

How the Judiciary Can Embrace the Technological Revolution and Improve Justice: The Brazilian Case

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Keywords: Technology, Judiciary, Public Policy, Efficiency, Access to Justice

Abstract

The article aims to analyze the digital transformation of the Brazilian Judiciary, providing reflections on the need for this in light of the rapid changes due to technological disruptions in social and economic dynamics that have taken place in recent decades.

Introduction

Technological innovations are revolutionizing our lives as never before. Those who were born less than 20 years ago sometimes cannot even conceive of the transformations that our day-to-day lives have undergone, whether in the way we communicate (from letters, pagers, and landlines to smartphones and instant messaging applications), we inform ourselves (does the reader still read printed newspapers or access a news portal?), we consume (delivery services and e-commerce) and even in the way we are entertained (from video stores and music CDs to Netflix and Spotify).

This phenomenon is also spreading into the public sector. Indeed, citizens have expectations of digital public services to ease their lives - just as it has been happening in the private sphere by means of a variety of applications, available in our own hands and accessible through a few taps.

In 2019, Richard Susskind highlighted that:

More people in the world now have access to the internet than access to justice. According to the Organization for Economic Cooperation and Development (OECD), only 46 percent of human beings live under the protection of law, whereas more than 50 percent of people are now active users of the internet in one way or another. Annually, one billion people are said to need “basic justice care”, but in many countries, close to 30 percent of problem-owners do not even take action.”

Currently, more than 65% of the population already has access to the internet. In Brazil, whose total population is around 210 million inhabitants, it is estimated that more than 149 million inhabitants already have access to the internet, more than 70% of the population.

In this context, the new social dynamic requires a new concept of the Judiciary Branch and of how justice should be provided to the citizens. The emergence, as well as the need for a solution, of individual and collective conflicts happens at a speed and rate completely different from those that prevailed when the traditional procedural precepts and the judicial decision-making process were established.

While technologies are evolving exponentially, organizations are changing logarithmically, which leads to a gap. The time has come for us to embrace technology in the courts as well, allowing judicial provision to take place effectively and within a reasonable time. The promotion of Digital Justice makes it possible not only to reduce temporal, financial, and social costs for the common citizens but also to reach a large number of persons who, unfortunately, were unable to assert their rights for a myriad of reasons.

Brazil is one of the global leaders in the ‘lawsuits filed per year’ ranking. There are more than 77 million pending lawsuits, with 27.7 million new lawsuits filed in 2021. Brazilian courts hold one of the world’s heaviest workloads, with 6.411 cases per judge.

There is a fear that the pressure of these growing numbers could end up in the collapse of the Brazilian judicial system, which has already been working close to the limit of its operational capacity. In 2019, criminal proceedings lasted, in the first instance (trial court), on average, an unbelievable three years and ten months, while non-criminal proceedings lasted two years and four months.

Justice Luiz Fux, when he became Chief Justice of Brazil and President of the National Council of Justice (“CNJ”), set as one of the goals of his administration the development of Justice 4.0 and the promotion of access to digital justice, aiming to improve governance, transparency, and efficiency of the Judiciary.

The first revolutionary initiative that must be mentioned is the Digital Platform of the Brazilian Judiciary (PDPJ-Br), which was responsible for the introduction of a new public policy for the Electronic Judicial process. In that sense, all the Brazilian courts are linked through a common platform (even if using different electronic systems), enabling them to join efforts to develop technological solutions, which, when coupled to the platform, can be shared with any court through the so-called “Judiciary marketplace” (“CNJstore”). That was a great step for a country such as Brazil, a federation composed of 26 states and a federal district with more than 90 courts, enabling the collection of statistics and data, as well as facilitating the use of AI (artificial intelligence) tools. It is worth noting that, in the past, the courts faced similar problems but ended up investing a lot of money and personnel to develop their own solutions, actually in a parallel race.

As an example, through the technical cooperation agreement between the CNJ and the Roraima State Court of Justice (TJRR), the pioneering inclusion of the Mandamus module occurred a solution that makes use of AI to automate the warrants procedure (court orders such as subpoenas and court summons) and which is now available to all other courts in Brazil, realizing the implementation of a community concept, in which all courts, regardless of the sphere, can contribute with the best technological solutions for common use, and better management of the digital jurisdiction.

Mandamus used several techniques and technologies in its development, such as Latent Dirichlet Allocation (LDA), consisting of a statistical model of natural language processing, Term Frequency-Inverse Document Frequency. (tf-idf or TFIDF), responsible for assessing the importance of information obtained resulting from data mining carried out using statistical measurements, the Bag of Words (BoW), and the Named Entity Recognition model – NER (Mentioned Entity Recognition), among others.

Through Mandamus, artificial intelligence is now used to carry out the analysis of all judicial decisions made, identifying the need to issue a warrant, creating it with information from the case, and automatically distributing it to the court official who is closest to the fulfillment address, thanks to the use of GPS. Court officials, now working with smartphones, will receive warrants on their devices through a mobile app, in the order in which they should be fulfilled, as well as an indication of the best route to carry out the diligences.

Once the address indicated on the GPS has been reached and the person has been located, the court officer will access, via smartphone, the warrant and related procedural documents, read their entire contents and collect the person's signature on the phone screen itself. It will then forward the electronic content of the warrant via email or WhatsApp. If this is not possible, either due to the person's lack of resources or due to non-cooperation in indicating their contact, the warrant will be printed on a slip similar to that used in credit card machines, containing general information, as well as a QR code and a link to access to the entire content of the process.

After that, the court office will be able, from a flow of options corresponding to the type of warrant, to generate the certificate automatically through just a few clicks on the cell phone itself. If there is a need to add any information, it's as simple as entering the text by typing it on the smartphone. Finally, the court office will electronically sign the certificate, which is automatically added to the case file, providing real-time transparency to the judge and the parties regarding compliance with the order.

The entire procedure will, therefore, be carried out electronically, from receipt of the warrant to its return with the respective certificate. Some details deserve to be highlighted. If an officer receives a summons and cannot locate the person due to having discovered from the new resident or a neighbor that they have changed address, simply indicate the new address in the system, and the warrant will be automatically changed and distributed to another officer who is closest to the address.

In another twist, the system will also consider, when distributing warrants, the amount already served by each officer, the distance they traveled, and the time they remained logged working, allowing the warrants to be distributed in a fair and equitable manner among the officers. Furthermore, the automatic extraction of the officer's location at the time of the certificate via GPS also provides security regarding the actual attendance at the place where the due diligence is carried out.

In the case of TJRR, such automation made it possible to make better use of the workforce, with the reallocation of human labor for functions that cannot be delegated to artificial intelligence. In addition to eliminating mechanical and repetitive tasks, the project generates sustainability, as it avoids the consumption of millions of sheets of paper and reduces fuel consumption when carrying out diligences, bringing a new phase of governance for the Judiciary, focused on ESG (environmental, social, and governance).

Regarding Artificial Intelligence, Brazil has a national platform called SINAPSES for the storage, supervised training, versioning control, distribution, and auditing of AI models, in addition to establishing the parameters of their implementation and operation. The management and responsibility for the models and datasets rests with each court through its technical staff and users who collaborate with the platform. The use of AI focuses on

providing greater agility and quality in judicial provision, contributing to the reduction of the backlog of cases. Machine Learning solutions have stood out as they involve a data evaluation method that allows you to discover patterns and improve decision-making. They can provide computational capacity, as well as data, algorithms, and APIs, among other solutions, to design, train, and apply models in the area to machines, applications, processes, etc. 150 active Artificial Intelligence (AI) models produced by 29 courts and councils, are currently deposited on the Sinapses Platform. In November 2023, the Brazilian Federal Supreme Court (STF) published a public call for proposals involving prototypes of artificial intelligence solutions that allow summarizing legal proceedings.

It is also crucial to highlight the creation of the “100% Digital Proceeding,” which embodied a paradigm shift in the Brazilian Judiciary, conceiving of Justice effectively as a service and not as a physical building commonly called “Forum.” Under this rule, the proceedings can now be fully remote. Hearings and trials take place exclusively by video conference, while all information related to the cases are also provided remotely, during office hours, by phone, by email, by video calls or other digital means of communication that may be defined by the court.

In the same sense, the CNJ instituted the “Digital Desk,” enabling parties and counsels to speak to court officials during business hours through the use of any video conference tool in a similar manner to the face-to-face service (which occurred at the so-called “desk” physical services in the courthouses).

Finally, as the culmination of this digital transformation of the judiciary and symbolizing its entrance into the metaverse, we must underscore “Justice 4.0 Divisions,” which are Brazilian fully remote courts, specialized in certain law issues or fields and with jurisdiction over the entire territorial area located within the limits of the Courts of Appeals jurisdictions. As Steven Pinker pointed out, “The digital revolution, by replacing atoms with bits, is dematerializing the world right before our eyes.”

Undoubtedly, the “Justice 4.0 Divisions” enable not only more effective judicial provisions by providing the means to high-level specialization for certain types of demands but also that it takes place in a reasonable time. In fact, they allow the improvement of magistrates’ decisions quality since they handle only cases related to a specific law issue (i.e., bankruptcy cases, pollution cases, etc.), in contrast to traditional local courts in which a single and unspecialized judge handle all types of cases: criminal, family, civil, torts, etc. Nevertheless, each division will be able to count on several judges and, thus, to attend even to eventual episodic outbursts of litigation due to specific events (evoking the idea of “joint efforts”).

The main criticism raised against the advance of the so-called “Justice 4.0” is related to the vulnerable and digitally excluded people who do not have access to the internet or do not have sufficient knowledge to use it.

However, in the traditional model of the judiciary, physical attendance demands expenses for transport, food, and even the loss of a day's work, thus being even more costly for those unassisted individuals and making the guarantee of access to justice a formal and empty promise.

Nevertheless, even for these people, Digital Justice might be the best solution. It was established in 2020 that Brazilian courts must provide available rooms for hearings and trials via video conference system. Therefore, those who have difficulties accessing the internet via a cell phone or computer might go to the court closest to their residence and not necessarily to the one where the procedural action is taking place.

On June 14th 2022, the CNJ approved a new normative act that has the potential to solve the problem once and for all, recommending to the courts the installation of Digital Inclusion Points (PID), rooms that adequately allow the carrying out of procedural acts out of courts by video-conference systems, through cooperation agreements with municipalities, districts, Public Prosecutors' Offices, Public Defenders' Offices, Attorneys' Offices, Sectionals of the Brazilian Bar Association (OAB) and the police, thus enabling the multiplication of access to the Judiciary.

Importantly, the Digital Inclusion Points (PID) must be equipped with at least two cameras, or a 360degree camera, in order to afford the full view of the space, allowing magistrates, prosecutors, and lawyers to certify the conditions in which the act is being carried out and fulfill the procedural guarantees.

As an example of the benefits, one of the first PIDs was implemented by the Court of Justice of the State of Roraima (TJRR) in an indigenous community called the Waimiri-Atroari, located on the border between Roraima and Amazonas. Its Digital Inclusion Point allowed the issuance of more than a thousand identity documents, which are essential for accessing other public services, including hospital care, bringing citizenship and fundamental rights to the locals.

“It is not the strongest that survives, nor the most intelligent nor the most beautiful, but the one that best adapts to changes,” the famous phrase by Leon C. Megginson, never made so much sense as in this contemporary scenario, which demands fast adaptation from everyone, including the judiciary.

It is imperative to reflect on the need for this technological transformation in the judiciaries around the world in light of the rapid changes in social and economic dynamics that have taken place in recent decades. The digitally excluded should not be treated as an obstacle to technological transformation, the purpose of which is to guarantee access to justice. On the contrary, given how Digital Inclusion Points can provide for the digital inclusion of many citizens, enabling access not only to justice but to multiple state services, even in the most remote places.

In October 2022, the Brazilian judiciary had already implemented PDPJ nationally, all courts had the digital desk working in their judicial units, more than 13,000 units had adopted the 100% Digital Proceeding (more than 67% of the Brazilian judiciary), and there were already at least 48 Justice 4.0 Divisions in operation. The average duration of a case until the final court decision, comparing the years 2019 and 2021, has already been reduced by six months.

Many challenges still lie ahead, and the difficulties in making justice more agile and efficient are not negligible. However, one thing is certain: no one can deny that the Fourth Industrial Revolution has already entered, irreversibly, into Brazilian justice and that the digital age is shaping the present and future of Brazil's judiciary.

References

- Agência CNJ de Notícias. 2023. “Com a plataforma Sinapses, Judiciário assume protagonismo no desenvolvimento de soluções de IA” <https://www.cnj.jus.br/com-a-plataforma-sinapses-judiciario-assume-protagonismo-no-desenvolvimento-de-solucoes-de-ia/>, last accessed on October 12, 2023.
- Agência CNJ de Notícias. 2020. “Solução de IA da Justiça de Roraima estará disponível para demais tribunais” <https://www.cnj.jus.br/solucao-de-ia-da-justica-de-roraima-estara-disponivel-para-demais-tribunais/>, last accessed on October 12, 2023.
- Araujo, Valter Shuenquener de; Gabriel, Anderson de Paiva, and Pinto, Esdras Silva. 2021. “A plataforma digital do Judiciário brasileiro e o Mandamus” *Jota*, Brasília. <https://www.jota.info/opiniao-e-analise/colunas/juiz-hermes/inteligencia-artificial-poder-judiciario-23022021>. last access on February 27, 2023.
- Carnio Costa, Daniel, Salomão, Luis Felipe and, Shuenquener Araujo, Valter. 2020. “Achatar a curva de crescimento das ações judiciais” *O Globo*, Rio de Janeiro.
- CNJ. 2020. “Plataforma Sinapses / Inteligência Artificial” <https://www.cnj.jus.br/sistemas/plataforma-sinapses/>, last accessed on October 12, 2023.
- CNJ. 2021. “Resolução N° 385 de 06/04/2021” <https://atos.cnj.jus.br/atos/detalhar/3843>
- CNJ. 2020. “Resolução N° 345 de 09/10/2020” <https://atos.cnj.jus.br/atos/detalhar/3512>
- CNJ. 2021. “Resolução N° 372 de 12/02/2021” <https://atos.cnj.jus.br/atos/detalhar/3742>
- CNJ. 2020. “Resolução N° 335 de 29/09/2020” <https://atos.cnj.jus.br/atos/detalhar/3496>
- Conselho Nacional de Justiça. “Justiça em Números 2021” Brasília: CNJ, 2021. p. 214-220. Available at: <https://www.cnj.jus.br/wp-content/uploads/2021/09/relatorio-justica-em-numeros2021-12.pdf>. Last accessed on October 12, 2023. p. 213 e 219.
- Conselho Nacional de Justiça. 2022. “Justiça em Números 2022” Brasília: CNJ. <https://www.cnj.jus.br/wp-content/uploads/2022/09/justica-em-numeros-2022.pdf>. p. 21-31, 107, 119, 223.
- Estatísticas Sociais. “PNAD Contínua TIC 2018: Internet chega a 79,1% dos domicílios do país” <https://agenciadenoticias.ibge.gov.br/agencia-sala-de-imprensa/2013-agencia-de-noticias/releases/27515-pnad-continua-tic-2018-internet-chega-a-79-1-dos-domicilios-do-pais>, last accessed on January 3, 2022.
- EUA: Internet World Stats. 2021. “Internet Usage, Facebook Subscribers and Population Statistics for all the Americas World Region Countries” <https://www.internetworldstats.com/stats2.htm>, last accessed on January 2, 2022.

EUA: Internet World Stats. 2021. "World Internet Users and 2021 Population Stats"

Available at:

<https://www.internetworldstats.com/stats.htm>, last accessed on January 2, 2022.

Gabriel, Anderson de Paiva. 2022. *O Pragmatismo como paradigma do Direito Processual Penal contemporâneo: tecnologia, consenso e whistleblowing*. Londrina: Thoth

Holmes, Stephen, and Sunstein, Cass. 1999. *The cost of rights: why liberty depends on taxes*. New York: Norton.

Leal, Aline and Fabricio Fereira. 2020. "Brazil top court has new chief justice, Luiz Fux" *Agencia Brasil*. June 26, 2020. <https://agenciabrasil.ebc.com.br/en/justica/noticia/2020-06/brazil-top-court-has-new-chief-justice-luiz-fulx>

Pinker, Steven. 2019. *Enlightenment Now: The Case for Reason, Science, Humanism, and Progress*. Penguin, p. 179.

Porto, Fabio Ribeiro; Gabriel, Anderson de Paiva; and Libonati, Alexandre. 2021. "Plataforma Digital do Poder Judiciário Brasileiro - a ponte para Justiça 4.0" *Revista do Conselho Nacional de Justiça (CNJ)*. Vol. 5, n. 1 (jan./jun. 2021) – Brasília, CNJ. <https://www.cnj.jus.br/ojs/index.php/revista-cnj/article/view/196/90>, last accessed in 2023.

Retter, Emily. 2016. "Netflix, Uber and Spotify: 'Disruptor' businesses which changed how world works" *Mirror*. Feb 11, 2016. <https://www.mirror.co.uk/tech/netflix-uber-spotify-disruptor-businesses-7354782>

STF. 2023. "STF faz chamamento público para projetos de inteligência artificial que automatizem resumos de processos" <https://portal.stf.jus.br/noticias/verNoticiaDetalhe.asp?idConteudo=518467&ori=1>, last accessed on October 12, 2023.

Susskind, Richard. 2019. *Online Courts and the Future of Justice*. Oxford: Oxford University Press.

TJRR. 2022. "JUSTIÇA CIDADÃ - TJRR comemora aniversário do posto de atendimento na comunidade Waimiri-Atroari" <https://www.tjrr.jus.br/index.php/noticias/16140-justica-cidada-tjrr-comemora-aniversario-do-posto-de-atendimento-na-comunidade-waimiri-atroari>

Tribunal de Justiça de Roraima. 2019. "Mandamus - Sistema Inteligente de Controle de Mandados" *Youtube*. <https://www.youtube.com/watch?v=CShQOa94kn0&feature=youtu.be>, last accessed on October 12, 2023.

Tribunal de Justiça de Roraima. 2022. "Justiça Cidadã - Pólo WAIMIRI-ATROARI".

Twain, Mark. 1999. *The Wit and Wisdom of Mark Twain: A Book Of Quotations By Mark*.

Twain. Mineola: N.Y: Dover Publications.

Youtube. https://www.youtube.com/watch?v=xaFzF9dHn_s