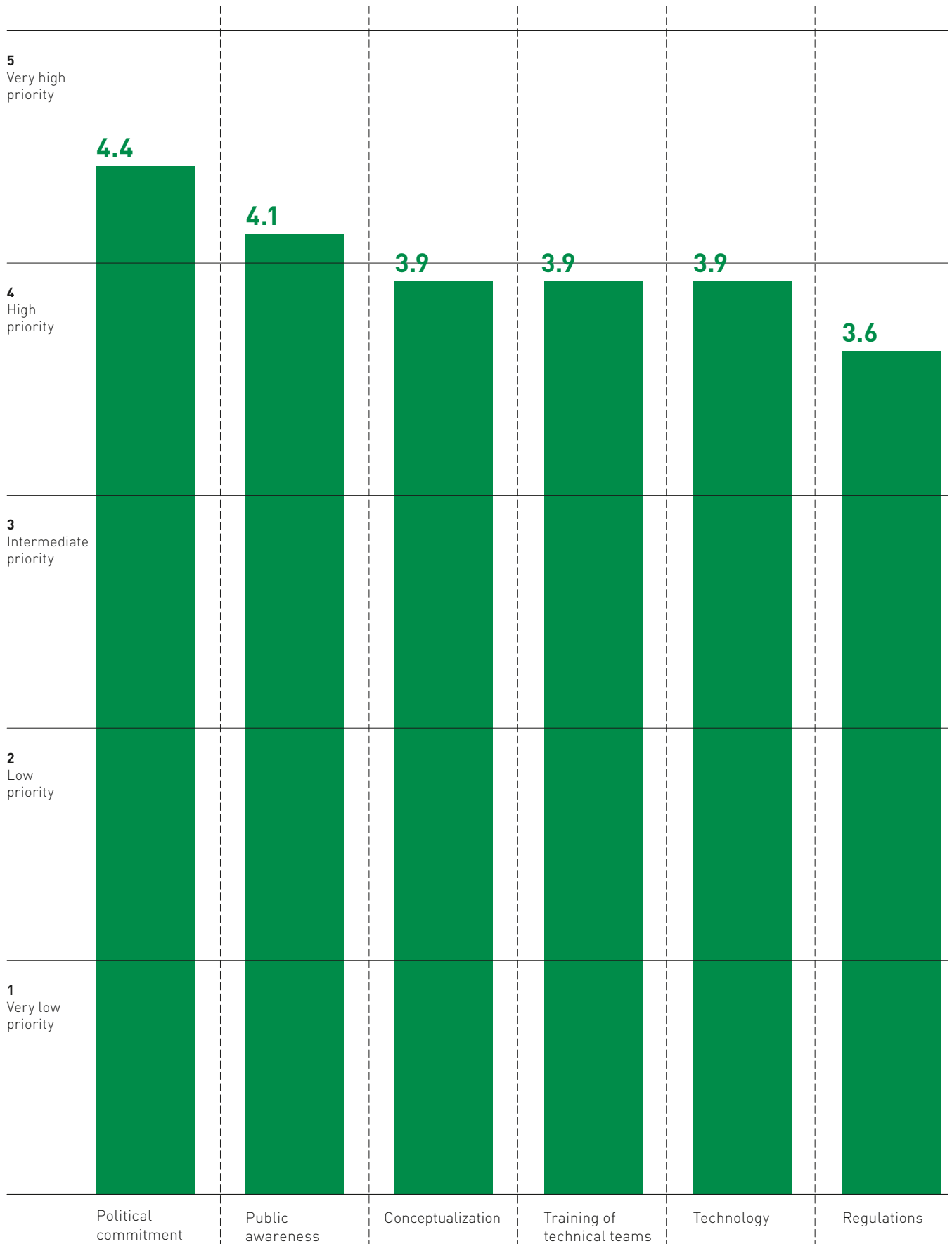
It is necessary to have the regulatory standards that guarantee access to public information, the right to participate and the rules of reuse of public data.



Technological tools.

The provision of public information collection and processing systems, as well as portals where information is available are essential to achieve an Open Government. It is also important that these systems facilitate a friendly and understandable visualization of such information, while being accessible (for all people).

According to the cities participating in the study, the highest priority for developing Open Government is political commitment, followed by public awareness.



Citizen participation

A government would not be smart if it did not depend on citizens for decision making. One of the most pronounced trends today is citizen's growing demands, both with the services available to them and in relation to decision-making processes, for greater transparency and commitment on the part of local political leaders.

Citizens' growing demands for a more democratic practice in public management and greater active participation in government results in the need to improve interaction and communication between authorities and citizens.

This component focuses on the importance and role of citizenship, that is, on local governments acquiring a "citizen-centric" approach, not just as "users" of public services, but as key partners in their co-production.

One of the main benefits of citizen participation is that citizens can perceive certain issues that the Administration does not see, acting as "eyes" of the Administration, and therefore are able to propose and put on the table unsolved issues and innovative solutions. In short, citizens can provide substantial value in areas such as:

1. Specific knowledge about a sector or subject.
2. A more detailed view from a geographical point of view (neighborhoods).
3. A vision of "user experience" about policies, programs and services.
4. The ability to generate and expand social networking through their contacts and circles.



In short, citizen participation is synonymous with generating value and improving public management. However, cities still face a series of challenges to move forward in this area.

In short, citizen participation is synonymous with value creation and improvement of public management. However, cities still have several challenges to move forward in this area.

One of the main challenges is to identify the best ways to promote participation and generate the appropriate and effective spaces for it. New technologies generate new opportunities and facilities for the development of virtual participation spaces, but they are not the only ones. Therefore, one of the key issues in this regard is to properly identify for what processes virtual participation spaces can be useful, when to provide physical participation spaces, and when they must be combined.





✓ Best practices

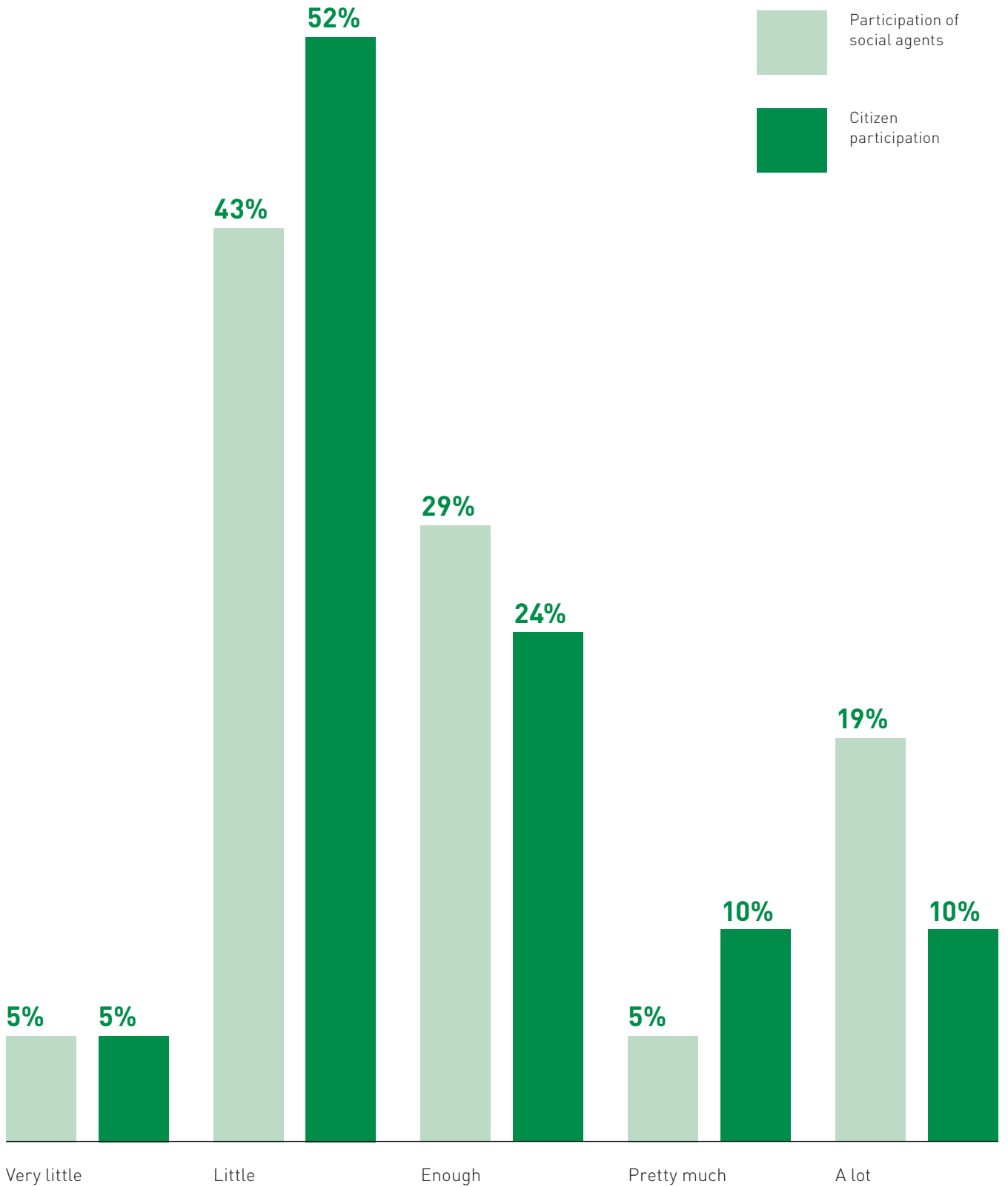
Taking advantage of this opportunity, the **DECIDIM platform** has been developed in **Barcelona** with the aim of constituting the fundamental vehicle to articulate any type of democratic process so it can be used by other institutions and organizations. Its design and its flexibility, its modular architecture and its open development model have generated an enormous extension, to the point that more than 80 local and regional governments and a quarantine of social organizations have already opted for this platform. It is also a community of people and organizations that seek and design mechanisms for democratic governance that has transcended the city of Barcelona itself and is now a project of international scope. Thus, in this case the space has been constituted as a fundamental reference for citizens when it comes to participation, bringing together any process that may be of interest to them. With this same spirit, the **“Areco Decide”** initiative has been launched in San Antonio de Areco, with different possibilities, from the realization of proposals to the generation of debates among citizens.

All this is linked to the need to adapt to the reality of the target audience and the digital and physical media that each segment frequents. In addition to identifying these spaces, in order to favor participation, it is important that the Local Administration be proactive and approach them (for example, by going to the educational centers to obtain the youth perspective on a particular city issue, intensifying the use of social networks,...). In this sense, it is also important to innovate in the methodologies for participation (dynamics, incorporation of fun elements,...) that make the experience a value in itself. A remarkable initiative in this regard are the Neighborhood Care Centers of the city of **Pilar**, which, although they aim to bring citizenship services to more accessible points, are a key piece in improving the detection of their needs and concerns, in short, putting citizens at the center of the design or redesign of local public services. Another good practice to improve the effectiveness and efficiency of participatory processes is their specialization or segmentation. In the City Council of **Córdoba**, for this purpose, **Sector Councils** have been created to favor the participation of groups with greater knowledge and those who have been impacted by policies around a specific topic/sector/collective.

In short, it is about fostering commitment, collaboration and citizen involvement. Therefore, **one of the keys to participation as a whole is to allow participants to visualize the traceability of their participation through the return of results.** This involves, on the one hand, the collection and reporting of the main conclusions of the participation process and, on the other, to report on the results of this participation. Sometimes the issues raised by the citizens take time to take shape, but it is important that the participation be clearly identified (how it has helped). In order to achieve a more committed citizenship accustomed to participate, this opportunity must be provided from an early age, and it is in this sense that **Ville de Limoges** the participatory processes for children are deployed around projects of interest (for example, the construction of a park), both to improve the design and execution of current projects and to make them grow in a dynamic way, more committed to their own city, normalizing participation and making it something natural.

Another issue that worries the Local Administration is the importance of having a representative citizen participation. In this sense, the deployment of processes aimed at “unorganized” citizenship is becoming increasingly important. In fact, **the cities participating in the study show a higher level of promotion in the participation of social stakeholders than in the direct participation of citizens, although in any case they value both areas of participation as insufficient.**

Sufficiency level of participation. Comparison between citizen participation and that of social agents



The level of sufficiency of citizen participation in the cities analyzed is high in the case of participation through social agents, with a level of 2.9 (on a scale of 1 to 5), compared to a 2.7 in the case of the participation of unorganized citizenship

All of this refers to the “how” of the processes as key elements for the promotion of participation and its effectiveness, but one of the great challenges to overcome in this area is the “when” of participation and their “degree or intensity.” **It is very common that there is a tendency to deploy participatory processes in the design phase of projects and programs, and then they participate and collaborate less with citizens in the implementation and assessment phases. That is where there is even greater room for improvement.**



Visually, five stages can be defined in which to develop the degree of citizen involvement, going from just informing to even “empowering,” that is, delegating all or part of the decision.

As shown on the following page, the participating cities are in more advanced stages of participation when it comes to designing plans and programs than when carrying them out and evaluating them. However, in some cases it has begun with initiatives that go beyond the degree of participation.



✓ Best practices

In the case of **Medellín**, one more step has been taken in this regard and the city has managed to give access to large numbers of **citizen participation in the preparation of the city budgets**.

Another notable initiative in the transition that goes from “informing” to “empowering” is the **Auzokide Plana de Bilbao** (literally translated as “neighborhood plan”). Auzokide Plana is one of the most important citizen participation tools available to the Bilbao City Council. Its objective is to agree on the planning, development and execution of improvement projects in the neighborhoods prioritized by the District Councils. It is about reserving part of the investment, so that it can be prioritized by the neighbors of each district.

● In the design phase of policies, plans and programs.

● In the implementation processes of the defined actions

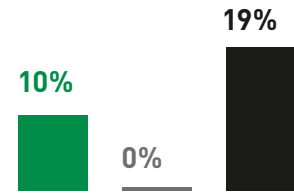
● In the evaluation phase, actions carried out

Without consulting

The decisions that are planned to be made or not taken are not reported

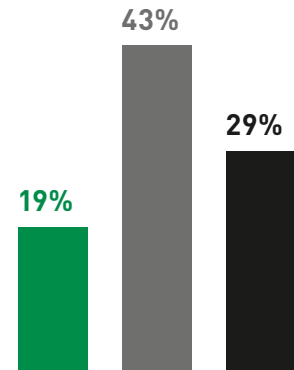
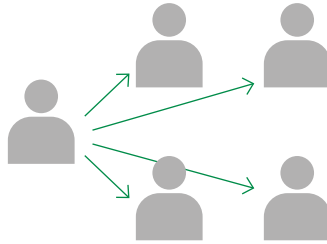


Current regular participation level at the different stages of the life cycle of a plan or program



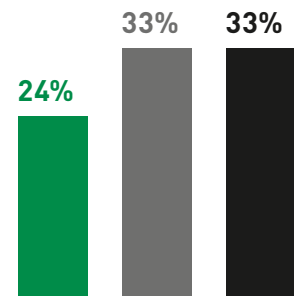
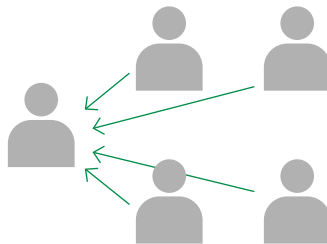
Informing

Citizens are informed (a one-way communication is made to notify decisions made), but there is no participation



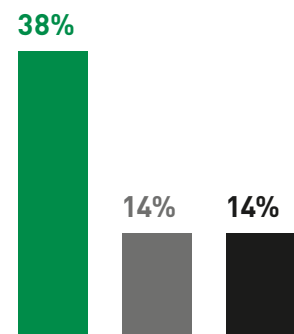
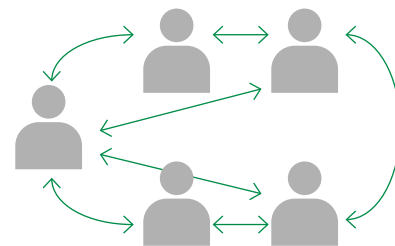
Consulting

Citizens are asked their opinion and receive contributions



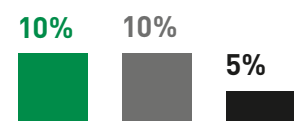
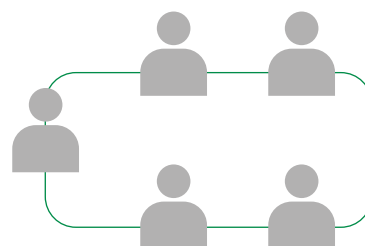
Collaborate

It works together with the citizens, maintaining the decision-making capacity in the Administration



Empower

All or a part of the decision making process is delegated to the citizenry



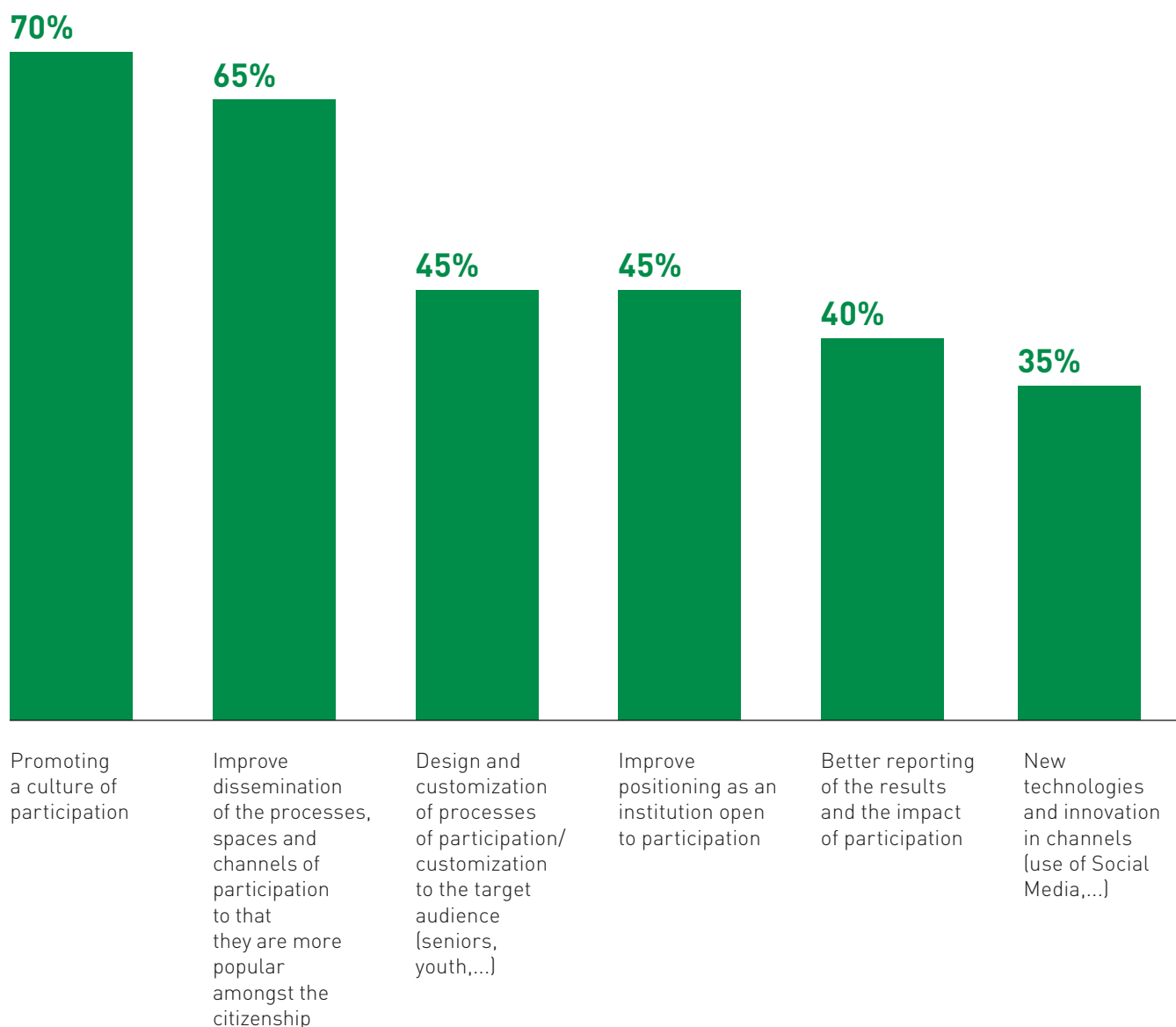
On average, cities claim to be closer to collaborating in the design phase, while during implementation and assessment they are between informing and consulting

In short, cities understand the concept of participation, there are still significant challenges when trying to ensure the effectiveness of the processes. In analyzing the data offered by the cities that have taken part in the study, we can see the importance of a culture of participation and the improvement of the diffusion of the processes, spaces and channels.

It is important to “get participation right” in terms of the methodologies, spaces and channels, **but it will be of no use if all this is not accompanied by communications of these participatory processes and open channels guarantying their use.** While a city may have the technical training and the necessary tools in its Local Administration, **participation is still a cultural aspect, so citizens must be educated and move towards a more active type of citizenship, starting at an early age.**

Main challenges in terms of participation

(% of cities that indicate each of the challenges among the top 3)



Transparency and Accountability

Transparency in government management has gone from being a social demand to an indisputable reality. In fact, today most cities are already technically capable to make key information available to the public. 85% of the cities participating in this study have a Transparency Portal.

In any case, there is still room for improving what and how information is displayed to citizens and socio-economic stakeholders.

It is increasingly important not only to show data, but informative content that is of interest to citizens. Likewise, in terms of its format, information tends to be published as the Administration has it and uses it, and not as citizens need to find it. For example, a common case is to publish the balance sheet, income and expense accounts exclusively in an accounting or administrative language, instead of also using language or concepts more easily understood by its citizens.

On the other hand, it is not only the language of the information that is shown, but also its organization. Sometimes this corresponds to the departmental organization of the Administrations, and not to the citizen's areas of interest.

Also, since the transparency portals are the most familiar tool for the development of transparency, the portals themselves have also evolved. Today there are a wide variety of them (in usability, formats,...). While some of these are solid and merely informative, others are interactive, allowing users to filter, work and download the desired information.

In addition to improving the content and the architecture, it is important to understand the scope of transparency actions, and their reception by citizens. For this, **it is advisable to carry out assessments of the public perception on the degree of transparency of its Administration and identify how to bring it even closer to them**, something unusual, since 71% of the cities participating in the study, indicate that they do not carry out research to know the citizen's perception of the degree of transparency in municipal management.



There is still space improving the way information is displayed and what information is displayed citizens and socio-economic agents

86%

86% of cities in this study have a Transparency Portal

29%

Only 29% prepare studies on citizen perception of the degree of transparency of its management

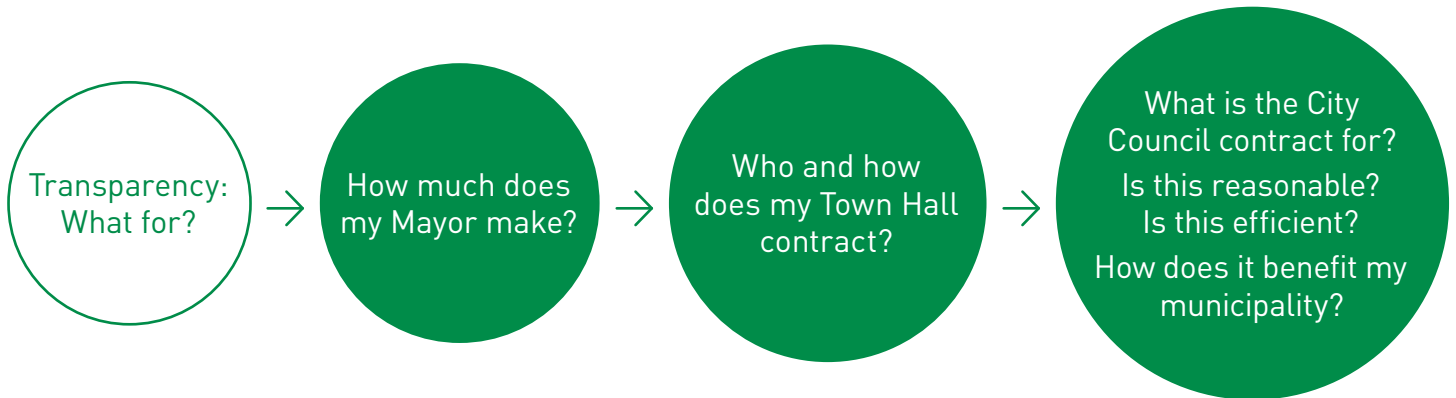


✓ Best practices

Among the good practices identified through the study, it is worth mentioning the **TorinoFacile** initiative, whose purpose is to build a single portal with all the services and information for citizens, and most importantly with a user-centric design. Thus, through an identifier, in addition to access to all public information and services, citizens can access their own profile with which to manage all the services and procedures they require. The portal, organized based citizens' needs, is constantly evolving. Among the cities participating in the study, it is also worth mentioning the citizen-centric portals in **Guatemala**, **Malmö** and **Villa Gesell** for having been conceived by placing citizens at the center of their design.

The demand for a transparent government is a relatively recent issue, but it is a demand that is in the process of change and that today goes beyond the publication of budgets and salaries of local politicians. The following figure shows the evolution that this social demand for transparency is experiencing.

Evolutionary dynamics of the social demand for transparency in a municipality



This is how it has gradually evolved from transparency to accountability. It could be considered that, while the concept of transparency is somehow in the “publication” of the information, and is usually linked to that of an economic-financial nature, accountability goes further, so that work is also done on the justification of the decisions taken and in the reporting of the results obtained in the management.

Among the main issues that should be held accountable at the local level are:

Degree of compliance in relation to the actions and expected projects.

For example, based on a defined program or mandate plan, explaining the number of actions started, completed, implemented, their degrees of development,...

Justification of decisions made.

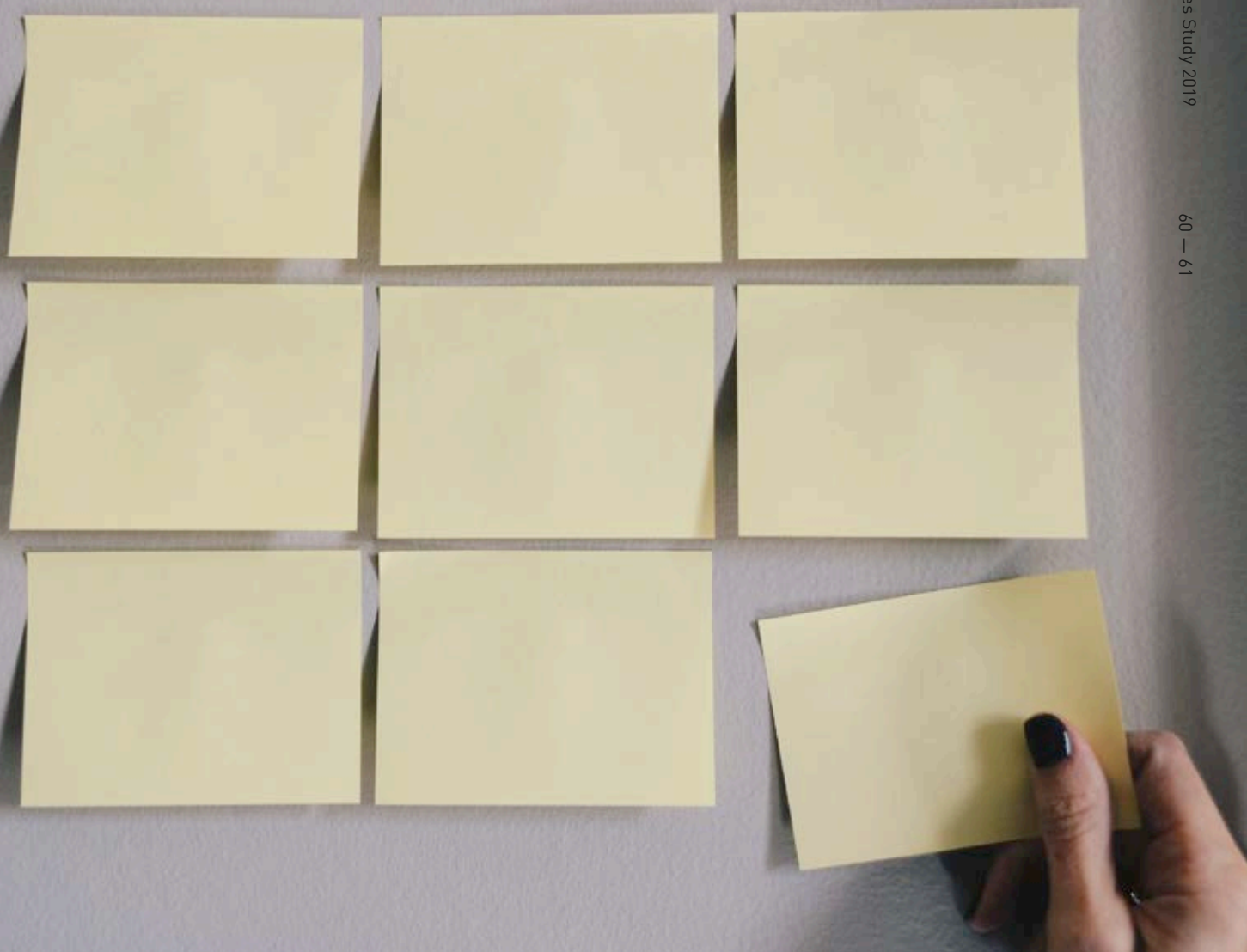
It is important that citizens, according to certain decisions or not, can understand the reasoning behind the policies developed. For example, that there are references of success on which the initiative is based, which arose at the request of the citizenry itself; that it has not been possible to tackle any issue for technical reasons or for modifications in the regulatory framework; or that pilot projects have determined a change of focus,...

Results obtained in the actions.

In addition to understanding why one issue or another has been carried out, citizens want to know their impact, in terms of effectiveness (if the expected results have been obtained), efficiency (what resources have been used), scope (beneficiary population), equality,...

Successes and failures.

There is a tendency to be accountable for the results obtained, but generally the output emphasizes “reporting only the achievements”, which is important, but it is also essential to work on the accountability of the failures, thus fostering credibility. Communicate why a project has not been carried out, or why it has not obtained the expected results, what lessons were learned for subsequent occasions and what corrective measures the local government hopes to take.



✓ Best practices

Among the cities participating in the study, **Ngaka Modiri Molema** has made progress in this regard through its “Budget related to policies” web section, in which the work between Strategy and Budgets is integrated.

A notable example in this regard is that of the **Municipality of Talca**, where continuous dynamics of accountability have been introduced on key projects for citizens. Through these dynamics citizens can view the progress of key works in a neighborhood and the degree of progress, limitations, delays...also conceived as a valid space to encourage the participation of neighbors.



The Mandate Plan: a key instrument for accountability

The Mandate Plan is the commitment that the government team assumes for a legislature. This is a strategic document in which the main lines of action of the municipal government are determined, which will be developed year after year with transparency and citizen participation. It is, above all, the political commitment of the municipal authorities to the citizens. It is their road map.

Global scope Plans:

It promotes transparency in its actions, informing the citizens and all the city's stakeholders.

It allows citizens and local stakeholders to know about future projects and, therefore, can prioritize them and give their opinion, finally assessing government action based on the degree of achievement of the objectives set.

It is, at the same time, an internal strategic document, since:

It allows the entire municipal structure to be clear about the objectives to be achieved and the actions to be carried out.

It allows all services or units to work in a coordinated and transversal way to achieve the same shared objective.

Ultimately, having established a roadmap allows, in the final analysis, to be able to make partial and final balances on the degree of compliance with the planned actions and the degree of achievement of its objectives, thus being able to inform citizens on the management actions. A tool that, although it is very useful, is not used by all but is gradually being adopted by political teams. Among the cities participating in this study, only 60% currently have a Mandate Plan.



60% of the cities participating in the study have a Mandate Plan

Establishing a road map to assess results is the first step. However, when it comes to accountability, as mentioned in the participation section, there are different options depending on its format or dissemination channel.

As indicated by the cities participating in this study, the most commonly used tool for accountability is the permanent website, with face-to-face activities still being an incipient activity.

The most commonly used tool for accountability is the permanent website, with face-to-face activities still being an incipient activity.

Accountability

	They are not carried out	They are carried out/updated, but the frequency is insufficient	They are carried out/updated continuously
Implementation reports	15%	55%	30%
Permanent website	15%	32%	53%
On-site conferences of accountability with citizens and stakeholders	50%	35%	15%





✓ Best practices

Among the experiences of the cities participating in the study, it is worth noting the **portal on budget distributions** developed by the city of **Carthage**, which aims to present the budget and its distribution in a clear way. The portal contains data in an open format, allowing the visualization and distribution of data around the key issues for citizens.



Collaboration

Smart governance involves integrating the different interest groups in the decision-making and implementation processes of a city's project.

Limited resources affects all cities to a greater or lesser extent. So in response to the challenges they face, cities need more and more support from private stakeholders, non-profit organizations and other administrations.

This is considered as one of the elements that reflects the evolution of "Government" to "Governance", that is, from the mere definition of "figures" to the "way of working." Governments are no longer the only providers of public policies and projects. Other actors are involved, and these participate in one or more of the different phases or steps of their formulation, implementation and assessment.

Collaboration with the private sector is considered a fundamental part of Smart Governance, as it is a way to improve the outcome of the projects, minimize risks and favor greater operational efficiency.

To demonstrate this, below are a series of motivations that make public-private collaboration an intelligent and attractive choice for Local Administrations, both in the design of a project and in its implementation and financing.

Is about private actors performing functions that public actors cannot do or that private actors can do more efficiently. These collaborations can be carried out through highly formalized agreements, such as outsourcing or public-private partnerships, or through more informal agreements, such as inter-organizational collaboration networks.



Project Drafting,
Design and
Construction

Improvement of their risk analysis, transfer and management

Project **Optimization**

Ability to make long-term costs visible

Guarantees to meet the estimated budget and deadlines



Project
Operation

Improvement of **asset maintenance** (equipment, infrastructure,...) in the long term

Improvement in the **consistency** of services provided



Financing

Allowing additional investments and improving **affordability**

Linking long-term benefits with long-term financing

Private **financing as an engine** of project performance



In any case, although public-private collaboration is today an increasingly used instrument, there are still significant challenges to make the most of its benefits, with the key challenges for participating cities being the internal processes, bureaucracy and internal capacities of the local public administration.

Main challenges of public-private collaboration

(% of cities that place the challenge among the top 3)

Administrative Agility
for project development

81%

In-house Capabilities
of the Local Administration

67%

Communication management and citizen perception
on public-private projects

62%

Adaptation of the legal framework

47%



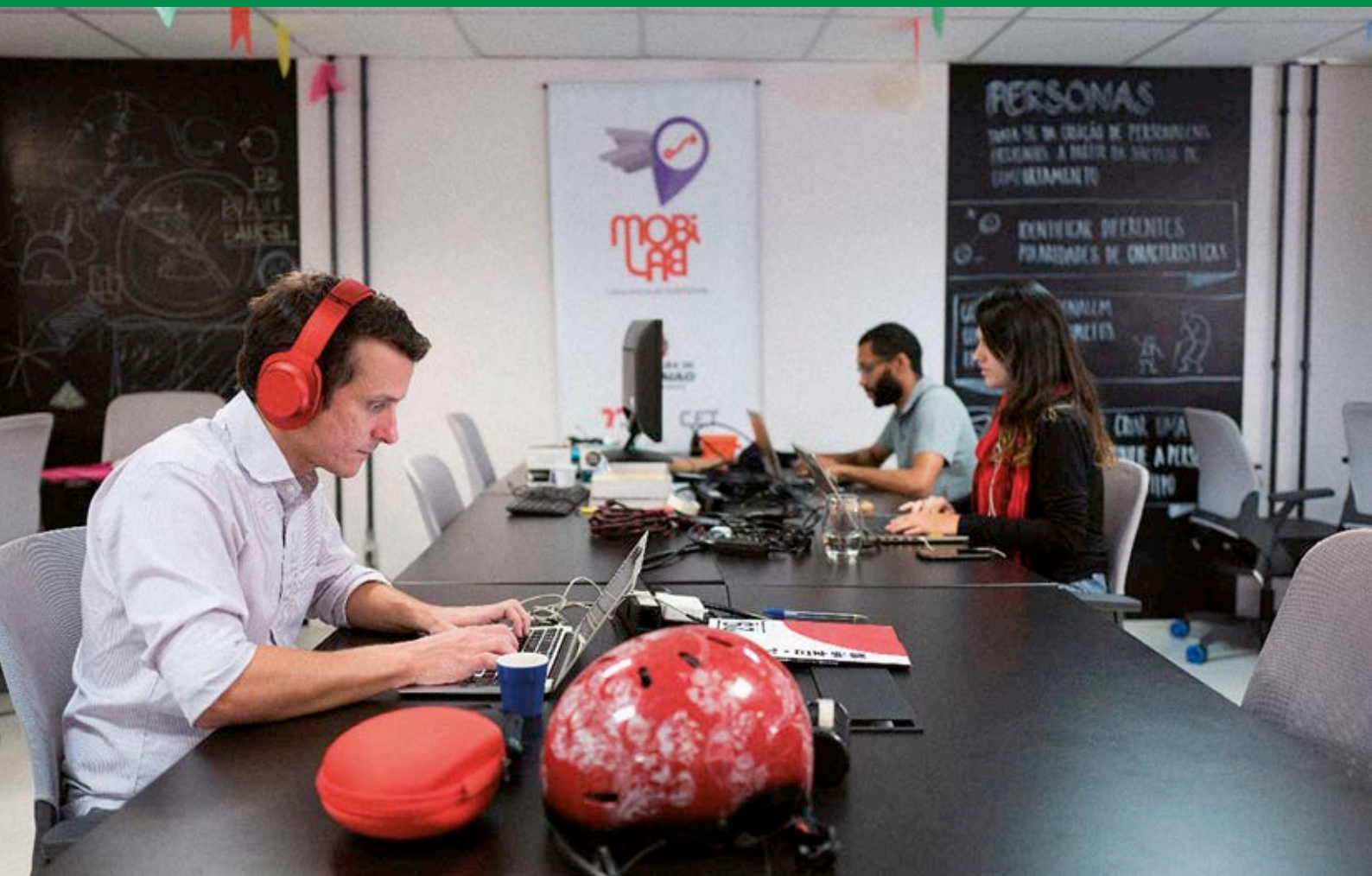
✓ Best practices



In order to take advantage of the opportunities offered by collaborative projects, **São Paulo** created the **MOBLAB+ space**, an open innovation laboratory for the development of solutions applicable to the city. Its objective is to mobilize local actors to foster their interaction and take advantage of the wide range of innovation resources and knowledge that the city of São. Although it is a collaborative project between actors, it is also an initiative with a holistic

vision that incorporates other clear principles of smart governance, as some of its lines of action demonstrate:

- Residency program for the selection and accommodation of companies, new companies and innovative civil society organizations.
- Open meetings and events to create and maintain a community of stakeholders around the Laboratory.
- Intersectoral collaboration, establishing collaboration agreements with the private sector and the Third Sector.
- Promotion of actions to identify the demand for opening data and connecting users with publishers.
- Support for the opening of data of the municipality's organs and entities to integrate them into the innovation processes.



On the other hand, when talking about collaboration as the axis of Open Government, it is important not to forget the **benefits of collaborating with other administrations, both at the same level and at the territorial and national level. Thus we arrive at the concept of multilevel governance.** Working together allows public authorities to combine their experiences to obtain better results and achievements such as:

- 1. Ensure coherence between local and regional plans.**
- 2. Develop clear and consistent visions.** The sharing of knowledge and ideas between different administrations can lead to the creation of new shared visions.
- 3. Establish more favorable financing mechanisms.** Partnering with other authorities can generate conditions of greater security and stability that attract investment.
- 4. Communicate more effectively.** Defining the objectives together ensures the harmonization of the messages shared between the interested parties.
- 5. Establish tools or structures for monitoring** and presenting information to ensure consistent monitoring of the plans, both locally and regionally
- 6. Share experiences, skills and knowledge.** To fill important gaps in the planning process and facilitate the dissemination of good practices and innovative actions.
- 7. Group resources, skills and techniques.** Different skills of collaborative work, techniques and planning resources can be combined to advance taking advantage of economies of scale.

Finally, **it is worth noting the growing number of alliances and joint projects that are carried out between the Local Authorities and the Third Social Sector** (non-profit associations, foundations,...). The Administration can improve on the identification and find solutions to resolve unsatisfied social needs in the most appropriate way.

When different public authorities work together, it allows to combine their experiences to achieve a better result and to meet big goals

✓ Best practices

This method becomes especially important when cities have a key role in the revitalization of their region. In this regard, it is worth highlighting the work of the city of **Bogotá** in the process of preparing the **Strategy for Specialization of the Region**, working together through workshops and specialization groups with 140 other entities from the public sector, business sector, academia, the scientific community, research centers,...



Open Data

In addition to the unquestionable value the use of open data can generate, it is important because it represents a further step in the path of transparency. As mentioned at the beginning of the study, citizens and stakeholders of the city's ecosystem are increasingly demanding, and **the right to information has also evolved towards the right to access the data that Administrations generate for their management.**

To publish primary data you have to collect it, which is easier today with new technologies. However, the challenge in advancing smart governance is knowing how to take advantage of this data. One clear example is scientists' access to environmental data, allowing them to deepen and better understand problems and their causes. Changes are also emerging in Open Data, which is in a transitional period, focusing on the need to only publish the necessary data, to understand and respond to specific problems, since "publishing all available data" is possibly one of the most common mistakes in this area. Instead, it is more efficient to

advance to a more "thematic" or "sectoral" approach which is more aligned with the needs of the users or final beneficiaries of the data.

There is no doubt that the collection, filtering, management and publication of data is an increasingly complex task for administrations, due to its volume and the need to combine these themes and their own structure. That is why it is increasingly important that cities invest in what is known as "data infrastructure," both physically and in technology and management, also establishing a model of data governance that allows them to be shared with agility: a prerequisite for the success of Open Data.



Key characteristics of the data so that they can be considered open:

Availability and access

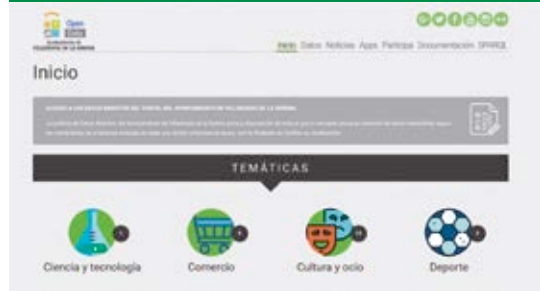
The data must be accessible, preferably through the Internet. Access must be made through a standard protocol that does not entail an additional cost and must be turned over in a widely used format that facilitates its processing.

Reusing and redistribution

The data must be distributed under terms that allow for free use and exploitation and that do not place restrictions on crossing them with other data.

Universal participation

All interested parties, without exception, should be able to access the data and use it in any way they wish, without any commercial or limited purpose restriction.



✓ Best practices

With the aim of facilitating the reuse and redistribution of data from different sources of information, in **Villanueva de la Serena a study has been carried out to identify all the data that is priority for citizens, and an application has been developed that organizes all this data with the same geographical base**. In this way, communication and management related to the collection, maintenance, review and updating of geographic information is improved, facilitating the storage, processing, access, presentation and distribution of this information, meeting the interoperability criteria and allowing for the visualization of spatial data through innovative and citizen-friendly viewers. Another of the initiatives identified among the participating cities is **UrbiThings in Cuenca**, in which, in addition to accessing all geolocated information related to urban planning, citizens can comment, make complaints, claims and ask questions.



To maximize the potential of Open Data, it is essential to proactively collaborate with citizens and with representatives of civil society and the private sector, in order to determine what data they need or consider of interest, especially for the development of new solutions.

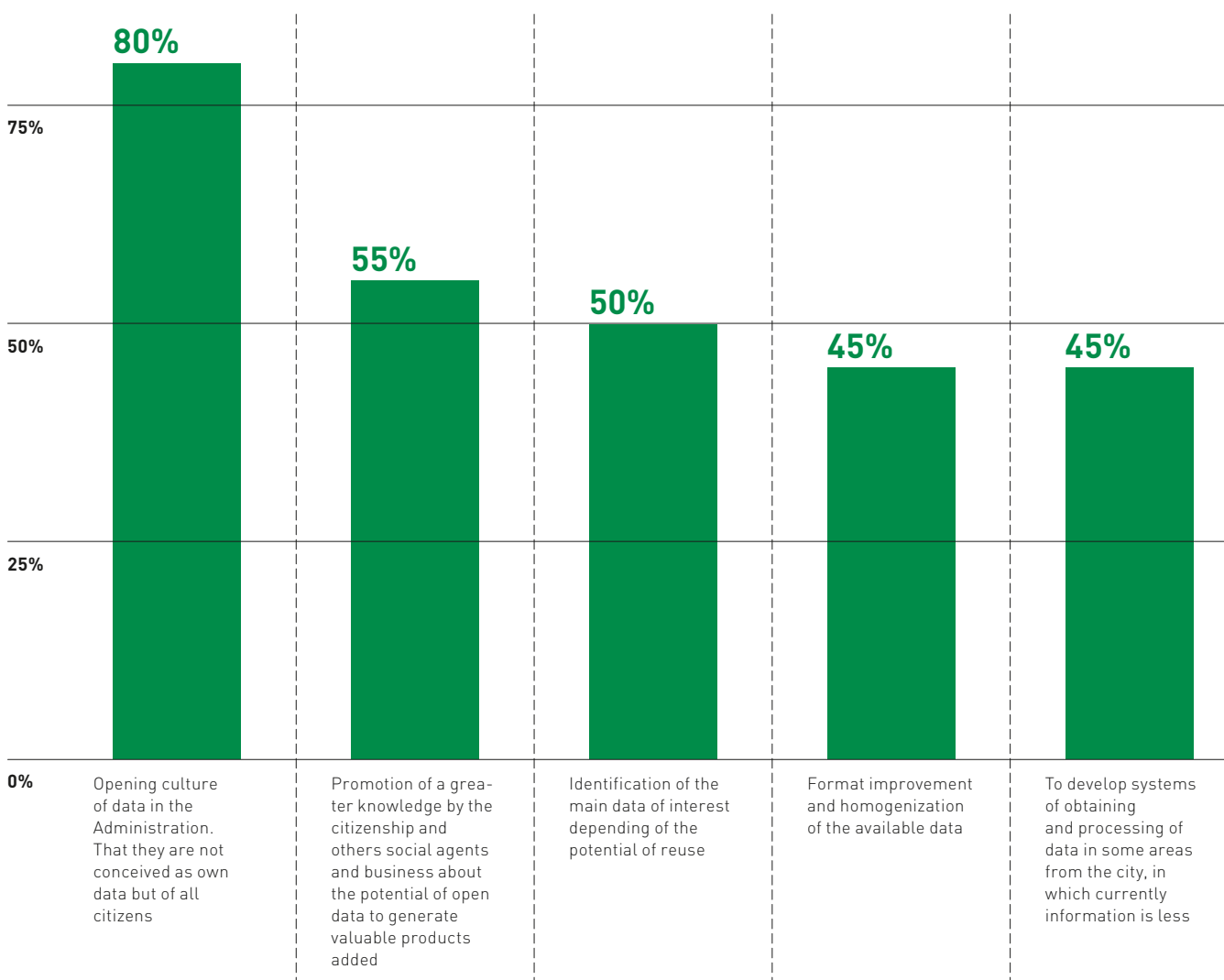
Another of the biggest challenges in this area is interoperability, since in most cases many systems that are related and work together are involved. It is important to work and collaborate between the different stakeholders to advance in the standardization of the formats that allow the connection between various sources.

According to the cities participating in the study, the main challenge to Open Data remains creating a greater culture of open data, which is not conceived as their own data but as belonging to all citizens

Also, although progress is made in improving open data in terms of their quality and usefulness, it is true that there are challenges in relation to its use by users. **Open Data is a relatively unknown concept for citizens and, therefore, a greater communication effort is necessary. Report what it is and what can be done with that data.**

Main challenges for the development of Open Data

(% of cities that indicate each of the challenges among the top 3)





✓ Best practices

It is with this ambition that **Amman's Open Data Portal** was designed, in which there is a clear vocation for the reuse of data that covers key areas for the development of solutions for the city, such as managing water, energy, natural resources or security.

Advanced Strategic Management

Advanced
analysis

Advanced
strategic
planning



Assessment
of public policies

Foresight

As mentioned in the introductory chapter, a smart government must be open and must also be able to carry out advanced strategic management.

One of the keys to the current context is that reality is changing faster and faster. **The ability to observe and know the reality of each moment and, in turn, to anticipate the future reality that we will face, can be the real difference between the right policies, or for a city to be left behind and not respond to the needs of the citizens and the companies that live in it.**

In addition, it is no longer just about providing the necessary response, but about doing it more efficiently. And in order to “do more with less” it is necessary to focus on advanced strategic management.

Thus, in the present chapter of the study we discuss the keys to advanced strategic management, and its founding pillar or process is to design and act according to Advanced Strategic Planning. However, due to its importance in the process and its contribution to smart government, the keys include Foresight Studies, Advanced Analytics and Assessments, which are also discussed. In fact, through the study we observed that **strategic planning is more present and developed by cities than the other key elements for local strategic management.**

What does it mean to manage in a strategic and advanced way?

1. Ability to foresee

2. Ability to observe and analyze what happens.
Understanding the point of departure

3. Ability to think about the present
and the future

4. Ability to generate a shared vision
of the future

5. Ability to establish a road map
to reach that vision

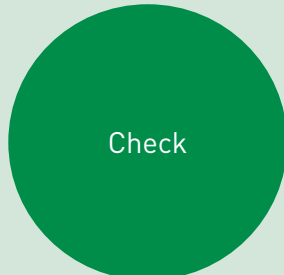
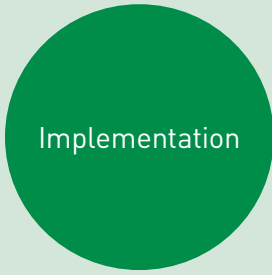
6. Ability to measure (and not only at the end)
to learn and improve

Overview of Advanced Strategic Management

Processes and tools



Prospective and advanced data analytics



Facilitating elements

Organizational suitability

Training of technicians

Digital transformation

Assessment

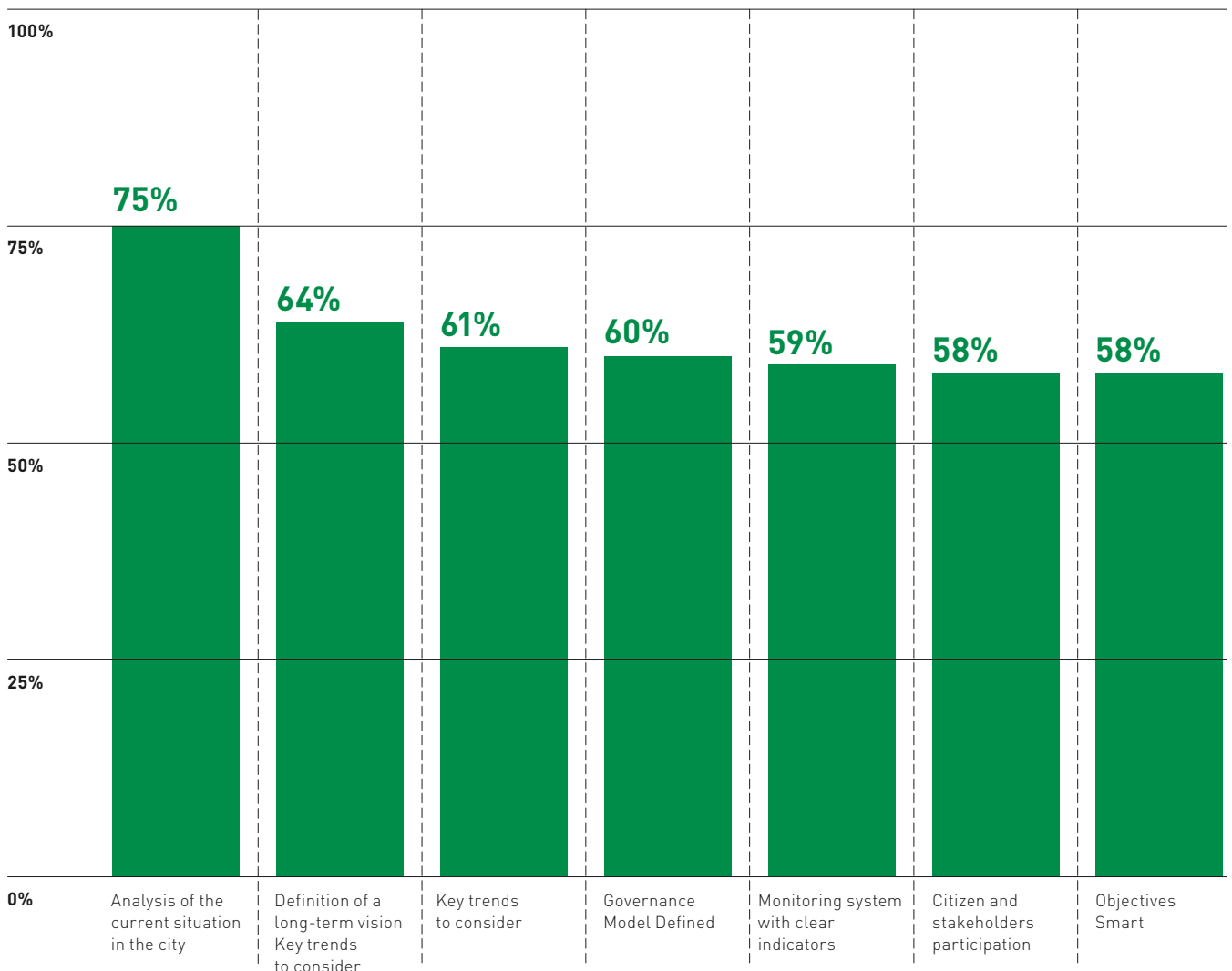
Advanced strategic planning

The context in which Local Administrations are framed requires that their actions be planned. In other words, a smart local government does not improvise. Smart Governance requires that actions in the different areas of city management be planned based on evidence, actively collaborating with citizens and stakeholders, and ensuring the collaborative monitoring of these actions.

For all these reasons, it is important that strategic planning integrate a series of key aspects that are dealt with in this study, thus guaranteeing that the challenges identified for society are resolved. As shown in the following graph, **there is a greater degree of development in the inclusion of baseline diagnoses than in another series of key elements to ensure that society's needs are answered and that mechanisms are deployed to guarantee its correct execution and monitoring.**

Degree of incorporation of key aspects for city planning

(% of cities participating in the study that incorporate these elements regularly)



Strategic planning can include a variety of plans, each of which serves different objectives, addresses different issues and has different time scopes. But these plans must still be aligned and display a common vision of the city's future and of the policies needed to get there.

Coherence between plans of a partial scope (by territorial or sectoral scope) and global scope (Strategic Plan and Mandate Plan) is particularly important. In addition, all these plans are usually deployed through annual operational plans, which specify the actions to be carried out each year, while being aligned with the Local Budgets.

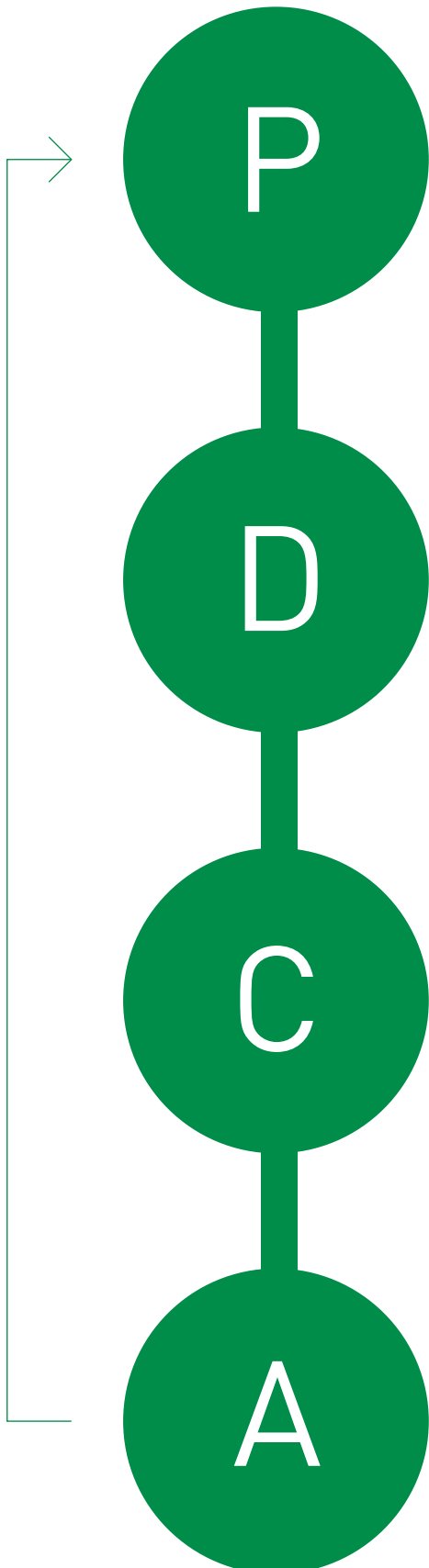
A clear example: Smart Specialization Strategies in cities

Smart Specialization Strategies are an increasingly common tool in cities. Through these reflection processes, cities identify the tangible and intangible assets or competitive advantages they have to strengthen some sectors or niches and position themselves at the forefront of them. These strategies are carried out with a medium-long term vision, but they have as their objective the deployment of actions that facilitate this transition towards the desired specialization.

Plans of a global scope	Strategic Plan	It represents the long-term vision of the desired future for the city and the strategic lines of action to reach it
	Mandate Plan	It includes, in the form of commitments, the priority projects that the Government Team intends to achieve in the legislature
Plans of a partial scope	Sector plans	Aimed at improving in specific areas of the city and affecting a limited number of municipal areas
	Territorial Plans: neighborhood development	Aimed at improvement in specific territorial areas of the city, usually neighborhoods or other city units of less than municipal scope
	Transversal Plans	Aimed at improving issues that affect the entire municipal organization. Sometimes they also have an external importance of promoting useful values among citizens, businesses and local stakeholders



These issues can be summarized in a management plan called the PDCA Cycle, which is based on the idea that strategic planning is carried out through 4 large phases that integrate another series of activities. But above all it reflects the philosophy that planning must be a cyclical issue, through which it is evaluated, learned, corrected, advanced and continuously improved upon; all decisive for a smart government.



To plan. The priorities are identified and the strategic objectives and key actions to achieve them are set

To do. Planned actions are deployed

To check. Once the actions are deployed, it is necessary to evaluate them. In case the improvement does not meet the initial expectations, modifications are made to adjust it to the expected objectives

To act. Finally, based on the results obtained, improvements will be made to the policies and programs deployed, increasing their value to citizens

The Strategic Planning processes do not have to be aimed at a strategy, plan, service or program as a whole, but can be carried out in phases.

In this sense, it is important **to work on the basis of pilots and deploying programs and services in a more intelligent and efficient manner that allows them to gradually be evaluated**. It is about working based on agile methodologies (such as Kanvan, Scrum,...) that allow for easier adaptation to a changing context.

Advantages of working with agile methodologies and pilot deployment

Improvement of the motivation and involvement of the development team

Greater speed and responsiveness to the citizens' needs

Efficiency and realization of investments with greater probability of success

Avoid unnecessary actions



✓ Best practices

This philosophy is also used a city's services, since the city itself becomes a laboratory for experimenting with its solutions. One of the good practices identified among the cities participating in this study is the **Torino City Lab**. This is a laboratory that, in addition to being a collaborative space (which integrates research and industrial partners), is used by newly created companies to test solutions (in development process) in the city in areas such as the use of drones, autonomous mobility, IoT, circular economy,...

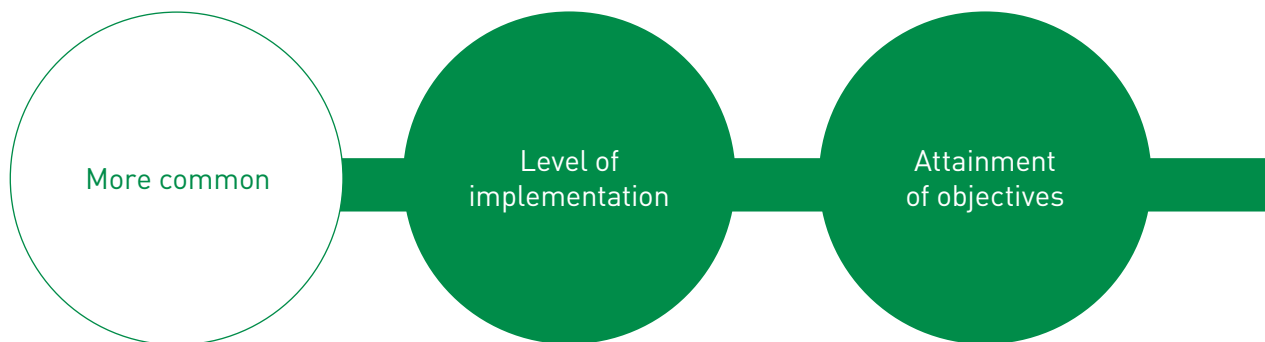


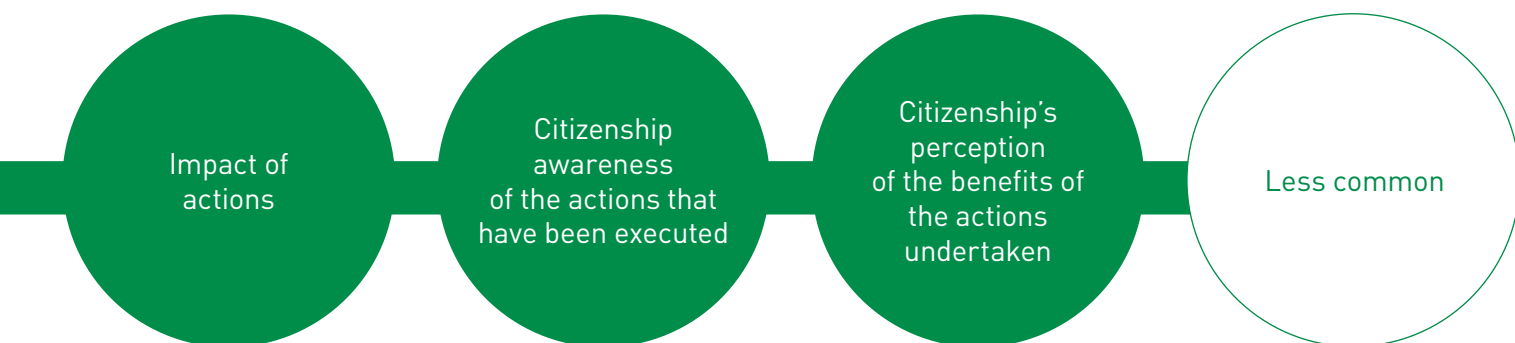
Assessment of public policies

A smart government is one that learns. In this sense, assessment has a clear function of continuous learning to improve the exercise of public management. It is also the way to demand accountability of the stakeholders involved in proposing public interventions.

An intelligent government diagnoses the results achieved, their usefulness and impact; the quality of the services offered; helps correct deviations and facilitates the management of public resources based on the proposed objectives and the means used. But, above all, it provides evidence on the progress and orientation of the city towards the common good.

This assessment of public actions can only be carried out with sufficient rigor in the framework of a planning process. Governments plan their actions, defining objectives and indicators, and the subsequent assessment examines the level of compliance with the commitments assumed and weighs the reasons why, where appropriate, the deviations occur.





The study concludes that the current assessment of local policies is more focused on the degree of compliance with the established objectives and the level of execution (actions deployed against the planned ones) with less emphasis on assessing their impact and citizen perception.

In addition to the assessment’s purpose (the “what”), another challenge in this area has to do with the “when.” Historically, both in the public and private spheres, assessments have been used at the end of a specific action, strategy or measure. However, and recovering the idea of carrying out pilots and continuous monitoring, by not leaving the assessment exclusively for the end remains a pending issue in city governance.

As shown in the attached table, the participating cities state that the ex ante assessment is carried out residually, while the intermediate assessment is somewhat more common and a final assessment turns out to be the most common.

Tabla de evaluaciones

	Never	Rarely	Sometimes	In most cases	In all cases
Assessment ex-ante	26%	26%	32%	0%	16%
Mid-term assessment	11%	21%	42%	16%	11%
Final assessment	11%	16%	47%	16%	11%





Likewise, the “how to evaluate” is also a matter to be addressed in smart governance. And one of the keys is the incorporation of assessments from external stakeholders, fundamentally by the policies own beneficiaries.

In any case, although the questions about “the what”, “the how” and “the when” are important, through the present study it can be concluded that **the great challenge of assessments is mainly cultural. It seems that a consolidated evaluative culture is still lacking.**

That is, its importance is not sufficiently internalized. Few Administrations have systematized or integrated assessment processes as another standard process, and this is manifested by the cities participating in the study, which identifies the lack of an evaluative culture and systematization of methodologies for carrying out assessments on other potential barriers.

Main barriers identified by cities

(% of cities that indicate each barrier)

Lack of systematization of a work methodology related to the development and assessment of plans	75%
Cultural barriers (lack of evaluative culture, perception that it slows down work,...)	60%
Lack of resources (people’s dedication)	45%
A lack of political will	45%
Budgetary constraints	25%
Lack of training of technical teams	10%

Foresight. Anticipating the future

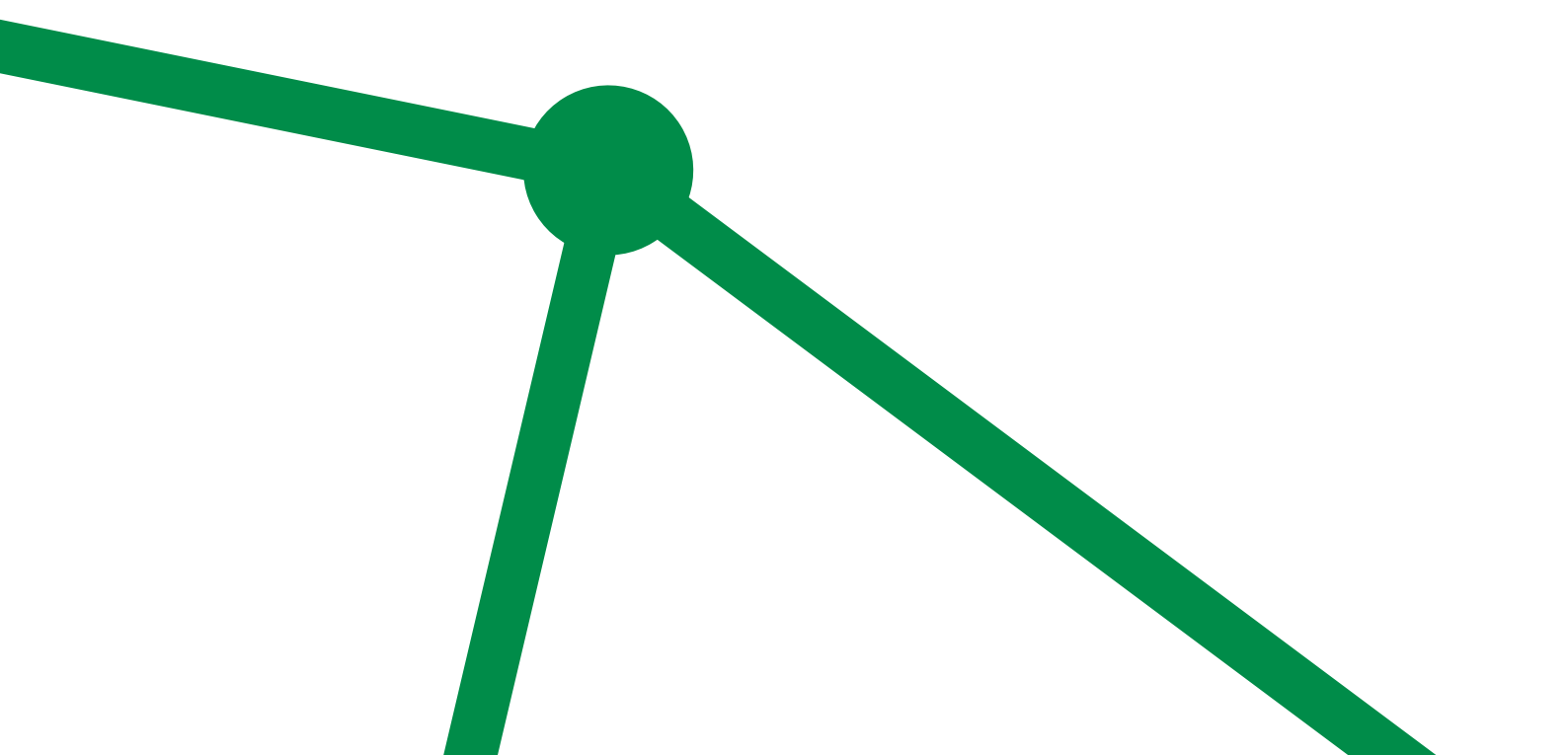
The OECD defines foresight as *“the process involved in systematically attempting to look into the longer-term future of science, technology, the economy and society with the aim of identifying the areas of strategic research and emerging generic technologies likely to yield the greatest economic and social benefits.”* So a foresight study is a tool to support strategies and to observe the environment from a long-term perspective for early identification of those aspects and technologies that could have a major impact on the future by determining possible future situations by considering both the current situation and trajectory data as well as expected behavior.

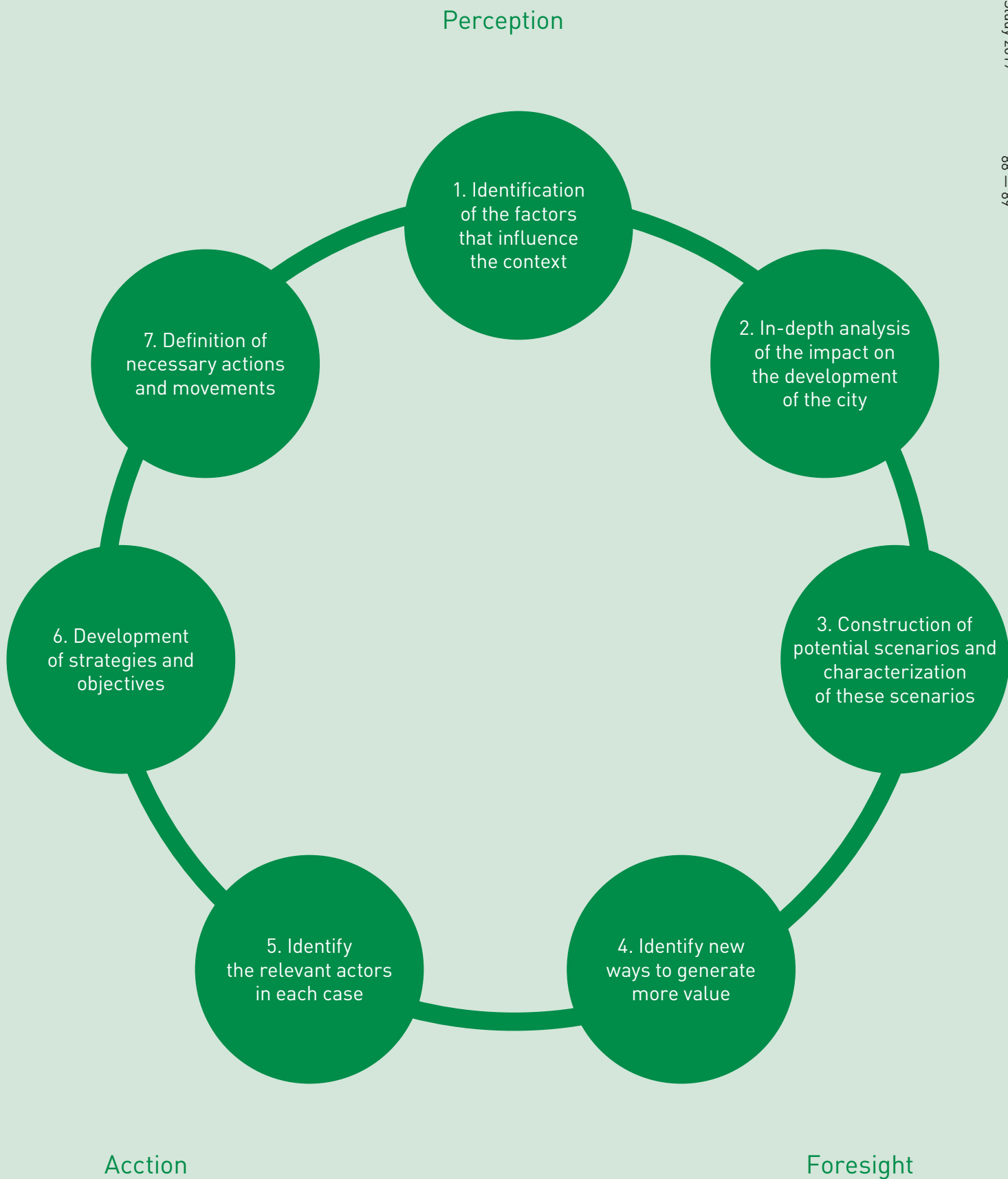
This is an issue that traditionally seemed to concern exclusively private businesses, but of course it is also the responsibility of city governments, which must not only live with and be sufficiently satisfied with the successes of the present, but must continue to visualize and plan their vision towards a promising future, since today's achievements will not necessarily be tomorrow's.

A smart government must be continually renewing itself. It is not enough to formulate a strategic plan if this formulation does not incorporate an adequate prospective environment

A smart government must be continually renewing itself. It is not enough to simply formulate a strategic plan and not take into account a future vision. Statistics say that only one out of ten strategic plans is implemented successfully, and that the most common causes of failure is a lack of vision and foresight.

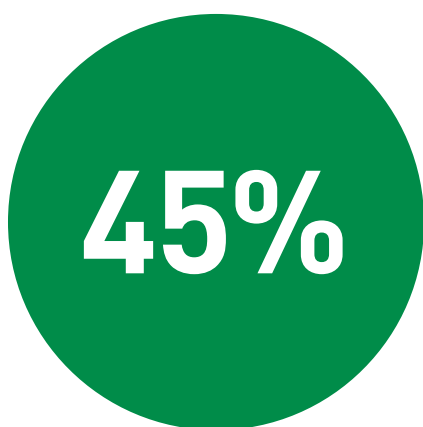
Foresight activities allow to satisfy both the needs of citizens and those of the Local Administration itself, answering their most common questions with a pragmatic approach based on evidence that, being based on statistical analysis, participation, probability, patterns and other types of data, allow us to understand how things will work, what the needs will be and what changes will likely occur.





However, despite the potential benefits of foresight, the Public Sector's organizations are currently behind the rest of business organizations, a fact that is confirmed through what was expressed by the cities participating in this study.

When asked about their perception of their own level of development in the field of foresight as the key to "Smart Governance," the average degree of development is 4.6 over 10, which is insufficient. However, cities give a priority of 7 over 10 to the need to work in this area.



Only 45% of cities say they use foresight studies to support decision making

On the other hand, in addition, the prospective activities are not yet fully developed and internalized in the ways of making cities, their development degree is quite disparate depending on the different sectoral issues.

Among the cities that do carry out studies of prospective, it is identified that the fields of study which are more common are population trends (birth, aging, ...) and environmental, followed by economic growth trends and sectors of activity and specialization. However, among the least analyzed issues are inequality, new technologies and **talent**, where **only 11% of the participating cities in the study carry out regular prospective studies.**

In short, **prospecting for the future is essential for a city to be "smart". Forgetting the future scenarios, we will hardly succeed in public policies able to guarantee a sustainable development.**

Trends in new technologies, social inequalities and talent are among the least studied areas in terms of foresight studies

Areas on which foresight studies are conducted (% of cities that conduct studies on each subject)

Consequences of population trends (aging, birth rates, etc.) **100%**

Environmental trends **100%**

Economic growth trends **89%**

Trends in activity sectors and sector specialization **78%**

New technologies **56%**

Trends in relation to social inequalities **56%**

Future talent and professional profiles **11%**

✓ Best practices

One way to get ahead of the future is to maintain an active role in identifying solutions to social challenges. **Santander's** City Council regularly leads **social innovation processes** in key areas for the city (mobility, payment integration in public transport, commerce, tourism sustainability, waste management,...). One of the key elements of this initiative is the involvement of various actors (political authorities, municipal staff, companies, experts and citizens). Among the main benefits identified is the municipal staff's education involved in the different solutions and the integration of new ideas and solutions into the contracting documents.

The city of Tequila also goes further in this regard. Aware of the power of data and the need for anticipation, it has created the project called **"Big Data Tequila."** The aim of the project is to achieve new perceptions, create new forms of value, analyze trends and perform simulations that support prevention models, so that markets, organizations and relations between citizens and local government are a transforming element for Tequila.

The project integrates city data that comes from sensors, microphones, cameras, social networks or websites, which nurture a Think Tank created to analyze historical data and trends to generate connections, simulations and prevention models for better management of the city.



Among the initiative's factors for success are, in addition to the technology used, the fact of having reflected on what issues are a priority to analyze.

Thus, it has gone from Big Data to Smart Data, and the information generated through the system has been fully integrated into its decision making, having advanced in matters such as:

- The analysis for the improvement of traffic.
- The population density analysis for the planning of public spaces.
- The monitoring of information in real time for the prevention of recurrent events.





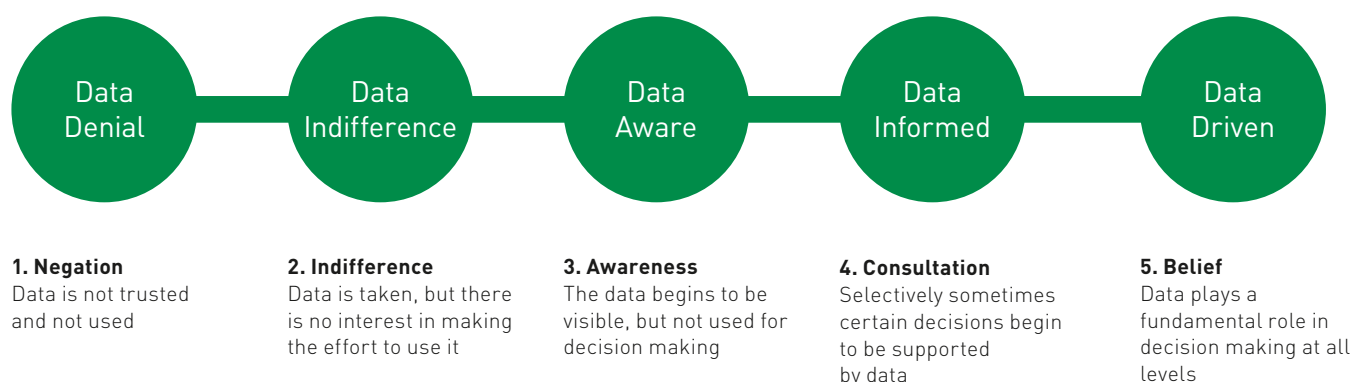
Advanced data analytics - Data Driven Decision Making

Historically, a large part of the value and role assumed by company executives and political leaders was measured by how wise their intuition was when making certain decisions. Without supporting data, and therefore without a solid analysis to justify them, these decisions were based on pure instinct, tradition, history, theory or a mixture of all of them. However, the digital transformation has come to stay and, along with it, the ability to measure and collect all kinds of information that may end up being useful if it is treated and analyzed in the appropriate way.

And this, in addition to being the main virtue is also the main danger, since the desire to maximize investments to the limit and to have an analysis that covers the largest possible sample of data can lead to collapse. This is commonly called “analysis paralysis.” The most relevant part of measuring and collecting data is to ask the right questions. It is essential to invest a lot of time in the approach of the questions and in defining hypotheses. The objective is not to collect the maximum amount of data, but that these are of the highest possible quality to be able to transform them into metrics, the metrics into KPIs and, in turn, the KPIs into the best possible decisions. That is, move from ‘Big Data’ to ‘Smart Data’.

One of the big questions to answer is whether the data-driven decision-management model (DDDM) can be applied to traditional governance, making it a data-driven governance model (DDGM). The answer is clear: of course. In fact, if the common objective is to achieve better governance and design of policies that fit reality, not only is it possible but it seems necessary to implement and use ICT solutions that allow processing, integrating and exploiting that mass of data, which is getting bigger and bigger, and which is currently available thanks to the multitude of sensors, social networks, systems, stakeholders,... that participate in the development of daily life in cities. The process is more sophisticated when past and present data is used to predict what is likely to happen in the future. This approach has many names: “Big Data,” “Data Analytics,” “Business Intelligence”..., but what underlies all of them is the conviction that better data ends up becoming better decisions. However, this is not a simple process.

To establish a culture based on data, organizations (both public and private) often go through a process similar to the one shown in the following graphic:





When asking the participating cities about “their relationship with data,” we see that sometimes they are measured, but in general, their full potential is not realized.

Position of the participating cities in their development towards advanced data analytics

Measure	42%
Measure and publish	21%
Polish	11%
Incorporate into decision making	16%
Operate with the data	10%

✓ Best practices



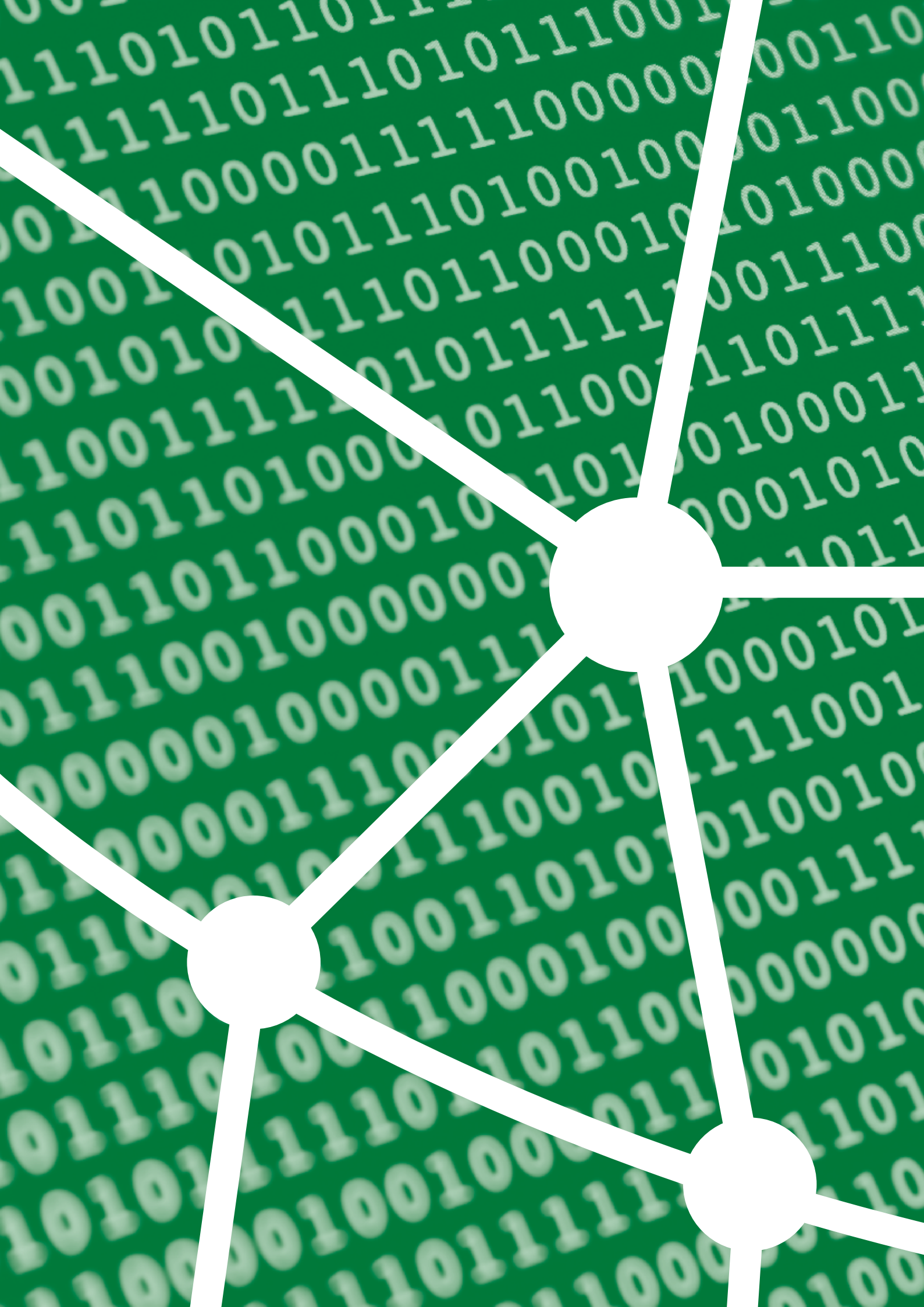
Aware of the potential of intelligent data management, the **BlockChain Mérida** and Hyperledger Mérida projects were launched in **Mérida** (Mexico). The objective is to promote “trust ecosystems” that facilitate urban governance, civic literacy and new entrepreneurial environments through blockchain or Distributed Registry Technologies and decentralized community consensus processes based on crypto-security mechanisms.

Two civil society communities have been created to promote decentralized governance, thanks to which applications are being developed for

monitoring supply chains for the local fishing industry and an incubator for high-impact productive projects with physical assets and environmental and social sustainability.

The data-based decision can lead to key solutions such as the good practice of the city of **Lappeenranta**, in which a virtual power plant has been developed that helps to balance energy consumption, reduce the need for reserve energy and consequently, to reduce carbon dioxide emissions. The project has adopted an innovative approach to increase the benefits of increasingly decentralized energy systems. The heart of the virtual power plant is a software platform that intelligently balances the electrical charges of the buildings that have been connected in a micro-grid, incorporating renewable energy and energy storage. The new virtual power plant platform, a digitalized demand response system, makes it possible for the first time to combine the small electrical charges of buildings or industrial establishments. The city of Lappeenranta will begin with 9 public buildings, with the aim of connecting 50 buildings to the micro-grid. In short, the combination and integration of information from various sources, provides the possibility of greater efficiency for the public sector and decreases the environmental impact.





One of the main barriers for not making data-based decisions, and with special relevance in the public sector, has been the economic implications that arose from the computer specifications required to achieve sufficient computing capacity to process and analyze those large volumes of data. **But little by little the economic investment of data intelligence has become relatively affordable, and this has ceased to be a valid excuse. In fact, the majority of cities participating in the study essentially blame the delay in advanced data analytics on the lack of a data-oriented culture; the lack of a figure leading this area in their city; and the lack of political will.**

According to the cities participating in this study, the most pronounced barriers to the development of advanced analytics is the lack of a data-oriented culture and lack of leadership at a municipal level

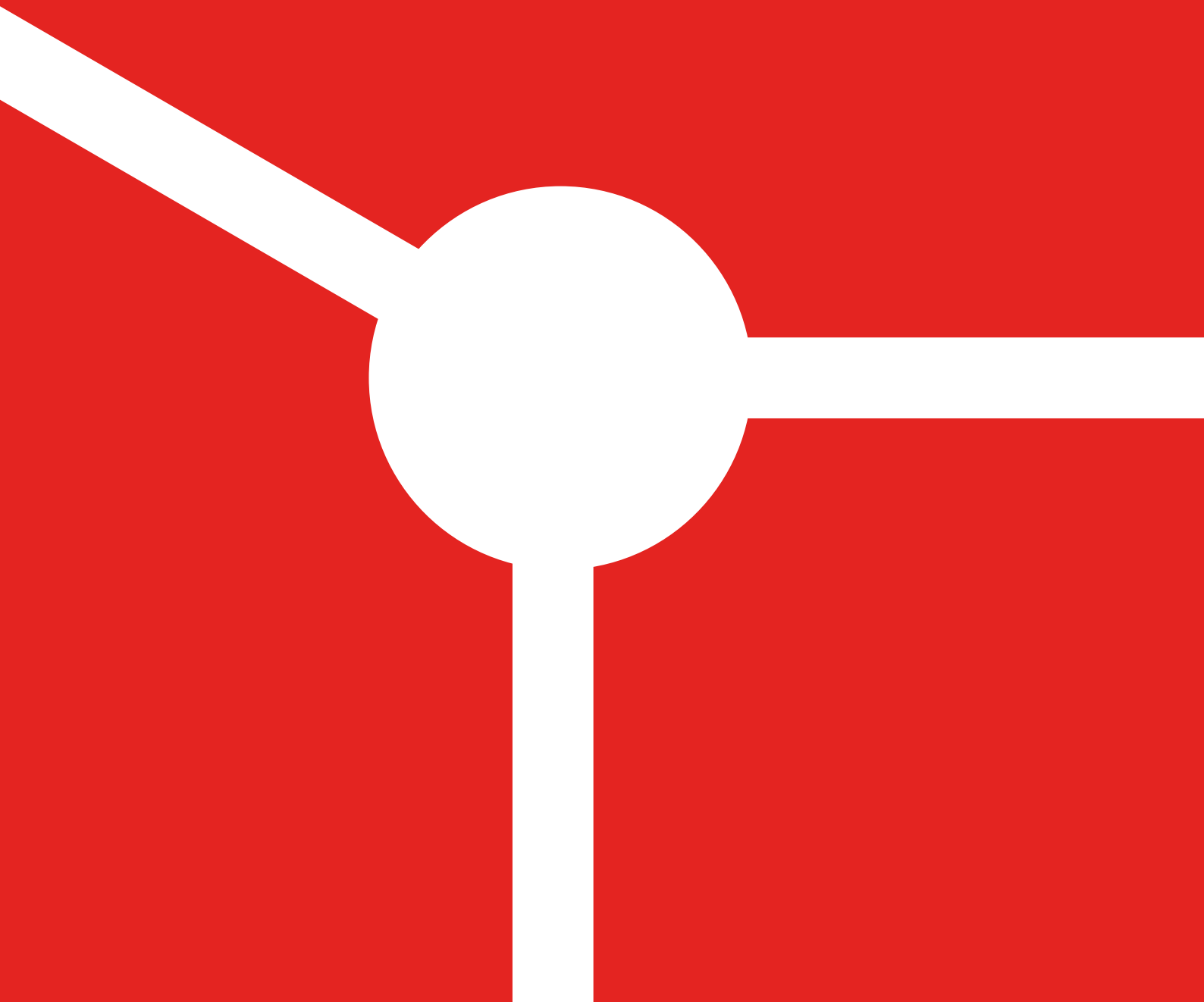
Principales barreras de entrada para no realizar una toma de decisiones basadas en datos

Lack of a data-oriented culture	20%
Lack of a figure leading data intelligence at a municipal level	20%
A lack of political will	18%
Non-interconnected data sources	13%
Budget barriers	13%
Data not digitized	8%
Lack of analysis software	5%
Team's lack of technical knowledge	5%



Conclusions

The right path ahead





Smart Governance Diagnosis in cities. How are we and where are we going?

Smart Governance is not one more area of a smart city, but it becomes the catalyst and facilitator for the achievement of the city's objectives, improving the well-being of its citizens and advancing in the smart development of other key areas of the city such as mobility, resource management, energy,...

It is a way of working that integrates both key principles and processes that can be structured around the concepts of Open Government and Advanced Strategic Management.

The cities participating in the study consider that, although they are working on its development, it is a top priority to deepen Smart Governance in the cities.

Open Government, on the other hand, is well-known in these cities, but there is still room for improvement so as not to remain in the first phase of its development and to be able to innovate in the activities that are carried out within its framework. Some key areas to advance in are:

It is necessary to go from having a Transparency Portal to accountability, both on the achievements and also on the failures.

To go from asking the opinion about something defined, to create a design with the citizens “from scratch.”

To incorporate in greater extent all non-organized citizens into the participation processes, approaching the spaces where the citizens are located.

Deepen collaboration with other stakeholders.

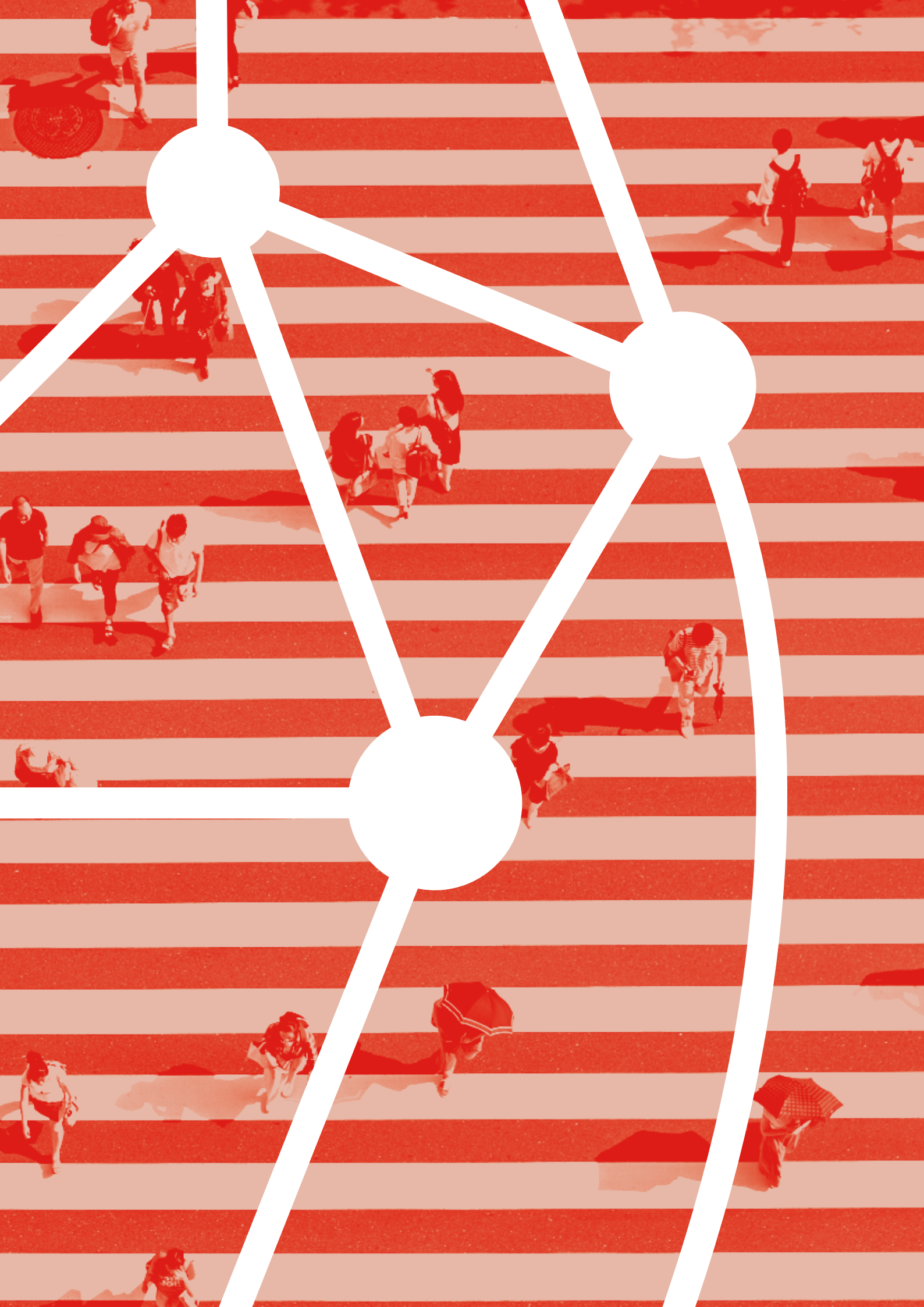
Advanced Strategic Management is also a city’s priority, which must advance along lines such as:

Strengthen strategic planning processes.

More and better assessments, giving more weight to the concept of “impact assessment” and developing “more participatory” assessments.

Give higher priority to Foresight Studies and Advanced Analytics. These are still emerging tools in most cities, but they are key for the development of a clear vision for the future and for efficient management of public resources that generate social value.





Opportunities and facilitating elements

The growing citizen demands constitutes an impulse to address smart governance..

Access to the necessary technologies is no longer a barrier and facilitates work that seemed impossible a few years ago.

Technical staff increasingly trained and knowledgeable in the field.

Increased self-awareness of social and business stakeholders' role in their development of the city.

Barriers for the development of Smart Governance

An insufficient culture of opening data by the Local Administration.

A lack of leadership and ad-hoc figures for the development of Open Government and Advanced Strategic Management in cities.

The need to systematize processes associated to the continuous assessment of the initiatives deployed.
Measure to learn and improve.

The need to work on the construction of a context of trust that encourages citizens and companies to collaborate and believe in the team leading the city.

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