
Policy Brief #15

Mexico: the story and lessons behind Latin America's first AI strategy

Data Intelligence
and New Technologies

A Policy Brief by CAF -development bank of Latin America

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Summary

Artificial Intelligence (AI) is one of the most disruptive technologies of our time and that is influencing increasingly more aspects of our social, economic, and private lives. Given its invisible influence on human actions and interactions, AI is also an area of public interest that compels governments to question how to enable its potential, while guarding against its perils.

In 2017 the government of Mexico, together with strategic actors from civil society, private sector, academia, and international cooperation, decided to develop the first AI strategy for the country and Latin America.

What follows in this policy brief is the recount of the leaders of the initiative from government and civil society, along with recommendations for other governments seeking to develop AI strategies in the future.

Context

AI is used in many of our daily lives activities like mobility, retail, hospitality and will increasingly be used in areas such as social programs, security and finance. In our current context, marked by a pandemic, AI and the data that underpins it will be key for healthcare policy, vaccine research, and risk management. Eventually, in the next 5 to 10 years, virtually all areas of our life –either directly, or indirectly– will be influenced by AI.

Along with concrete uses of these technologies, there are relevant questions that remain to be answered: what data will these applications use? Where will it come from and what are their biases? How should BigTechs treat personal data, both inside and across countries? How will jurisdictions address ethical issues around algorithmic accountability, openness, and transparency? How should we protect Human Rights, while at the same time unlocking an economic potential of close to 16 trillion dollars by 2030?

These are only some of the questions that make the need for national and local AI strategies relevant, since **the path governments decide to follow today will define their place in an increasingly AI driven global space.**

Everything points to the existence of more than one model: in parts of Asia, States control how these technologies are designed and deployed. In North America a *laissez-faire* approach focuses on how the private sector develops and uses AI, with minimum involvement from the State. In Europe it is taking the shape of a mixed approach, focused mainly on a strong regulatory framework enforced by the State, and implemented through big techs and SMEs. **In Latin America, same as in Africa and South East Asia, this is still an open question. Countries in these regions have to decide whether they will lead or fall into an umbrella of others, and in that case if they are forced to follow with no or minimum voice on how AI will transform their governments and societies.**

Mexico and AI

The Government of Mexico took a proactive approach to the matter and in 2017 decided to catalyze the conversation on the future of AI and the place that the country should take in the international scenario.

By then, Mexico was recognized as one of the most progressive digital governments in the world. Through the initiative of the Coordination of National Digital Strategy, access to the internet was coded as a human right in the Constitution. 30 million new Mexicans were connected, and organizations such as the OECD recognized the country as a leader in creating impact through open data reuse, second only to South Korea. Furthermore, digital government-led innovation initiatives such as MiSalud were already using Artificial Intelligence, along with behavioral science and randomized control trials to lower maternal mortality and build trust in the population.



There were also other important projects underway using data science and piloting the way for future AI technologies in areas such as conflicts of interest and corruption, prevention of teen pregnancy, protection of human rights journalists and activists, and identification of tax evasion, among many others.

The advancements on digitalization, technical infrastructure and open data availability, among others, allowed **Mexico to decide to set the foundations of AI through three concrete actions: first, analyzing the country's readiness for AI; second, launching its first AI Strategy in 2018; and third, consolidating the AI multi-sector ecosystem.**

First action: Readiness assessment and policy recommendations

To understand the readiness of Mexico for AI, the Governments of Mexico and the United Kingdom (UK) commissioned a study and Policy Report through the UK's Prosperity Fund done in collaboration with AI leading organizations

C-Minds and Oxford Insights. The report, titled "Towards an Artificial Intelligence Strategy in Mexico: Harnessing the AI Revolution", **analyzed the opportunities and challenges of Mexico, summarizing the perspective of more than 80 experts in the AI field in the country.**

Among other topics covered, the report predicts that 19% (9.8 million) of all jobs in Mexico will potentially be exposed to automation over the next 15 years, ranging from simplified tasks via automated systems to complete job replacements.

Furthermore, the report focuses its policy recommendations for the short, medium and long terms in 5 main areas:

- 1. Governance, government, and public services**, by using the transformative power of AI for public service delivery, in spheres such as health, education and social care, as well as for improving the inner workings of government, increasing public sector efficiency and even assisting in the policy-making process.
- 2. Research and development**, by providing support for building AI applied knowledge through government and catalyze markets to do the same.

TABLE 1.

Estimate of Mexican jobs affected by automation by sub-sector

TOP FIVE SECTORS FOR POSSIBLE AUTOMATION (NO. OF JOBS)		BOTTOM FIVE SECTORS FOR POSSIBLE AUTOMATION (NO. OF JOBS)	
Sub-sector	Automatable jobs	Sub-sector	Automatable jobs
Manufacturing	2,809,944	Management and self-employed	29,448
Construction	1,750,676	Information and communication	32,382
Wholesale & retail	1,653,335	Arts, entertainment & recreation	42,769
Agriculture	942,705	Financial and insurance activities	47,047
Accommodation & food services	725,092	Education services	51,401

Source: "Towards an Artificial Intelligence Strategy in Mexico: Harnessing the AI Revolution", 2018.

3. **Capacity, skills, and education**, by introducing coding, tech skills, science, maths and engineering early in the national curriculum that could support AI fellowships at postgraduate level and lifelong education and training to ensure the workforce can adapt to changing conditions.
4. **Data infrastructure**, by supporting the release of reusable data from government and public interest data from the private sector in formats which AI can make sense of, and by supporting high-quality digital infrastructure such as broadband networks and 5G.
5. **Ethics and regulation**, by implementing guidelines and codes of practice for AI as ways of addressing ethical issues.

The publication of this report allowed for a better understanding of Mexico's capacities and needed actions to move forward.

Second action: Developing Mexico's AI Strategy

With this assessment and recommendations in place, in March 2018 the Office of the President launched, in collaboration with civil society and academia, the first AI strategy for the country.

Mexico's AI Strategy 2018, included five key actions:

1. **Develop an inclusive governance framework**, through the creation of an AI Sub-commission led by the Office of the President, the Ministry of Public Administration, and with official participation of industry, civil society, academia, and some local governments as advisors. This Sub-commission had the objective of setting the direction of the AI initiative and developing coordinated actions within the National Public Administration and States of Mexico.

2. **Identify the uses and needs of AI in industry**, through a documentation exercise carried out by the Mexican Chamber of Telecommunication Industry, as well as identifying best practices within government of AI.
3. **Open the medium and long term recommendations of the Policy Report for public consultation**, (described in section 3).
4. **Support Mexico's AI leadership in international forums**, including the OECD, D9, the G20, and by creating the Working Group on Technological Change in relation to the Sustainable Development Goals within the United Nations (UN) and the Working Group for Emerging Technologies in the Latin America and Caribbean Network for the Development of Digital Governments (GEALC, its acronym in Spanish).
5. **Promote continuity through changing administrations**, by working with all interested stakeholders towards an official AI National Policy.

Other important AI government actions included the publication of two key documents related to the responsible and ethical development and use of AI: the official AI General Principles and Risk Assessment tool for the development and use of autonomous systems by the National Public Administration, both opened for public participation in their development. These were based in Canada's work and served in the following years as an inspiration for other countries in Latin America and the Global South.

These actions allowed Mexico to establish the bases for the leveraging of AI as a tool for social and economic development, a strategy to be further explored and strengthened by academia, the industry and civil society and by the new Administration (2018-2024), which entered office in December 2018.

Third action: Consolidating and Engaging the AI ecosystem in a sustainable way

Following a recommendation of the Policy Report, institutions from the industry, civil society, academy and government launched in 2018 the **multi-stakeholder national coalition named IA2030.mx**. Its objective is to coordinate efforts, build a single voice around AI and promote continued action and support for the topic. What started as the collaboration of 10 institutions grew to the participation of more than 110 on a national scale. One of the first actions of the coalition was launching a [national consultation on AI](#), where more than 1,500 people shared their perspectives.

From this broader understanding of diverse perspectives, the quest for the bottom-up development of recommendations for a National AI strategy started by the end of 2019. Chaired by the co-founding organization, [C Minds](#), six working groups were established: 1) AI Ethics 2) Governance, Government, and Public Services 3) Research and Development, 4) Skills, Capacities. and Education 5) Data, Digital Infrastructure, and Cyber Security, and 6) Mexicans Abroad. Key Mexican institutions from all sectors help lead each working group including the Mexican Society of AI, the Ministry of Foreign Affairs, the Ministry of Economy, the Telecommunications Federal Institute, [Plenum Group](#), [National University of Mexico](#), the [National Mathematics Institute](#), among others, bringing their expertise and different points of view into the efforts. This open and collaborative exercise to further Mexico's AI agenda is to be published at the end of 2020.

The coalition is a key participant in [diverse AI related events with a single voice](#), and through its members it is currently participating in [legislative initiatives concerning the future of AI in Mexico](#). Other goals of the coalition include working at the state level, helping energize and consolidate local ecosystems that can support the development of state and city level AI actions, and supporting emerging AI

local strategies such as in the states of Jalisco, which has a government office focused on the development and use of AI for public innovation, health, education, mobility, among others.

Conclusion and recommendations

As seen with Mexico's case, the role of governments in the creation of AI strategies and national policies is crucial. On one side, governments have the power to set the direction and solid foundations for AI development and use for the country's benefit, allow for funding of key initiatives and can act as an ecosystem integrator for a collaborative country-wide agenda. On the other hand, it is a key sector to adopt the responsible use of AI within its government programs and administrative operations to enable more efficiencies, better decision making, and more effective social policies and programs. Moreover, the government has a key role in establishing a framework and regulations on the ethical use of AI, making sure that autonomous systems are designed and deployed based on human rights. Topics such as privacy, transparency, explicability, accountability, legal responsibility, bias, accessibility, environmental impact, data monopolies, among others, are fields where the government can help mitigate risks in clear terms for all.

In spring 2018 Mexico had a change of administration, and much of the work from the government around digital took a halt with a shift in policy priorities. Nonetheless, with the actions outlined above, **Mexico became the first country in Latin America to develop an AI strategy, as well as one of the few countries in the world with an official roadmap on how to develop and adopt AI as a tool for a better, more efficient government, as well as to support its use in all sectors of society.**

Furthermore, **the work of the coalition [ia2030.mx](#) is stronger than ever.** It continues to

consolidate the AI ecosystem in Mexico and is collaboratively exploring opportunities for the country. As in other development agendas, the sustainability and impact of the AI agenda will strongly depend on the depth of the ties and synergies that different sectors, disciplines, generations, cultures, and genders achieve.

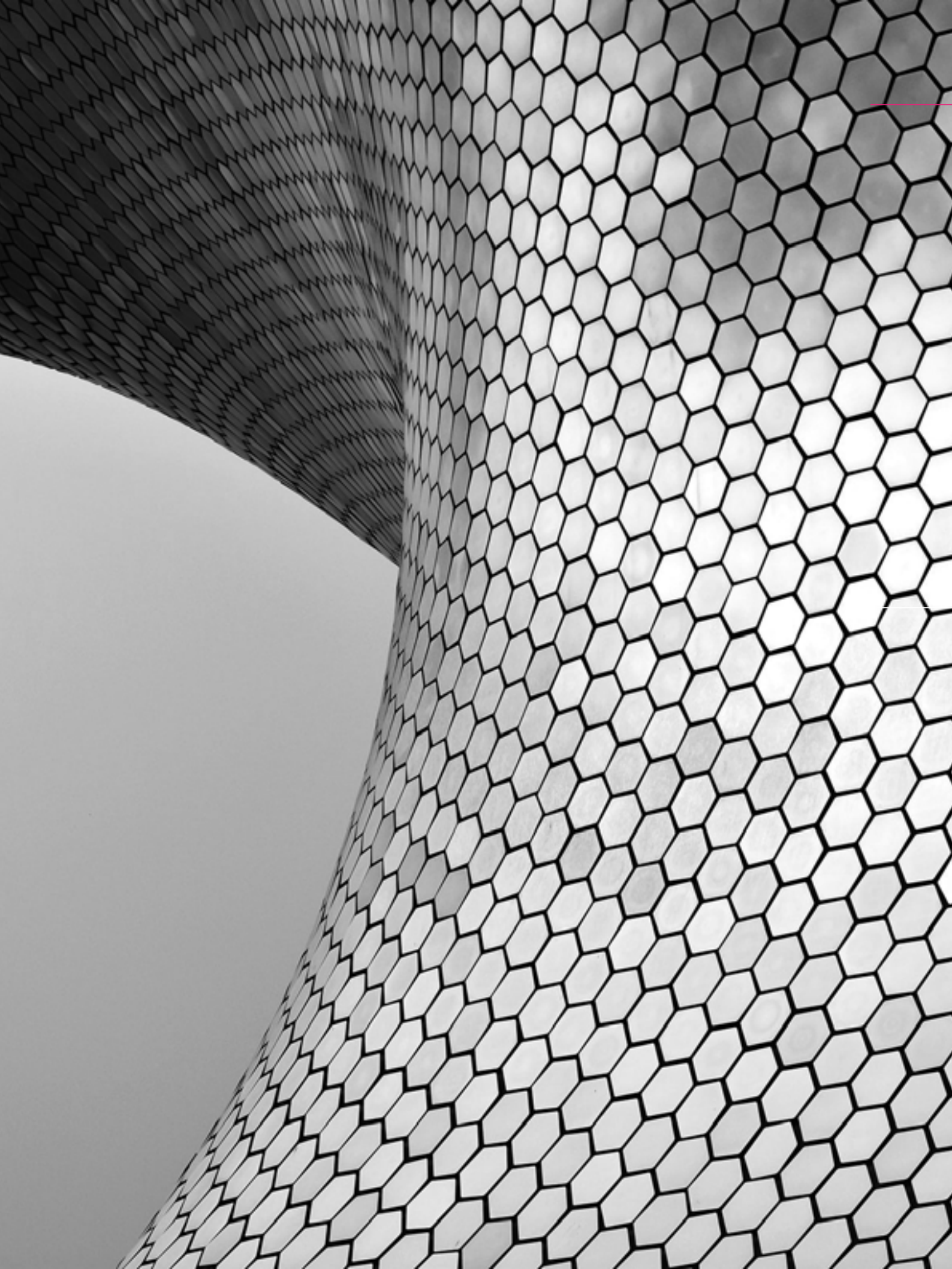
Finally, five main recommendations for governments arise from the Mexican experience as paramount to develop an AI strategy:

1. Having an **initial assessment** of where a government and ecosystem stands with relation to AI, its challenges, and its opportunities is needed to make informed decisions and develop an action plan. In the case of Mexico the report "Towards an Artificial Intelligence Strategy in Mexico: Harnessing the AI Revolution" was key in this understanding, and will continue to take relevance as sectors in government –such as the Senate– seek to take AI related actions in the future.
2. **Strategic, multi-stakeholder partnerships are needed** to align efforts across different sectors and to make sure that open participation channels are established so that the developed AI strategies are inclusive and integrate an array of diverse perspectives. Furthermore, as in the case of Mexico, the coalition IA2030.mx has been the cornerstone of the continued efforts towards a concrete strategy from the government.
3. **Involve other branches and levels of government**, as the Mexican experience shows, a change of administration can be an important challenge to maintain AI as a priority. In the case of Mexico, interest from the Legislative or from local governments was key to maintain the inertia, support, and enable the design of comprehensive national AI agendas.

4. Keeping human rights and distributed benefits at the center of the AI strategy is key, especially to make sure that the development and use of AI enables shared benefits and avoids widening existing social gaps.

5. Public and private funding is critical to achieve robust and sustainable AI strategies aimed at transforming a national environment in the long run.

Mexico has still a long way ahead, consolidating its efforts towards the harnessing of AI for the benefit of its population and economy. At the core of this effort, there is a recognition that a national AI strategy is needed to enable a swift transition into the AI driven digital economy, leverage AI for increased competitiveness and productivity, and, most importantly, to protect fundamental human rights and wellbeing of citizens in the years to come.





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