PROMETEA

ARTIFICIAL INTELLIGENCE
TO TRANSFORM PUBLIC ORGANIZATIONS

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http://scm.oas.org/pdfs/2018/CP-PRES-CORV.pdf

Video available at:
http://www.prometea.com.ar/prometea_oea.mp4

This text is used as an application guide of the "Prometea experience" in the Constitutional Court of Colombia and in other Public Institutions of the region.

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FOREWORD

New technologies in ICTs, impact almost every aspect of development and indeed, is an invaluable tool that can help the implementation of the 2030 Agenda for sustainable development under the principle of leaving no one behind.

Resolution A/RES/73/17adopted by the United Nations General Assembly last year, encourages Member States to continue to consider the impact of key rapidtechnological changes on the achievement of the Sustainable Development Goals andtargetsin order to benefit from opportunities and address challenges, promote thedevelopment of national strategies and public policies, science, technology andinnovation road maps, capacity-building and scientific engagement, and share bestpractices.

Artificial Intelligence, Big Data, botchats, and deep machine learning indeed are powerful tools to increase government efficiency, effectiveness, accountability and inclusiveness in providing service delivery. The use of these frontier technologies may create new opportunities for development and economic growth in almost every aspect of government like health care, law enforcement, food security, crisis mitigation, and other Governments can utilize the advantages offered by AI in providing a wide array of services but which at the same time are tailored to the specific needs of each citizen at a 24/7 basis.

These services designed with information gleaned from big data as well as those obtained through improved citizen engagement can dramatically improve the interaction between government and its citizens.

We are currently going throughthe Fourth IndustrialRevolution that is fundamentally transforming the human beings and its environment. The Fourth Industrial Revolution tries to respond to the two major significant phenomena we are increasinglyfacing today — the exponential mutation of the time and space notions from massive use of ICT and the transformation in the way of processing data and information within many activities that before could only be made by humans.

Despite the benefits and the opportunitiesthat the use of AI and other emerging technologiesprovide, italso creates new challenges and pressures for public institutions to change.The extensive and successful utilisation of AI requires public administrations to redefine strategies based on the use of new technologies as well as todevelop adequate data governance.They must ensure a sustainable and inclusive development of AI that does not create inequality gaps in society but rather reduces the existing ones. Thus, the transformation should be managed from a "social technology" approach.

This intertwines to the requirement to create ways to apply AI to public functions through automation techniques, based on the non-substitution or elimination of job positions, therefore capturing routine, mechanical and repetitive task, in a way that the public employee can reconvert.

However, in the era of the Fourth Industrial Revolution,there is a need for diverse talent and expertise and a public worker will have to transform and adapt. In turn, the use of new technologies makes it possible to focus on activities that are more complex as the mechanical and routine tasks can be automatized. That isalso related to the United Nation's affirmation "innovation and Artificial Intelligence are critical drivers towards Sustainable Development and for well-being " - AI can humanize the work allowing human beings to dedicate themselves to more creative and productive work.It is time to create a new generation of skilled and talented civil servant and to empower and requalify the existing ones. No one must be left behind in adopting new technologies for service delivery.

Indeed, AI has expanded policy options that literally did not exist as recently as few decades.AI has a remarkable potential to reduce bureaucracy and to increase efficiency as well as customer centricity in public sector.AI-based systems, such as Prometea, which is presented in this book, can help significantly reduce time, but at thesame timeimprove quality standards for public processes and proceedings. They can detect information patterns from massive amount of data and therefore help us to make better, more evidence-based decisions in achieving the SDGs and in particular Goal 16, providing access to justice for all and build effective, accountable and inclusive institutions at all levels.

1. See, Resolution No. 72/257 of the UN General Assembly, "Science, technology and Innovation for the development" A/72/257 (July 31, 2017) whereas 10& 11, available at: http://undocs.org/es/A/72/257 checked on: 24/01/2019].

However, AIsystems cannot fully replace the competences of human beings. They can place humans in an advantageous position and help better organize our society, but at the end, humans are, or at least should be, the ones making always the final decisions. This is why I prefer to spell AI as "Augmented (human) Intelligence" rather than Artificial Intelligence.

VINCENZO AQUARO

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TO PUT IT SIMPLY...

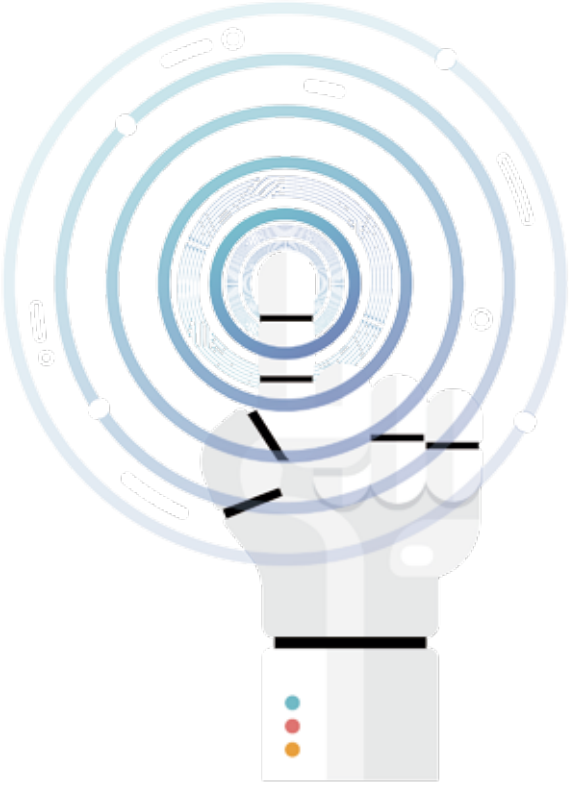
We are going through the Fourth Industrial Revolution that places us in a scenario of profound transformation in what we do and in what we are. This monumental change, in essence, responds to two major intertwined phenomena: 1) the radical mutation of the time and space notions from massive use of (ICT) and 2) new ways of data and information processing within many activities that before could only be done by our brains.

Faced with these vertiginous and disruptive scenarios, public institutions are facing multiple risks, challenges and opportunities: How to adapt them when your designis based on an industrial world without internet,digital platforms, social networks, Artificial Intelligence systems and robots? How can one take advantage of the emerging technologies to transform the printed bureaucracy into an authentic digital Government, Administration and Justice transformation? How to take advantage of Artificial Intelligence in order to begin a transition towards an intelligent bureaucracy? How do you alphabetize and create digital and AI competences, so that this whole approach is based on, by and for, improving people's lives? And how to make automation, intelligent assistance and AI predictions, be accompanied by an inclusive approach towards the public worker? In a few fords, the answers to the seand other questions, is crystallized in the four points of the expanded presentation of the Artificial Intelligence system "Prometea" before the Permanent Council of the Organization of American States.

First. Making public organizations efficient, inclusive and intelligent presupposes addressing four main axes:

1) Do the same with more technology? NO! This is one of the central premises in order to transform procedures and public organizations that are formatted around printing. Even, those who migrate towards digital formats, many times replaced their printed bureaucracy with digital bureaucracy that results in clicks, window opening and copying and pasting data into computer programs. Therefore, it is essential to redefine strategies based on the use of new ICT, so that the public worker and the citizens are the center of AI systems that exponentially reduce State bureaucracy;

2) Manage ICT access from a "social technology" approach, as defined by the UN. Here it is important to take special consideration of vulnerable groups and the existing asymmetries of the region;



3) Artificial Intelligence and the new ICTs are indispensable tools to optimize, simplify and maximize (OSM paradigm) the objectives and activities of public organizations; data governance is the Artificial Intelligence's (AI) oxygen. Segmenting, standardizing and systematizing public organization's available data and information so that different AI techniques that boost intelligence human can be articulated;

4) Applying IA to public functions through automation techniques that are based on the non-substitution or elimination of job positions. The challenge is to capture routine, mechanical and repetitive tasks so that the public employee can reconvert. Humanizing the worker and accompanying the reconversion process for people that are considered "digitally vulnerable" (due to their age, lack of training, etc.).

Second. The Prometea experience is based on the unprecedented application of an Artificial Intelligence system that was born and developed, entirely, in an Argentinean public entity and that was trained to be applied in the Inter-American Court of Human Rights. This AI system, combines applied innovation layers and can help to perform multiple tasks so that the organization becomes exponential.

In essence, it transforms days into minutes or seconds. Therefore, this experience is key to rethinking how to accelerate different activities that used to take a long time: procedures, appointments, licenses, permits, conflict resolution, among many other tasks where "more rights for more people" are at stake.

Third. Knocking down myths about the loss of jobs..."automation that humanizes." Although it is logical to have discouraging forecasts towards disruptive innovations, we believe that Artificial Intelligence systems will be essential to improve the quality of work within public organizations, and this should not translate into a source of unemployment. That is to say, that even if certain tasks are automated, in a broad sense, that does not mean that inexorably

replaces the person by a machine. In this short and medium term, there is an auspicious opportunity to reconfigure the division of tasks and, at the same time, increase efficiency and improve the State-citizens relationship.

The public worker of the Fourth Industrial Revolution will have to transform and adapt. For this, senior officials must create fertile transition environments. Sensitize, alphabetize and create adequate conditions for the transition to be inclusive and so that the automation focuses on humanizing public tasks. In short, we must reduce or eliminate mechanical, routine, insalubrious, repetitive tasks to enhance human potential to new tasks or other postponed activities due to their greater complexity.

Fourth. Risk and challenges. All technological innovation produces benefits, but also risks and challenges. In essence, we strive for the application of principles and rules that reduce or eliminate facets of the "dark side of AI." Algorithmic transparency, algorithmic traceability, maximum algorithmic access, algorithmic non-discrimination and a mandatory and adequate human supervision of the process and of the decisions will be the key. We believe that the "luminous side of the AI" facets have an enormous potential for the sustainable and inclusive development of people, but its application and development cannot be done at any cost. The use of disruptive and emergent technologies must be based on human rights and in the democratic principles that govern public organizations.

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To the Inter-American Court of Human Rights for their confidence and for being the first international organization in which we were able to carry the Prometea experience with surprising results at the beginning of 2018.

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To Elsa Estévez for making the effort to visit us and studying all the work we do, for her advice and ideas and for putting her vast trajectory at the service of the transformation of public organizations.

Finally, I thank all international and national organizations that opened the doors for us to share the Prometea experience. We learned more than we transmitted. Thanks to them we strengthen the work that we develop from the Innovation and Artificial Intelligence Laboratory of the University of Buenos Aires. After all, there are many organizations that share our vision and mission: taking advantage of the luminous side of Artificial Intelligence to place it at the service of the concrete and real effectiveness of the rights of people and beings.

1 INTRODUCTION

The relationship between citizens and public organizations has been a kind of procession of offices, papers, files, records, physical transfer to multiple buildings, forming queues and requests to speak with a manager or a boss. A sort of "bureaucratic purgatory". Arising from the Internet, more sophisticated computers, the development of digital portals, mobile applications and social networks, the public sector of this 21st century has intensified the migration towards digitalization that improves and transforms the time/space - bureaucracy/citizen ship binomials by empowering and updating three supra guiding principles: optimization, simplification and facilitation.

However, as disruptive information and communication technologies (ICTs) have been developed in recent years, within the Public Prosecutor's Office of the City of Buenos Aires (hereinafter, Prosecutor's Office) we have already completed the first and substantial steps towards the second transition: from a "printed and digital bureaucracy" towards an "intelligent bureaucracy" where Artificial Intelligence systems (hereinafter, AI) facilitate, simplify and exponentially accelerate interactions and tasks based on automation and predictive activity.[2] As these changes are much deeper than "adapting" the State and public institutions to the digital file, the web or social networks,

2. On all these matters please expand on: Corvalán, Juan G., Towards a Public Administration 4.0: digital and based on artificial intelligence. Decree on "Complete Digital Procedure", published in: LA LEY 17/08/2018; CORVALÁN, Juan Gustavo. Digital and Intelligent Public Administration: transformations in the era of artificial intelligence. Revista de Direito Econômico e Socioambiental, Curitiba, v. 8, n. 2, p. 26-66, maio/ago. 2017. doi: 10.7213/rev.dir.econ.soc.v8i2.19321.

must transform the logic of organizations and their procedures.

As a preview of the general conclusion, we can affirm that the proven benefits that a multilayer AI system generates within public organizations are numerous. Since November 2017 until this date "Prometea's" surprising results are evident at several levels. Thanks to the joint work between the Prosecutor's Office team and AI experts (Ignacio Raffa and Nicolas Vilela) Prometea simplifies, reduces errors, exponentially accelerates the the complete preparation of legal and administrative documents, and decisively impacts on the effectiveness of rights in general and, more specifically, the principles of equality and legal security. In turn, it humanizes public workers as it allows them to be freed from mechanical or routine tasks, which makes it possible to allocate more human capital to more complex activities. All this, from the combination of five major levels of innovation layers:

1

Intuitive user interface from a voice command or conversational agent;

2

Integrated single-screen interface to reduce clicks and eliminate the opening of digital windows;

3

Improvement in data and information management of data and information from the automation of tasks to create documents and link them with stable or predictable decisions;

4

Development of multiple digital assistance functions, such as the advanced search of laws, documents, reporting and statistics, etc.;

5

Making predictions in judicial decisions based on a supervised automatic learning technique, with an average success rate of 96%.

As we will detail here in after, all these layers of innovation do not pretend to replace human labor under any circumstances. Just as the computer and the word processor increased the capacity to generate more and better documents, Prometea empowers human intelligence by taking on various routine and predictable tasks, as well as increasing the knowledge base to make better decisions within public organizations.

That is why we speak about "automation that humanizes" and at the same time, of how it is possible that the application of Artificial Intelligence in the public sector is presented as an indispensable bridge that opens a wide path to increase the connection between the information and communication technologies (hereinafter, ICT) and the OAS motto that inspires this presentation:

2 TOWARDS A NEW PARADIGM OF PUBLIC ORGANIZATIONS[3]

The Fourth Industrial Revolution that we are going through is deeply transforming the human beings and their environment.[4] Substantially, this monumental change originates in two significant phenomenon:

- The exponential mutation of the space and time notions from the massive use of new information and communication technologies;[5]

- The transformation in the way of processing data and information in many activities that previously could only be done by our brains.

3. On the exposed in this point and its consequences, See Corvalán, Juan G., Towards a Public Administration 4.0: digital and based on artificial intelligence. Decree on "Complete Digital Procedure", published in: LA LEY 17/08/2018.
4. Expand in: SCHWAB, Klaus. The Fourth Industrial Revolution. Barcelona: Debate, 2016; Comisión Económica para América Latina y el Caribe (CEPAL), Datos, algoritmos y políticas: la redefinición del mundo digital (LC/CMSI.6/4), Santiago, 2018.
5. See, BALANDIER, Geroges. El desorden, La teoría del caos y las ciencias sociales. Buenos Aires: Gedisa, 2012. p. 160.

From the explosion of information and data that increases exponentially, the inherent complexity within the information and knowledge society is intensified. And in these disruptive and vertiginous scenarios, in addition to facing the challenges the 20th century brought us, those coming from the digital age[6] and the development of AI are also included. In environments where most of the activities of the human being take place in the digital world, the task of protecting the digital dignity and identity[7] of individuals acquires a central role.

As ICTs grow to a large scale, public organizations are not prepared for these challenges, since all their design, operation and structure is based on paper, printing, offices, etc.. Therefore, the advance of AI determines that the state bureaucracy faces challenges, opportunities and unprecedented challenges that we summarize in two major issues:

6. The digital age is the result or the effect of a combination of ideas and political, economic and cultural affirmations, rooted in cybernetic styles, which have been articulated to define and periodize a certain interval of recent history and to produce a technified vision of the future . The digital age is, like all the 'new times' and the new terms that are associated with them, a chronological and also cultural construction." LOVELESS, Avril; WILLIAMSON, Ben. New learning identities in the digital era. Madrid: Narcea, 2017. p. 39.

7. Identity is specified as a relational conept, which is why data privacy changes its meaning. The digital identity shall respect three essential criteria in relation to privacy: 1 It must make explicit data flows so as to allow control by the individual conceerned, 2. Respect the principle of “minimizing” the data, treating only those necessary in a given context, 3. Impose limits to connections between data banks. Expand in RODOTÁ, Stefano. The right to have rights. Madrid: Trotta, 2014. p. 173-186.

1

On the one hand, how to internally reconfigure State power (new approaches, structures, systems, procedures, etc.) and, externally, in its relationship with citizenship. Here we talk about accelerating times, reducing barriers, simplifying environments, facilitating interactions, among many others;

2

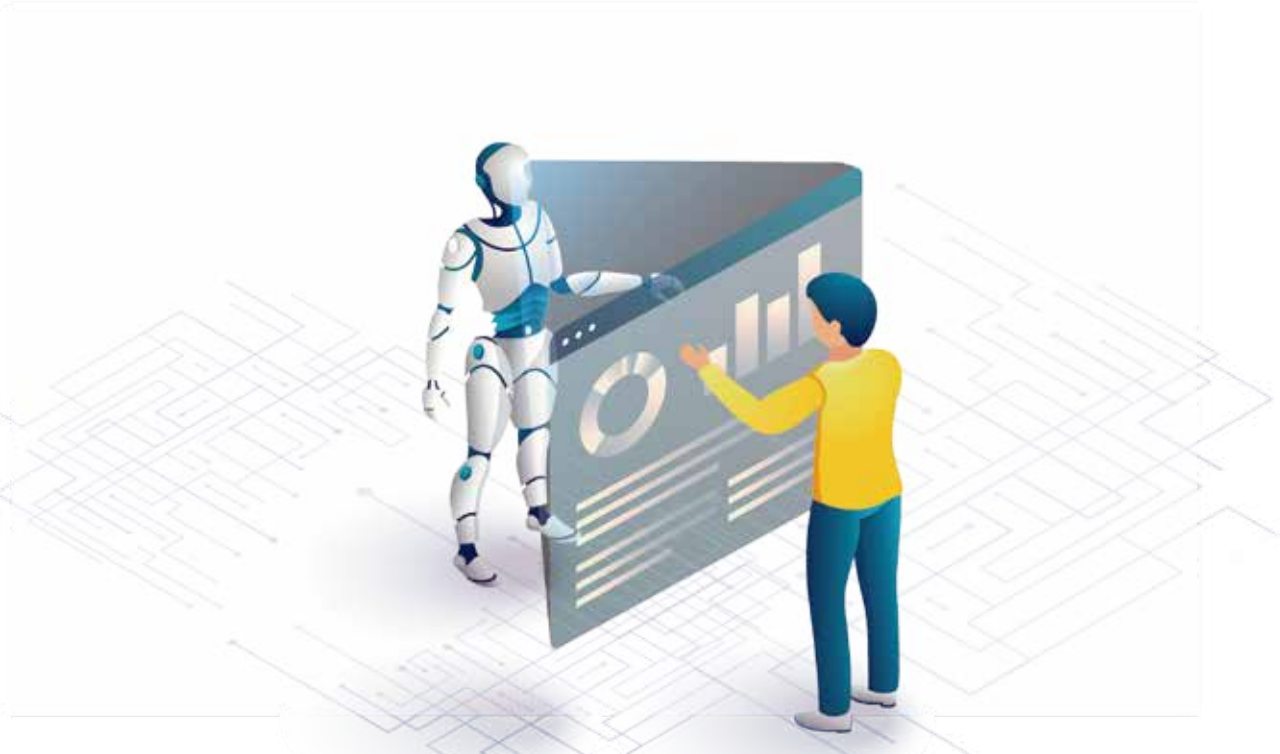
On the other hand, how to ensure that new technologies optimize the effectiveness of rights in general and, in particular, to ensure sustainable and inclusive development that reduces the existing inequality gaps in society.

If we go through a new industrial revolution, this necessarily forces us to rethink the way in which the powers of States are organized, and the way in which sustainable and inclusive development must be ensured. From our optic, the mutations we go through presuppose considering four major aspects linked to the digital age and the exponential development of AI.

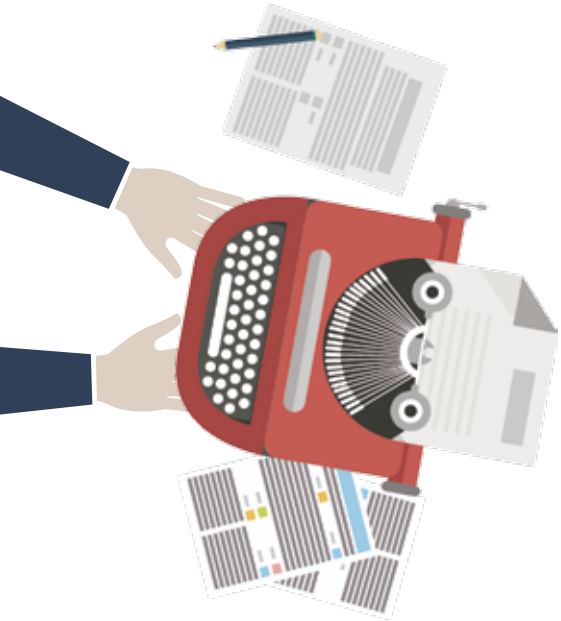
FIRST

The incorporation of new technologies should be approached from the perspective of people and their rights. [8] The challenge is to ensure that citizens as a whole have access to all the services provided by governments through the implementation of ICT.[9]

That is, that the public organizations using the most disruptive ICT are presented as a genuine paradigm change anchored in which substantial transformations and not merely instrumental ones. It is no longer enough to "apply" new technologies to existing problems, or to improve computer systems to "do the same" but with more technology. On the contrary, it is about rethinking or redefining new strategies and ways of understanding the relationship between society and technology; new types of specializations in the social field will be associated with science and innovation activities.



8. Centro Latinoamericano de Administración para el Desarrollo, Carta Iberoamericana de Gobierno Electrónico, p. 4, Available at: http://old.clad.org/documentos/declaraciones/cartagobelec.pdf [checked on: 27/08/2018].
9. Department of Economic and Social Affairs, United Nations study on Electronic Government, 2012, Electronic Government for the people, p. 65, available at: https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2012-Survey/Complete-Survey- Spanish-2012.pdf [checked on 27/08/2018].

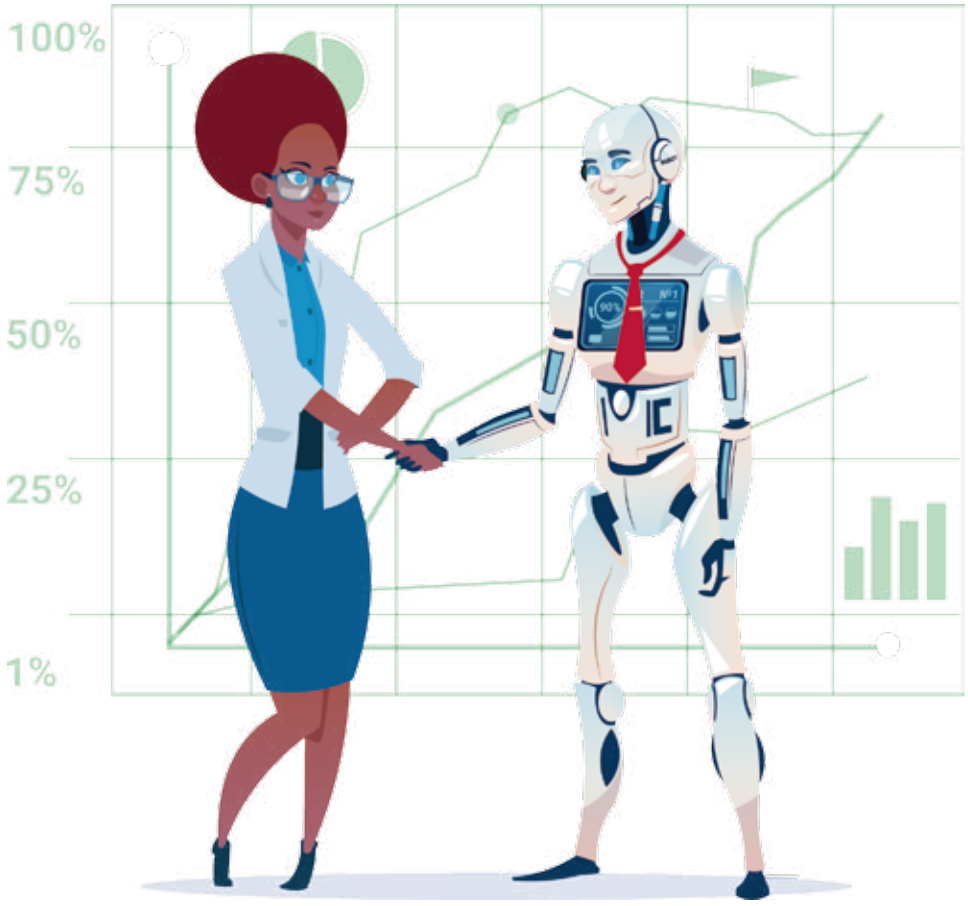


The challenge is substantially greater than that which societies had to go through with the emergence of electricity and the assembly line in the late nineteenth and twentieth centuries. Just as writing and written processes shaped organizations and procedures, the digital age and new ICTs transform these interactions and render obsolete many of the principles and rules that were justified by the existence of a system based on paper and printing presses.

In one example, the principle of decentralization in the field of administrative organizations, in essence, liquefied in an attention system that is based on algorithms. If we intended to expand the attention in the granting of shifts in public offices, in the "printing bureaucracy" the key was to decentralize this activity by adding offices, people, computers, etc. In the digital world, expanding the offer of a totally digital service depends essentially on the algorithmic design and the quality of the connectivity, among others aspects. And if we add automation or innovation layers through AI, we could exponentially shift grants.

Put simply, the digital or algorithmic organization does not pass through "open offices", but instead by expanding or adjusting different algorithms. In short, we must move away from a logic that conceives the new ICT as if it were a matter of replacing a typewriter with a basic computer in State offices.

Adjusting public organizations to the transformation of the time/space duality is without a doubt, the biggest challenge of a digital world that has become an "immediacy centered universe" where sequential or chronological time begins to dissolve. And something similar happens starting from a deep spatial mutation, since in many cases a specific physical place or even to speak of presence and absence in the same terms as in other times becomes irrelevant.[10]



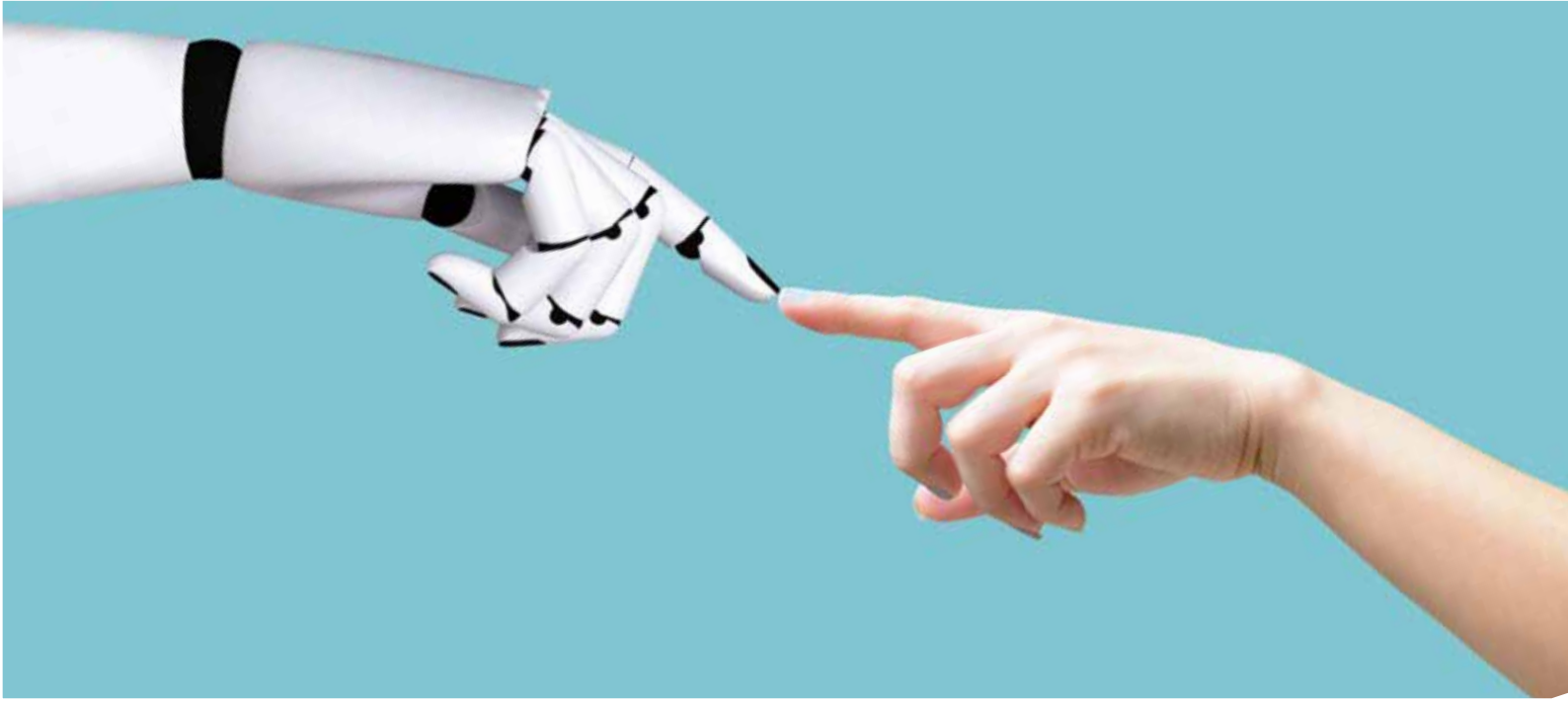
10. On all these matters please expand on: BALANDIER, Georges. El desorden. Buenos Aires: Gedisa, 2012. p. 159-160 and LUHMANN, Niklas. The society of the society. Mexico: Herder, 2007. p. 909

SECOND

It is extremely important for technologies to be inclusive. That is to say, the new ICTs and innovation[11] should be aimed at reducing technological gaps and at promoting adequate technological infrastructure, among other objectives. As stated by the UN, allowing access to technologies will be a fundamental element and, especially, when dealing with minorities, vulnerable groups or those that are not sufficiently represented.[12]

At the same time, it is indispensable to approach the concept of "social technology". It is called "society of social technology"when considering the new social ways of valuing and applying knowledge, defined as the "development of knowledge applied by and for each individual, in a society organized to intensively apply science and technology in social problem resolution".[13]

11. In Habitat III, it was concluded -among other aspects- that access to multiple intelligent solutions of the ICT and clean technology is an environment conducive to inclusive economic growth and to promote prosperous and innovative cities. See, Resolution No. 71/256 of the General Assembly "New Urban Agenda" A / RES / 71/256 (25/01/2017), available at: https://undocs.org/es/A/RES/71/256.
12. See UN, Economic Social Council, Resolution E / hlpf / 2016/6, point II.
13. GOÑI ZABALA, Juan José. Technology. Madrid: Díaz de Santo, 2012. p. 342.



This notion is associated with three phenomena in terms of threats, challenges and opportunities. On the one hand, it is important to understand the factors which determine that people and communities can access and take advantage of certain technologies. On the other, we must consider the communities' resistance to adopt new or innovative approaches

Here it is important to establish public policies aimed at social and community participation. Finally, for technologies to work, they have to be adapted to the context and culture of the place. This phenomenon is called "technological preparation". [14] All of these concepts, to a large extent, account for one of the greatest current challenges of most States: reducing the asymmetric development of digitization and understanding the diversity of factors that intervene so that individuals and communities adapt to certain technologies.

14. According to the UN, social technologies are fundamental to change mentalities, attitudes and behaviors. See Resolution No. 2016/6 of the Economic and Social Council "Forum on multiple interested on science, technology and innovation for the Sustainable Development Goals: summary of the Co-Chairs" E / HLPF / 2016/6 (24 June 2016), items II, 13 to 15, available at: http://undocs.org/sp/E/HLPF/2016/6) checked on" 27/08/2018].

Therefore, certain technological innovations must be adapted to social contexts, based on prioritizing disadvantaged areas and people in vulnerable situations. In short; the three phenomena that we have described presuppose three major challenges for the states of our region:

reducing the digital gap,

promoting digital literacy,

guaranteeing digital assistance to people in digital vulnerability.[15]

15. The Geneve Declaration states that “in disadvantaged areas, the establishments of points of public access to ICT in places such as post offices, schools, libraries and archives, can be the effective means of guaranteeing universal access to infrastructure and services of the Information Society ", OEA / Ser.L / V / II IACHR / RELE / INF.17 / 17 March 15, 2017 Original: Español Estándares para una Internet Libre, Abierta e Incluyente Relatoría Especial para la Libertad de Expresión de la CIDH, párr. 33 and 64 Available at: http://www.oas.org/es/cidh/expresion/docs/publicaciones/INTERNET_2016_ESP.pdf

THIRD

Digital government is based on three major supra essential principles that link ICTs with the public organizations of the 21st century: optimize, simplify and maximize.[16] Its projection presupposes incorporating new postulates or innovative categories of key importance within the digital era and AI. Among others, we refer to digital inclusion, service integrity, affordability, internal consistency, algorithmic ransparency, algorithmic non-discrimination, user personalization, conservation, traceability, interoperability, durability, robustness, scalability, usability, technological sustainability, web neutrality, technological suitability, accessibility, security, digital literacy.[17]

16. Maximizing, in turn, is related to the concretion or search of obtaining the greatest possible degree of"something" specific HÖFFE, Otfried.El proyecto político de la modernidad. Buenos Aires: Fondo de Cultura Económica, 2008. p. 323.
17. Expand on Centro Latinoamericano de Administración para el Desarrollo, Iberoamerican letter on Electronic government. Available at: Http://old.clad.org/documentos/declaraciones/cartagobelec.pdf checked on: 27/08/2018].

Moreover, it is essential to ensure the following principles when dealing with data and information: integrity, inalterability, durability, conservation and preservation. In short, a new paradigm of public organization is, in substance, based on the promotion and development of modernization and innovation, continuous improvement, permanent updates, as well as the systematization, standardization, harmonization, facilitation - focused on deadline reduction- and the simplification of the tasks and services to be executed.

FOURTH

As of human intelligence, multiple and diverse technological innovations have been developed. The one that concerns us here has to do with information processing for problem solution and decision making based on the so-called intelligent algorithms. Artificial Intelligence is based on intelligent algorithms or learning algorithms that, among many other purposes, are used to identify economic trends or personalized recommendations.[18]

An algorithm can be defined as a precise set of instructions or rules, or as a methodical series of steps that can be used to make calculations, solve problems and make decisions.[19]

AI systems use computers, algorithms and various techniques to process information and solve problems or make decisions that previously could only be made by our brains. At the end of the day, just as the brain extracts, selects, cuts and organizes available information to make decisions, AI does the same, but with other methods and at another speed.[20]

18. Expand on DOMINGOS, Pedro. The master algorithm: how the quest for the ultimate learning machine will remake our world. New York: Basic Books, 2015. p. 1 y ss.; HARARI, Yuval Noah, Homo Deus. Autonomous City of Buenos Aires: Debate, 2016, ps. 99-107; PALMA MÉNDEZ, José; MARÍN MORALES, Roque. Artificial Intelligence. Madrid: Mc Graw-Hill, 2011. p. 683.
19. BENÍTEZ, Raúl; ESCUDERO, Gerard; KANAAN, Samir; MASIP RODÓ, DAVID. Artificial Intelligence. advanced. Barcelona: UOC, 2013. p. 14.
20. Expand on BOSTROM, Nick. Super intelligence. 2. ed. Spain: Tell, 2016. p. 29.

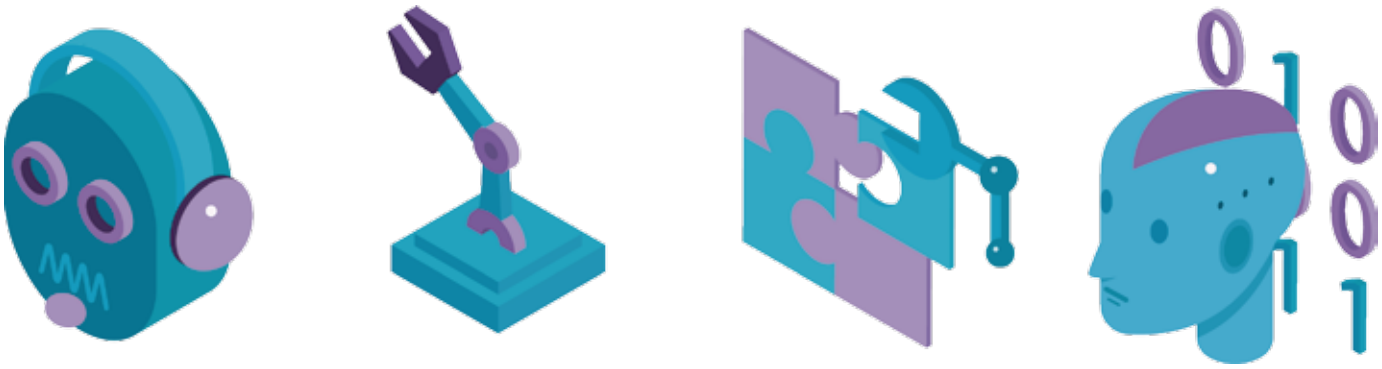
On these definitions, it is important to clarify two considerations that are intuitively understood when analyzing to which extent robots or computers can be "intelligent". In the first place, merit is denied to AI when it is maintained that it is impossible to reproduce the human brain with machines, given its complexity and the absence of reliable data to determine its complete functioning.

While the latter is correct, the fact is that this objection ignores the fact that Artificial Intelligence does not have to resemble the human brain to successfully perform certain activities that could only be attributed to human intelligence.

In addition, it is important to bear in mind that the development of Artificial Intelligence does not consist -at least exclusively- in imitating or copying the human brain. AI uses various methods to process information and solve problems or make decisions, in the same way that aviation engineers did not imitate or copy the method and/or learning techniques of birds to build modern aircraft.

Second, many technological advances where Artificial Intelligence is present are naturalized. If an intelligent machine begins to perform certain activities in which it equals or surpasses the human brain's capacity to process information, it is often said that this is a matter of computing and that it is not a true "intelligence".

If Apple's iPhone voice assistant Siri gives us intelligent answers, we usually think that it is not "so" intelligent because it often fails, or because it is not capable of recognizing what we express, beyond the fact that in other instances it provided efficient responses in less than a second. At the end of the day, just as the brain extracts, selects, cuts and organizes the information available to make decisions, the AI does the same, but with other methods and at another speed.



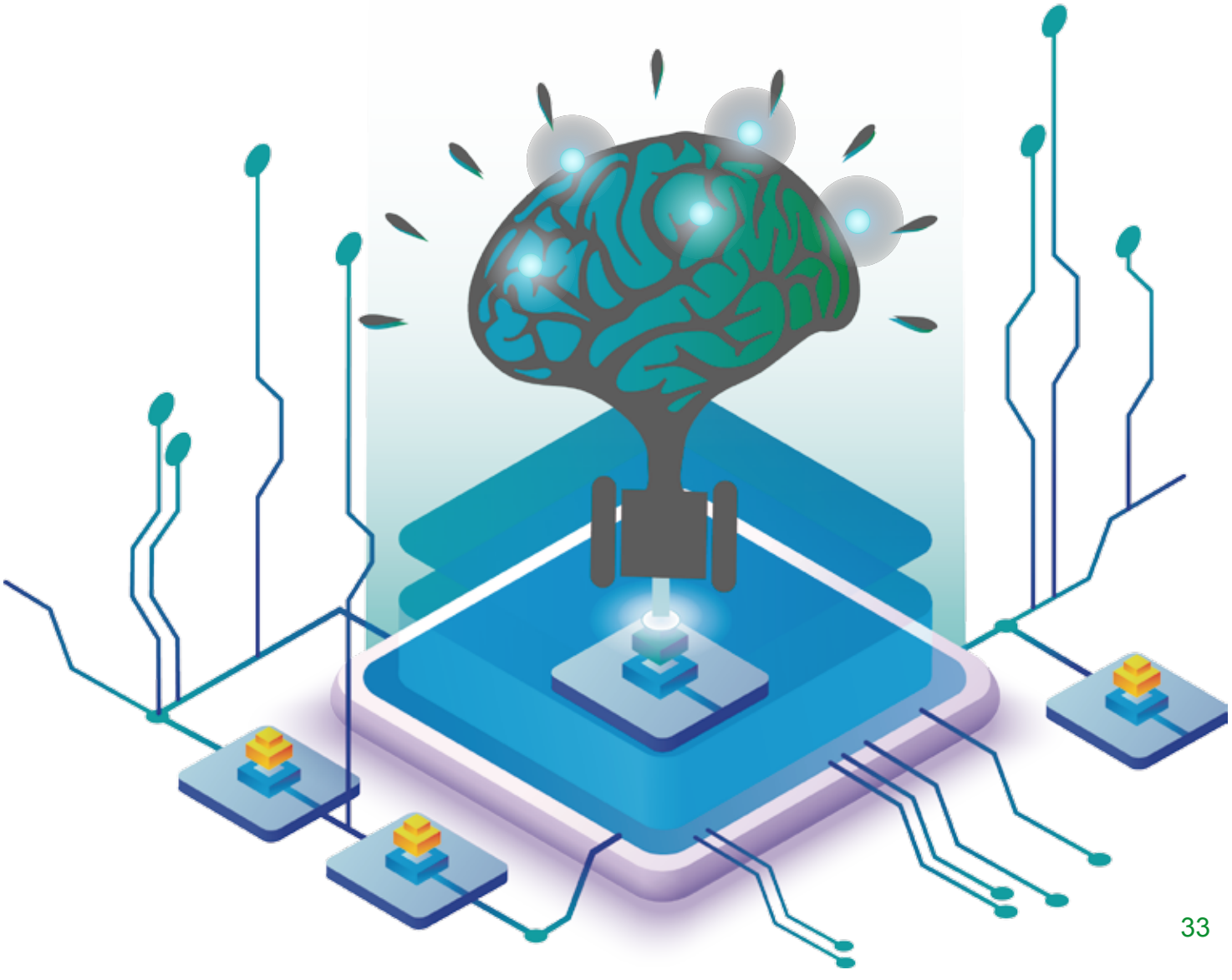
In short, just as there are different types of human intelligence, there are also several kinds of AI systems which further more use multiple techniques. There are some that are traceable and others that are not yet, such as AI systems that use artificial neural networks massively.[21] To simplify, from a programming point of view, the less sophisticated or less complex Artificial Intelligence systems are referenced as "automation".

This is the case, for example, when we train a system to control procedural deadlines. Other more complex systems use machine learning to detect relevant patterns and, on that bases, make a decision or a prediction. And, finally, there are the most sophisticated AI systems that use neural networks and can self-learn, even without human supervision.

21. An artificial neural network can be understood as a massive combination of simple processing units, which learn from the environment through a learning process and store knowledge in their connections. See S. Haykin (1999). Neural Networks: A Comprehensive Foundation, Prentice Hall, New Jersey. In other words, they are a huge set of algorithms and values, where each component of the network (neuron) is able to handle different variables and arrive at different results, learning together.

Now, as we have already said, the transformation of the printing or digital bureaucracy into an intelligent bureaucracy requires for the articulation of joint automation and innovation layers that work together. For example, Prometea uses an AI system to recognize natural language, and thus be able to generate a friendly interface with the user.

It then works with a unique and integrated screen system to combine the automation of various tasks, digital assistance to obtain relevant information and, finally, it elaborates entire documents, which may also be the product of a prediction. In this way, various bureaucratic tasks can be absorbed by this system, so that human beings can dedicate themselves to more complex tasks.



3 MORE ICTS FOR A SUSTAINABLE AND INCLUSIVE DEVELOPMENT

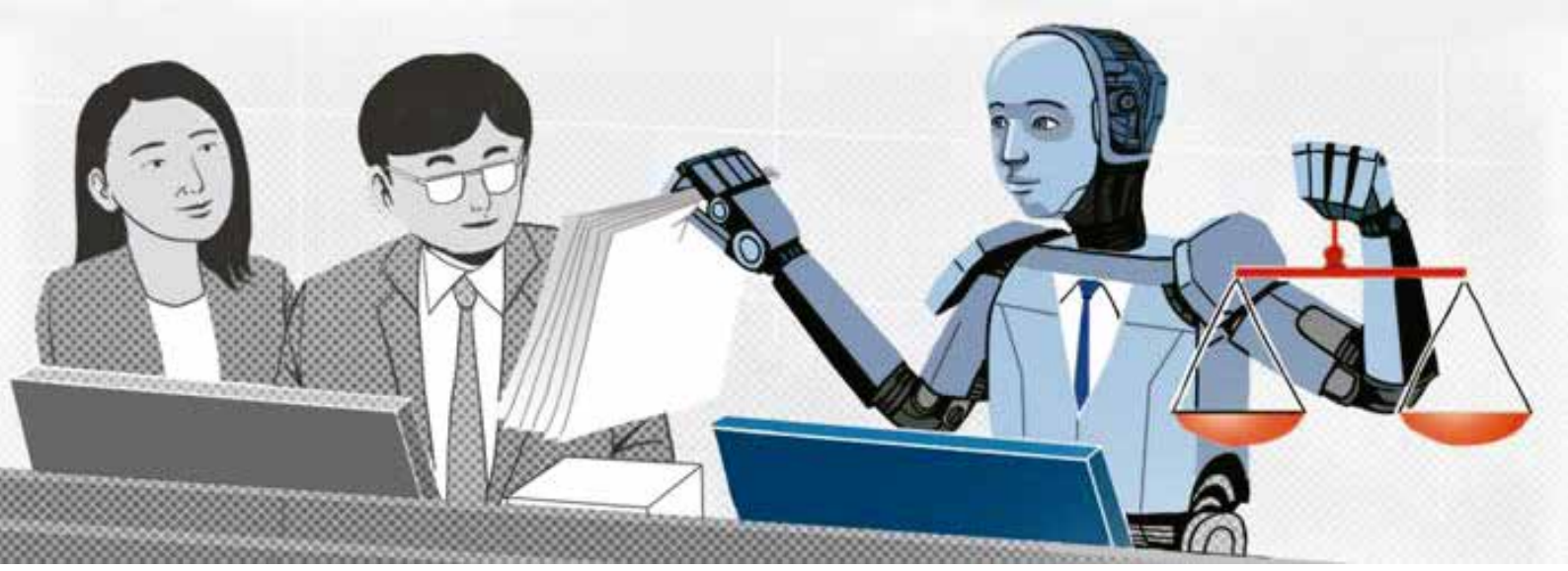
ICT linkage to the sustainable and inclusive development of countries has been the subject of numerous resolutions, both by the United Nation's General Assembly and the General Assembly of this Organization of American States. Based on the research we have carried out, in the last seventy years the General Assembly of the OAS has issued 51 resolutions related to ICTs.[22] While the UN's General Assembly, from 9.13.2000 until 12.11.2017, has issued 93 resolutions.[23]

Now, when we begin the task of systematizing all this important source of knowledge, we detect that Prometea can be framed in three major axes, which are based on three recent resolutions.

22. See Annex I.
23. See Annex II.

THE FIRST

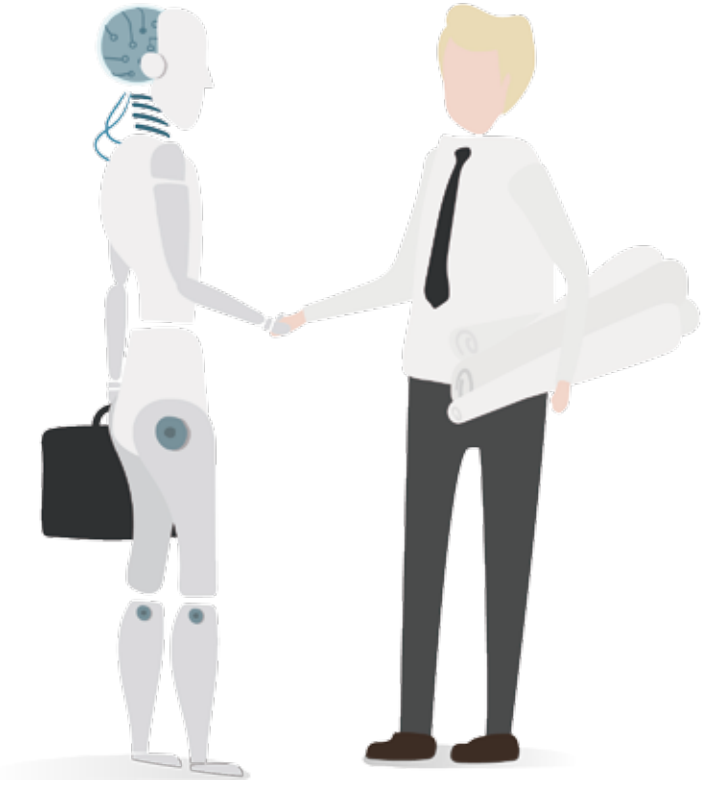
Linked to OAS 2095 Resolution of June 20, 2017. Here the OAS' General Assembly resolved: "To reaffirm the importance that using digital technologies holds for the governments of Latin America and the Caribbean as one of the most transformative factors of our times, given their impact on effective public service, democratization of public services, open government, the organization, systematization, and availability of public information, and citizen empowerment, as well as in terms of enhancing economic development, narrowing reducing social gaps, bring about digital inclusion, and moving towards an increasingly knowledge-based society and economy." [24]



24. See, FORTALECIMIENTO DE LA DEMOCRACIA, General Assembly of the OAS, Cancun (Mexico), June 20, 2017, AG/RES. 2905 (XLVII-O/17), page. 53 whereas 1. Available at: http://www.oas.org/consejo/sp/AG/resoluciones-declaraciones.asp Fortieth seventh period of regular sessions. Checked on: 27/08/2018].

THE SECOND

Linked to the 72/211 Resolution of the United Nations' General Assembly, dated July 24, 2017. Although the UN Economic and Social Council has recognized the potential of ICTs to "reduce many traditional obstacles, especially time and distance", recital 44 of Resolution 72/211 exemplifies it from the "[...] factors such as the distance to registration centers and places of payment, added to long lines and poor infrastructure, can constitute additional obstacles to access, especially for people with disabilities."



THE THIRD

Related to the role that Artificial Intelligence will occupy. With Resolution 72/257, whereas 10, 17 and 19 of the United Nations' General Assembly, issued on July 31st, 2017. Here the UN affirms a connection that we consider essential: innovation and Artificial Intelligence as critical drivers for Sustainable Development and for well-being.[25] The logic of this connection, within the public sector, is related to two major aspects.

On the one hand, ICT's capacity to "reduce many traditional obstacles, especially time and distance." [26] On the other, that the UN itself recognizes one of the luminous aspects of AI when it states that"[...] machines can perform routine and predictable work, so that people can engage in more creative and productive work." [27]

25. See, Resolution No. 72/257 of the UN General Assembly, "Science, technology and Innovation for the development" A/72/257 (July 31, 2017) whereas 10, available at: http://undocs.org/es/A/72/257 checked on: 27/08/2018].
26. See, Resolution No. 2016/6 of the Economic and Social Council "Forum for multiple interested on Science, technology and innovation for the objectives of sustainable development: summary of co-chairs", E/HLPF/2016/6 (june, 24,2016), whereas 12 available at: http://undocs.org/sp/E/HLPF/2016/6 [checked on: 27/08/2018].
27. See, Resolution No. 72/257, of the General Assembly of the UN "Science, Technology and Innovation for the development" A/72/257 (July 31, 2017) whereas 19, available at: http://undocs.org/es/A/72/257 [checked on: 27/08/2018].

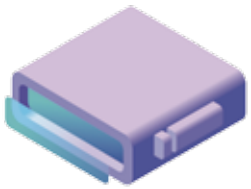
This conceptual framework, in turn, presupposes considering three other major aspects in relation to ICTs for the countries of the region.

In the first place, we must consider the multiple divergences regarding the degree of ICT development in public organizations. We can name this scenario: "ICT Development Asymmetries."

On a second tier, it is useful to reaffirm the rights and obligations that arise from the ICT-State-Citizenship triad. Among other aspects, we refer to first order obligations of the States, linked to reducing the digital divide, prioritizing digital literacy, protecting those that are considered digitally vulnerable, developing inclusive innovation, among many other obligations assumed by the countries, in the face of sustainable and inclusive development. Therefore, we fully coincide with the objectives set by this Organization, together with ECLAC and other institutions, within the framework of the 2030 ICT Alliance for the Americas, signed on June 14th, 2016 in Santo Domingo, Dominican Republic.

Recall that the main objective of this Alliance is to promote equitable access, in order to accelerate the social and economic development of the countries of the region in the long term.

Third, despite the asymmetries of ICT development, AI has enormous potential to transform the common denominator that is present in public organizations in the countries of the world: the printing or digital State bureaucracy.



As we have already pointed out, the AI systems will have a decisive role to increase intuitive interaction, interface simplification, optimization of document generation, and the exponential acceleration of procedures, shifts, licenses, authorizations, permissions, conflict resolution, among many other tasks or portions of tasks where "more rights for more people" are at stake.

4 MORE RIGHTS, FROM THE USE OF ARTIFICIAL INTELLIGENCE IN THE STATE BUREAUCRACY

The bureaucratic structures that increased significantly during the 20th century were designed based on a logic that can be summarized as follows: data and information are managed from paper, the printing press, typewriter, carbon paper, to then transition towards the computer, text processors, and printers. This "printing bureaucracy" is based on offices, face-to-face attention, various steps, phases and procedures.

In this format, the citizen is not the center of the equation, since its link with the State is based on making lines, obtaining numbers, movinzg geographically, going to various public buildings, and frequently presenting the same data and information to various State offices (name, address, card number, etc.). If we are allowed a Copernican metaphor, in the "printing bureaucracy" the citizens are the "planet" and the public organization is the "sun."

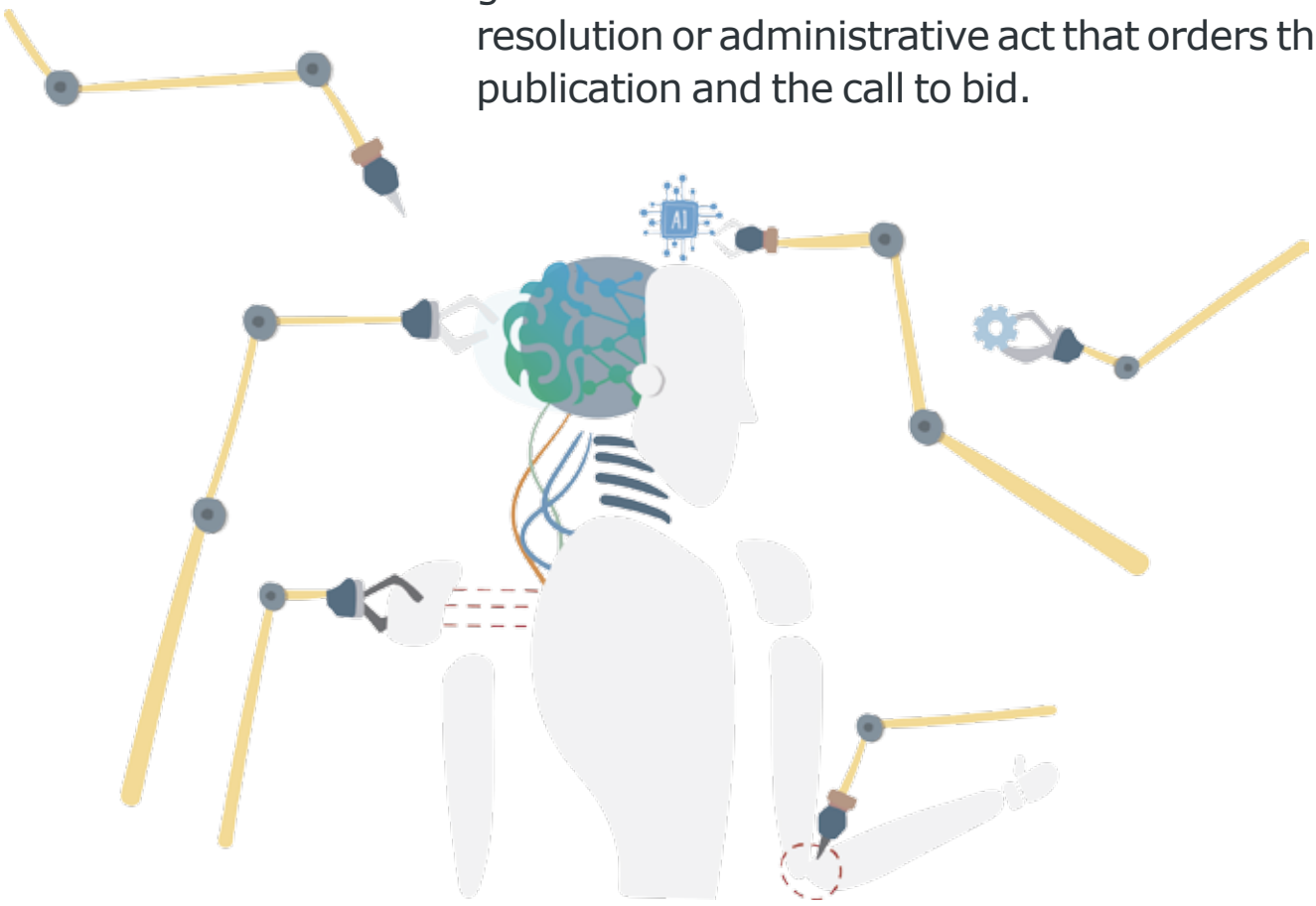
With the advance of Information and Communication Technologies, from the internet, digital portals, social networks and mobile applications, with different nuances, our countries are making important efforts to consolidate an integral digital government that ultimately translates, into a "digital bureaucracy" that aims to consolidate the "user's centrality."[28]

This transition simplifies interactions, reduces time, distances, shortens time and alters the time-space equation of the printing bureaucracy. In this digital scenario, the State can approach citizens, by interacting with computers or mobile devices, through multiple digital techniques that were developed some years ago in the governments of the region: unique portals, single digital windows, and citizen's digital profile, among others.[29]

28. See UN, Department of Economic and Social Affairs, UN Study on Electronic government, Electronic government for the people (2012) page 87, available at: https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2012-Survey/Complete-Survey-Spanish-2012.pdf checked on: 27/08/2018].
29. See Decree No. 339/2018, section 1, complete norm available at: http://servicios.infoleg.gob.ar/infolegInternet/anexos/305000-309999/309154/norma.htm; Decree No. 87/17, Section 2) Complete norm available at: http://servicios.infoleg.gob.ar/infolegInternet/anexos/270000- 274999/271486/norma.htm checked on: 27/08/2018].

In this paradigm, the digital bureaucracy now materializes through numerous clicks, opening windows, completing digital forms, copying and pasting data, among other digital activities. And while this is a great step forward, in the face of the previous scenario, we believe that this digital paradigm can be substantially improved.

For example, the Innovation and Artificial Intelligence Laboratory of the University of Buenos Aires, together with the Public Prosecutor's Office of the City of Buenos Aires and the General Direction of Procurement and State Contracting of the Ministry of Justice and Security of the City of Buenos Aires, we analyzed the digital contracts for goods and services that were procured from 2017 to the present. Although the entire procedure is digital, it requires an average of 29 days, 670 clicks, the opening of 60 windows and at least the downloading of 35 data that is copied and pasted into the digital management system, to generate the contract's documents and the resolution or administrative act that orders the publication and the call to bid.



As we will see later in the live demo, Prometea is ready to do all that in 4 minutes, on a single screen, through questions and answers using voice command (conversational chat). In addition, to achieve greater efficiency in these purchasing processes, Prometea integrates a price comparison tool for the products that they want to acquire, including public and private estimation prices, an inflation evolution, the price of the dollar within the market, among other variables.

With all this information, it creates a report of these comparisons that serves the user as guidance for each purchase.

Another example is evident within the Inter-American context. When from the Public Prosecutor's Office we entered into an agreement with the Inter-American Court of Human Rights to apply Prometea, since we also noticed how the construction of their documents is linked to various clicks, copying and pasting data, and opening several digital windows.

In the tests we conducted for this international court, the simplification and time reduction achieved has been exponential. To illustrate it, we can say that one of the processes in which we applied Prometea, (notifications to the States and interested Agencies of the Court's Advisory Opinions) previously took them three full work days while with Prometea it is now done in only 2 minutes.

Something similar occurs in the Public Prosecutors' Office of the City of Buenos Aires where the time reduction achieved is quite significant. From taken measurements, generating 1000 rulings related to housing rights- in the digital and printed bureaucracy paradigm- previously required 174 work days to be completed, while with Prometea they were done in only 45 days.

The same happens with cases related to the right to work, in which without Prometea it took 83 days to make that number of rulings, while with the AI system they were generated in 5 days. Moreover, Prometea also serves as a controller of file formal requirements, and reduces this from 160 days to only 38 work days for each 1000 files.[30]

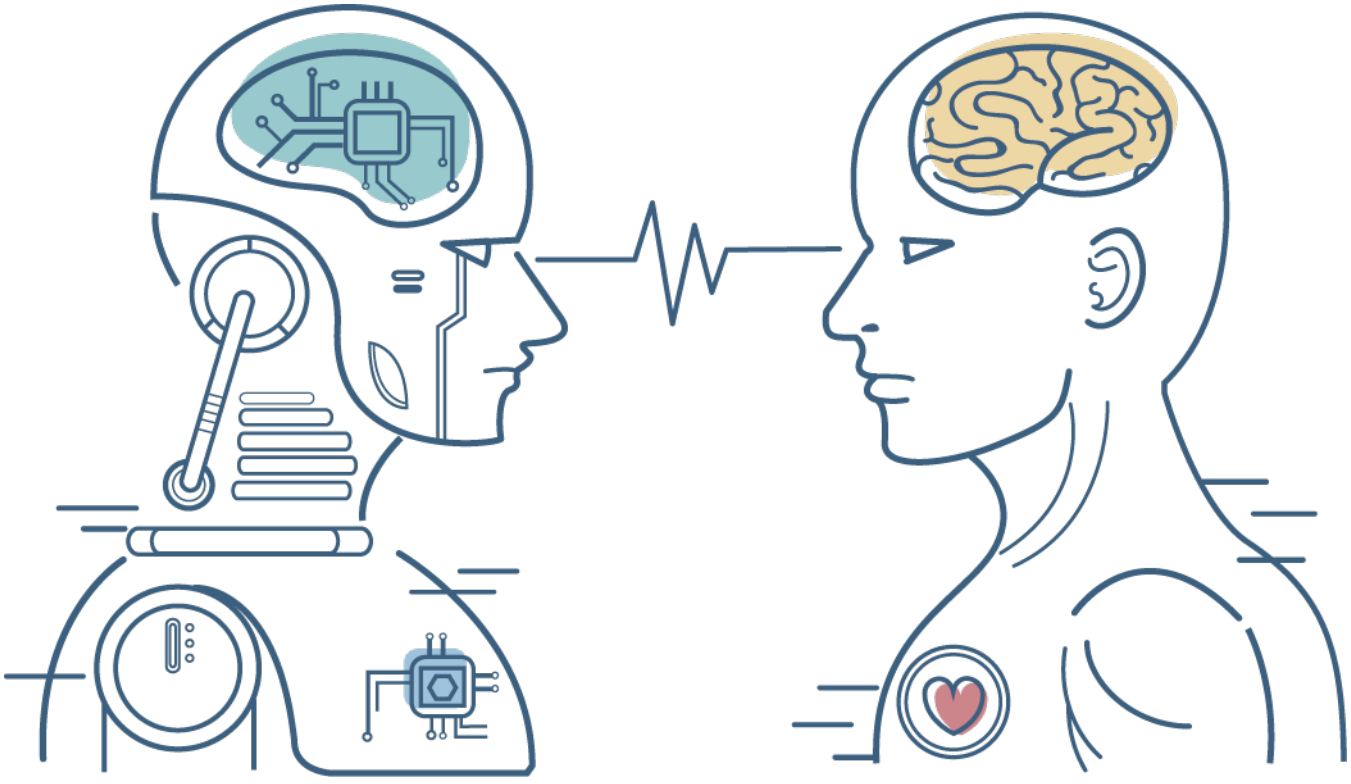
All these examples show a change in focus that goes beyond something that is often intuitive: "Doing the same" but with more technology. In retrospect, we have usually duplicated the logic of the printing bureaucracy into the digital world, which translates into a decline in the possibilities of achieving "more rights for more people" goal.

Taking advantage of Artificial Intelligence systems, while working to consolidate Digital Governments and universal ICT access, we aspire to promote a second transition towards a new archetype of public organizations that will make them exponential.

30. Measurements made on 6 hours of work per day, on 22 work days per month.

In other words and as synthesis, intelligent bureaucracy is not linked to replicating the procedures and forms of a digital bureaucracy. Probably, many of the steps or phases will be liquefied in the design of the algorithms.

And although we do not ignore the many challenges that we have to face, we propose to move forward in this path towards an "intelligent bureaucracy" to achieve more accessibility, more acceleration, more precision, more simplification, more knowledge base, and in the end, more rights for more people.



Now, when we talk about the application of Artificial Intelligence to transform public organizations, we refer to the acceleration of administrative decisions, such as the granting of building permits, social welfare benefits, disability certificates, licensing, among many other administrative activities.

The same happens with judicial decisions or with previous processes and intermediate decisions within the judicial field. In one example, all the countries of the region have legal systems and special procedures for judicially enforcing tax or tax debts. In Argentina, these processes are called "executive trials." In the City of Buenos Aires alone, there are more than one million of these cases. According to recorded measurements, a projection of what Prometea does today to other judicial processes in which the State intends to collect taxes would generate surprising figures.

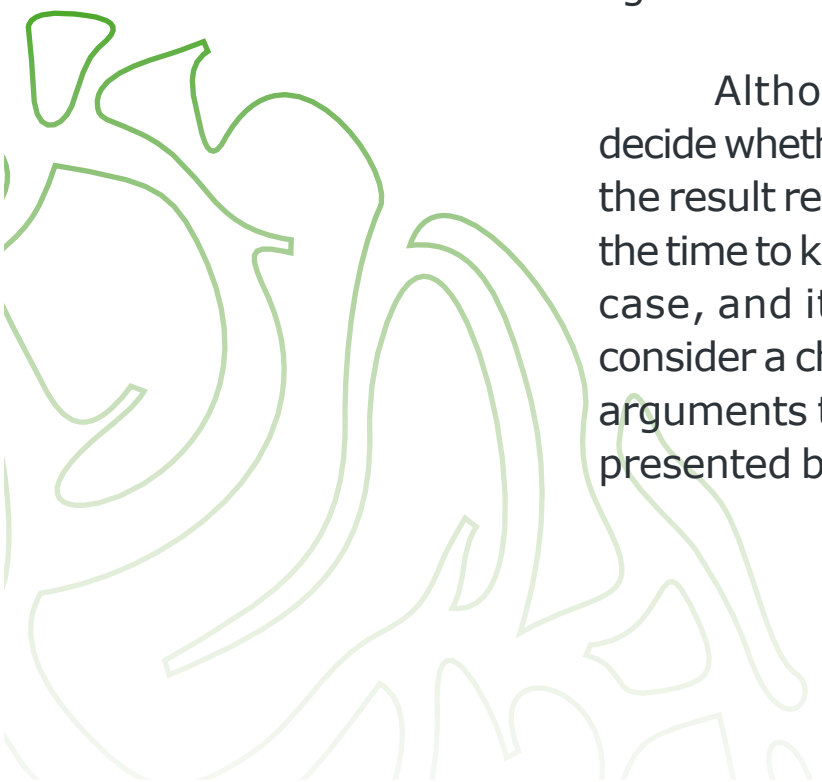
According to our calculations, the completion of a first judicial provision -payment notification- takes 10 minutes of work. If we applied Prometea, the time would be reduced to only 3 minutes. The same applies to a seizure and auction order, which in the digital paradigm requires 31 minutes to be complete, and with Prometea it would take only 6 minutes.[31]

31. To make these forecasts, we took as reference the time that currently takes - with the Electronic Judicial File system "EJE" - in carrying out the provision of payment intimation and the seizure and judicial sale order This system "EJE" - already implemented in the courts of first instance of the Contentious Administrative and Tax Matters jurisdiction of the CABA - is a first advance in the process of reducing paper use, through electronic files, which will allow sharing a common computer system in the three instances of the Justice of the City However, to predict how long it would take using Prometea, the efficiency of its implementation in the penal system was taken as a reference, and based on that percentage, the estimated way how long it would take in these processes with the implementation of Prometea could be calculated.

As you can see, the field of action of the intelligent systems is vast and covers a great number of classic bureaucratic, administrative, judicial, legislative tasks and planning in the design of public policies, among many other activities within the public sector that have a decisive impact on individuals' rights. Artificial Intelligence increases efficiency and improves quality standards for public processes and proceedings, based on a data-based approach, evidence and information patterns that these systems can manage more efficiently.

But also, a draft document created from an automation process or an automatic learning process, can contribute to the equity within administrative and judicial decisions, since in a few seconds you can establish whether a situation is the same or very similar to another, and the system itself can create the model, document, template, form, etc., to adopt the same decision against an analogous case.

Although the public official may then decide whether to modify it, for multiple reasons, the result results in a double benefit: it reduces the time to know whether or not there is a similar case, and it increases the time available to consider a change of criteria or incorporate new arguments to that draft that has already been presented by the system.



5 PROMETEA IN NUMBERS: AI AT THE SERVICE OF JUSTICE

As we have anticipated, Prometea is being applied in the judicial scope since November 2017. As the General Public Prosecutors' Office rules before the Court of Justice of the City of Buenos Aires, it works as a third instance, since the judicial cases have had a decision of two previous instances: one first instance judge and three second instance judges.

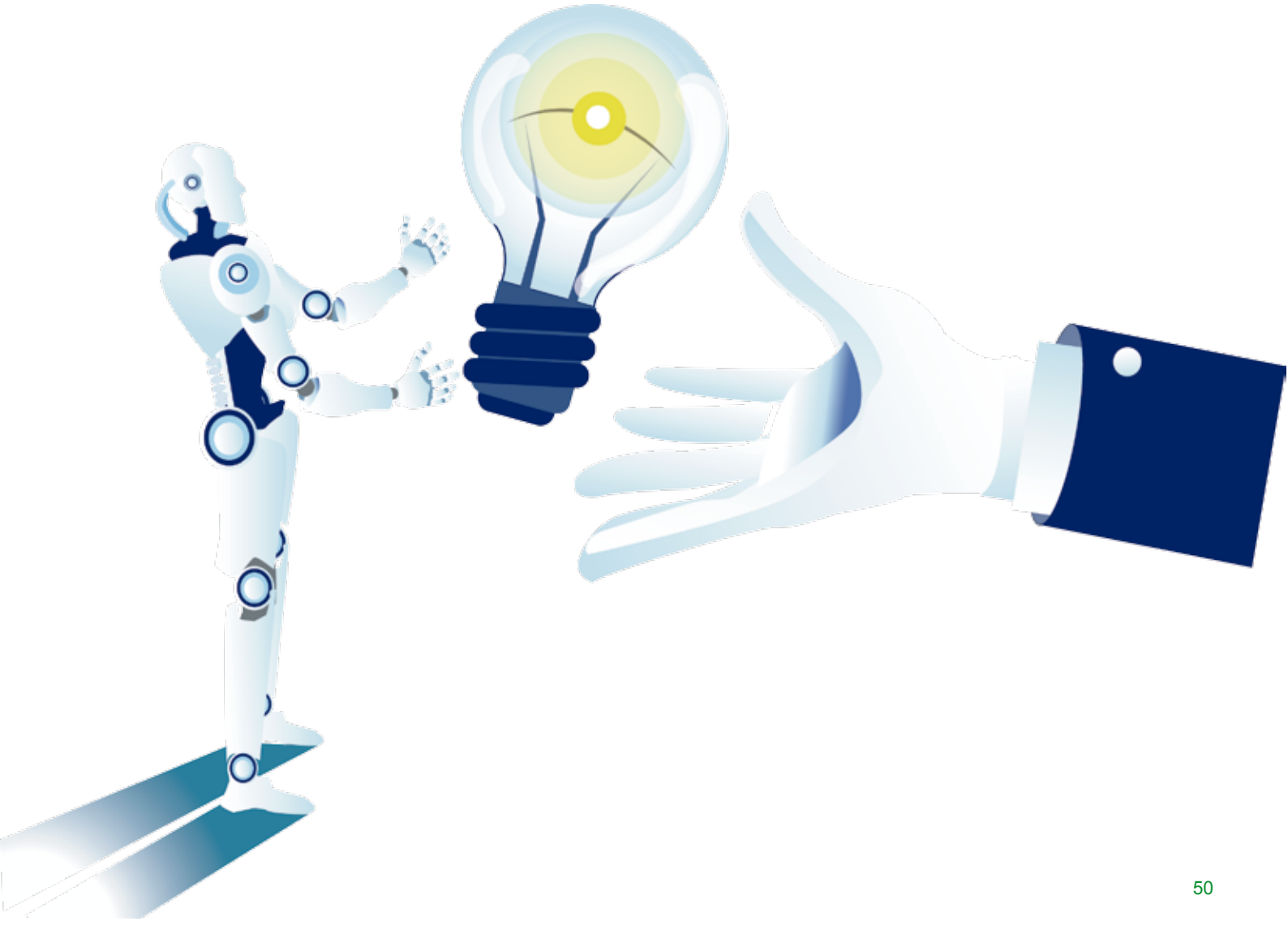
During 2017, 652 rulings were signed in the non-criminal sphere, of which 342 dealt with issues related to the right to housing and to individuals in vulnerable conditions, adults, children, and individuals with disabilities, among others. These individuals, in general, request a subsidy or a housing solution from the Government of the City of Buenos Aires.

As the Court of Justice of the City of Buenos Aires has resolved several thousand cases on this issue, Prometea is able to predict whether situations and facts are configured where a strong jurisprudential tendency already exists. Therefore, at the moment of making a legal opinion, various rights established in the Constitution and in International Treaties are at stake, as well as the principles of equality, legal security and effective judicial protection, within a reasonable time frame.

I propose the following exercise. Let's suppose a file just entered. It is unread and the case number is introduced in Prometea. When it casts a prediction in an average of 20 seconds, it increases the knowledge base so as to improve the Justice Service.

If it provides a certain solution, there is a 96% chance that this case is substantially identical with another case, which means that we should provide the same answer, if we do not want to violate the principle of equality and legal security.

The prediction, in short, helps us to detect this at an unprecedented speed, while allowing us to accelerate the judicial response.



To have a dimension of how this has been achieved, we initially began with a training set of more than 2400 judgments, 1400 prior legal opinions of the Prosecutors' Office and an initial mapping of those judgments grouping them by topic and sub-topic. Then, together with the AI expert, Ignacio Raffa, the system was trained to recognize patterns according to case groups, so that it can do so with new cases.

The dynamics of the predictive function is as follows: from identifying a single case number, Prometea traces the judgments of the previous instances in the digital portals, among more than 300,000 documents, and then compares them with its knowledge base. It then elaborates the prediction and creates the document associated to that prediction. This, in short, refers to associating a new case with a judicial response that has been previously issued in cases of similar and/or identical characteristics.

Beyond the prediction cases, the acceleration and the possibility of creating documents is also seen in other cases where we have applied automation nuances.[32] For example in the criminal field: we have worked together with a Prosecutor's Office of the First Criminal Instance of the City of Buenos Aires. According to the measurements, 172 cases can be generated monthly with the current computer system without automation.

32. Expand in: Corvalán, Juan G., Towards a Public Administration 4.0: digital and based on artificial intelligence. Decree on "Complete Digital Procedure", published in: LA LEY 17/08/2018.

With the use of Prometea that number reached 720 for the same amount of time. Currently, we are working together with the system developers, to evaluate the possibility of making the systems interact with each other, as this could increase productivity from 720 to 6800.[33]

All these functions are linked to rights in particular: housing, health, individuals with disabilities, labor rights, children and adolescents, road safety. Nowadays, there are 151 legal opinions signed by using Prometea solely in the Attorney General's Office, of which 97 of them the system predicted the solution to the case. In the other 54 cases we use Prometea as a virtual assistant that automates tasks related to the deadline control of judicial appeals filed and self-sufficiency controls; this implies analyzing the documentation accompanied by the file, which is essential for its resolution.

But in addition, Prometea works as a kind of "artificial bloodhound" because it can search for rulings, judgments, or open documents or templates that can serve as a base for decision making.

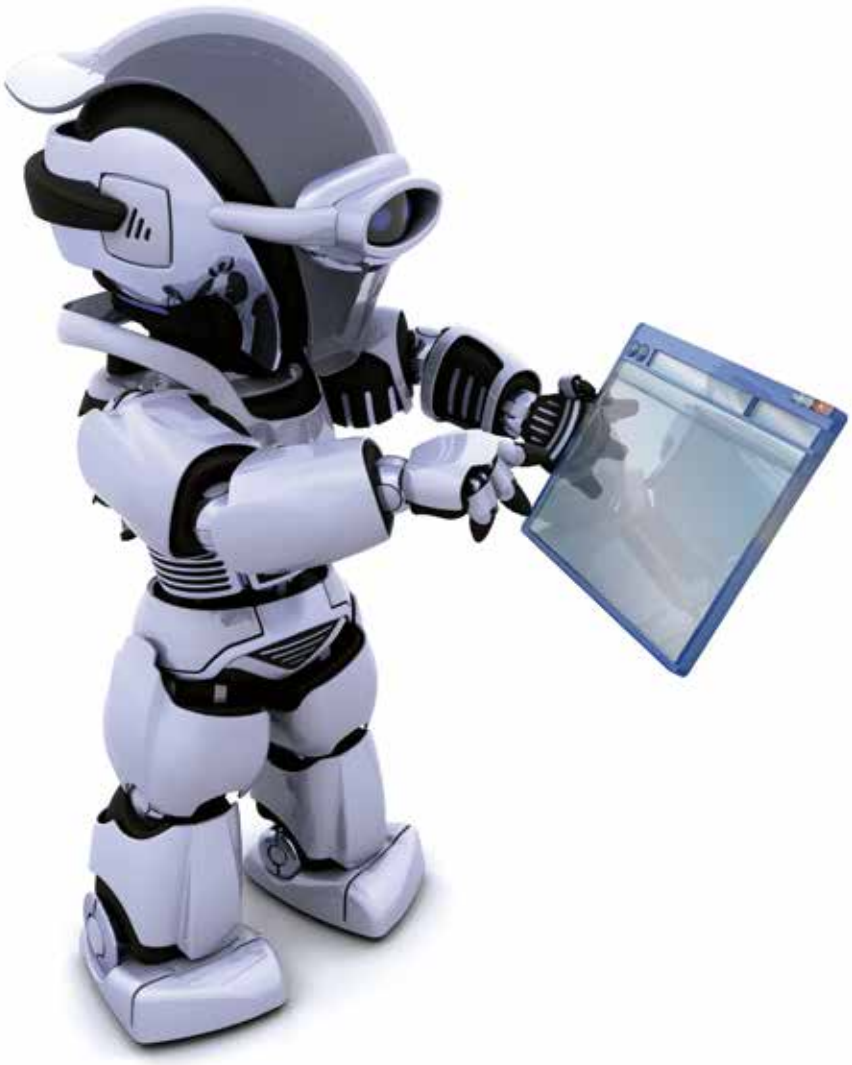
33. See Annex III.

Because of the system's flexibility and adaptability, this can be expanded to more rights and into more situations, since it adapts to the needs, norms and the organization's decision flows, insofar as if there is adequate data governance.

When the preparatory meetings began, on July 2017, we always aimed to rethink the use of new technologies in issues that generate impact in a significant number of individuals.

For example, the tool developed for public procurement, makes it possible to reduce the time that the State allocates to purchasing vaccines or medicine for public hospitals.

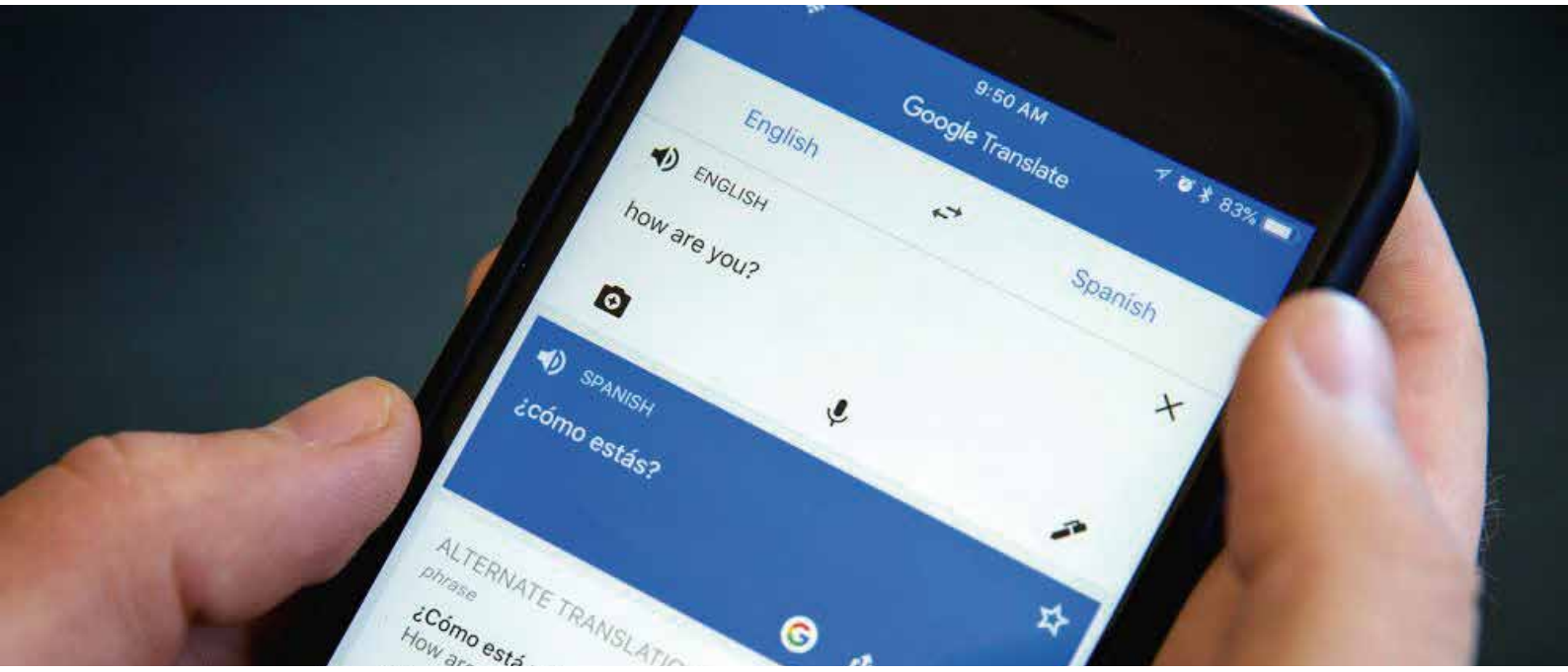
When a purchasing process is exponentially accelerated, there are rights that are mediate or even immediately optimized. This can be portrayed in a simple chair purchase, or a purchase for tables and computers for a first aid room, or the provision of a computer to a child or adolescent within a school setting. Behind the numbers in those deadline reductions and in duration taken to perform a public task, there is always a possibility of simplification and acceleration to improve rights.



6 DATA GOVERNANCE, CONVERSATIONAL AGENTS AND AUTOMATION NUANCES[34]

Information is knowledge, as long as relevant patterns can be found depending on certain objectives. The Google translator, which is used daily by more than 500 million individuals in the world,[35] does not need to know what is the grammatical structure of the different languages to translate text, voice, images or video in real time, from one language to another among different levels of 103 languages.

What the system uses is a neural automatic translation through which it analyzes the composition of the sentences considering different factors. That is, it translates based on information pattern detection and it "self learns" with the millions of queries that people make.



34. On the exposed in this point can be expanded at Corvalán, Juan G., Towards a Public Administration 4.0: digital and based on artificial intelligence. Decree on "Complete Digital Procedure", published in: LA LEY 17/08/2018.
35. See, BBC Mundo, ¿Cuáles son los traductores que compiten con Google Translate y cómo funcionan? (January, 21, 2018), checked on 08/10/2018. https://www.bbc.com/mundo/noticias-42819225

In intelligent systems, whatever their complexity, the handling of information and data is crucial. If we think in terms of data and information that support the activities of public organizations, a significant portion is standardized, while some tasks are excluded because they are complex or very complex.

And if you intend to start an automation process and application of AI basted innovation layers, it is key to develop adequate data governance, from which you can deduce how the data connects with documents that reflect human decision. Here, the impact of AI systems will be projected on multiple tasks that are developed within the administrative organizations (*back office*).

Therefore, in a few seconds or minutes, Artificial Intelligence systems allow to automate tasks and solve issues that previously required multiple steps, procedures and phases.

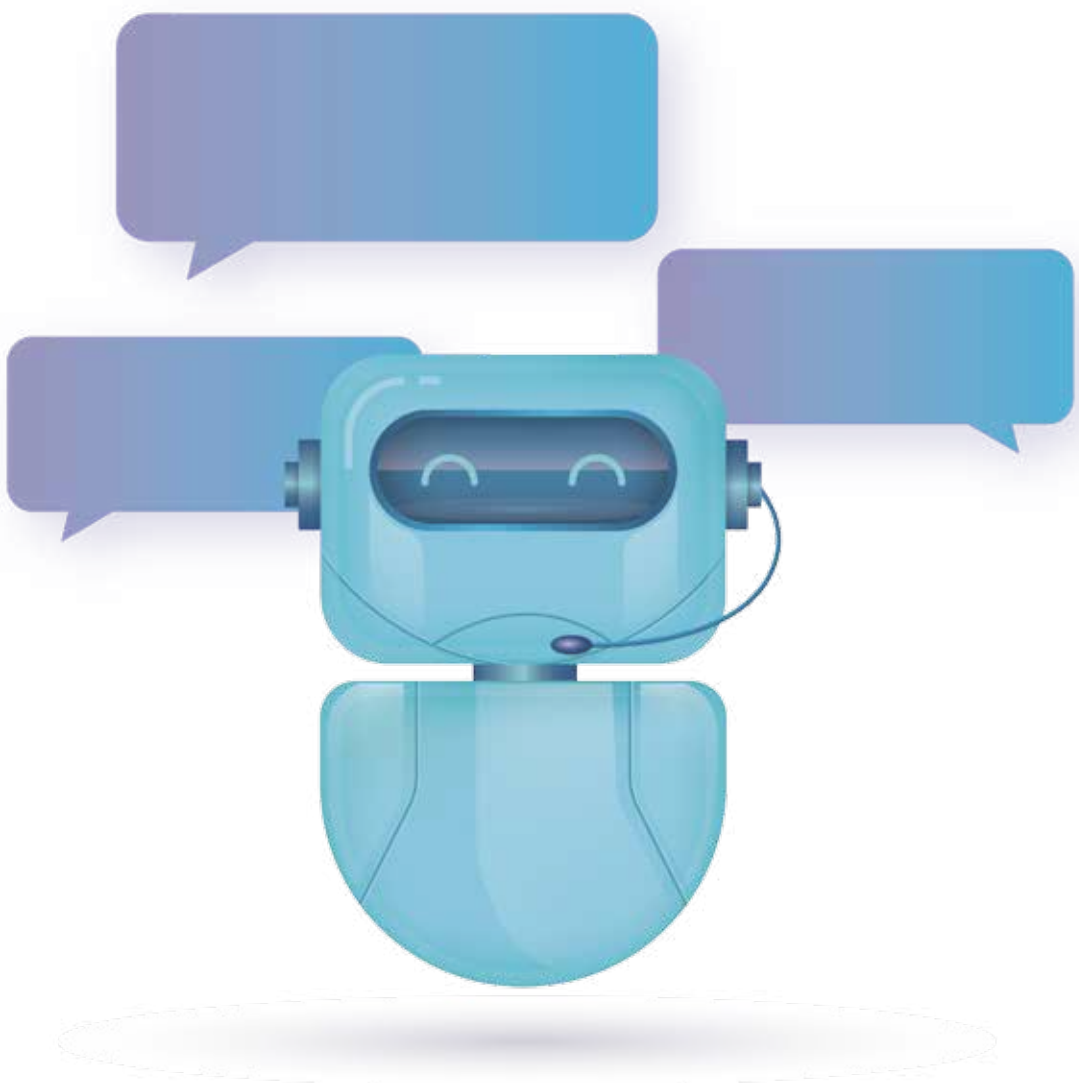
Now, the development and application of Artificial Intelligence systems to optimize organizations presupposes considering two big dimensions that can also be articulated. On one hand, the application of intelligent systems to simplify and facilitate the recognized citizen-State relationship (*world's front office*). On the other, we talk about accelerating and optimizing the internal tasks of organizations (*world's back office*).

The first world covers the bulk of State and citizen interactions. We refer to comments, inquiries, complaints, requests or claims from digital assistants based on voice or chat interaction, so that the citizen does not have to go through countless web pages to try to find the exact information they need, within a digital world that grows exponentially every day. Even, some procedures can be provided entirely through a digital assistant with natural language recognition, the same way in which Apple's Siri works, or through various conversational agents.[36]

36. A chatbot is a conversation agent that interacts with users in a certain domain or in a certain topic with natural language. See, HUANG, Jizhou; ZHOU, Ming; YANG, Dan. Extracting Chatbot Knowledge from Online Discussion Forums. International Joint Conference on Artificial Intelligence, California, 2007, vol. 7, p. 423-428.

This paradigm is known as "intelligence in the interface."[37] Here the user simply interacts and the technology solves the problems through connections with different systems that can respond to the needs of the person from the system's "learning."

Within this 4.0 model, the "conversational agent" concept arises. These conversational agents, also called digital or virtual assistants, are beginning to occupy a central role in the organization 4.0 because they simplify, facilitate and optimize the citizenship-services-State equation.



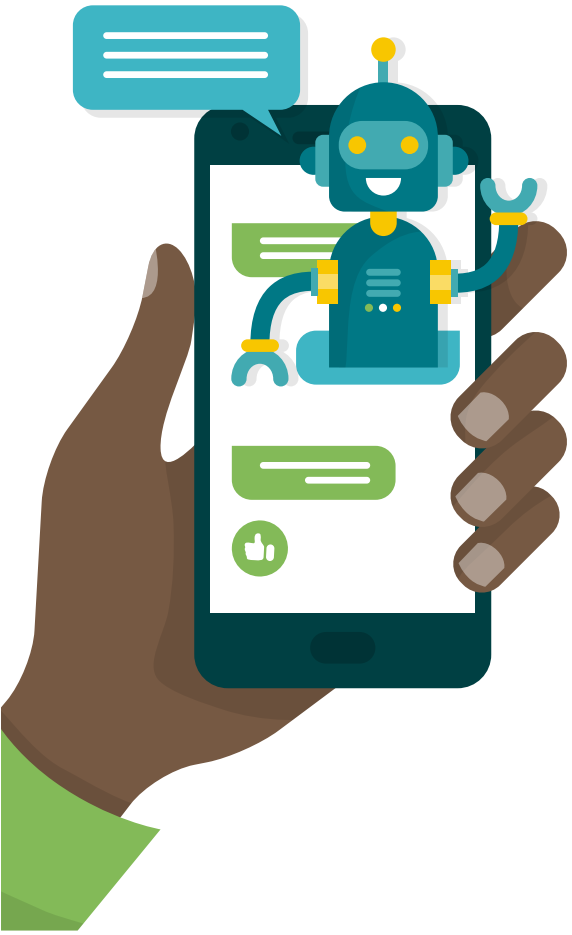
37. The concept "Intelligence in the interface" is worked by Tom Gruber (one of Siri's inventors), and it implies the use of an artificial intelligence capable of accessing our information, our data and the context in which we find ourselves to behave accordingly, facilitating and improving the user's experience. See http://tomgruber.org/writing/semtech08.htm [checked on 27/08/2018].

This conversational agent world can be divided into three groups according to the system's complexity. The first and most basic version is the one that has been used the most in recent years. The system is trained from pre-configured questions, while the same screen offers more frequent questions about certain topics or more usual services, by processing the language to interpret the user's desire through a neural network technique or machine learning that interacts with the interested party through a question directed dialogue.

To see a basic version of these systems in action within the public sector, you can access BA147, the virtual assistant of the Government of the City of Buenos Aires. This conversational agent is presented as a first access point to obtain information on State services, general guidance, soliciting help to make appointments, make requests and, eventually, to evacuate certain doubts regarding public services of the Public Administration of the Autonomous City of Buenos Aires.[38]

The second version of these conversational agents is linked to more advanced Artificial Intelligence systems (deep neural networks). Here, open dialogues can be generated because networks often model conversations as a matter of predicting the next sentence or the possible answer based on the previous conversation.

38. You can interact with the assistant here: http://www.buenosaires.gob.ar [Checked on 27/08/2018].



The third version, the most sophisticated of these conversational agents, is the one recently presented by a team of Microsoft researchers and certain universities. Here, a model of images based dialogue, that combines the recognition of scenes and feelings with a natural language model, is presented. The idea is that the conversational agent can express more "emotion" and to do so, visual information is included to the conversation (different images, objects, scenes and facial expressions).

The system was trained and tested on a million real social network conversations.[39] In this advanced conversational agent model, the questions and answers are contextualized. According to the researchers, the "grounding" of the image generates a significantly more informative, emotional and specific response. Even other research indicates that these agents must be informative and empathic in order to participate in conversations.[40]

39. See, HUBER, Bernd; MCDUFF, Daniel, BROCKETT, Chris; GALLEY, Michel and DOLAN, Bill, "Generación de Diálogo Emocional usando la Imagen-Puesta a Tierra", https://www.microsoft.com/en- us/research/uploads/prod/2018/04/huber2018chi.small_.pdf [checked on 27/08/2018].
40. Expand in: BICKMORE, Timothy and CASELL, Justine. Agentes relacionales: un modelo eimplementación de la construcción de la confianza del usuario. En Actas de la conferencia SIGCHI sobre factores humanos en sistemas informáticos. ACM, ps. 396-403 (2001); BICKMORE, Timothy and PICARD, Rosalind. Establecimiento y mantenimiento de relaciones humano-computadora a largo plazo. Transacciones de ACM en interacción computadora-hombre (TOCHI) 12, 2, ps. 293-327 (2005); CASELL, Justine; BICKMORE, Tim; CAMPBELL, Lee; VILHJÁLMSSON, Hannes y YAN, Hao. Conversación como un marco de sistema: diseño de agentes conversacionales encarnados. Redacción de agentes conversacionales, ps. 29-63 (2000).

Although the use of conversational agents is embryonic or beyond that there is still much to improve the user experience,[41] these assistants will be essential in dealing with information overload scenarios generated by the exponential increase of data and information within the digital world.[42]

Now, the other world in terms of AI system application is linked to the optimization of what happens inside public organizations: the "internal State bureaucracy" (*back office*). Let´s see.

When we talk about automation, it is useful to consider that this process has different nuances depending on multiple variables. To have an idea, we have segmented three automation classes, which in turn, can be included and combined with innovation layers that facilitate and simplify the interaction with the public agent or with the citizen.

41. There are studies that show unsatisfied chatbot users. See, LUGER, Ewa And SELLEN, Abigail. "Como tener un PA realmente malo: el abismo entre la expectativa del usuario y la experiencia de los agentes conversacionales". En Actas de la Conferencia CHI 2016 sobre Factores Humanos en Sistemas Informáticos. ACM, 5286-5297, 2016.

42. We are witnessing a digital world saturated with data that causes the so-called "fatigue syndrome due to excess information", or also known as "information overload" or "excess opacity". Here we see a paradox: the more data and information are "uploaded" to the digital world, the more difficult it is to find and process it by citizens. As Diana Galetta affirms, "opacity due to confusion" can cause, paradoxically, disinformation. See, GALETTA, Diana Urania. "Transparencia y buen gobierno. Evaluación y propuestas a partir de la experiencia en la Unión Europea e Italia", en COTINO HUESO, Lorenzo y BOIX PALOP, Andrés: "El Buen Gobierno y la transparencia, a caballo entre la Ética y el Derecho". ILEMATA, Revista Internacional de Éticas Aplicadas, Año 10 (2018) Nro 27; GALETTA, Diana Urania. "Digitalización y transparencia: ¿un "responsable de la transparencia" y su "asistente digital" como herramientas del buen gobierno del futuro?" (Inédito).

THE FIRST

Complete automation. In this case, the algorithms automatically connect data and information with documents. Here the most useful thing is to use AI systems based on rules or better known as "expert systems."[43] The document is generated without human intervention and can be done in two ways. Either indicating a file number, procedure or name of a person, or it can be designed so that it is not even activated by a human mechanism.

An example of this type of automation would be the following: in the Prosecutor's General Office of the City we have a tool within the Prometea system that allows to detect if a file has been entered with all the necessary documentation to be resolved (copy of the claim, copy of the unconstitutionality appeal, copy of the complaint, etc.).

If the file is incomplete, Prometea assigns a model called "no self-sufficiency", in which it is established that the file does not have the essential documents required to be solved.

43. On these systems please expand on, Méndez, José. T. Palma, Marín Morales, Roque, Inteligencia artificial, Mc Graw Hill, Madrid, 2011, p. 83 y ss.

To do this control, it is now necessary for the person to enter the case number in the system and answer a few questions. That is to say, this document is generated with very reduced and simple human intervention.

However, it would be very easy to train the system to automatically execute this control once a file enters the Prosecutors' Office. Thus, the control would function as a first filter, without the need for human intervention, as long as the documents were entirely digitized and interoperable.

As can be seen, in both cases there is qualified automation established by the existence or absence of human intervention to generate the document.

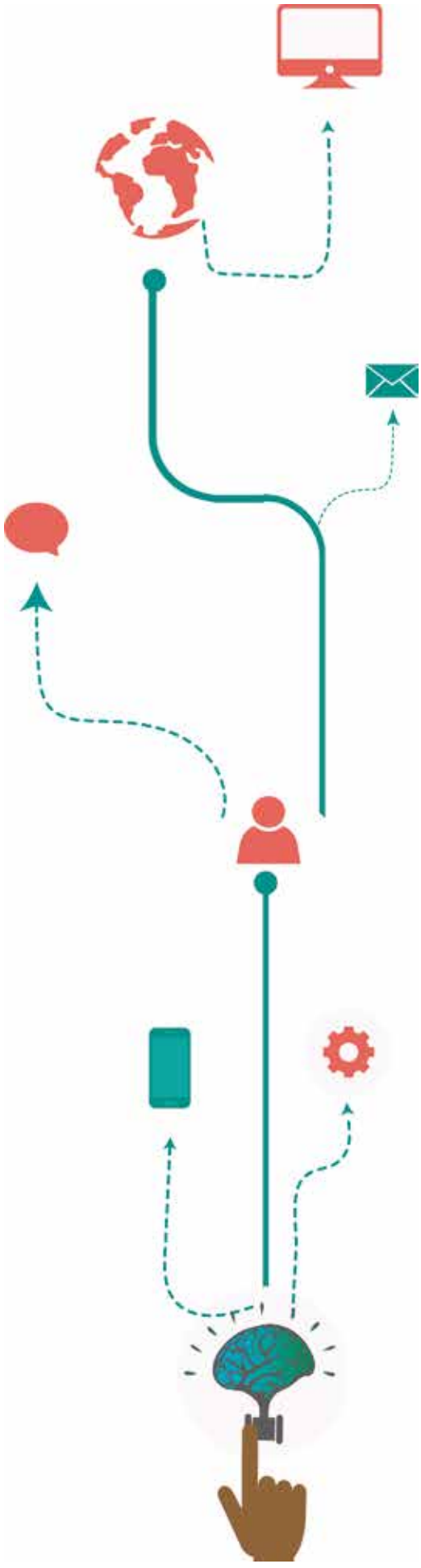
THE SECOND

Automation and reduced human intervention.

In many cases and for different reasons, it is necessary for people to interact with an automated system in order to complete or add value to the creation of a document. This has different justifications. It could happen that parts of a document require constant updates and there is no way to automate that portion.

Or, sometimes, it is easier for the person to intervene through asking questions or interactions that could delay the process in seconds or minutes, but that could be more convenient for the other phases of the procedure or process. When we refer to human intervention, we are not referring to the system's design and training process, but to the one that is needed to generate the document once the procedure or document generation process has been automated.

THE THIRD



Automation plus prediction. Machine learning is an AI technique that, in a very basic and rudimentary explanation, can be conceptualized as follows: One or several algorithms reveal a lot of data in order to establish patterns that are translated into predictions, based on some statistical criteria. This technique, applied to the public sector, could be very useful when there are clear trends, jurisprudence or relatively stable prior administrative activity.

A clear example of this occurs with the application of Prometea's predictive aspect in the scope of the contentious administrative cases of the Prosecutors' Office. There are certain issues in which the judicial responses of the Superior Court of Justice are already standardized.

This happens, for example, in several cases regarding the right to housing or public employment issues. In this type of cases, Prometea can predict the solution of the case within seconds, just by entering the file number into the system. What it does is it "reads" all of the previous actions of the case, available and published online on the public file consultation web pages, where there are more than 300,000 documents available.

Once this is done, it presents a solution according to the circumstances of the case, which in reality is a prediction subject to a success rate. In these cases, Prometea's average score is 96%.

In the case of public procurement, it would be very useful for a system to make a prediction in regards to the number of days a contract can take within a given public entity (for example, 45 to 48 days) in a matter of seconds. Moreover, the system could predict, with a very high success rate, the amount of requests of certain social benefits that could be made by the citizens in the following two months.

But this automatic learning is not only to establish a mere historical statistic about how many days were used to perform similar contracts. In machine learning, there are many other patterns that can be used, which can sometimes include metadata (for example, the price of the dollar, the evolution of inflation, etc.), so that the prediction is based on multiple aspects and becomes more efficient.[44]

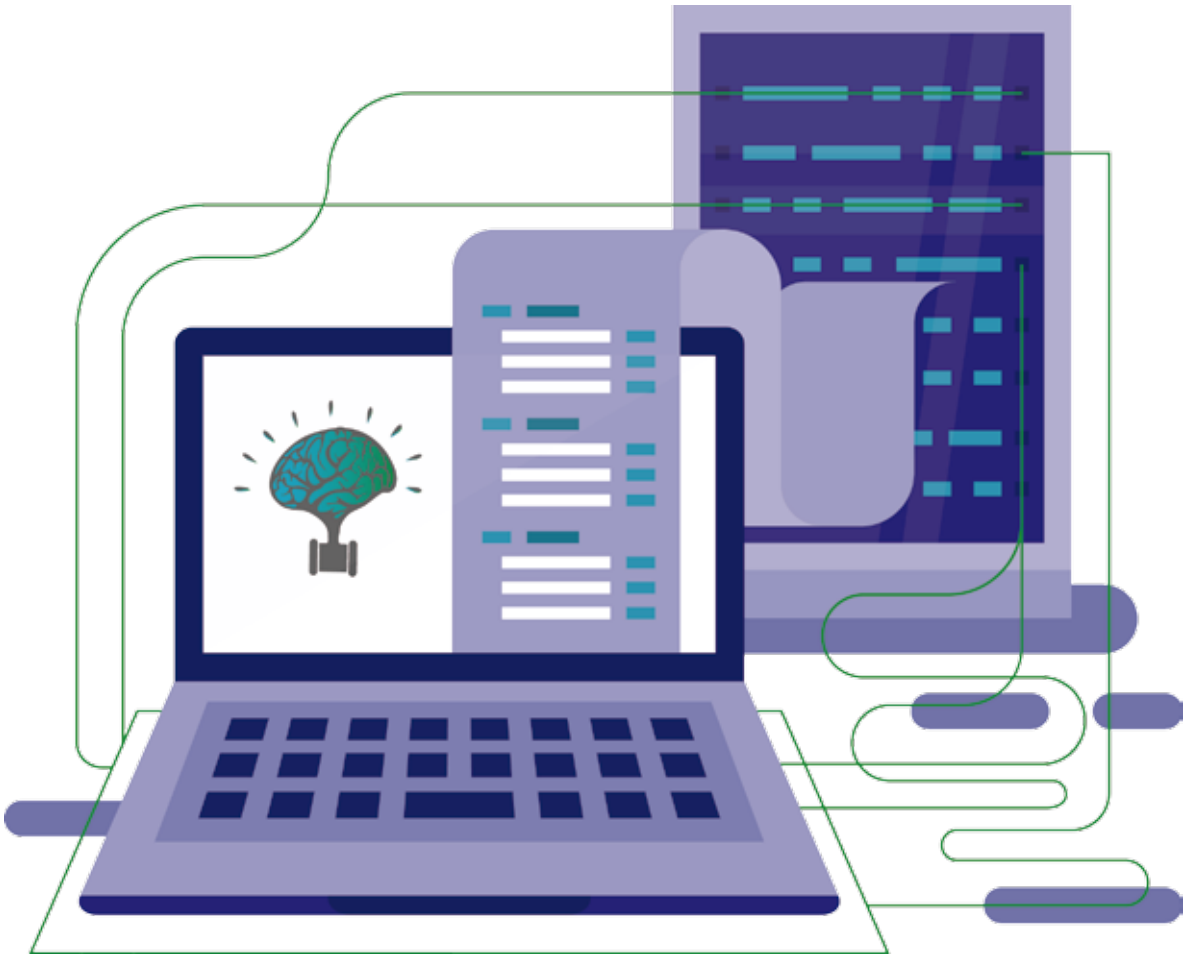
44. In our opinion, the predictive activity of AI systems, besides generating documents and assisting public agents, will be the most important tool for designing and executing public policies in the near future.

Now, the levels of automation that we present with didactic aims may be traversed by innovation layers that simplify, facilitate and optimize the tasks. Among others, we talked about:

I) developing a single-screen model that reduces clicks and window opening;

II) using intelligence in the interface to "talk" to the system or chat withm a natural language recognizer;

III) train the AI so that it becomes an "artificial bloodhound"; for example, if I ask the system to "bring" a law, it searches, finds and opens the document in a couple of seconds.



But in addition, it is possible to generate more sophisticated automated search tools, which create reports and add value to a specific task. This is the case, for example, of the price control tool that we have recently developed for Public Procurement. This function presents an unprecedented efficiency.

Basically, in a few seconds you can make an accurate diagnosis of the evolution of public and private prices on the goods or services that you wish to acquire through a public bid. Prometea establishes averages of public and private prices as well as a comparison between both by unit price.

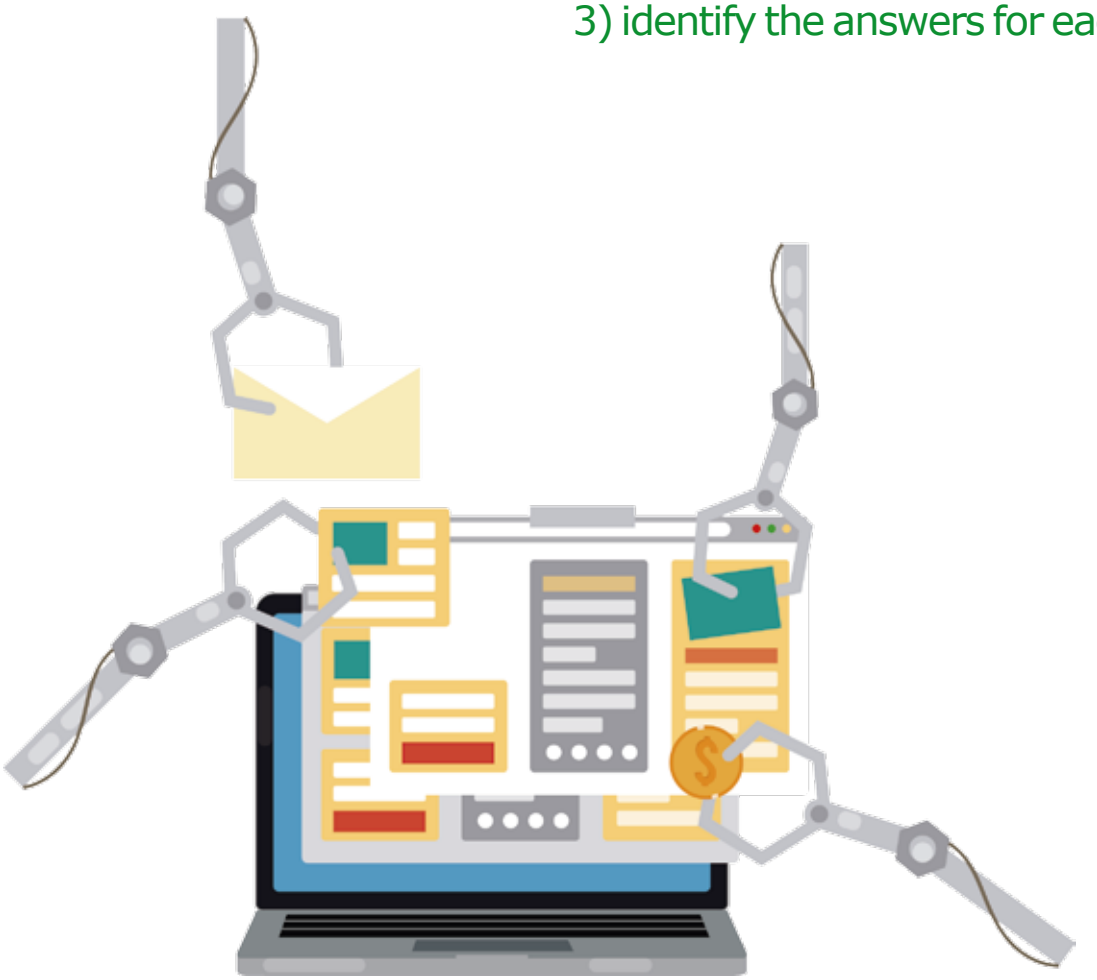
In addition, it prepares comparisons in relation to inflation, the dollar, it makes reports, and downloads files in which it has searched for information, prepared comparative graphs, and extracted technical characteristics of already awarded products, among other functions. All this, in less than 5 seconds and from consulting various internet websites were awarded bids or similar issues related to goods and services are published.

But all these layers and innovation nuances that we have highlighted, in its vast majority, can be achieved from a data governance that presupposes ordering, structuring, segmenting, systematizing and correlating data and information with possible questions, answers and documents that are the product of certain structured steps in "decision trees" or flows. These trees are diagrams of logical constructions, based on rules, which represent and categorize a series of conditions that occur successively, for the resolution of a problem. To perform them correctly, it is necessary to travel through three phases:

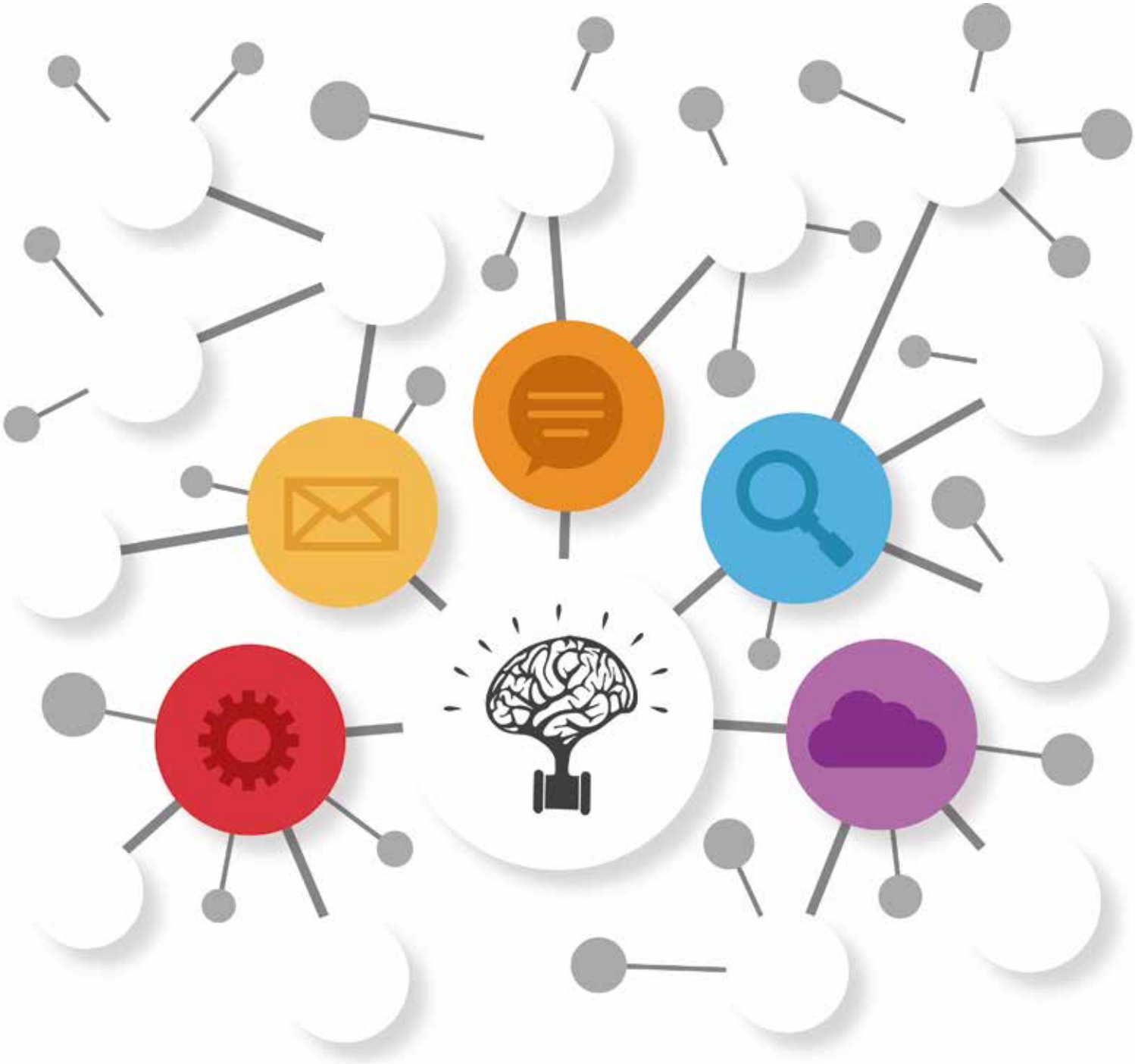
1) identify the theme;

2) identify the different factual variables within the theme;

3) identify the answers for each factual variable.



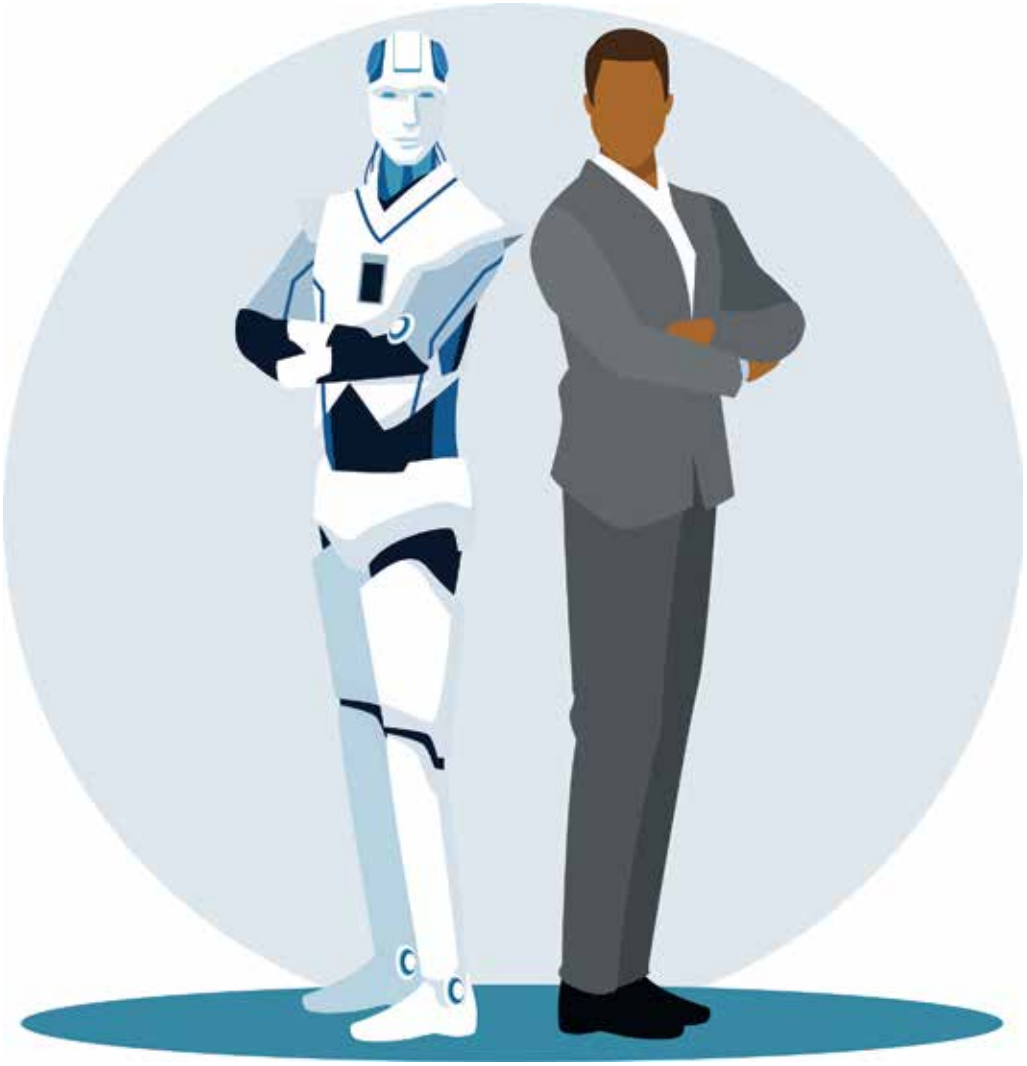
In a decision tree, all the possible scenarios before a certain assumption will be outlined. An example of a closed-loop flow decision tree is the tree that we use the Prosecutors' Office as the bases for the "no self-sufficiency" models mentioned above.



The control begins with the question of whether the user has the main file in his possession. If you have it, there is nothing more to ask, you can analyze the file without problem. If you don't have it, the next question will be whether the Superior Court of Justice instructed the party to accompany copies or not. In the case in which the Court had not intimated, it would require to precede to, in principle, the in-depth substantive analysis of the matter. But if, on the contrary, the Court intimidated for copies presentation, other alternatives arise: if, once the petitioner had intimated, the appellant requested an extension or not and subsequently accompanied or not those copies.

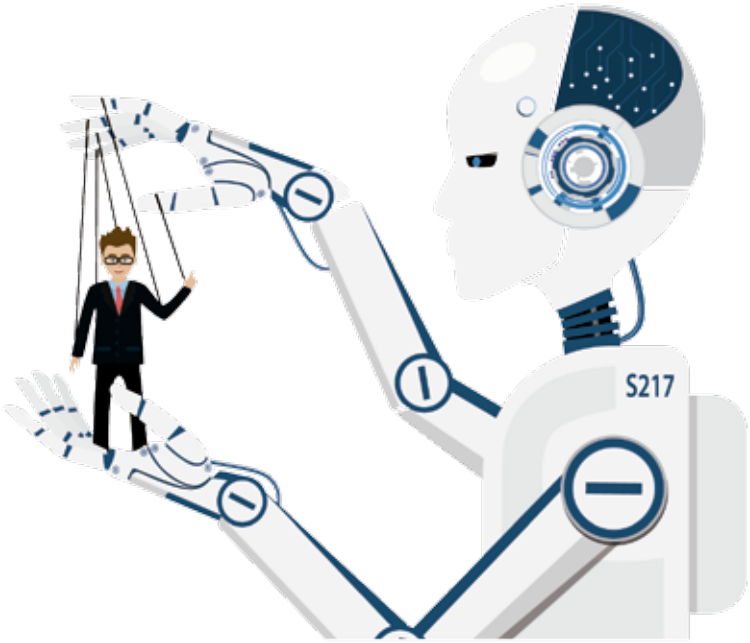
As the questions are responded, possible answers are discarded, until finding the correct one, that is, with the one appropriate to the particular factual situation. Once that happens, the entire document is generated automatically. As can be seen, data governance is the oxygen of Artificial Intelligence system application to automate large portions of routine, repetitive and standardized tasks that, in the end, usually translate into a bureaucracy that harms citizen rights and violates reasonable deadlines.

Now, if it is held that all this is difficult or impossible to apply, we believe that in part it is due to the lack of knowledge about the possibilities of implementation and the inaccurate belief that these systems are very expensive. If we analyze the expense that the State currently makes to provide services in a classical manner (buildings, service tables, office maintenance, paper, etc.), without a doubt, the classical bureaucracy far exceeds the cost that could be demanded by certain Artificial Intelligence systems. For these and many other reasons, access to Artificial Intelligence will be one of the most important rights in the coming years.



7 AUTOMATION THAT HUMANIZES

From the General Prosecutor's Office and within the scope of the Innovation and Artificial Intelligence Laboratory that has been created within the Law School of the University of Buenos Aires, we have focused on the impact of Artificial Intelligence and robotics on employment.[45] Although it is logical that in the face of such disruptive innovations the first perspective is often discouraging, it is important to analyze the phenomenon in greater depth since the fact that certain tasks are being automatized does not necessarily mean that human work is being replaced by machines. Moreover, the adoption of new technologies seems to come along with a new division of labor between the both.[46]



45. What is exposed in this section, is a synthesis of the following issues: "Technological unemployment? The impact of artificial intelligence and Robotics at work ", Cevasco, Luis J. - Corvalán, Juan G., LA LEY 11/07/2018, 11/07/2018, 1, available online at: AR/DOC/1329/2018

46. ORGANIZACIÓN INTERNACIONAL DEL TRABAJO, "Technological changes and work in the future: How to get technology to benefit everyone. The centenary initiative on the future of work ", nota informativa 1 (2016), p. 5 [Online] https://bit. ly/2It6KBo [checked on: 17/05/2018]; ARNTZ, M. -GREGORY, T. - ZIERAHN, U., "The Risk of Automation for Jobs in OECD countries: A comparative Analysis", OECD Social, Employment and Migration Working Papers nro. 189, OECD Publishing, Paris (2016), p. 8 [Online] https://bit.ly/2INh1Ml [Checked on: 17/05/2018]; ATKINSON, R. D., "It's Going to Kill Us!" and Other Myths About the Future of Artificial Intelligence", Information Technology & Innovation Foundation (2016), p. 12 [En línea] https://bit.ly/2KNkF65 [Checked on: 22/05/2018].

In an extreme synthesis, one of the keys to analyzing the impact of new technologies on employment is linked to the distinction between professions and tasks/activities that integrate them. The professions themselves, at least in the short term, are not automated, but certain tasks that make up trades or jobs in general can be based on the use of AI systems. In figures: about 60% of occupations in the global labor market have at least 30% of their activities that are automatable with currently proven technologies.[47] But to better understand this phenomenon and its impact on public organizations, it is useful to consider the following aspects. Let's see.

47. McKINSEY GLOBAL INSTITUTE, "A Future that Works: Automation, Employment, and Productivity", McKinsey Global Institute, New York (2017), p. 5.; see also: MCKINSEY GLOBAL INSTITUTE (2017), "Un futuro que funciona: Automatización, Empleo y Productividad. Executive Summary" [Online] https://mck.co/2k2PgS9 [Checked on: 10/08/2018].

If we look back in time, the industrial revolutions caused a significant concentration of industrial labor in large plants, imposing rigid formulas in the work schedule. From the development of electrical energy (second industrial revolution), the possibilities in relation to work were improved; basically, tasks could be executed beyond what natural light previously permitted.

During much of the nineteenth century working hours were strenuous and, in many cases, manifestly incompatible with current western legal systems. For example, the working day began at five-thirty in the morning and lasted until nine at night and, within that fifteen-hour period, it was legal to employ minors between the ages of 13 and 18 for up to twelve hours, and between 9 and 13 years for an eight hour shift.[48]

48. MARX, K. (1872-1873) El capital. El proceso de producción del capital, Tomo I/Vol. 1, Libro primero, Buenos Aires: Siglo Veintiuno Editores, 2010, pp. 336-337.

In the first part of the twentieth century (1930) John Maynard Keynes spoke of an illness that struck people. He was referring to machines replacing humans; more specifically, to the negative impact that technological changes would have on employment and used the term "technological unemployment" to refer to it as a disease. Even this economist believed that with the technological advances, people would tend to work less and, in that logic, predicted a working day of around 3 hours.[49]

Just as Keynes envisioned a dark future with a fewer hour load, in the second decade of this 21st century, many authors and international organizations, on one hand, have warned about possible technological unemployment and, on the other, have warned that many professions and activities could disappear (to a lesser extent, reference is also made to the fact that other, totally new jobs would emerge). Even recent publications speak of a "creative destruction" as a product of innovation. It means that, it is predicted that old fashioned institutions, just as much as uncompetitive business firms will be swept aside by radical technological change.[50]

49. See, KEYNES, J. M. (1930) "Economic Possibilities for our Grandchildren", Essays of Persuasion, New York: W. W. Norton & Co., 1963, pp. 358-373.
50. See, KEYNES, J. M. (1930) "Economic Possibilities for our Grandchildren", Essays of Persuasion, New York: W. W. Norton & Co., 1963, pp. 358-373.

Although it is logical that in the face of such disruptive innovations, the first perspective tends to be discouraging, it is important to analyze the phenomenon in greater depth:

In the first place, predicting the impact of automation on employment it is a very complex task. Exponential technology opens unthinkable doors and in addition, there are many indirect issues at stake.

The development of the car is an interesting case. Even though car mass production unemployed the people who pulled the carriages, instead, many positions were also created in tire manufacturing.

The decrease of the horse population also contributed to agricultural depression, which affected the entire American economy between 1920 and 1930. About a quarter of the agriculture was used to feed horses, so the horse decline reduced the demand for hay and that is why farmers had to migrate to other crops. However, simultaneously another indirect effect of the creation of the automobile was generated: the industry's expansion into sectors that, at first glance, seemed distant from the cars.

For example, the emergence of consumption credits, since people needed to obtain loans in order to be able to buy cars. In this way, a new market was born in financial services. [51]

Second, it is very useful to review what has happened in recent years. This is a starting point to evaluate, in figures, successful predictions made at the beginning of this decade. Although we do not ignore certain risks that could emerge in the medium and long term, this work will create distance it self from many publications that envision a dark future where robots will leave us unemployed. It is too early to believe that the net effects of disruptive technologies within employment creation will be negative.[52]

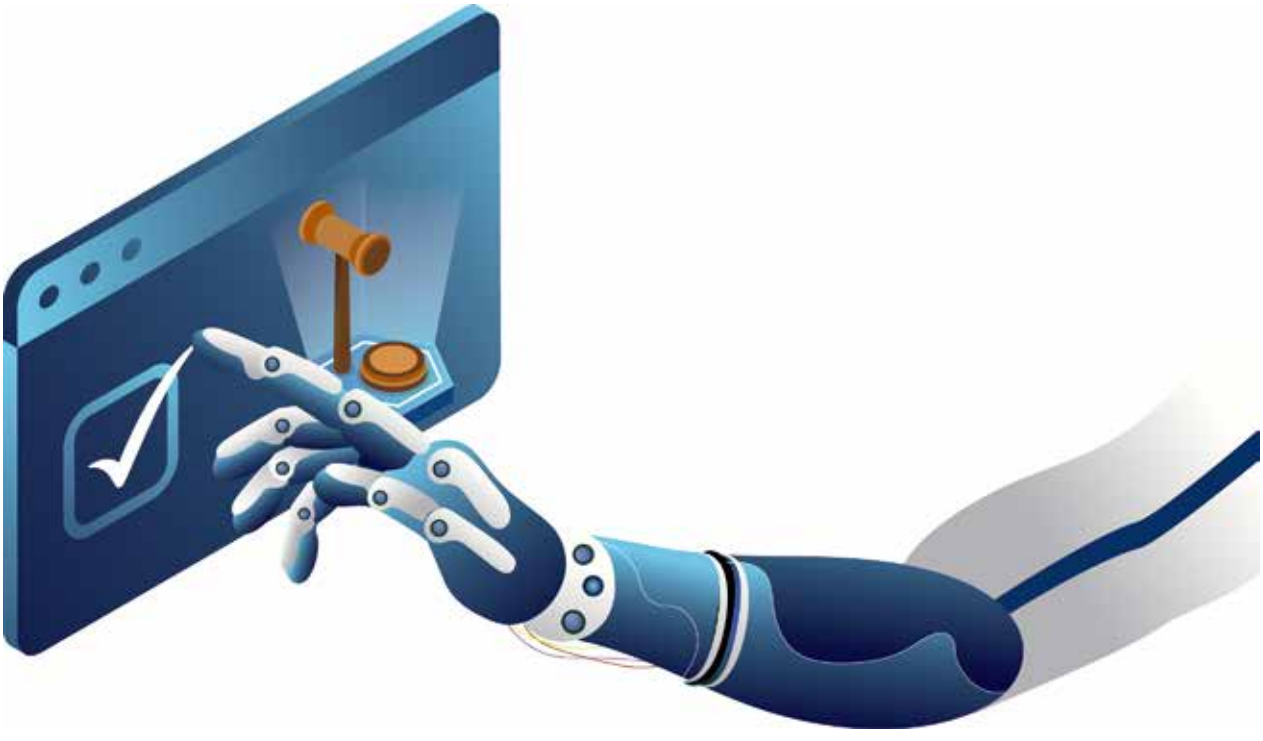
51. MICROSOFT (2018), The future computed. Artificial Intelligence and its role in society, Redmond, Washington: Microsoft Corporation, pp. 11-12.
52. LEWIS, K., Dehyping Robotics and Artificial Intelligence, 21/03/2017 [Online] https://ibm.co/2ILEIWl [Checked on: 22/03/2018]; DEAKIN, S.; MARKOU, C., Op. cit.

8 WORK VS TASKS

One of the keys to analyze the impact of new technologies in the workplace is linked to an important distinction: professions or jobs, on one hand, and the tasks/activities that integrate them on the other. In general, the trades and professions performed by people are made up of multiple and diverse tasks, which at the same time require distinctions in regards to the cognitive abilities that are behind each one. In addition, the development of Artificial Intelligence and robotics depends on the type of task that is performed and how it is interconnected with others. Here we can talk about automation degrees.

For example, in the legal sphere, it is feasible to apply AI systems to automate some legal tasks that link judges with lawyers. This is what can be done from training an AI system to enter a website where simple resolutions of a judge are loaded so as to search, read and then link them with pre-configured legal documents, which can be signed automatically (digital signature) so that the system can present in Court digitally.[53]

This example, which is not yet anchored in most of the countries of our region, shows how a task within the legal field can be automated, which does not mean that the lawyer's profession is automated in general. It is very important to consider this aspect, because many predictions in terms of employment have been analyzed without making this distinction.



53. In Justice, certain decisions promote the judicial process but do not resolve the substance of what is discussed (for example, sentences). We refer to those decisions that require basic cognitive skills, such as corroborating that a person is who they say they are and that, then, that same person can authorize another so that they can consult a file. In legal terms, provided by the courts that provide the following: be aware of the conferred authorization; this judicial office is preceded by a document that a lawyer presents for the purpose of authorizing a certain person.

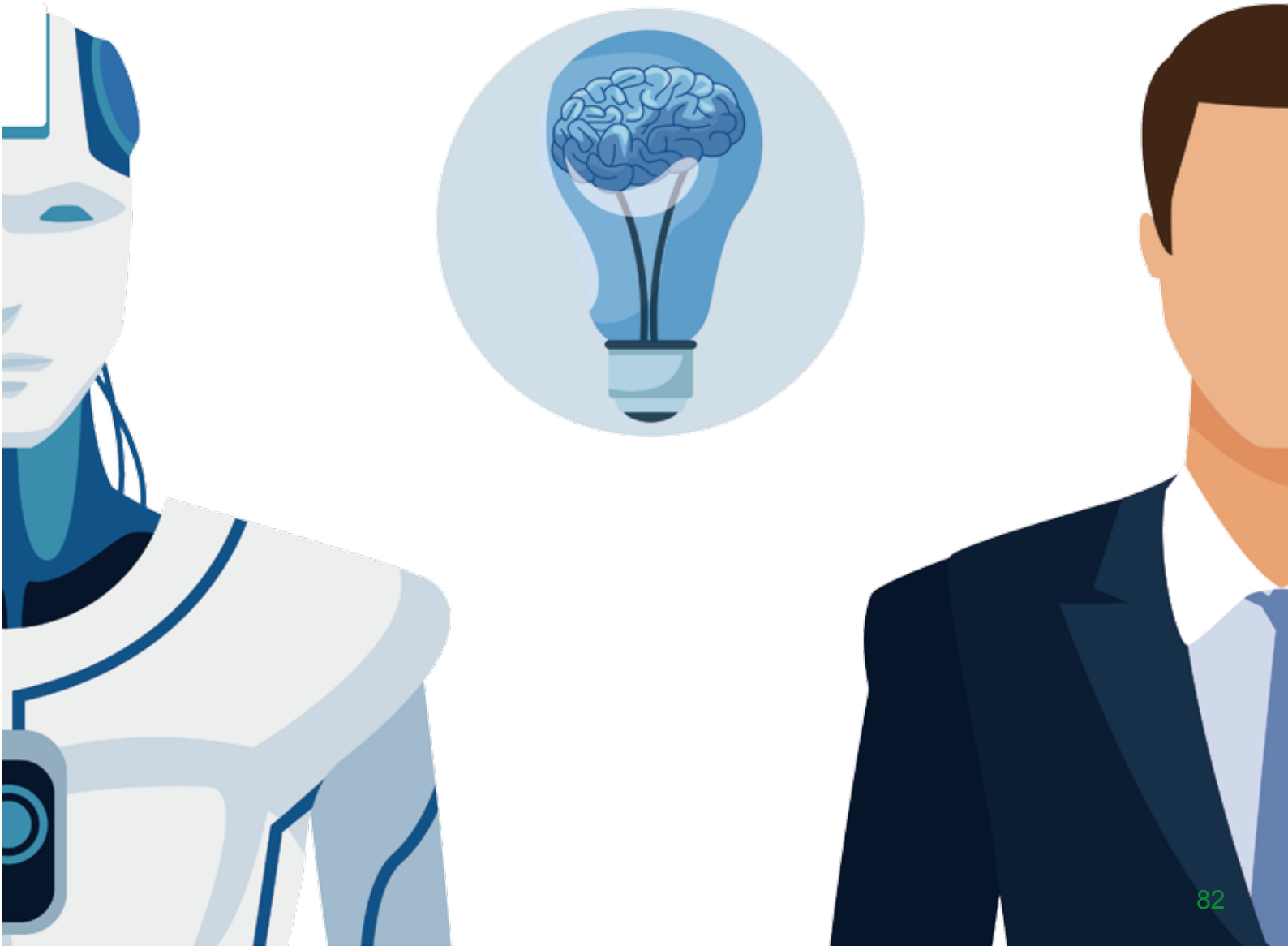
However, from the example we offered, there is a general tendency that is demonstrated in most of the studies and, in particular, in relation to what we have shown in the Public Prosecutors' Office of the Autonomous City of Buenos Aires.

The most routine, repetitive or mechanical tasks are and will tend to be the first to be automated. And although this is not new (the computer and the word processor replaced the mechanical and repetitive tasks of the typewriter), the truth is that in this case the phenomenon occurs exponentially.

The automation product of the massive application of AI systems will play a central role in simplify and improving any human activity involving data, information and information patterns.

But all this does not mean that there are no difficulties and challenges, mainly in the adaptation, transformation and relocation of people with respect to automated tasks and new tasks or jobs that are created. However, in the short or medium term, we believe that AI will be presented as an exponential technology that will enhance human intelligence.

AI has the potential to humanize the tasks of public workers. Thus by reducing or eliminating human activity in routine or mechanical tasks, human potential can be directed to cases of greater complexity, and in that way empower public organizations to increase the effectiveness of service provision.



In other words, the task automation is shown as a work complement that allows increasing people's capacity in executing complex activities that cannot be performed by AI or robotic systems. As affirmed by the European Union, those human workers who are replaced or enhanced by robots, have the opportunity of focusing on tasks through which they acquired creative and social skills where they can make a greater impact on their performance.[54]

54. COMISIÓN EUROPEA, Analysis of the impact of robotic systems on employment in the European Union, Luxemburgo, Publications Office of the European Union, p. 30 [En línea] https://bit.ly/2rQJ96S [Consulta: 17/05/2018].

However, it will not be easy to carry out a quick transition where the AI systems take charge of simple, mechanical or repetitive tasks in the short term. Among several obstacles, there are two important factors to understand the reasons why AI systems will not advance so fast on the activities or tasks that make up jobs or works with a significant bureaucratic load.

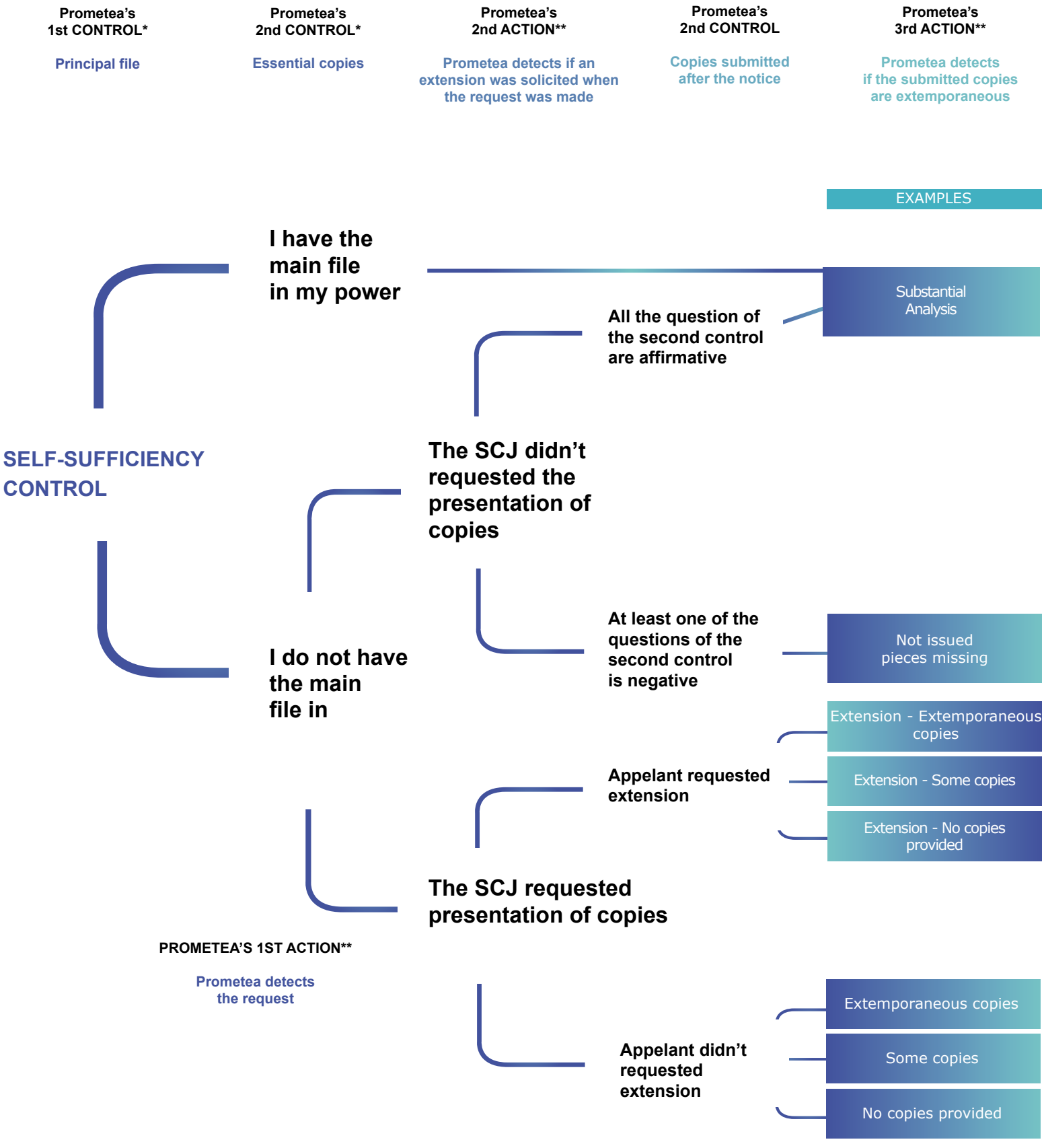
We reference the impossibility of data and information being organized and digitally available. The challenge that many countries in Latin America and the Caribbean are facing is linked to the capacity to store and preserve data and information and at the same time, for such information to be open and in interoperable formats within the digital spheres. This is the first step for Artificial Intelligence systems to transform the digital bureaucracy into intelligent bureaucracy.

In addition, the IA experts now require specialists in specific tasks (radiography analysts, jurisprudence and legal decision processes experts, etc.), so with them they can train those systems to recognize the information patterns, which will be important to help simplify and improve those tasks. It is essential to work with an adequate environment of "Data Governance" that must be carried out by the people who work in an organization.

For example, to dictate in judicial cases, it is necessary to perform a specific task that has to do with executing a formal control to the presentations made by the parties in a judicial process. This verification considers several hypotheses that can be outlined in a "decision tree," which the AI system can then use to carry out this task, as long as the data and information are digital and interoperable.[55]

An example of data governance and decision-making patterns is expressed in the following decision tree made by the team of the General Prosecutors' Office:

55. Machine intelligence, in the architecture of the self-sufficiency control process. This process consists on controlling legal documents that meet certain formal requirements imposed by the law



*PROMETEA CONTROL: these are the questions that it asks the user and according to the answer, it then selects the corresponding tree branch to continue.
**PROMETEA ACTION: these is the content detected by the system itself and according to it, the system will theb select the corresponding tree branch to continue.

In conclusion, governing data and information digitally available in open and interoperable formats, is the key to the development of AI systems. However, there are other important issues to consider analyzing the impact on the work of public organizations.

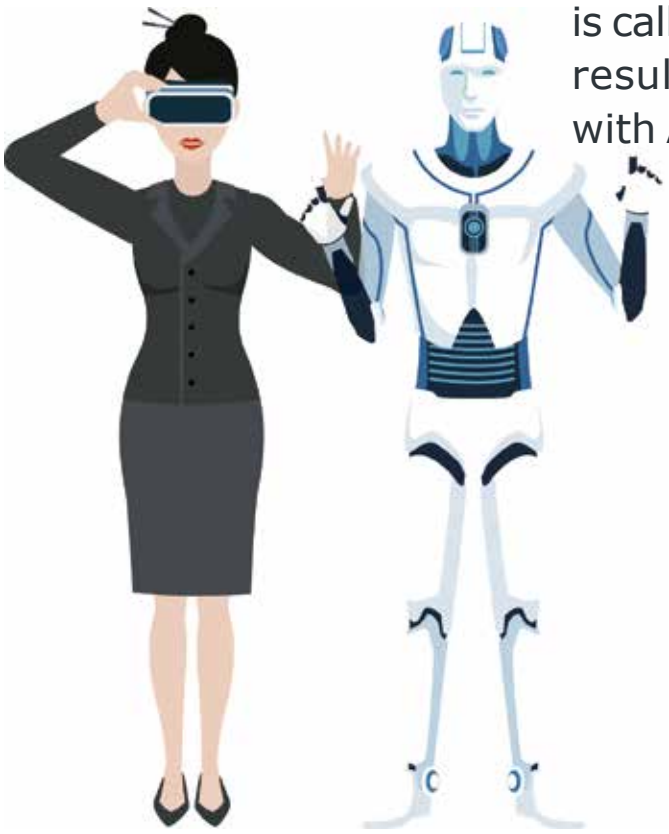
FIRST

Humans are required to work full-time and dedicate themselves to work along with programming experts.

SECOND

This integration process between the organization's employee and the AI expert is dynamic and continuous, because it is essential to integrate tasks continuously or turning the AI system more and more intelligent, since it is not a simple and closed software that people learn to use and that is later updated by the programmers.

That means that the most successful Artificial Intelligence systems require many people so that together with human intelligence, they can improve everything that surrounds one or several specific activities. This phenomenon is called "hybrid intelligence paradigm," which results from combining human intelligence with Artificial Intelligence.



Finally, another aspect is given by something we discovered when using Prometea. By replacing or reducing the time required by the simplest judicial cases (involving routine or mechanical tasks), it tends to increase the workload available to allocate more time to more complex cases that require greater dedication and demand greater cognitive skills.

Since we now have more time to analyze them, we discovered many nuances that demand a greater effort and creativity. And moreover, now, other activities or tasks that previously were not taken into account due to the work volume that occurs within public organizations (also in large private companies) can be addressed.

In addition, to train Prometea six people worked full-time (and currently continue to do so) dedicating along with Artificial Intelligence experts. We can say that Prometea has "employed" people in the scope of the Prosecutors' Office.

And although these people were already working on other tasks, they reduced the mechanical activities of all the members of the work team and, at the same time, they exponentially decreased the rated error linked to the formal review of issues that are associated with the creation of legal documents (spelling and grammatical errors).

Even the six people who were devoted to solve these types of cases, now have more time to perform other more complex activities that require greater cognitive abilities. This, at the same time, made it possible to allocate human resources to a more global task that will later impact on the specific ones. For example, some of these people now concentrate a portion of their time in the task of systematizing the recommendations of the United Nations and the Organization of American States in the field of information and communication technologies (ICT).

In short, Prometea's implementation, far from leaving people without their jobs, simplified bureaucracy, streamlined response times of the Justice system, incorporated new operators and also allowed to develop delayed tasks or have more time and resources for other activities that are much more complex.

9 RISKS AND CHALLENGES IN THE APPLICATION OF ARTIFICIAL INTELLIGENCE BY PUBLIC ORGANIZATIONS[56]

All technological innovation produces benefits but also risks and damages. In the short term, there are multiple challenges to ensure the compatibility of Artificial Intelligence development with the domestic law of the States and with current international law. Smart algorithms are used to capture a large amount of our data, to recommend what to look for on the Internet, where to go, what to do, how to get to a specific place faster, to diagnose diseases, to prevent them, etc.

Among other paradoxes we realized that in certain cases, Artificial Intelligence cannot offer a detailed explanation of how to get to a certain result or what factors it considers in order to reach a certain result. That means, that the process of how the algorithm evaluates the data and the information it processes cannot be established: the so called "black box" phenomenon.[57]

56. The above mentioned has been published in: Corvalán, Juan G., Towards a Public Administration 4.0: digital and based on artificial intelligence. Decree on "Complete Digital Procedure", published in: LA LEY 17/08/2018.
57. It is called a "black box" system to the computational tool in which one understands the data entered and the results, but does not understand the underlying procedure. Here the code is inscrutable because the program "evolves" and humans can not understand the process that programming followed to achieve a certain solution. See, BARRAT, James. Our final invention. Mexico: Paidós, 2014. p. 92

Here we find a first and important warning: we believe that the State cannot use a black box system to solve issues that impact on the fundamental rights of individuals. The justification is simple: The State must be able to justify, motivate and explain its decisions.

And since it is technically impossible to outline a black box AI system (based on artificial neural networks), for now it is not possible for a State to authorize its use when it comes to influencing the fundamental rights of people.

Another essential aspect is given by ensuring human intervention against the decisions or predictions of intelligent algorithms. As we maintained in the work published in the studies section of the French State Council,[58] as a rule, AI systems must respect the following principles:[59]

Algorithmic transparency: Artificial Intelligence must be transparent in its decisions, which means that an "understandable explanation" about the criteria on which it is based can be inferred or deduced to arrive at a certain conclusion, suggestion or result.

In addition, when rights such as health, life, freedom, privacy, freedom of expression, etc. are at stake, it is important that the intermediate results of the system are validated. This means that the reasoning or the reasoning structures that follow themselves until arriving at decisions or predictions, must suppress a process of three major phases:

Verification

Validation

Evaluation[60]

58. See, CORVALÁN, Juan Gustavo, L'algorithme et les droits de l'Homme, en CONSEIL D'ÉTAT, Étude annuelle 2017 Puissance publique et plateformes numériques : accompagner l'«ubérisation». Available at: http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/174000714.pdf [checked on: 28/08/2018].
59. More on CORVALÁN, Juan Gustavo, La primera inteligencia artificial predictiva al servicio de la Justicia: Prometea, La Ley 29/09/17.
60. More on Palma Méndez, José T., Marín Morales, Roque, Inteligencia artificial, ps. 891 to 935.

Algorithmic traceability: An AI based on a human rights approach must be able to explain, step by step, the technical operations it makes from the beginning to the end of a given process. Traceability is the "ability to trace the history, application or location of an entity through registered indications." [61] As a rule, the intelligibility and traceability of the decision-making process of intelligent algorithms must be guaranteed.

Maximum algorithmic access: We believe that access rights to algorithmic information will begin to be developed. When the State and non-State public people, by themselves or through third parties, design, develop or information use or communication technologies supported by IA or intelligent algorithms (which involves any type of intelligent machine or robot), they must guarantee the maximum access to the information processing system that these technologies perform.

61. Definition according to norm ISO 8402, complement of norms ISO 9000.

- Non-algorithmic discrimination: The design and/or implementation of intelligent algorithms must respect the principle of non-discrimination, which consists in preventing AI systems from processing information or data under any distinctions against human beings, for reasons of race, color, sex, language, religion, political or other opinion, national or social origin, economic position, birth or any other social condition (Section 2, art. 2º, Covenant of the Economic Social and Cultural Rights).

These means that intelligent operations that use certain distinctions based on prohibited categories (suspicious algorithmic categories) to carry out rankings, scoring or categorizations within their processing circuits that violate due process and human rights must be avoided.[62]

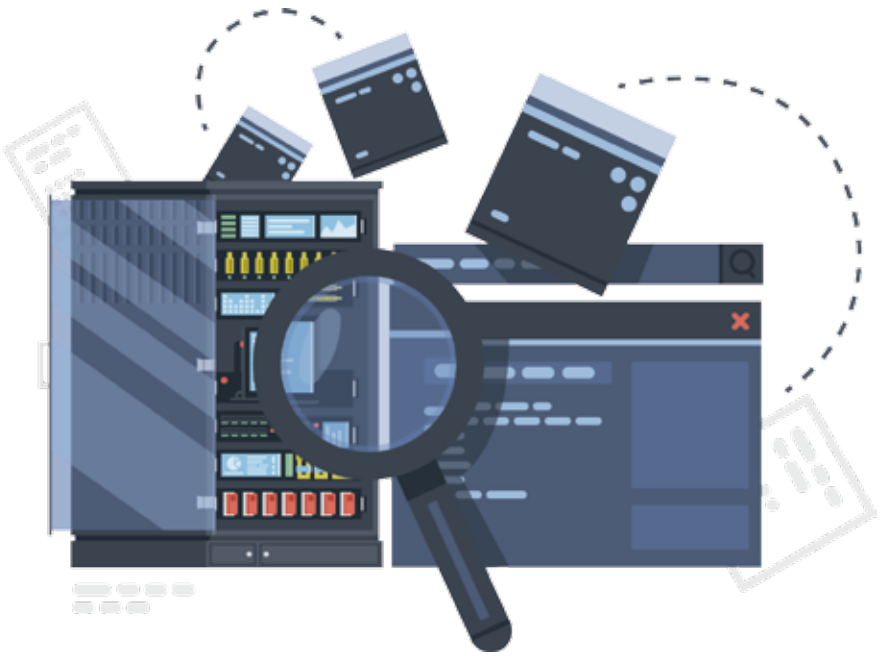
Along with these principles, it is essential to ensure two great aspects that occur in the automation process and AI application within the public sector. On one hand, that the results of those automated processes are monitored and controlled by human beings. On the other hand, it is important to guarantee a dynamic and collaborative work, to continuously update and optimize the intelligence of the system.

62. For example, certain predictive AIs used in the United States of America are based on a source code that takes into consideration distinctions of race, gender, among others. And this causes an inadmissible case of structural algorithmic discrimination. For example, in the case "State c. Loomis "(Supreme Court of Wisconsin," State of Wisconsin v. Eric L. Loomis ", 07/13/2016, available at https://www.wicourts.gov/sc.opinion/DisplayDocument.

Returning to the case of Prometea, and the AI system's application, although certain documents are entirely made with the use of algorithms, the subsequent human control of those legal documents is essential and mandatory. This is because the time saved by the prediction and the reduction of spelling errors to almost zero, in the preparation of the document, is used to think more deeply about that case.

If the person wishes, it can add even more legal value to the document by the incorporation of other arguments, jurisprudential references, legal constructions, etc., since the legal opinions created with Prometea are completely editable on the screen.

Or, eventually, it could rethink the legal answer given by the algorithm in relation to the facts, and decide to change the criteria, for which the algorithm should then be adjusted. But also having the possibility of adding value or changing one's mind, we must neverlose sight of the fact that the constitutional or legal competence is the bear of the entity and not the AI system.



In other words, the automation function places people in an advantageous position, because it reduces time, errors and exponentially increases the data and information available to make a decision. But it is not the system that makes that decision autonomously and independently. At least, this cannot be the rule. AI systems cannot replace the competence of the entities.

Exceptionally, when highly standardized "work flows" are established (for example, controlling legal deadlines), the algorithmic process that makes the administrative decision can be validate by a resolution and then signed automatically. In the case of Prometea, for example, the system works with an intelligent calendar to control the deadlines.

If the entity previously validates that calendar and the response of the algorithm, it would be taking charge of its content. Exceeds the present extend on these issues, but these and other challenges await us in the coming years in terms of regulation.[63]

63. For example, in front of these scenarios, it is possible that some aspects of the rules that regulate the digital signature have to be modified.

Finally, as the State will have an unprecedented capacity for of citizen data and information processing, it is essential to adequately safeguard sensitive data, and prohibit predictive activity, scoring or mapping through AI systems in relation to private life, regarding their electoral preferences, or those characteristics that may lead to discriminatory responses based on sex, race, religion, beliefs, etc. However, in many areas the public sector can use predictive systems to link certain patterns of citizen information.

For example, intelligent predictions could be made regarding citizens and traffic infractions. A simple hypothesis could be that an AI system sends you to your e-mail or mobile device how many points are available before the driver's license is suspended because you have just crossed a red light. This, and many other examples, demonstrates the challenges, opportunities and risks presented by the application of Artificial Intelligence systems that are crucial in order to collaborate with the sustainable and inclusive development for the countries of the region.

ANNEX I

Resolutions of the United Nations Organization
Linked to ICT and Artificial Intelligence

·ADVANCING HEMISPHERIC INITIATIVES ON INTEGRAL DEVELOPMENT,Genera General Assembly of the Organization of American States, Cancun (Mexico), 20 June 2017, AG/RES. 2904 (XL VII-O/17), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-Seventh Regular Period of Sessions;

·STRENGTHENING OF DEMOCRACY, General Assembly of the Organization of American States, Cancun (Mexico), 20 June 2017, AG/RES.2905 (XLVII-O/17), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-Seventh Regular Period of Sessions;

·ADVANCING HEMISPHERIC SECURITY: A MULTIDIMENSIONAL APPROACH, General Assembly of the Organization of American States, Cancun (Mexico), 20 June 2017, AG/RES. 2907 (XLVII-O/17), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-Seventh Regular Period of Sessions;

·DECLARATION ON INSTITUTIONAL STRENGTHENING FOR SUSTAINABLE DEVELOPMENT IN THE AMERICAS, General Assembly of the Organization of American States, Santo Domingo (Dominican Republic), 15 June 2016, AG/DEC. 81 (XLVI-O/16), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-sixth Regular Period of Sessions;

·ADVANCING HEMISPHERIC SECURITY: A MULTIDIMENSIONAL APPROACH, General Assembly of the Organization of American States, Santo Domingo (Dominican Republic), 14 June 2016, AG/RES. 2880 (XLVI- O/16), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-sixth Regular Period of Sessionss;

·ADVANCING HEMISPHERIC INITIATIVES ON INTEGRAL DEVELOPMENT, General Assembly of the Organization of American States, Santo Domingo (Dominican Republic), 14 June 2016, AG/RES. 2881 (XLVI-O/16), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-sixth Regular Period of Sessionss;

·STRATEGIC VISION OF THE ORGANIZATION OF AMERICAN STATES, General Assembly of the Organization of American States, Washington D.C. (United States), 12 September 2014, AG/RES. 1 (XLVII-E/14), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Cuadragésimo Séptimo Período Extraordinario de Sesiones;

·DECLARATION OF ASUNCIÓN "DEVELOPMENT WITH SOCIAL INCLUSION", General Assembly of the Organization of American States, Asunción (Paraguay), 4 June

2014, AG/DEC. 74 (XLIV-O/14), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp
Forty-fourth Regular Period of Sessionss;

·PROGRESS TOWARD ACCOUNTABILITY, EFFICIENCY AND EFFECTIVENESS, AND RESULTS IN THE OAS GENERAL SECRETARIAT, PROGRESS TOWARD ACCOUNTABILITY, EFFICIENCY AND EFFECTIVENESS, AND RESULTS IN THE OAS GENERAL SECRETARIAT, 4 June 2014, AG/RES. 2815 (XLIV-O/14), available at:
http://www.oas.org/consejo/sp/AG/resoluciones-declaraciones.asp
Forty-fourth Regular Period of Sessions;

·TELECOMMUNICATIONS/INFORMATION AND COMMUNICATION TECHNOLOGIES FOR DEVELOPMENT, General Assembly of the Organization of American States, Asunción (Paraguay), 4 June 2014, AG/RES. 2859 (XLIV- O/14), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp
Forty-fourth Regular Period of Sessions;

·SUPPORT FROM CITEL FOR THE IMPLEMENTATION OF THE OUTCOMES OF THE SIXTH SUMMIT OF THE AMERICAS AND THE HIGH-LEVEL WORLD CONFERENCES HELD IN 2012 AND IN PREPARATION FOR INTERNATIONAL TELECOMMUNICATION EVENTS FOR THE 2013-2014 CYCLE, General Assembly of the Organization of American States, La Antigua (Guatemala), 5 June 2013, AG/RES. 2765 (XLIII-O/123), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp
Forty-third Regular Period of Sessions;

·PROMOTION AND STRENGTHENING OF DEMOCRACY: FOLLOW-UP TO THE INTER-AMERICAN DEMOCRATIC CHARTER, General Assembly of the Organization of American States, La Antigua (Guatemala), 5 June 2013, AG/RES. 2766 (XLIII-O/13), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp
Forty-third Regular Period of Sessions;

·SUPPORT FOR THE COMMITTEE FOR THE ELIMINATION OF ALL FORMS OF DISCRIMINATION AGAINST PERSONS WITH DISABILITIES AND ITS TECHNICAL SECRETARIAT, General Assembly of the Organization of American States, La Antigua (Guatemala), 5 June 2013, AG/RES. 2785 (XLIII-O/13), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp
Forty-third Regular Period of Sessions;

·EFFECTIVE PUBLIC MANAGEMENT STRENGTHENING AND INNOVATION INITIATIVE IN THE AMERICAS, General Assembly of the Organization of American States, La Antigua (Guatemala), 5 June 2013, AG/RES. 2788 (XLIII-O/13), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp
Forty-third Regular Period of Sessions;

·DRAFT AMERICAN DECLARATION ON THE RIGHTS OF INDIGENOUS PEOPLES, General Assembly of the Organization of American States, La Antigua (Guatemala), 5 June 2013, AG/RES. 2793 (XLIII-O/13), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp
Forty-third Regular Period of Sessions;

·SOCIAL CHARTER OF THE AMERICAS, General Assembly of the Organization of

American States, Cochabamba (Bolivia), 4 June 2012, OEA/Ser.P AG/doc-5242/12 rev. 2, available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-third Regular Period of Sessions;

·USE OF TELECOMMUNICATIONS/INFORMATION AND COMMUNICATION TECHNOLOGIES TO BUILD AN INCLUSIVE INFORMATION SOCIETY, General Assembly of the Organization of American States, Cochabamba (Bolivia), 4 June 2012, AG/RES. 2702 (XLII-O/12), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-third Regular Period of Sessions;

·PROMOTION AND STRENGTHENING OF DEMOCRACY: FOLLOW-UP TO THE INTER-AMERICAN DEMOCRATIC CHARTER, General Assembly of the Organization of American States, Cochabamba (Bolivia), 4 June 2012, AG/RES. 2705 (XLII-O/12), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp, Forty-third Regular Period of Sessions;

·DECLARATION OF SAN SALVADOR ON CITIZEN SECURITY IN THE AMERICAS, General Assembly of the Organization of American States, San Salvador (El Salvador), 7 June 2011, AG/DEC. 66 (XLI-O/11), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-first Regular Period of Sessions;

·EDUCATIONAL PORTAL OF THE AMERICAS: TEN YEARS OF STRENGTHENING HUMAN DEVELOPMENT IN THE HEMISPHERE THROUGH DISTANCE EDUCATION, General Assembly of the Organization of American States, San Salvador (El Salvador), 7 June 2011, AG/RES. 2638 (XLI-O/11), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-first Regular Period of Sessions;

·RIGHT TO FREEDOM OF THOUGHT AND EXPRESSION AND THE IMPORTANCE OF THE MEDIA, General Assembly of the Organization of American States, San Salvador (El Salvador), 7 June 2011, AG/RES. 2679 (XLI-O/11), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-first Regular Period of Sessions;

·PROMOTION OF THE RIGHTS TO FREEDOM OF ASSEMBLY AND OF ASSOCIATION IN THE AMERICAS, General Assembly of the Organization of American States, San Salvador (El Salvador), 7 June 2011, AG/RES. 2680 (XLI-O/11), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-first Regular Period of Sessions;

·INCREASING ACCESS TO TELECOMMUNICATIONS AND INFORMATION AND COMMUNICATION TECHNOLOGIES THROUGH STRENGTHENING OF THE INTER-AMERICAN TELECOMMUNICATION COMMISSION, General Assembly of the Organization of American States, San Salvador (El Salvador), 7 June 2011, AG/RES. 2681 (XLI-O/11), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Forty-first Regular Period of Sessions;

·PROMOTION BY THE INTER-AMERICAN TELECOMMUNICATION COMMISSION

(CITEL) OF COOPERATION FOR THE DEVELOPMENT AND DISSEMINATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE AMERICAS General Assembly of the Organization of American States, Lima (Perú), 8 June 2010, AG/RES. 2545 (Xl-O/10), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Fortieth Regular Period of Sessions;

·PROMOTION AND STRENGTHENING OF DEMOCRACY: FOLLOW-UP TO THE INTER-AMERICAN DEMOCRATIC CHARTER, General Assembly of the Organization of American States, Lima (Perú), 8 June 2010, AG/RES. 2555 (XL-O/10), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Fortieth Regular Period of Sessions;

·FOLLOW-UP TO THE INTER-AMERICAN PROGRAM FOR UNIVERSAL CIVIL REGISTRY AND THE "RIGHT TO IDENTITY", General Assembly of the Organization of American States, Lima (Perú), 8 June 2010, AG/RES. 2602 (XL-O/10), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Fortieth Regular Period of Sessions;

·THE STATUE OF THE INTERAMERICAN TELECOMMUNICATION COMMISSION, General Assembly of the Organization of American States – approved by resolution AG/RES. 1224 (XXIII-O/93) and amended by resolution AG/RES. 1589 (XXVIII-O/98)–, Edition 2010, available at:
https://www.citel.oas.org/en/SiteAssets/About-Citel/Estatuto-2014-r1_e.pdf;

·OPTIMIZING RESOURCES: USE OF VIDEOCONFERENCE AND OTHER COMMUNICATION TECHNOLOGIES, General Assembly of the Organization of American States, San Pedro Sula (Honduras), 4 June 2009, AG/RES. 2439 (XXXIX-O/09), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-ninth Regular Period of Sessions;

·TELECOMMUNICATIONS DEVELOPMENT
IN THE REGION TO REDUCE THE DIGITAL DIVIDE, General Assembly of the Organization of American States, San Pedro Sula (Honduras), 4 June 2009, AG/RES. 2440 (XXXIX- O/09), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-ninth Regular Period of Sessions;

·PROMOTION AND STRENGTHENING OF DEMOCRACY: FOLLOW-UP TO THE INTER-AMERICAN DEMOCRATIC CHARTER, General Assembly of the Organization of American States, San Pedro Sula (Honduras), 4 June 2009, AG/RES. 2480 (XXXIX-O/09), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-ninth Regular Period of Sessions;

·RIGHT TO FREEDOM OF THOUGHT AND EXPRESSION AND THE IMPORTANCE OF THE MEDIA, General Assembly of the Organization of American States, San Pedro Sula (Honduras), 4 June 2009, AG/RES. 2523 (XXXIX-O/09), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-ninth Regular Period of Sessions;

·MODERNIZATION AND USE OF ELECTORAL TECHNOLOGIES IN THE HEMISPHERE, General Assembly of the Organization of American States, San Pedro Sula (Honduras), 4 June 2009, AG/RES. 2528 (XXXIX-O/09), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-ninth Regular Period of Sessions;

·COMMUNIQUÉ OF THE FOURTH INTER-AMERICAN MEETING OF MINISTERS OF CULTURE AND HIGHEST APPROPRIATE AUTHORITIES: THE ECONOMY OF CULTURE IN THE AMERICAS: A PATH TO SUSTAINABLE GROWTH AND SOCIAL INCLUSION, General Assembly of the Organization of American States, San Pedro Sula (Honduras), 21 November 2008, CIDI/REMIC-IV/doc.5/08, available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-ninth Regular Period of Sessions;

·DECLARATION OF MEDELLÍN: YOUTH AND DEMOCRATIC VALUES, General Assembly of the Organization of American States, Medellín (Colombia), 3 June 2008, AG/DEC. 57 (XXXVIII-O/08), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-eighth Regular Period of Sessions;

·RIGHT TO FREEDOM OF THOUGHT AND EXPRESSION AND THE IMPORTANCE OF THE MEDIA, General Assembly of the Organization of American States, Medellín (Colombia), 3 June 2008, AG/RES. 2434 (XXXVIII-O/08), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-eighth Regular Period of Sessions;

·STRENGTHENING HEMISPHERIC COOPERATION IN THE FRAMEWORK OF EFFORTS BY THE INTER-AMERICAN TELECOMUNICATION COMMISSION TO PROMOTE TELECOMMUNICATION DEVELOPMENT IN THE REGION, General Assembly of the Organization of American States, Panama (Republic of Panama), 5 June 2007, AG/RES. 2259 (XXXVII-O/07), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-seventh Regular Period of Sessions;

·RIGHT TO FREEDOM OF THOUGHT AND EXPRESSION AND THE IMPORTANCE OF THE MEDIA, General Assembly of the Organization of American States, Panama (Republic of Panama), 5 June 2007, AG/RES. 2287 (XXXVII-O/07), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-seventh Regular Period of Sessions;

·PROGRAM OF ACTION FOR THE DECADE OF THE AMERICAS FOR THE RIGHTS AND DIGNITY OF PERSONS WITH DISABILITIES (2006/2016), General Assembly of the Organization of American States, Panama (Republic of Panama), 5 June 2007, AG/RES. 2339 (XXXVII-O/07), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-seventh Regular Period of Sessions;

·OBSERVATIONS AND RECOMENDATIONS ON THE ANNUAL REPORT OF THE INTER-AMERICAN DRUG ABUSE CONTROL COMMISSION, General Assembly of the Organization of American States, Panama (Republic of Panama), 5 June 2007, AG/RES. 2343 (XXXVII-O/07), available at:

http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-seventh Regular Period of Sessions

·INCREASING AND STRENGTHENING CIVIL SOCIETY PARTICIPATION IN THE ACTIVITIES OF THE ORGANIZATION OF AMERICAN STATES AND IN THE SUMMITS OF THE AMERICAS PROCESS, General Assembly of the Organization of American States, Santo Domingo (Dominican Republic), 6 June 2006, AG/RES. 2172 (XXXVI-O/06), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-sixth Regular Period of Sessions;

·OBSERVATIONS AND RECOMMENDATIONS ON THE ANNUAL REPORT OF THE INTER-AMERICAN DRUG ABUSE CONTROL COMMISSION, General Assembly of the Organization of American States, Santo Domingo (Dominican Republic), 6 June 2006, AG/RES. 2198 (XXXVI-O/06), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-sixth Regular Period of Sessions;

·STRATEGIC PLAN FOR PARTNERSHIP FOR INTEGRAL DEVELOPMENT 2006-2009, General Assembly of the Organization of American States, Santo Domingo (Dominican Republic), 6 June 2006, AG/RES. 2201 (XXXVI-O/06), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-sixth Regular Period of Sessions;

·RIGHT TO FREEDOM OF THOUGHT AND EXPRESSION AND THE IMPORTANCE OF THE MEDIA, General Assembly of the Organization of American States, Santo Domingo (Dominican Republic), 6 June 20066, AG/RES. 2237 (XXXVI-O/06), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-sixth Regular Period of Sessions;

·SUPPORT FOR THE IMPLEMENTATION OF THE DECLARATION OF SANTO DOMINGO, General Assembly of the Organization of American States, Santo Domingo (Dominican Republic), 6 June 2006, AG/RES. 2243 (XXXVI-O/06), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-sixth Regular Period of Sessions;

·MODERNIZATION AND USE OF ELECTORAL TECHNOLOGIES IN THE HEMISPHERE, General Assembly of the Organization of American States, Santo Domingo (Dominican Republic), 6 June 2006, AG/RES. 2254 (XXXVI-O/06), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-sixth Regular Period of Sessions;

·THE USE OF INFORMATION TECHNOLOGIES IN GOVERNMENT PROCUREMENT IN ORDER TO PROMOTE TRANSPARENCY AND THE PARTICIPATION OF MICRO, SMALL, AND MEDIUM-SIZED ENTERPRISES, AND OTHER PRODUCTIVE ORGANIZATIONS, General Assembly of the Organization of American States, Santo Domingo (Dominican Republic), 6 June 2006, AG/RES. 2255 (XXXVI-O/06), available at: http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-sixth Regular Period of Sessions;

·ADOPTION OF A COMPREHENSIVE INTER-AMERICAN STRATEGY TO COMBAT

THREATS TO CYBERSECURITY: A MULTIDIMENSIONAL AND MULTIDISCIPLINARY APPROACH TO CREATING A CULTURE OF CYBERSECURITY General Assembly of the Organization of American States, Quito (Ecuador), 8 June 2004, AG/RES. 2004 (XXXIV-O/04), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-fourth Regular Period of Sessions;

·PROMOTION AND STRENGTHENING OF DEMOCRACY: FOLLOW-UP TO THE INTER-AMERICAN DEMOCRATIC CHARTER, General Assembly of the Organization of American States, Santiago (Chile), 10 June 2003, AG/RES. 1957 (XXXIII-O/03), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-third Regular Period of Sessions;

·ADOPTION OF THE STRATEGIC PLAN FOR PARTNERSHIP FOR DEVELOPMENT 2002-2005, General Assembly of the Organization of American States, Bridgetown (Barbados), 4 June 2002, AG/RES. 1855 (XXXII-O/02), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-second Regular Period of Sessions;

·SUPPORT FOR THE PROGRAM OF INTEGRAL ACTION AGAINST ANTIPERSONNEL MINES IN CENTRAL AMERICA, General Assembly of the Organization of American States, San José (Costa Rica), 5 June 2001, AG/RES. 1793 (XXXI- O/01), available at:
http://www.oas.org/consejo/GENERAL%20ASSEMBLY/Resoluciones-Declaraciones.asp Thirty-first Regular Period of Sessions.

ANNEX 2

Resolutions of the United Nations Organization
Linked to ICT and Artificial Intelligence

·Resolution N° 72/28 of the General Assembly "Role of science and technology in the context of international" security and disarmament" A/RES/72/28 (December 11th, 2017), available at: https://undocs.org/en/A/RES/72/28;

·Resolution N° 72/621 of the General Assembly "A world against violence and violent extremism" A/72/621 (December 1st, 2017), available at: https://undocs.org/en/A/72/621;

·Resolution N° 3/72/44 of the General Assembly "Protection of human rights and fundamental freedoms while countering terrorism" A/C.3/72/L.44/Rev.1 (November 13th, 2017), available at: http://undocs.org/en/A/C.3/72/L.44/Rev.1;

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ANNEX 3

CANTIDAD DE CAUSAS POR MES	MANUALMENTE	CON PROMETEA (sin linkeo sistema de gestión KIWI)	PROMETEA con linkeo KIWI
PROBATION	172	720	6886
JUICIO ABREVIADO	130	566	5462
REQUERIMIENTO DE JUICIO	115	495	5697

TIEMPOS POR CAUSA (minutos)	MANUALMENTE	CON PROMETEA (sin linkeo sistema de gestión KIWI)	PROMETEA con linkeo KIWI
PROBATION	46	11	1,15
JUICIO ABREVIADO	61	14	1,45
REQUERIMIENTO DE JUICIO	70	16	1,39

TIEMPOS POR DOCUMENTO (minutos)			
Documento	MANUALMENTE	CON PROMETEA (sin linkeo sistema de gestión KIWI)	PROMETEA con linkeo KIWI
Decreto de determinación de los hechos	15	4	0,25
Acta comparecencia	8	2	0,25
Acta de Audiencia	10	2	0,25
Probation	8	2	0,25
Juicio Abreviado	23	5	0,76
Requimiento a Juicio	32	7	0,66
Certificación	5	1	0,25
PROCESO CON PROBATION	46	11	1,15
PROCESO CON JUICIO ABREVIADO	61	14	1,45
PROCESO CON REQUERIMIENTO A JUICIO	70	16	1,39