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À PROPOS DE NOUS

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ABOUT US

The **International Journal of Digital and Data Law / Revue Internationale de droit des données et du numérique (RIDDN)** is an academic journal created and edited by Irène Bouhadana and William Gilles at IMODEV, the Institut du monde et du développement pour la bonne gouvernance publique.

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PUBLIC SERVICES AND ARTIFICIAL INTELLIGENCE: THE STRATEGY TO ITS USE IN ORDER TO PROMOTE THE ADEQUATE PUBLIC SERVICE IN BRAZIL

by **Rafaella BRUSTOLIN**, Parana's Court of Justice Legal Advisor (Brazil)

The use of artificial intelligence has been increasingly discussed in the Public Administration's framework, representing a trend towards the improvement of public policies and public services in the most diverse countries. In Brazil, the idea of 'adequate public service', known by the principles of regularity, effectiveness, security, generality, transparency, courtesy, beyond others, guides the provision of such services to the community. With this in mind, this study aims to identify the strategy necessary to the promotion of the adequate public service based on the use of artificially intelligent applications. Therefore, it is perceived that, by the association of normative principles (constitutional and legal), the set of instruments that provide results in the quality of the services offered and the practices developed within the Public Administration (based on transparency, data protection, delimitation of decisions, with the maximum understanding of the usefulness and purpose of the applications) are conditions that should modulate the development of a strategy for establish artificial intelligence in public services. Finally, some challenges are listed such as the delimitation of decisions to be incorporated into the algorithms, the use of rationality and legal security that protect the privacy of personal data when using automated procedures and the development based on algorithms with the participation of managers and public administrators, among others.

§ 1 – ARTIFICIAL INTELLIGENCE: CONCEPT AND APPLICATION

The first question that have to be answered is pretty simple: what is an Intelligence? What is an Artificial Intelligence? There are many different definitions of what intelligence is or what artificial intelligence is. However, this study uses a related resource from abstract reasoning until it reaches the concreteness of the

concept¹. So, who is an intelligent being? Is there a single intelligence? Is it possible to learn a type of intelligence? The answers are: anyone can be smart (the ever-recurring “my dog is smart” statement demonstrates this); what is known is that there is not a single concept of intelligence, because we constantly talk about emotional, spiritual, logical-mathematical, creative and other typologies that indicate that intelligence is a learning process and which manifests itself in multiple skills and activities.

Therefore, an Artificial Intelligence (AI) refers to the possibility of technological applications develop responses to problems identified in everyday contexts. So, Artificial Intelligence (AI) can be identified as a branch of computer science that proposes to develop devices that simulate the human ability to reason, perceive, make decisions and solve problems, in short, the ability to be intelligent.

The origin of Artificial Intelligence (AI) is attributed to the British mathematician Alan Turing who, during World War II, designed a machine capable of decoding messages. However, it was only in the first decade of this century that there was a definitive impulse of AI, with the evolution of the internet and microprocessors, reduced cloud storage costs, new algorithms and other innovations.²

In general terms, the concept of Artificial Intelligence, a subarea of computer science, is used to designate the set of computational techniques, devices and algorithms, in addition to statistical and mathematical methods capable of reproducing some of the human cognitive capacities³. John McCarthy defines Artificial Intelligence as ‘[...] the science and engineering of making intelligent machines, especially intelligent computer programs’⁴. Peixoto e Silva, quoting Shabbir and Anwer, refer that Artificial Intelligence consists of ‘[...] artificial reproduction of the ability to acquire and apply different skills and knowledge to solve a given problem, solving it, reasoning and learning from situations’⁵.

The authors also quote the definition formulated by Miles Brundage, for whom AI is ‘[...] a body of research and engineering with the objective of using digital technology to create systems capable of performing activities for which human

¹ M. S. MAIA FILHO, T. A. JUNQUILHO, « Projeto Victor: perspectivas de aplicação da inteligência artificial ao direito », *Revista de Direitos e Garantias Fundamentais*, Vitória, Vol. 19, No. 3, 2018, pp. 219-238.

² F. P. HARTMANN, R. Z. M. DA SILVA, *Inteligência artificial e direito*. 1. ed. Curitiba: Alteridade, 2019, p. 24.

³ TOFFOLI, D. Prefácio, in: R.V. de C. FERNANDES; A. G. P. de CARVALHO (eds.), *Tecnologia jurídica & direito digital*: II Congresso Internacional de Direito, Governo e Tecnologia. Belo Horizonte: Fórum, 2018. p. 17-21.

⁴ J. MCCARTHY, J. *What is artificial intelligence?* Stanford: 2007. Available in: <http://jmc.stanford.edu/articles/whatisai/whatisai.pdf>. Access in December 20, 2020, p. 2.

⁵ F. P. HARTMANN, R. Z. M. DA SILVA, *Inteligência artificial e direito*. 1. ed. Curitiba: Alteridade, 2019, p. 24.

intelligence is used⁶. AI consists, therefore, in the development of computer systems capable of performing tasks for which, normally, human intellectual skill is required.

As a subfield of AI, there is *machine learning*, a term created in 1959, by Arthur Lee Samuel, whose objective is to provide computers with the ability to learn without being programmed. *Machine learning* involves creating algorithms capable of automatically learning from data; instead of software developers elaborating codes and routines so that the machine can perform certain tasks and achieve results, in *machine learning* the algorithm undergoes a ‘training’ so that it can learn on its own. This training involves feeding the algorithm through a large amount of data⁷, allowing it to adjust and improve the results even more.⁸

Peixoto e Silva, quoting Kevin Murphy, define *machine learning* as ‘[...] a set of methods that can detect patterns in data automatically, and then use those patterns to predict future data or perform other forms of decision making’⁹. Stuart Russel, also cited by the authors, considers *machine learning* as ‘[...] branch of AI that studies ways to make computers improve their performance based on experience’¹⁰, aiming to enable computers to learn autonomously, from the identification of patterns in the data under examination. *Machine learning* involves several approaches: deep learning, decision tree learning, programming inductive logic (inductive logic-programming), clustering, reinforcement learning, Bayesian networks, among others¹¹.

Each of these approaches corresponds to a different machine learning technique, and deep learning currently leads Artificial Intelligence considering the ability to deal with BigData and the generation of better results in this context.¹²

Deep learning has the ability to transform large volumes of data into useful information; inspiration is the structure and functions of the human brain, in the interconnection of neurons, giving rise to artificial neural networks (Artificial Neural Networks –

⁶ F. P. HARTMANN, R. Z. M. DA SILVA, *Inteligência artificial e direito*. 1. ed. Curitiba: Alteridade, 2019, p. 21.

⁷ TOFFOLI, D. Prefácio, in: R.V. de C. FERNANDES; A. G. P. de CARVALHO (eds.), *Tecnologia jurídica & direito digital*, II Congresso Internacional de Direito, Governo e Tecnologia, p. 19

⁸ P. S. ELIAS, Algoritmos, inteligência artificial e o direito. Available at: <https://www.conjur.com.br/dl/algoritmos-inteligencia-artificial.pdf>, p. 2.

⁹ F. P. HARTMANN, R. Z. M. DA SILVA, *Inteligência artificial e direito*. 1. ed. Curitiba: Alteridade, 2019, p. 88.

¹⁰ F. P. HARTMANN, R. Z. M. DA SILVA, *Inteligência artificial e direito*. 1. ed. Curitiba: Alteridade, 2019, p. 88.

¹¹ P. S. ELIAS, *Algoritmos, inteligência artificial e o direito*, Available in: <https://www.conjur.com.br/dl/algoritmos-inteligencia-artificial.pdf>. (Access on December 15, 2020), p. 2.

¹² F. B. PORTO, “O impacto da utilização da inteligência artificial no executivo fiscal, Estudo de caso do Tribunal de Justiça do Rio de Janeiro”, in: R. V. de C. FERNANDES; A. G. P. de CARVALHO, (eds.). *Tecnologia jurídica & direito digital*. II Congresso Internacional de Direito, Governo e Tecnologia. Belo Horizonte: Fórum, 2018. pp. 109-144.

ANNs¹³). Through deep learning tasks that are traditionally performed by human beings, such as facial recognition, decision making, voice recognition and translation, and others that exceed human capacity, such as handling and processing large databases, are being performed by smart machines, allowing the human being to save time and take on more complex tasks that require human intelligence to perform.

The notions brought above, although generic, give a sense of how Artificial Intelligence and its subfields work and how they can assist human beings in the execution of daily activities. In Brazil, the use of these so-called ‘disruptive technologies’ is still small in relation to other nations, mainly in the public area, but some systems are already being implemented in some agencies, such as the Courts of Accounts and, even, in the National Supreme Court.

Observing the use of this intelligence in Public Administration, it is seen that many struggles that the public power faces may find its answers with the development and use of these technologies, such as in the performance of information activities. So, the use of intelligent systems can occur both internally and externally. Internally, computer resources can be used to carry out information activities, which means the flow of information between computer mechanisms, and for decision-making activities, and in the exercise of State’s competences. The use of AI in internal procedures allows an exponential improvement in the quality of response to the citizen, which can be reduced from months to days, from days to hours and from hours to seconds. In the external dimension, although not all services can be provided through computer systems, artificial intelligence is shown to be a great facilitator for the direct relationship between administration and the administrated, both in terms of the exercise of democracy and in terms of access to public data and services.

From this perspective, it is possible to affirm that there is a tendency to use artificially intelligent applications in public policies and services worldwide. However, in all of them, there are risks and threats that challenge the AI processes that can be highlighted.

Highlighting these challenges, the European Commission outlines the potential and risks of AI development, and emphasizes that artificial intelligence is developing fast and it will change our lives, improve health care (for example, increasing the accuracy of

¹³Artificial neural networks ‘are algorithms that mimic the biological structure of the human brain. In ANNs there are ‘neurons’ (in quotation marks) that have multiple layers and connections with other ‘neurons’. Each layer chooses a specific resource to learn, such as curves and edges in the recognition of an image, for example. Deep learning is named for these various layers. Depth is created by using multiple layers in opposition to a single learning layer by the algorithm. These deep learning algorithms form ‘neural networks’ and they can quickly surpass our ability to understand all their functions’. See P. S. ELIAS, Available in: <https://www.conjur.com.br/dl/algoritmos-inteligencia-artificial.pdf>. Access on December 15, 2020, pp. 2-3)

diagnoses and allowing better prevention of diseases), increase the efficiency of agriculture, contributing to the mitigation of climate change and the corresponding adaptation, among other examples. Also, the Commission points out that the efficiency of production systems through predictive maintenance will increase the security of the citizen and will provide many changes that can only be perceived at the moment. At the same time, the Commission advises that Artificial Intelligence (AI) involves a series of potential risks, such as opacity in decision making, gender discrimination and other types, intrusion into private lives, and their use with criminal offenses.¹⁴

Also, it is important to mention another risks that challenge the AI process. It is noted that different regulatory standards exist between the countries and that aspects such as protection of privacy and data, transparency and algorithmic performance are central concerns. This means that the use of technological applications in public services must also consider local legislation, in order to guarantee equality and the protection of the fundamental rights of the human condition.

That is why the formulation of a local Strategy is important in order to resume the principles capable of mitigating the effects of the application of AI in public services.

This seems to be the difficult equation to solve when developing AI strategies in countries around the world. In this regard, some points of the Brazilian Artificial Intelligence Strategy will be presented below in order to resume the principles and precepts capable of mitigating the effects of the application of AI in public services.

§ 2 – BRAZILIAN STRATEGY OF ARTIFICIAL INTELLIGENCE

In Brazil, the Digital Governance Strategy was developed in 2015 and in 2016. The purpose is to promote the use by the public administration of information technology resources to improve the availability of information, encourage the participation of society in the decision-making process and improve the level of transparency and effectiveness of the federal government (article 2, III, of Decree No. 8.638/2016¹⁵). Later in 2018, Brazilian government published the Brazilian Strategy for Digital Transformation (E-Digital). In its content, artificial intelligence is brought as part of a productive structure and as something that requires the State's capacity for institutional innovation.

Recently, on December 12, 2019, the Brazilian government, through the Ministry of Science, Technology, Innovation and

¹⁴ COMMISSION EUROPEIA, *Libro Blanco sobre la inteligencia artificial - un enfoque europeo orientado a la excelencia y la confianza*, Bruselas, 19.2.2020 COM(2020) 65 final. Available in: <https://op.europa.eu/pt/publication-detail/-/publication/aace9398-594d-11ea-8b81-01aa75ed71a1>. (Access on December 17, 2020).

¹⁵ BRAZIL, Decree No. 8.638/2016. Available in: http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2016/Decreto/D8683.htm. Access on: December 12, 2020.

Communication (MCTIC) launched, in the process of public consultation, its strategy for the development of artificial intelligence. The document entitled ‘Public Consultation - Brazilian Artificial Intelligence Strategy’, points out the institutional legal modulation that leads to the consultation of this strategy, highlighting the ‘Brazilian Strategy for Digital Transformation’ (E-Digital). The document aimed to ‘solve concrete problems in the country, identifying priority areas in the development and use of AI-related technologies in which there is a greater potential for obtaining benefits’¹⁶. The document also suggests that AI can ‘bring gains in promoting competitiveness and increasing Brazilian productivity, in providing public services, in improving people's quality of life and in reducing social inequalities, among others.’¹⁷

Explaining briefly the content of the strategy, it is possible to summarize the main principles of it as: (i) to ensure flexible regulatory structure and continuously adaptable to the fast transformations promoted by information technologies; (ii) to structure a precise model, to guarantee legal security and promote the continuous balance between the various values involved in the digital environment, including citizens' rights, security, innovation, and free enterprise, among others; (iii) to propose a state policy (and not just a government policy) in order to ensure that a strategic and technical theme such as artificial intelligence has a prominent place and the attention of the whole society, regardless of changes in the country's political scenario; (iv) to highlight the importance of the principles of fairness, accountability and transparency, which are common denominators of many proposals of regulation of artificial intelligence, among others.¹⁸

In the same perspective, the ‘NICEIA’ (Technical Discussion Department on Artificial Intelligence of the Information and Coordination Center - NIC.br) is indispensable for the creation of a governance structure, which should have the role of informing ‘the actors involved in the ecosystem regarding the promotion and implementation of public policies and the allocation of resources, favoring the achievement of ethical principles and human rights’¹⁹. This structure should be similar to internet governance in Brazil (Law 12.965/2014 – ‘*Marco Civil da*

¹⁶ R. BUCCO, *NIC.br defende criação de estrutura de governança de inteligência artificial no Brasil*. Available in: <http://www.telesintese.com.br/nic-br-defende-criacao-de-estrutura-de-governanca-de-inteligencia-artificial-no-brasil/>. (Access on November 20, 2020).

¹⁷ R. BUCCO, *NIC.br defende criação de estrutura de governança de inteligência artificial no Brasil*. Available in: <http://www.telesintese.com.br/nic-br-defende-criacao-de-estrutura-de-governanca-de-inteligencia-artificial-no-brasil/>. (Access on November 20, 2020).

¹⁸ LAPIN. *Contribuições à Estratégia Brasileira de Inteligência Artificial: respostas à consulta pública promovida pelo Ministério da Ciência, Tecnologia, Inovações e Comunicações* (MCTIC), 2020.

¹⁹ LAPIN. *Contribuições à Estratégia Brasileira de Inteligência Artificial: respostas à consulta pública promovida pelo Ministério da Ciência, Tecnologia, Inovações e Comunicações* (MCTIC), 2020.

*Internet*²⁰), with special characteristics such as flexibility, independence and multisectoriality.

The Center (NICEIA) also states that ‘the idea of creating an artificial intelligence observatory in Brazil that can connect with other international observatories - initiatives to produce and gather collective knowledge on the subject, identify and promote good practices is more than welcome. And those practices on the use of Artificial Intelligence can connect researchers and actors from different segments, who wish to form an integrated Artificial Intelligence ecosystem’²¹. The public consultation was closed on March 2, 2020 and, after this date, through the search on the MCTIC website, no further developments were found regarding the referrals given for the construction of this strategy. It was found that, on February 18, 2020, the agency provided documents resulting from consultancy on the subject.²²

Apart from those recent initiatives from the government, in Brazil, the use of disruptive technologies is still small in relation to other nations, mainly in the public field. However, despite from the lack of a national strategy, some Brazilian public agencies are already using Artificial Intelligence systems to optimize operations, as is the case of the Federal Court of Accounts, which, in the internal operational scope, counts on the help of robots ‘Alice’, ‘Sofia’ and ‘Monica’ to identify possible irregularities in public contracts involving federal resources.

‘Alice’ has already helped auditors to stop several irregular bidding procedures across the country, demonstrating their contribution to the optimization, agility and efficiency of the public service provided by the agency.

Another system with Artificial Intelligence used by the Federal Court of Accounts, in the external operational dimension, is the ‘Zello’, which is a robot made available on Twitter, which interacts with the citizen through text messages providing information on the Court's performance of bills. Interested parties can, for example, question the robot about people with accounts deemed irregular by the Accounts Tribunal, informing the name of the person responsible.

Also, the Attorney General's Office uses ‘Sapien’s, a hybrid electronic document manager (GED), used by the company to optimize the legal work of public lawyers. It has advanced resources to support the production of legal content and control of administrative flows, focused on integration with the computerized systems of the Judiciary and the Executive.

²⁰ BRAZIL. Federal Law No 12.965/2014. Available in: http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2014/lei/112965.htm. (Access on: December 12, 2020).

²¹ R. BUCCO, *NIC.br defende criação de estrutura de governança de inteligência artificial no Brasil*. Available in: <http://www.telesintese.com.br/nic-br-defende-criacao-de-estrutura-de-governanca-de-inteligencia-artificial-no-brasil/>. Access on November 20, 2020.

²² See.

<http://www.mctic.gov.br/mctic/opencms/inovacao/paginas/politicasDigitais/Inteligencia/Consultoria.html>.

A recent example of the implementation of AI in the external area is Paraná Artificial Intelligence (PIÁ). The proposal of the Government of the State of Paraná consists of reducing bureaucracy, simplifying and enabling the access of state citizens to Paraná public services. Launched in June 2019, PIÁ, consists of a platform and an application that brings together more than 380 services, in addition to functioning as a channel of dialogue between the state government and the population.

Another example of the use of AI in the external dimension is the institution by the Unified Health System (SUS) of the ‘Conecte SUS Program’, which uses AI to enable citizens to know their trajectory in SUS from a national data network that will allow access to the profiles of any user through an online bank, where all the procedures and resources used by these patients will be available. With this, parameters will be established in the services that will speed up the waiting lines and help in the distribution of state and municipal resources in a more intelligent way.

Still, a survey conducted by the Getúlio Vargas Foundation (FGV) found that half of the courts in Brazil already use AI. There are seventy-two different projects, at different stages of implementation.

Bearing in mind that the Brazilian Public Administration has incorporated artificial intelligence in different decision-making processes and to assist public decisions and public policies, there is a need for a specific legal regime for this new digital environment that allows sustainability, development, equality, the right to the future, dignity and non-exclusion. Thus, it is incumbent upon Administrative Law to enter deeply into this discussion, since it is its role to combat the abuse of power, information asymmetry, the use of data by the State, among others.

There are those who consider the most complex and indispensable challenge of the coming years to make artificial intelligence compatible with human rights, especially in terms of ensuring human intervention in decisions or forecasts of intelligent algorithms and in terms of the amount of intervention necessary for the result to be achieved. processing of information and data is legitimate, respectful and promotes the effectiveness of people's rights.

There is also a need to change the logic of organizations to move from a ‘digital bureaucracy’, which takes care of automating previous choices, to a ‘smart bureaucracy’, which adapts to new and unforeseen circumstances and uses AI to facilitate, simplify and accelerate interactions, tasks, document generation, and so on, based not only on automation, but on predictive activity (forecasting). It is not just a question of adapting the government and public administration to digitalization, the internet or social networks.

Despite the relevance of the topic, aside from the initiatives seen on the beginning of this topic, there is still no regulatory

framework in Brazil and no effective public policies to guide Brazilian Public Administration and citizens regarding the use of AI. Beyond the discussions seen, there are also three bills are being processed: Bill No 21/2020²³ that proposes a Legal Framework for Artificial Intelligence in Brazil, Bill No 5691/2019²⁴, responsible for instituting the National Policy for Artificial Intelligence and Bill No 5051/2019²⁵ responsible for establishing the principles for the use of Artificial Intelligence in Brazil.

In this scenario, it is observed that the Brazilian reality is still at an early stage with regard to the complexity of the discussions required when incorporating AI into the aid and also in making public decisions. It is necessary, for example, to investigate the practice of administrative acts through AI, its limits and challenges. There are still many questions to be answered, such as: Can a system that uses AI perform autonomous administrative acts? If so, what types of acts? Only the linked or also the discretionary? What would be the limits of this discretion? In which decision fields could AI act (organization, control, and so on)? Would there be the possibility of reviewing these acts, with subsequent validation, if necessary? Would there be a need for supervision or would AI have sufficient autonomy to act alone? Could deep learning be used as a learning technique or just machine learning? How to ensure that the fundamental rights of citizens are respected, promoted and protected in this new decision-making environment? In the case of non-contractual civil liability, the return action would be directed against whom (the programmer, the civil servant responsible for the machine, a third person)?

Nevertheless, one cannot fail to pay attention to the Brazilian reality in the exercise of digital transformation. This is because, digital access in Brazil is marked by social inequality, with the existence of a digital elite, in a scenario that reproduces the existing social inequalities. For this reason, it is useless to incorporate new technologies if it is not accompanied by specific instruments that are attentive to the Brazilian reality.

In addition, the idea of creating an artificial intelligence observatory in Brazil that can connect to other international observatories - initiatives to produce and gather collective knowledge on the subject, identify and promote good practices is more than welcome.

²³ BRAZIL. Bill No 21/2020.

Available in: <https://www.camara.leg.br/propostas-legislativas/2236340>. (Access on: December 12, 2020).

²⁴ BRAZIL. Bill No 5691/2019.

Available in <https://www25.senado.leg.br/web/atividade/materias/-/materia/139586>. (Access on: December 12, 2020).

²⁵ BRAZIL. Bill No 5051/2019 .

Available in: <https://www25.senado.leg.br/web/atividade/materias/-/materia/138790>. (Access on: December 12, 2020).

Having made this presentation, it is necessary to face the third question that runs through this study, namely: is it possible to speak about adequate public service, when it comes to the development based on Artificial Intelligence?

§ 3 – ADEQUATE PUBLIC SERVICE AND ARTIFICIAL INTELLIGENCE: PRINCIPLES AND STANDARDS

To discuss the use of Artificial Intelligence (AI) in public services it is necessary to identify which principles and norms should compose a strategy for this use. In this perspective, in the Brazilian legal system, the principles that should guide the provision of public services, expressed in the Federal Constitution and in the legislation, are regularity, effectiveness, security, timeliness, generality, transparency and courtesy, and together they compose an important principle which is called ‘Adequate Public Service’²⁶.

It means that ‘adequate public service’ is a requirement for the set of structuring principles of the Brazilian Constitution. This is because, by ensuring that citizens have due access to goods linked to social rights, at a reasonable tariff, in a universal and continuous manner, it guarantees effectiveness to the Social State principle, ensuring the necessary conditions for the implementation of the democratic principle, allowing consolidation citizenship, guaranteeing with and for all this, the implementation of the principle of human dignity.

From all that has already been exposed, it is possible to perceive that public services, as well as their legal regime, stand before social rights as mechanisms that allow such rights to be implemented, both in terms of their objective dimension and that of the dimension subjective. It is known that, due to the objective dimension, ‘it is up to the public power to always act in order to confer the greatest possible efficiency to fundamental rights’²⁷, thus forming ‘the basis of a legal system of a Democratic State of Law’²⁸. In this context, it can be understood that through the provision of public services, with the guarantee of universality, continuity and moderation – in other words, the adequate public service –, it is possible to guarantee the effectiveness of social rights, thus enshrining the fundamental principles provided for in the Constitution.

Such a principle is important not only for the democratic principle, but also for the Social State principle, insofar as the consecration of social rights allows society's hopes, in the

²⁶ See A. D. C. R. SCHIER, *Regime jurídico do serviço público: garantia fundamental do cidadão e proibição de retrocesso social*, Curitiba, 2009, 214 f. Tese (Doutorado em Direito) – Setor de Ciências Jurídicas, Universidade Federal do Paraná.

²⁷ C. M. CLÈVE, « A eficácia dos direitos fundamentais sociais », *Revista Crítica Jurídica*. Curitiba, nº 22, jul/dez. 2003, p. 22.

²⁸ G. F. MENDES, *Direitos fundamentais e controle de constitucionalidade*. São Paulo: Celso Bastos Editor, 1998, p. 32.

achievement of a free, just and solidary society²⁹. It is this perspective that imposes the reinterpretation of the adequate public service as a fundamental guarantee, a mechanism that offers citizens access to fundamental goods, thus adopted by the 1988 Constitution, that lead them to enjoy a dignified life.

Also, besides the need of understanding the idea of the adequate public service, the theme of AI may give rise to the incorporation of other principles that lead to the construction of applications capable of accomplish the public interest in the best way.

Highlighting the application of this notion in AI, it is possible to add to it two other principles, which deserve to be taken as practices: algorithmic transparency and performativity.

Therefore, challenges for good public service delivery in AI are measures that seek, among other aspects, to: (i) the opening of software source codes and algorithms; (ii) the adoption of control procedures, correction of directions and decisions adopted for the use of algorithms; (iii) the delimitation of decisions to be incorporated into the algorithms; (iv) the use of rationality and legal certainty that protect the privacy of personal data when using automated procedures; (v) the exemption from the collection of personal data that is not necessary; (vi) the organization of document data management, describing its storage and use; and (vii) the development of public decisions based on algorithms with the participation of public managers and administrators.

Therefore, It is perceived and concluded that the by the association of normative principles (constitutional and legal), the concept of “adequate public service”, whose central idea refers to a set of instruments that provide results in the quality of the services offered and the practices developed within the range of Public Administration must be focused on transparency, data protection, delimitation of decisions, with maximum understanding of the utility and purpose of applications, as conditions that should modulate the development of a strategy for building AI in public services.

From this perspective, the development of a Brazilian Artificial Intelligence Strategy must focus on the incorporation of this set of elements (principles and practices).

At the same time, one should not fail to consider the regulatory modulation, which already exists in the Brazilian system, around themes that involve access to information (Federal Law No 12.527/2011 - Access to Information Law³⁰), the rules for a neutral internet (Law No 12.965/2014 - Marco Civil da Internet³¹)

²⁹ K. HESSE, *Elementos de direito constitucional da república federal da Alemanha*. Tradução de: HECK, Luís Afonso. Porto Alegre: SAFE, 1998, p. 167.

³⁰ BRAZIL. Federal Law No 12.527/2011. Available in: http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2011/lei/l12527.htm. (Access on: December 12, 2020).

³¹ BRAZIL. Federal Law No 12.965/2014. Available in: http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2014/lei/l12965.htm. (Access on: December 12, 2020).

and data protection (and Law No 13.709/2018 - General Data Protection Act³²). All of these legal diplomas are standards that deserve to be incorporated into the development of the strategy mentioned above.

CONCLUSION

The notion of adequate public service, as a constitutional and infraconstitutional principle guiding Public Administration, represents the fulfillment of a duty inherent to the public manager, which means to carry out the duties with reasonable rates, provision obligation, efficiency, security, opportunity, generality and transparency. The provision of a public service following the legal regime of public law, observing the constitutional principles, represents, in addition, a fundamental guarantee of the citizens and the concretization of the Democratic Social State and the dignity of the human person. In this way, a search for the right offer constitutes the public objective that intends to overcome the slowness and inefficiency caused by the bureaucratic model. Faced with such a scenario, it is up to the public manager to seek alternative mechanisms that enable the provision of public services in an effective, transparent and, above all, efficient manner. Computer systems, which use Artificial Intelligence, are part of people's daily lives, making their lives easier by performing tasks that traditionally would require human intervention. This is because private sector companies also use such systems to optimize activities, enhance profits and improve customer relationships. In the public sector, although the use of AI is more rare, some public agencies are already benefiting from disruptive technologies, as common in the development of work. Given this, it is observed that Artificial Intelligence can be allied with Public Administration, thanks to the agility and time savings provided by the verification and crossing of data, through *machine learning*. In addition, AI creates possibilities beyond human capacity, offering public field elements that could go unnoticed in analyzes commonly performed by public servants. Still, it should be noted that Artificial Intelligence has also allowed for the social inspection of public spending. It is important to emphasize that it is not a matter of analyzing the use of intelligent systems in a simplistic way, attributing to them the burden of solving all the problems that contemporary Public Administration faces, but it cannot be forgotten that new technologies are important means for reaching the administrative purposes, since they streamline, modernize and reduce bureaucracy in public activity. It can be said, therefore, that the use of disruptive technologies by the Public Administration is an important mechanism for achieving

³² BRAZIL. Federal Law No 13.709/2018. Available in:
http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2018/lei/l13709.htm.
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the inherent efficiency, considering the possibility of preventing tax evasion, irregularities in public tenders and contracts, acts of corruption, in addition to to enable transparency of acts, social control and democratic access to public services.

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