

Govtech City-level Framework 2022

A Report by CAF -development bank of Latin America and Oxford Insights

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The ideas contained in this study are of exclusive responsibility of the authors and do not compromise CAF's official position.

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Introduction

About Govtech

For decades, national and local governments have been focused on the transition from traditional in-person and analogue services to new digital procedures. Recently, this transition has experienced a change of pace, as the global COVID-19 pandemic made evident the complexity and scope of some of the challenges we face. From public health risks and inequalities to climate change and the digital divide, these circumstances demand more responsive and efficient public administrations.

Facing these challenges require a wholesale transformation of how the public sector operates, beyond merely digitalising existing government practices. Governments must enhance their systems, incorporate user-centred approaches into public services, foster data-driven policy design, and harness data and technology to increase the power of government. To achieve this, they need a new service delivery model applicable to all sectors of government that can help them identify and adopt new technologies whilst enabling collaborative solutions.

It is a recognition of this fact that has made the concept of govtech pertinent to the public policy agenda globally. **Govtech refers to a ‘governance model where governments collaborate with start-ups, scale-up companies and SMEs that use data intelligence, digital technologies and innovative methodologies to provide products and services to solve public problems.’**¹ As detailed below, this model is operating in three different levels simultaneously.

On a first level, the govtech model is about helping public institutions embrace technological capacities to solve concrete problems. It is especially pertinent for the incorporation of disruptive technologies into the delivery of public services. For instance, governments across the Iberoamerican region are working with [OS City](#) to implement blockchain technology for certification, data quality assurance and anti-fraud measures. Similarly, [Munidigital](#)’s platform is leading to improvements in municipal management in 9 countries of the region by enhancing the delivery of public services using real-time data. What’s more, govtech is inherently innovative and user-centric in its design. For example, [Cívica Digital](#) is helping governments improve digital services through a cloud platform that makes procedures more agile and user-friendly. These sorts of solutions can enhance back-end systems to facilitate the work of civil servants and the delivery of policy, whilst improving user experiences for citizens.

On a second level, govtech is also being used by public bodies that own digital and tech policy, like Cordoba in Argentina, to institutionalize and coordinate a wider adoption and understanding of

¹ CAF, The GovTech Index. (2020). Retrieved from <https://scioteca.caf.com/handle/123456789/1580>

govtech across government. Also, concrete challenge programmes such as [Govtechlab Madrid](#) are aiming to address public issues through govtech solutions.

On **third level**, governments are beginning to explore normative principles for govtech together with governance mechanisms within government, and between government and the private sector. That is the case of bodies like [IBO](#) in Bogotá, which are aiming to set the regulatory and governance framework required to turn govtech into the go-to model for digitalisation.

Differentiating these three levels is key for an adequate understanding of govtech ecosystems as well as for the design and implementation of policies on the matter. This multilevel approach is complemented by digital government, data, public procurement agendas, innovation laboratories and challenges programmes, and turns govtech into a sustainable, scalable and comprehensive policy for digital delivery.

Finally, it is worth mentioning that govtech not only represents an opportunity to improve public services but can also be a catalyst for economic development. Govtech can spur innovation among startups and SMEs, by making them more competitive at the national and international levels. The Govtech global market is likely to experience significant growth in the next few years, as it is estimated to reach 1 trillion USD by 2025, compared to 450 billion USD in 2021². Stimulating the startup and SME sector through a growing govtech marketplace can bring economic benefits by increasing productivity and potentially creating new jobs.

Govtech City-level Framework 2022

Having a diagnosis of the state of govtech is a powerful tool to identify trends, evaluate areas of opportunity and promote best practices. Based on this premise, CAF launched the [Govtech Index 2020](#), which ‘assesses the potential of the Govtech ecosystems of countries in Latin America, Spain and Portugal, so as to unlock them’³. The Index explored the state of govtech in 16 countries of the Iberoamerican region.

The findings of the 2020 report indicated that exploring govtech at the city-level could be extremely valuable. In the first place, govtech represents a great opportunity for city governments and startups. Govtech can help small and medium cities access technology more easily from local providers, while boosting local SMEs markets. Additionally, local governments can procure technologies according to their specific needs.

On the other hand, many of the factors contributing to the state of Govtech, are determined by governments and economic actors at a city level. For instance, local authorities play an important

² Zapata, Panorama de los ecosistemas govtech: presente y futuro, (2021). Retrieved from <https://bit.ly/GovTech-eBook>

³ CAF, The GovTech Index. (2020).

role in govtech ecosystems by procuring technology solutions to improve public services. Furthermore, startups can be more competitive at the local level. Arguably, smaller companies are more likely to have the financial and human capital required for city-level government tenders, while the requirements to supply national governments may be out of reach for some early-stage firms.

Considering the above, the 2020 report piloted a city-level analysis, which brought valuable insights into the relationship between govtech and local public policy. To expand this city-level analysis and provide useful information for local authorities, we present the **Govtech City-level Framework 2022**. This report is the first instrument to benchmark the level of maturity of Govtech in cities across Iberoamerica. We aim to explore more in-depth the collaboration between local authorities and Govtech companies in the region as well as map the presence of relevant local policies likely to have a positive impact on Govtech maturity.

Unlike the national index this is not an attempt to rank cities but instead to provide a framework to allow the identification of steps that can be taken to promote Govtech in a city environment.

Furthermore, it is important to mention that **this framework is based on a sample of 31 cities**, hence it should not be taken as a diagnosis of the region at large. This group is composed by cities who volunteered to take part in the study and cities that were included to ensure a representative sample —covering a wide range of countries and including the major cities in the region in terms of GDP. Nevertheless, the framework seeks to help cities beyond the sample, and even the region, to examine govtech maturity in their own locations.

This report will be divided into two different documents. **The present document is a shorter version of the final report** focused on presenting:

This report will be published in two iterations. The present document is a shorter version of the final report focused on presenting:

- An introduction to the framework;
- a summary of our methodology;
- an overview of our key findings (including both regional trends and relevant developments across our three pillars);
- and a series of high-level recommendations that city governments can implement to unlock govtech's full potential.

The short version is being released ahead of the full report which is currently being prepared for publication. **The full report will additionally include a collection of city-specific reports** that illustrate the performance of each city according to our framework. We will also present a section that addresses our methodology and research framework into more detail.

Summary of Methodology

The Govtech City-level Framework 2022 explores **31 indicators across 7 dimensions**. The dimensions are grouped into **3 pillars: Government, Procurement and Startups**. This arrangement allows the framework to focus distinctly on the main city government-led policy initiatives that are taking place with regard to stimulating public innovation.

The design of this framework was informed by the ideas of experts and key stakeholders in the Iberoamerican govtech ecosystems. We carried out a series of workshops with people from local governments, govtech incubators and startups, which led to valuable insights on policies, practices and initiatives that contribute to a successful Govtech environment.

Pillars and Dimensions of the Govtech City-level Framework 2022

Pillar	Dimensions
Government	Policy Environment Digital Government
Procurement	Procurement Framework Procurement Culture
Startups	Innovation Environment Digital Environment Industry Environment

Even though the impact on govtech at the city level is clear, a challenge remains in terms of the collection of data related to the work on govtech. While we found that some cities have begun valuable initiatives to counter data paucity at the city level, for example, Cordoba's [Start Up Monitor](#), these initiatives are not currently replicated more broadly across the region. Considering this, we used a range of data collection methods to assess govtech capacity, including surveys, desk research, and existing datasets.

Key Findings

Govtech across Iberoamerica

The data collected for this report allowed us to gather insights into the current govtech capabilities in the region as well as to identify relevant developments that are likely to impact govtech capacity at the city level in the future.

Overall, the picture painted by our study is one of diversity. There are important differences between cities, both in terms of capacities and their approach to govtech. Half of the cities score below the average (50.66), indicating room for improvement across our three pillars. Within the group that scores above average, there are 13 cities that are showing signs of commitment to govtech development and are taking steps in the right direction. Finally, two cities stand from the rest in terms of scores (Madrid and Barcelona), reflecting a solid policy framework whilst facilitating transparent procurement processes and fostering innovative SME ecosystems.

With the exception of Bogotá, all the top 5 scoring cities come from the Iberian Peninsula. Mirroring the national index, this outcome suggests an existing gap between European cities and Latin American cities in terms of govtech capabilities. In addition, it is clear that the size of the national economies also plays a major role. All the biggest cities from the largest economies in terms of GDP (Brazil, Spain, Mexico, Argentina and Colombia) score above average. It is also worth highlighting that there are cities with highly dynamic industry ecosystems —like Monterrey and Guadalajara— as well as key regional trade hubs —like Panama City and Lima— which score below average. As for these cities, it is evident that govtech represents an enormous opportunity.

Government

Exploring data through our three pillars allows us to find nuances between the distinct elements that enable govtech. We found that the Government Pillar is the most consistently strong of our surveyed areas, with cities achieving an average score of 54.41. We observed remarkable trends in terms of the move toward Digital Government in the region. Yet, city-level policies in direct support of govtech were less apparent, and there is room for development in this space for local governments in Iberoamerica. Our findings suggest that most of our explored cities have not yet implemented a strategic approach to stimulating govtech in their local environment.

From examining the cities that have performed well in the Government Pillar, we can observe that there are foundational elements that should be in place prior to implementing more specific policies to foster govtech. One such element is the need for a clear technology vision for the city. When cities are actively planning their digital transformation in a strategic way, govtech entrepreneurs can

look ahead to understand the city's future technological requirements, and meaningful govtech innovation can emerge.

In our study, Smart City policies were the most frequently observed technology policy instruments at the city level, and almost half of our cities had at least one policy published. This is a good sign, yet there is still room for improvement across the region. A well-communicated and broad digital strategy —which incorporates government digital transformation, open data initiatives and future technological infrastructure— offers govtech innovators a vision that they can begin to build. At present, only 30% of the cities in our study have published a digital strategy.

In addition, only Cordoba and Alicante have published a document that serves the function of a govtech strategy. Although some Smart City and Digital strategies incorporate a govtech angle, **having guidelines exclusively focused on govtech can be extremely beneficial. It can help medium and long-term planning by setting standards for public-private collaboration, enabling the identification of future infrastructure needs and citizens' preferences, and facilitating accountability on progress towards this vision.** A govtech strategy also demonstrates a clear commitment to the startups and SMEs in that city. This commitment can go even further if governments incorporate funding for govtech initiatives as part of their strategies. Establishing clear policies on funding is likely to encourage digital entrepreneurship as it provides certainty on the sustainability of government projects aimed at fostering public innovation.

We saw creative and engaging examples of government-sponsored programmes to support entrepreneurs in Iberoamerican cities, and these programmes appear to be thriving. For instance, Cordoba has been offering development support to local enterprises at different stages of growth through [CorLab](#) since 2020. Moreover, we are pleased to highlight that most cities in our study have an open data portal. In some case, having access to government is fundamental for govtech companies to operate, hence this can result in better public innovation.

Procurement

The Procurement pillar presents an average score of 43.64. This area has the lowest average score of our three pillars and presents the most unequal scenario. Even though we found some innovative developments, it is clear that many cities across the region have scope to implement more accessible, transparent and efficient procurement procedures in order to fully enable public innovation.

Generally, a big challenge remains in terms of the disadvantaged position in which SMEs find themselves. Our study showed that accessing information on procurement processes is generally not very easy. This can affect SMEs' participation in bids, as smaller suppliers could find the process opaque and discouraging. Publishing the laws or rules that apply on the procurement

portal, can help local authorities to engage a broader pool of potential suppliers. This should also be coupled with adequate communication strategies focused specifically on govtech startups.

In addition, there is more to be done in making procurement frameworks include specific provisions for helping SMEs. Just a few cities have a policy on the percentage of bids that should go to SMEs specifically working in the provision of digital goods and services, or provisions to support the subcontracting and/or collaboration with SMEs in big tenders —this could help balance the opportunities between SMEs and larger suppliers. At the same time, many cities are still in the need of implementing a minimum time for the bidding cycle. This will potentially foster competition between providers. Additionally, several cities are yet to introduce a specified payment period for suppliers. This will help young businesses to have more certainty and navigate cash flow challenges. Nonetheless, there are a few procurement initiatives that have the potential to stimulate MSMEs' engagement. That is the case of Madrid's [Innovative Public Purchase](#) protocol about competitive dialogue, which has the potential to reach out to innovative businesses directly promoting SMEs' engagement in procurement procedures.

In terms of our Procurement Culture dimension, we can identify some steps in the right direction. Today, almost all cities have an open bidding policy, where tenders are invited from all interested parties. In addition, half of the cities have recently published open contracting information, which can potentially enhance transparency and foster trust in the government. There is, however, a relevant area of opportunity in terms of the implementation of sandboxes where cities can pilot new policies before formally implementing them. Our research suggests that cities in Iberoamerica are not yet taking advantage of sandboxes as just two cities —Cordoba and Madrid— have an innovation-testing zone. Sandboxes have the potential to de-risk innovation and build an innovative culture that the city and residents can truly feel part of.

Startups

It is important to begin this section by acknowledging that some of our indicators use country-level data, reflecting the national conditions for entrepreneurship. In some cases, analysing country-level data was more appropriate. For instance, it is pertinent to measure the level of technical education and digital skills through a national scope as the pool of workers and skills a startup is hiring from is not limited to the city population. In other areas, it was difficult to find updated information at the city level.

It could be argued that cities will have less agency to change their performance in the indicators based on country-level data. Nonetheless, the information provided by this pillar can help cities identify gaps in national policy that could be addressed by local authorities. For instance, cities in countries where the digital skills environment still has room for improvement can take action to enhance training through local programmes. Similarly, cities embedded in environments with many

bureaucratic obstacles to creating businesses can offer guidance for entrepreneurs who need to traverse these procedures to launch their ideas.

The Startups sector pillar has an average score of 49.44. In terms of the Innovation Environment pillar, we found that the Iberoamerican startup ecosystems has room for improvement. Especially in terms of digital skills and technical education. Besides, many cities need to improve regulatory frameworks to facilitate the creation and operation of SMEs. Yet, we can also identify some developments that reflect steps in the right direction. Today, more than half of the cities have innovation clusters. These sorts of spaces facilitate collaboration between tech firms (big companies as well as SMEs), academic institutions and government bodies, resulting in the exchange of useful information and best practices.

An interesting insight from our Industry Environment pillar is that most cities are fostering the emergence of startups through incubators —where entrepreneurs can receive guidance on how to scale up their companies. These platforms are likely to stimulate innovative and creative solutions that can be applied to public services and, thus, improve govtech readiness. In that sense, it would be interesting to see city-level startup incubators focused exclusively on govtech. Today, platforms of this kind, like [MiLab](#) and [BrazilLAB](#), are already operating at the national level. Some of the features of these initiatives could be replicated at the local level. Finally, we found relevant disparities across the regional in terms of the number of digital SMEs. This might be driven by the size of their industries as well as by economic factors at the national level.

A crucial element for achieving an innovative private sector is having a solid infrastructure in place. By analysing the Digital Environment dimension, we found relevant disparities across the region in areas like broadband connectivity and data availability. Initiatives to improve connectivity will become enablers of govtech. Similarly, we must mention that innovation processes are only possible when there is quality and accessible data available as well as the necessary tools to take advantage of it. In that sense, efforts to increase data infrastructure are fundamental for cities to unblock obstacles that hinder public innovation.

Recommendations

The analysis presented in this report allowed us to explore best practices and areas of improvement for each case. We were able to assess govtech capacities across the region, analyse relevant initiatives that are taking place and identify regional trends. **We present a series of recommendations for city authorities that could potentially unlock govtech's full potential.** We keep a high-level approach as we aim to suggest recommendations that can be implemented in different contexts throughout the region.

Government

In order to enable govtech to thrive, governments should:

- **Develop and implement govtech public policies.** It is crucial that local governments establish a strategy focused exclusively on govtech, besides from Smart City policies and Digital Strategies. Govtech is a new service delivery model that enables the creation of digital expertise aimed at delivering the goals included both in smart city and digital agendas. Ideally, these documents should consider coordination mechanisms, funding mechanisms and regulatory updates to increase the potential and facilitate government's work with govtech startups. Additionally, they should consider an adequate understanding and initiatives regarding the availability of the enabling physical and digital infrastructure, scenario in which notable gaps between urban and rural environments still persist.
- **Implement training programmes focused on govtech.** Providing both civil servants and digital entrepreneurs with knowledge of the fundamentals of govtech and the main trends around the world can be extremely beneficial. This will equip government workers with useful information for policy design while creating awareness about the relevance of govtech among digital entrepreneurs.
- **Designate a high-level team responsible for coordinating govtech across different government departments.** Govtech policies may have a cross-sector impact, therefore it is fundamental to have a special team tasked with facilitating and coordinating the use of govtech solutions with the government bodies and areas that needs them.
- **Take advantage of mechanisms like the Govtech Leaders Alliance to promote inter-city sharing of best practices.** As mentioned in the report, there are different approaches to govtech across the region as well as different levels of maturity. Exchanging knowledge with governments that might experience similar public challenges can lead to major improvements in policy innovation and its communication.

Procurement

To create an environment where public institutions can collaborate more easily with private providers, we recommend the following:

- **Publish and diffuse laws and regulations regarding public procurement.** Transparency and accessibility on procurement stipulations will facilitate the participation of SMEs in government tenders resulting in a more competitive pool of suppliers.
- **Enhance content design of procurement portals to improve user experience.** This will allow suppliers to access information in an easy way and, thus, comply with procurement requirements.
- **Establish a clear policy on payment terms and ensure compliance.** This will give smaller providers more certainty and will encourage their participation in government tenders. Having clearly defined payment terms will make a big difference for small businesses that are concerned about cash flow.
- **Take advantage of sandboxes.** Through these instruments, both government departments and SMEs can test new policies and technologies that have the potential to improve procurement procedures.
- **Promote alternate mechanisms to procure technologies.** Emerging contracting models —like Challenge Funding, Contracting Innovation and Government Subsidy Contracts⁴— can potentially foster collaboration between SMEs and local government to design innovative solutions to public problems.

Startups

To enhance and promote govtech innovation within the private sector, we suggest the following:

- **Promote the creation of govtech funds or innovation verticals in existing venture capital and impact investment funds.** This should also be coupled with the development of better information and risk assessment models that adequately take into account the specificities of the govtech ecosystem.
- **Facilitate innovation through new financing models.** Mechanisms as grants, R&D funding and innovation loans can foster entrepreneurship. Local governments can work with the private sector to offer a wide range of financial opportunities that can contribute to the specific needs of different SMEs.
- **Coordinate efforts through working groups.** It is important that local governments promote mechanisms to foster cooperation between public authorities chambers of commerce, trade unions, academic institutions and other relevant stakeholders.
- **Document evidence regarding the economic and public impacts of govtech.** Gathering and monitoring data about the impact of govtech policies can lead to effective

⁴ See <https://view.publitas.com/public-1/the-state-of-european-govtech-report/page/22-23>

iterations and, thus, policy improvement. Besides, collecting information on the effects of policies can facilitate the identification of best practice.

- **Implement digital training programmes at the local level.** Having a skilled pool of citizens (including entrepreneurs as well as government employees) can drive the creation of digital SMEs and enhance the competitiveness of the existing ones.
- **Offer support to entrepreneurs going through bureaucratic procedures.** Local authorities can guide entrepreneurs with practical advice on admin paperwork and legal matters, which can facilitate the creation of SMEs.
- **Make sure that the open data portal offers useful and accessible information.** Innovation can only happen through the exploitation of data. Hence, is crucial that local authorities have open data portals that are user-friendly and present quality and updated information, as well as the development of data marketplaces specially focused on govtech startups.