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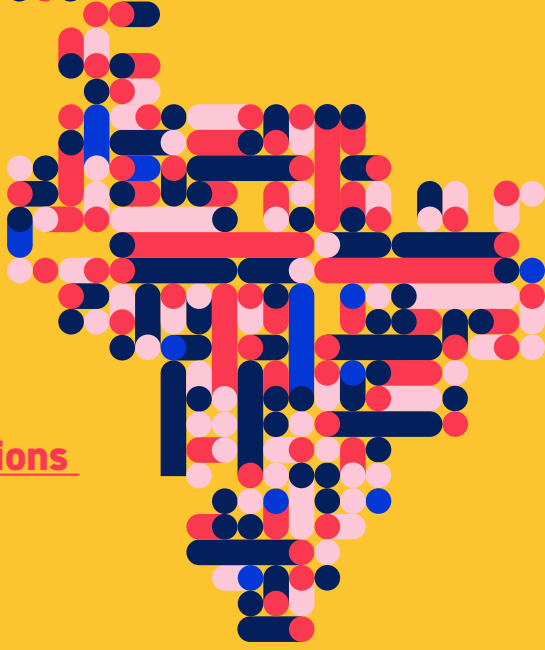
Regional trends in the deployment of technologies during the pandemic in Latin America: initial reflections from Al Sur's Covid-19 Observatory



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Since the World Health Organization (WHO) declared the Covid-19 pandemic on March 11th, 2020, it also made an emphatic call for the development of response and prevention capacities around the world. Many governmental and non-governmental actors around the world have tried to take advantage of the use of digital technologies to hinder the virus spread. Among other functionalities, they would make it possible to deliver reliable information to the population and, by collecting real-time data on the evolution of cases and mobility standards, to inform the design of policies to contain the spread of the virus, improving the existing epidemiological follow-up capacities, and to monitor the quarantine compliance.

Latin America is part of this trend, which deepens a pattern of growing digitization at the public and private levels already observed before the pandemic. The Covid-19 Observatory of the Al Sur Coalition (OCCA) is an initiative of 11 civil society organizations grouped in the Al Sur Coalition, which seeks to analyze how local technological responses to Covid-19 comply with basic data protection and access to information principles and best practices, and whether they represent additional risks to the exercise of human rights.

OCCA departs from the diagnosis that some governments in Latin America have tried to use the pandemic as an excuse to relax their responsibilities in delivering timely public information and to advance in the collection and processing of personal and sensitive data without due guarantees, generating additional risks to the population. The sense of urgency in the implementation of technological initiatives in such a context raises important challenges on how to incorporate proper contextual and impact assessments before, during, and after their deployment. At the same time, it brings concerns on the development of evaluations to analyze their effectiveness, and determine what will happen at the end of the sanitary emergency.

The situation becomes more critical if we consider that Latin America still suffers from a lack of regulatory and institutional frameworks for the adequate protection of personal data. Additionally, there is little transparency on many of the policies and measures adopted on the use of technologies in this period.

This complex reality is in the background of OCCA, which aimed to identify and collect relevant information about the technologies deployed and to create a public and open repository for unified access to descriptive records of each of them. We believe this information will allow detailed analyses of their impacts by different stakeholders and facilitate the development of comparative studies by activists, academics, the media, civil society organizations, and international organizations, among other actors.

Although the exceptional pandemic situation may justify the adoption of emergency measures that involve technological deployment, any action carried out in this context must comply with basic human rights standards and criteria of legality, necessity, proportionality, and transparency.

Main trends

In 2020, the OCCA analyzed 16 technological initiatives developed in 14 Latin American countries, including 14 mobile applications and two chatbots that implied an intensive processing of data, mostly directly collected from the users. In most cases, it is unclear how such data is combined with previously available public or private databases. Thus, there is unclarity on the governance structures established to handle data in such a way that ensures the fulfillment of the purpose of generating information to assist in the control of the pandemic, but that, at the same time, prevents negative impacts in the exercise of rights during, and after the Covid-19 health emergency.

The vast majority of the initiatives analyzed were quickly implemented by the public sector or through public-private partnerships. In some cases, previously existing initiatives were reoriented or had their functions expanded to new uses in the health or social security sectors. In fact, one was launched already in February 2020 and seven in March - right after the first cases of Covid-19 were detected in the region. Another seven initiatives were presented to the public between April and June and one was officially launched in August, but based on a pilot version previously available since March.

Together with detailed information on each of the 16 technological deployments analyzed, available at <https://covid.alsur.lat/es/>, we present below some trends observed from the analysis of these initiatives. With these findings, we hope to open a conversation that involves civil society, academia, and States about digital and data-intensive initiatives implemented by governments during the pandemic, and from which we can draw valuable lessons regarding the role of technology in the protection and promotion of rights.

Barriers to connectivity and access

The effectiveness of the digital technologies deployed during the pandemic encounters an important barrier in the persistent divides in access to the connectivity, devices, and digital skills that are still present in the region. Although it is possible to observe an increasing trend in the penetration of mobile devices in the past years, today's most frequent mobile connection plans allow access to a very limited amount of data every month or under zero-rating programs that ensure permanent access only to certain applications.
Such context directly impacts the penetration levels and, consequently, the effectiveness of the proposed technologies during the pandemic. The effectiveness of the functionality of exposure notification (implemented in five of the initiatives analyzed), for instance, rests on reaching a high level of penetration in the population, something that would be unrealistic in contexts of limited connectivity. As international studies have shown, adoption levels between 40% and 60% of the population are required for them to have a relevant impact on the health strategy, even though lower rates could be useful in cases in which they are applied together with other strategies. Only the mobile applications deployed in Argentina, Colombia, and Uruguay have reached a penetration of around 20% of their population until the end of 2020. In the other cases, adoption was in the order of 1 to 3%.

Legitimacy impact of public communications

The messages that followed the deployment of the analyzed technologies were on many occasions ambiguous. This is particularly true where governments were reluctant to recognize the seriousness of the pandemic, like in Brazil, or where a previous polarized political context affected official communications, as was the case of Bolivia, under a provisional government throughout most of 2020. *In other cases, technological deployment was accompanied by a technological optimism that overestimated the role of technology within the health strategy, as in Colombia and Ecuador, where technologies were communicated as tools to "save lives."*

Another trend identified was the existence of multiple digital solutions with similar goals and functionalities within the same country, which can generate confusion among the population and affect adhesion to specific initiatives. In many countries, particularly the federal ones, different initiatives were identified at the state and

even city levels. *In Mexico, for example, nine mobile applications were mapped, and in Bolivia, at least four initiatives were found, including an application implemented autonomously by a private company.*

Adding transparency to official communications regarding the deployment of technologies is a point of improvement for all the cases analyzed and it should be considered from the design of the initiatives. Official messages should in all cases be based on scientific criteria and the recommendations from the WHO. They should avoid creating a false sense of security based on technological use, which could compromise the population's adherence to proven measures to combat Covid-19. *The lack of confidence in State narratives, together with deficiencies in governance and supervision of the analyzed initiatives are important obstacles for them to play a significant role in responding to the pandemic. They represent not only an obstacle for adoption but can also be a setback in the effective fight against the virus.*

Most common functionalities and data collected

In terms of functionalities, the following were identified in the initiatives analyzed by OCCA: providing of health information (even real-time, in case of emergencies), self-diagnosis, integrated data for public health decision-making, exposure notification (previously known as contact tracing), mobility and work passports, telemedicine and confinement surveillance. Two *chatbots* implemented in social media and messaging applications were also analyzed.

Limited testing and monitoring capabilities led some governments to include among their initiatives' goals the generation of information to support State decision-making. This was the case in Mexico, where statistical information collected through the "COVID19-MX" mobile app was allegedly used to guide health policies. In the case of Argentina and the app "CUIDAR", its webpage stated that it provides specific input for State interventions in the whole country.

Regarding the data collected: 11 applications request users' information on their national identity number; 12 on their name; 12 on age; 10 on gender; 0 on address; 14 on their location; 14 collect data on symptomatology and 10 on pre-existing diseases. Only the application from Panama requests a photo of the users' face, possibly to enable a built-in facial recognition functionality.

Although in many cases the delivery of such data is not mandatory and depends on each functionality, there is no clarity in several cases regarding the conditions for storage, access, and preservation of such personal and sensitive information once it is collected.

Voluntarity

The adoption of the mobile applications and chatbots analyzed is, in general, voluntary. In some cases, however, people who wanted to enter a country from abroad were forced to install them to monitor symptoms. This was the case in Argentina, Panama, and Uruguay. Similarly, in the Colombian case, a resolution from the Ministry of Health and Social Protection obliges workers, contractors, cooperators, the aeronautical sector, among others to use the "CoronApp" mobile application. The same would happen in Uruguay with sports professionals, according to information published by the press.

There also cases in which permits were required for circulation during strict lockdown periods. Again this was observed in Argentina, where such permits depended on carrying out a self-diagnosis every 48 hours. Situations like these directly impact the exercise of the right to free movement.

Limitations on consent

When it comes to requiring data subjects' consent to process their personal and sensitive information, OCCA analyzed if it was express, free, and informed and found that less than half of the initiatives analyzed (6 out of 16) complied with such criteria. Among the ones which didn't, several reasons were identified as a fail in

meeting those standards. The Brazilian application, for example, presented inconsistencies between the terms of the consent requested in its Privacy Policy and the data collected.

The vast majority of applications actively request users to consent to data collection and processing by actively clicking a button or checking a box. Only three of them assumed consent by the use of the application, among which the 2 chatbots analyzed. The withdrawal of consent is allowed by most initiatives and can be requested by email or other means of communication. Worryingly, *however, seven technological deployments analyzed didn't allow the withdrawal of consent for data processing.*

When it comes to the information provided, *only the Mexican mobile application and the El Salvador chatbot do not inform data subjects of the purposes of the processing of their data. In four cases the information provided was considered unclear and not accessible.* In other words, the information provided did not have a simple structure and vocabulary that made explicit the different agents involved in the data processing.

In the Guatemalan and Paraguayan cases, as well as in the chatbots Sammy Bot (Bolivia) and Sivi (El Salvador), it was not offered any information on who was the authority or company behind the processing of personal data.

Weakness of the regulatory frameworks for the comprehensive protection of rights

The information collected by OCCA evidence that most initiatives were not subject to an assessment of legality, necessity, and proportionality in their impact on human rights *before or during the implementation. They were all developed administratively, without being subject to legislative discussions or framed under previously existing legal mandates that ensure that their implementation had a proportionate impact on the exercise of rights other than the right to health.*

From the perspective of necessity, *no evidence was found that scientific or technical criteria were used by decision-makers to justify that the adoption of such technologies was appropriate - or more appropriate than other digital or analogical alternatives.*

The declared commitment by public and private entities involved in the deployment of technologies with the protection of personal was not complemented by a broader vision of how they can impact other rights such as access to information, non-discrimination, the right to assembly, mobility, and the right to work. *At the same time, a preliminary analysis indicates that the rights to privacy, data protection, access to information, and free movement are impacted by at least half of the initiatives.*

Little citizen participation and absence of evaluation criteria

The implementation of the technologies analyzed by OCCA included limited efforts to incorporate the perspectives of civil society or academia. Similarly, they generally lack external audit mechanisms or formal channels to receive and incorporate contributions from civil society.

Where these mechanisms were incorporated during the iteration of the technology design, they contributed to improving new versions, as in the case of Argentina, for example. Only the Ecuadorian mobile application contemplated an instance of participation by academics before its launch.

Something similar is observed in relation to the participation of civil society in the evaluation of initiatives after deployment. *Ecuador and Uruguay represent good practices in this regard: both have their applications' source code open to comments and procedures to follow them.*

Finally, when it comes to *conducting external technical evaluations and audits, only the mobile applications analyzed in Colombia, Ecuador and Uruguay provide for this type of mechanism.* The Argentine case is striking, but this time from the negative point of view: the first versions of the "CUIDAR" application's Terms and Conditions prohibited independent audits by security researchers, for example, through reverse engineering techniques. These clauses were removed from newer versions.

The absence of audits or evaluation processes in the implementation of technological initiatives deployed by States *not only represents a threat from a human rights perspective but also puts at risk the proper use of public resources, once it prevents policy-makers and citizens to conduct an analysis of effectiveness that justifies maintaining or interrupting their operation. It is a practice that reinforces a trend of unplanned technological deployment in the region, and that compromises the legitimacy of these initiatives*. If the context of urgency could be used as an argument for the absence of previous impact assessments of these technologies, the argument ceases to hold when it comes to evaluating their performance.

Transparency in public-private collaboration

A high degree of public-private collaboration is perceived in the technological solutions *analyzed. Of the 16 initiatives included in OCCA, 7 were developed by the public sector and used State budget, while all the others were made possible through public-private initiatives.*

Although the willingness of the private sector to collaborate with the response to a public health emergency of extreme dimensions is commendable, the donation of technological solutions to governments does not detract it from the obligation to meet proper standards for the protection of rights, especially considering the impacts that the access and processing of the data collected may imply. At the same time, the State is not exempted from enforcing such standards if it chooses to acquire or to adhere to technologies developed by the private sector.

Among the public-private initiatives, *a model that is repeated in the cases of Argentina, Guatemala, El Salvador, Panama, Peru, and Uruguay is the donation of digital solutions by the private sector.* In the Argentine and Uruguayan cases, the development of applications was led by national technology companies organized around industry associations.

The case of El Salvador is interesting once the Sivi chatbot was a donation from the global technology company Facebook. In Guatemala, the application implemented would have been financed by the multinational group Tenlot, which runs a lottery in the country. In Panama, the donation came from a single regional company operating in Central America (GBM Panama) and in Peru from a group of six companies and one university.

In the case of Ecuador, a company (Link Digital) received support from the Inter-American Development Bank (IDB) to develop the application "Ecuador ASI" and later offered it to the local government.

In the absence of more detailed information on the terms of this type of cooperation between companies and governments, doubts are raised about possible benefits that these companies could have, such as access to certain types of data.

In any case, although such agreements may not involve financial exchanges, their conditions must be easily accessible to the public. This was not the case for most of the initiatives analyzed by this study.

Final considerations

This brief preliminary analysis of the data collected by OCCA highlights persistent challenges in Latin America when it comes to the use of digital technologies by the public sector. With few exceptions, factors such as access gaps, the potential impact on human rights, or even the existing evidence of effectiveness were not taken into account in the planning of the initiatives analyzed. This is a worrying trend that shows a generally passive attitude of the State towards the adoption of technologies that can directly affect the exercise of fundamental rights of their population.

Whether in the context of a pandemic or beyond, technological deployment from the public sector must be accompanied by strict measures of transparency, participation, and accountability. It is unacceptable in any situation, but even more so when Latin American countries are faced with the need to attend to increasingly urgent social demands, that the implementation of this type of initiative is not grounded in factual evidence that justifies its implementation and the public expenditures directly or indirectly involved in them. *The fact that the techno-*

logy is offered free of charge by private parties should not serve as an excuse for not complying with proper standards that guarantee the protection of the large amount of data collected through these initiatives.

The absence of spaces for multi-stakeholder dialogue and general public engagement, particularly of the groups most likely to be impacted by this type of initiative, once technologies are in place contributes to the persistence of implementation problems. This analysis is a starting point to explore opportunities for improvement in the design and implementation of technologies in the context of a pandemic and to reflect on the future of the role of technology in social control, and the development of relations between States and citizens in our region.

About the Covid-19 Observatory of the Al Sur Coalition (OCCA)

OCCA is an initiative by the Al Sur Coalition that seeks to map and analyze government measures (including public-private partnerships) related to the implementation of surveillance and data collection technologies in the context of the Covid-19 pandemic that could impact human rights. More information can be found at <https://covid.alsur.lat/es/>.

About the Al Sur Coalition

Al Sur is a coalition of eleven civil society and academic organizations working from Latin America, which jointly seek to strengthen human rights in the digital environment in the region. More information about its actions and members can be found at <www.alsur.lat/>.