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Latin America at the crossroads of generative AI and its responsible adoption in the judicial sphere

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The Center for Studies in Technology and Society (CETyS) is an interdisciplinary academic space for research, training, and dissemination on the dynamics and policies focused on the Internet and the digital ecosystem in Latin America.

Latin America at the crossroads of generative AI and its responsible adoption in the judicial sphere is a research project developed during 2024 and 2025 by the Center for Studies in Technology and Society (CETyS) at the University of San Andrés, Argentina.

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The use of language that does not discriminate, does not reproduce sexist stereotypes, and allows all genders to be visible is a concern of those who worked on this publication.

We chose to distinguish between genders in some passages and to use the generic masculine in others, depending on what was clearer and more fluid for reading, and always with the intention of including all people in these pages.

The opinions expressed in the publications are solely those of the authors. They are not intended to reflect the opinions or perspectives of CETyS or any other organization involved in the project.

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1. EXECUTIVE SUMMARY

The adoption of artificial intelligence (AI) in the Colombian judicial system reveals a significant gap between aspirations and reality. A study based on 182 people surveyed and 23 interviews with judicial officials, whose results converge with the survey conducted directly by the Superior Council of the Judiciary during the same period, shows that only 22% use generative AI tools, mainly ChatGPT in its free version (80% of users) as a resource to cope with the work and operational overload resulting from judicial congestion. These converging data also suggest that the main barrier is not the lack of regulation, financial resources, infrastructure, or training, but rather a system that prefers "innovation theater" to real digital transformation, protecting existing structures under the pretext of legal caution. The report maps the current use of AI in the Judicial Branch in order to understand the current state of implementation and suggests some recommendations to contribute to its responsible adoption with full respect for human rights and ethical standards. The report highlights the urgent need for the CSJ to adopt a comprehensive approach that encompasses technological, administrative, organizational, and regulatory aspects to optimize and accelerate the tangible implementation of AI in the Colombian justice system.

Keywords: AI in justice, Colombian judicial system, ChatGPT, digital transformation, digital justice, Colombia..

2. INTRODUCTION

In Colombia, as in many Latin American countries, the adoption of artificial intelligence (AI)-based tools in the judicial sphere is at an early but promising stage, marked by growing interest and a myriad of challenges. This document will examine the current landscape of AI use in the judicial system of the Republic of Colombia, with a particular focus on generative AI, analyzing its implications, opportunities, and obstacles.

It should be noted in this regard that the first report published in 2021 by the Center for Studies in Technology and Society (CETyS)[1] conducted an in-depth review of the regulatory framework and initial enabling conditions for what was then envisioned as the future adoption of AI in the judicial branch. After an in-depth technical and legal analysis of the state of the art of AI, including a beta version of GTP-3, we recommended that:

> *"While computer science attempts to design an artificial intelligence system capable of overcoming these legal and technical obstacles, the judicial branch could design, develop, and implement AI systems to optimize or improve the performance of simple tasks within the scope of judicial proceedings involving the administration of justice. In other words, AI could be used for mechanical and repetitive tasks where the margin of error does not pose a risk to the exercise of fundamental rights."*
>
> **Castaño, 2021**

This prediction made in 2021 is now a reality, but not thanks to institutional policies adopted by the Superior Council of the Judiciary (hereinafter "SCJ") and the Colombian government, but rather due to individual initiatives by judges that have been financed with their own resources, motivated by the excessive workload they suffer and their deep commitment to satisfying the human rights of users of the judicial system. Within this context, this research is based on a comprehensive analysis that combines quantitative and qualitative data obtained through a survey of 182 judicial officials and 23 in-depth interviews conducted between July and August 2024[2]. These interviews, carried out with various actors in the judicial sector at different hierarchical levels, provide a holistic view of the phenomenon, ranging from high courts to courts of first instance.

The CSJ conducted a survey on the use of AI tools in the judicial branch in July 2024, which was then published in February 2025[3]. The phenomenon observed between thesurvey conducted by the CSJ and our own empirical

1. See Project "Preparing the judiciary for artificial intelligence in Latin America." Reports available at: https://cetys.lat/preparacion-del-sector-judicial-para-la-inteligencia-artificial-en-america-latina/

2. For more information on the methodology of the interviews and the survey, see the Annex at the end of this report.

3. Supreme Council of the Judiciary, Executive Report Survey "Artificial Intelligence in the Colombian Justice System," February 2025, available at: https://www.ramajudicial.gov.co/documents/10635/96912759/Reporte+Ejecutivo+Encuesta+IA.pdf/c5023729-9ad0-ec87-125b-46709ff24533?t=1740177430513

research corresponds to the convergence of independent results, reflecting external consistency and strengthening the validity of the findings by showing that different surveys conducted in the same period (July-August 2024), with similar but not identical methodologies and questions, coincide in the same trends.

In fact, both the report issued by the CSJ (3,152 respondents) and ours (182 respondents plus 23 interviews) demonstrate robust convergent validity by confirming identical empirical patterns despite completely independent methodologies. The strength of this convergent validity is based on multiple methodological factors: the remarkable difference in sample sizes corroborates that the trends identified in ChatGPT in its free version as the dominant tool, concentration of adoption in courts, lack of infrastructure, problems of integration with other tools or information systems of the Judicial Branch, barriers to appropriation, training, and knowledge, among others, do not depend on the specific statistical power of each study.

The use of different research teams eliminates biases associated with particular pollsters, while convergence in central trends despite similar but not identical question formulations indicates that the phenomenon measured is sufficiently robust to manifest itself independently of minor variations in instrumentation. This methodological triangulation significantly increases the internal and external validity of the findings in this report, providing solid evidence that the results reflect real patterns in the population studied rather than methodological artifacts specific to each individual survey, thus establishing a reliable empirical basis for understanding the current state of AI adoption in the Colombian judicial system.

Within this context, this report aims to diagnose the current state of generative AI adoption in the Colombian judicial system and, based on this, provide concrete recommendations for a more effective and responsible implementation of AI in the judicial branch, in a spirit very similar to that which motivated the 2021 report. Through the analysis of current perceptions, uses, and challenges, we seek to contribute to an informed debate that will help dispel theoretical speculation with the sole motivation of contributing to the responsible adoption of AI in the administration of justice in Colombia and, by extension, in Latin America, with utmost respect for human rights and the rule of law. This report is published with information and data obtained as of December 2024, except for the survey published by the Superior Council of the Judiciary in February 2025.

I would like to express my deepest gratitude to the court officials who have dedicated their lives to the administration of justice, whose insights, anecdotes, and guidance were fundamental to this academic research. In writing this report, I used various AI-based tools to organize, process, and analyze data on a large scale.

3. CO-CREATION WORKSHOP AND PRESENTATION OF THE DRAFT OF THIS REPORT

On September 2, 2025, a workshop was held to present the draft of this report and develop a co-creation activity. The workshop brought together 25 key actors from the Colombian judicial ecosystem, including magistrates, judges, administrative authorities related to the ICT sector, representatives of civil society, officials from the Superior Council of the Judiciary, members of the Senate's legislative working units, and academics.

During this session, participants reviewed the preliminary findings of the research and confirmed a general consensus with the conclusions presented. Similarly, attendees enriched the analysis with fundamental methodological suggestions for the final report, the most relevant being the recommendation to incorporate data from the survey conducted directly by the Superior Council of the Judiciary in July 2024 and subsequently published in February 2025[4], as we did to ensure the balance of this report.

During the co-creation exercise, the working groups identified current real-world uses of AI-based tools such as the optimization of secretarial procedures (statistics, official letters, term control, etc.), the automation of judicial notifications, and the use of tools such as Perplexity for legal research. In terms of recommended uses, they agreed to prioritize applications that improve access to justice through the automation of routine activities, simple procedural orders, translation into plain language, and standardization of low-complexity procedural acts. They were categorical in prohibiting the delegation of judicial decisions, the creation of prompts that compromise judicial impartiality, and the use of AI for evidentiary assessment.

In terms of regulation, participants recommended developing a roadmap that includes fundamental guarantees, establishing different types of use (operational, administrative, investigative), implementing ethical guidelines that preserve the non-delegable function of the judge, and avoiding maximalist regulations that impose disproportionate burdens based on a regulatory impact analysis. Regarding training, they identified the need for large-scale programs with in-person components, specific design by user type and digital maturity, inclusion of practical use cases, and creation of user-friendly learning environments.

4. Id.

4. STRUCTURE OF THE JUDICIARY AND RELEVANT CHARACTERISTICS

The 1991 Political Constitution of Colombia establishes in its first article that Colombia is organized as a social state governed by the rule of law, organized as a unitary, decentralized, territorially autonomous, democratic, participatory, and pluralistic republic. This definition articulates the structure of the State and its political structure based on the separation of powers and harmonious cooperation between the branches of government in order to achieve the essential purposes of the State and protect human rights.

4.1. THE JUDICIAL BRANCH

The Judicial Branch refers to the power to administer justice and adjudicate conflicts and disputes between citizens and between citizens and the State. This function is exercised through the Judicial Branch, which is organized into a series of judicial bodies that include courts, tribunals, high courts, and various jurisdictional specialties, such as civil, criminal, labor, contentious-administrative, and the special jurisdiction for peace. These bodies operate at different levels, from municipal judges as initial instances to high courts, which act as mechanisms for closing their respective jurisdictional specialties.

n addition, Congress has the power to legislate so that administrative entities may exercise jurisdictional functions. Article 116 of the Political Constitution of Colombia establishes that administrative entities may exercise jurisdictional powers under certain conditions. According to the jurisprudence of the Constitutional Court, the assignment of jurisdictional functions to administrative entities is “subject to legal limits” and must comply with several conditions, including the existence of a rule that enables these powers and respect for due process, as recently evidenced in Ruling C-318 of 2023.

4.2. THE EXECUTIVE BRANCH

In Colombia, the Executive Branch is one of the fundamental pillars of the State, responsible for enforcing laws and public policies to fulfill the essential purposes of the State (Political Constitution of Colombia, art. 113). For the purposes of this report, the Executive Branch exercises two fundamental powers: regulatory and legislative. Through

the regulatory power, the President of the Republic can issue general rules that develop and specify the application of the law, ensuring that legislative provisions are implemented effectively and consistently (Constitutional Court, C-056, 2021).

On the other hand, regulatory power is exercised by specialized administrative entities and focuses on creating specific technical standards within sectors such as energy, telecommunications, or the environment, guiding economic and social activities to protect the public interest (Constitutional Court, C-302, 1999). Additionally, it has an administrative policing function that empowers the executive branch to take preventive and corrective measures to maintain public order, safety, and health, guaranteeing the protection of fundamental rights and compliance with regulations, with the ultimate goal of preserving the general welfare of society (Constitutional Court, C-492, 2002).

5. POLICIES, LAWS, AND BILLS ON THE USE OF AI IN COLOMBIA

Colombia, renowned for its legalistic tradition, exemplifies the dilemma faced by many traditional organizations and administrative agencies analyzed by Steve Blank. The country has cultivated an inexplicably deep-rooted belief in the transformative power of regulation, similar to how large companies and government agencies have placed excessive trust in their established processes. This commitment to the effectiveness of the written word has created an institutional paradox: while the state apparatus incessantly produces laws, decrees, and agreements that articulate new processes to "manage" the country's digital transformation, real investment in tangible elements for its implementation lags behind.

In his essay "Why Companies do 'Innovation Theater' instead of Actual Innovation," Steve Blank addresses the challenges large organizations face in adapting to rapid and multifaceted disruption. Blank argues that established companies and government agencies often struggle to innovate effectively because their existing processes, although originally designed for efficiency and scale, now hinder agility and responsiveness. To this end, he identifies three common but inadequate responses: organizational restructuring, superficial innovation activities, and fragmented process reforms. Blank calls them "organizational theater," "innovation theater," and "process theater," respectively (Blank, 2019).

This situation has led to what we might call "innovation and process theater." For Blank, this term refers to the superficial activities that companies and government agencies implement in an attempt to appear innovative, without really addressing the fundamental problems that hinder true innovation. Although these activities can contribute to shaping and building a culture, they rarely result in deployable products or solutions that truly drive organizational change.

As things stand, this dissonance reflects what we might call a "cult of process" in the Colombian context. Like the large organizations described by Blank, Colombia has prioritized the creation of "management" processes through countless laws and administrative acts - over the "product" - tangible infrastructure, adequate technological tools, and skilled human capital. The corridors of judicial offices, crammed with files gathering dust, contrast

sharply with the absence of modern tools and properly trained personnel to accelerate the digital transformation of the judicial branch.

This means that public authorities enact new regulations on digital justice and create more processes to implement them, but these actions often amount to mere media spectacle without achieving substantial transformation. Like the organizations described by Blank, Colombia runs the risk of confusing regulatory production with real progress that can reinvent the judicial system for the benefit of its users and their human rights.

With this caveat to the reader, this section provides an inventory of the main laws, administrative regulations, and judicial precedents that have been adopted in Colombia since 1996 to promote the digital transformation of justice and the use of AI in judicial proceedings.

5.1. OVERVIEW OF AI POLICIES AND LAWS IN COLOMBIA

As of the date of publication of this report, Colombia does not have specific legislation regulating the use of AI. However, the country has made significant progress in the digitization of public services and data management, which has paved the way for eventual adoption and regulation. Digital transformation has been a central focus within the Colombian legal system, reflected in the legislation issued by the Congress of the Republic and in the public policy planning and regulatory instruments issued by the National Government.

The country has adopted an enterprise architecture model to implement information technologies in public entities, aligning itself with the recommendations of the OECD (Castaño, 2021). The Online Government strategy, established in Law 790 of 2002 and reinforced by Law 962 of 2005, has promoted the incorporation of technologies to foster institutional and administrative changes.

Law 527 of 1999 and its subsequent developments have been fundamental in regulating the use of data messages and digital signatures, establishing the regulatory framework for e-commerce in the country. In terms of data management, the 2014 Law on Transparency and the Right of Access to Public Information (Law 1712 of 2014) has been key to promoting the use of open public data, encouraging the creation of new value-added services, and ensuring transparency and citizen participation.

5.2. SPECIFIC REGULATIONS RELATED TO THE USE OF AI IN THE JUSTICE SYSTEM

The evolution toward a model of justice that natively manages digital proceedings is essential to overcoming these challenges and achieving the objectives of a more accessible, agile, and effective justice system. The regulatory framework for digital justice in Colombia dates back to Article 95 of the Statutory Law on Justice (Law 270 of 1996), which promotes the incorporation of "advanced technology" into the administration of justice.

Let us remember that, in 1996, personal computers, laser printers, and the internet were considered "advanced" technologies, things that many of us today perceive more as commodities. Despite the passage of time, there are still many court offices in Colombia today that do not have a constant supply of electricity, a relatively modern personal computer, or access to broadband. Let us hope that this is not a bad omen for what could happen with the adoption of AI in Colombia.

In contrast to the above, the evolution of the regulatory framework for the implementation of technologies in the Colombian justice system has been gradual but steady. Law 1564 of 2012, which adopted the General Code of Procedure, marked a significant milestone by introducing a comprehensive model of digital justice. A crucial aspect of Law 1564 was the order to implement the Digital Justice Plan, entrusted to the CSJ. This peremptory mandate reflected the legislator's long-term vision for modernizing the administration of justice.

Subsequently, Law 2080 of 2021 introduced amendments to the Code of Administrative Procedure and Administrative Litigation, reinforcing the trend toward digitization. This law placed special emphasis on the dissemination and publicity of court rulings, thus promoting greater transparency and accessibility to judicial decisions.

The most recent and significant advance in this judicial digitization process came with Law 2213 of 2022. This legislation consolidated and made permanent the measures introduced by Legislative Decree 806 of 2020, which had been enacted in response to the health emergency caused by the COVID-19 pandemic. Law 2213 not only ratified the use of technology in judicial proceedings, but also granted judicial authorities the power to determine whether proceedings would be conducted in person, digitally, or in a hybrid format, thus providing crucial flexibility to adapt to different contexts and needs.

Recently, the Superintendency of Industry and Commerce (SIC), as the National Authority for the Protection of Personal Data, issued External Circular No. 002 of 2024 on August 21, 2024. This circular establishes guidelines on the processing of personal data in AI systems, highlighting the importance of protecting the fundamental right to habeas data, as established by Statutory Law 1581 of 2012.

For its part, the CSJ of Colombia has also issued a series of general administrative acts,

called “agreements,” focused on the digital transformation and modernization of the administration of justice. These agreements reflect an incremental and path-dependent effort to implement ICT in the judicial system, from the internal management of offices and court files to interaction with citizens.

The CSJ issued Agreement PCSJA24-12243 on December 16, 2024, which, although it purports to implement ruling T-323 of 2024, ends up contradicting its spirit by creating barriers that effectively make it impossible to use AI in the Colombian judicial branch. The disconnect between the Constitutional Court’s intention and the CSJ’s implementation is evident in three fundamental aspects.

First, the empirical findings of this report show that:

22% of the judicial officials surveyed **already use generative AI tools, mainly ChatGPT** (80% of users), pto optimize administrative and judicial support tasks.

This organic, bottom-up adoption reflects a real need for law firms to find solutions to their efficiency and productivity challenges.

However, Article 8 of the Agreement creates a paradox of technological adoption: it expressly prohibits the use of “chatbots” in their “free versions” and requires knowledge of “(...) the origin of the data used for their training, the way in which they are processed, or the operation” of the AI tools intended to be used for certain judicial use cases.

In doing so, the CSJ restricted the use of the only commercial tools currently available to judicial officials without offering technically viable alternatives, as most providers are unlikely to disclose all this information to the public. It should be remembered that:

51% of the judicial officials surveyed identified the reduction of routine work as the main benefit of these tools, a benefit that will be eliminated by this restriction.

Second, the Agreement perpetuates the “innovation theater” by failing to allocate a budget or establish concrete implementation mechanisms, ignoring the fact that 73% of civil servants cite the lack of official tools as the main barrier and 46% indicate deficiencies in basic technological infrastructure.

Finally, the Agreement creates what we might call an “implementation paradox”: on the one hand, it recognizes the need to modernize the administration of justice through AI; on the other, it establishes such restrictive requirements that this modernization becomes impossible. This paradox becomes even more evident when we remember that 73% of the judicial officials surveyed identified the lack of official tools as the main barrier to AI adoption, while 46% pointed to deficiencies in basic technological infrastructure. Although the Agreement recognizes these limitations, it does not establish specific mechanisms, budgets, or deadlines for addressing them.

In addition to the above, the CSJ introduced an apparently technical requirement that requires judicial officials to verify the "origin of the training data" of the AI tools they use, creating a regulatory paradox that exposes the contradictions inherent in this regulation. The reality is that almost no commercial AI provider fully discloses the

origin and detailed composition of its training data sets, considering this information to be a trade secret. This regulatory requirement creates a covert prohibition under the guise of technical regulation, suggesting possible underlying institutional resistance to the adoption of emerging technologies, where regulatory compliance is practically impossible.

Thus, the aspiration for a generative AI tool specific to the Colombian Judicial Branch, as envisioned by the Constitutional Court and the CSJ, seems more like a judicial "hallucination."

5.3. ANALYSIS OF CURRENT BILLS

To date, several bills have been introduced to regulate AI in the country from different angles and perspectives. Bills such as 21/20, 354/21, 253/22, 59/23, and 91/23 focused on creating general guidelines for the development, use, and implementation of AI, emphasizing key principles such as the supremacy of human intelligence, transparency, security, and the protection of personal data. In addition, all of them proposed the creation of commissions or institutional frameworks to oversee the development of this technology.

On the other hand, Bills 130/23, 200/23, and 255/24 focused on more specific aspects: 130/23 on the protection of labor rights, 200/23 on the classification of risks and restrictions, and 255/24 on the use of AI to improve road safety.

When analyzing these bills, significant differences can be observed in terms of their scope and level of detail. While some, such as 59/23, sought to establish a broad regulatory framework, others, such as 130/23 and 255/24, focused on specific applications of AI in specific contexts. There are also differences in the legislative progress of these bills: some were shelved (21/20, 354/21, 253/22, 200/23), while others advanced to the debate stage (59/23, 91/23, 130/23, 255/24).

It is important to note that, despite numerous attempts at regulation, none of these bills has yet become law, highlighting the complexity of the issue and the challenges involved in reaching a consensus.

6. RELEVANT CASES OF ARTIFICIAL INTELLIGENCE USE IN THE JUDICIARY

Since the beginning of 2023, several court cases have been publicly reported in Colombia in which judges have used AI tools, such as ChatGPT, to draft certain parts of various court rulings. These examples have highlighted the emergence of new forms of interaction between technology and law, which anticipates advances that, over time, will become more deeply integrated into the system. For the purposes of this report, we selected what we consider to be the three most representative cases of AI use by judges in Colombia according to the following criteria: decisions made after November 2022 (coinciding with the commercial launch of ChatGPT), cases concluded by a final judgment, and explicit statements by judges regarding the use of generative AI tools.

6.1. CONSTITUTIONAL COURT RULING T-323 OF 2024

Ruling T-323 of 2024 by the Constitutional Court of Colombia addressed an emblematic case that combined the protection of the rights of a minor with autism spectrum disorder (ASD) and the use of AI in judicial decisions. Originating from a writ of protection filed by the child's mother against a healthcare provider, the case gained prominence when the second instance judge used ChatGPT to supplement his decision based on the provisions of Law 2213 of 2022.

In reviewing the case, the Court determined that there had been no violation of due process, given that the second instance judge had made his decision before using AI, but identified deficiencies in the application of the principles of transparency and accountability. With regard to the rights of the minor, the Court partially upheld the ruling, extending transportation coverage and ordering the healthcare provider to guarantee the effective exemption from copayments and user fees. This will be analyzed in detail below.

6.2. SUPERIOR COURT OF THE JUDICIAL DISTRICT OF PEREIRA - CRIMINAL DECISION CHAMBER - CASE # 76 001 60 00193 2013 80734 01

In a ruling dated April 3, 2024, the Superior Court of the Judicial District of Pereira overturned a first-instance acquittal in a manslaughter case. The case, which originated from a tragic traffic accident in 2013, led the criminal judge of first instance to acquit the driver on the grounds that the victim took action at his own risk as a result of the impairment of his cognitive faculties caused by the consumption of alcoholic beverages.

This case is of great significance for this report because the Court used ChatGPT to overturn the lower court's ruling and substantiate its decision. To do so, the judges consulted the AI on the equivalence between blood alcohol levels and the victim's consumption of alcoholic beverages:

"How many glasses of wine, brandy, rum, or beer does the presence of 20 milligrams of ethanol per 100 milliliters of blood correspond to?"

ChatGPT responded that the level of alcohol found in the victim's blood was not significant enough to constitute reckless behavior. Based on this analysis and other evidence, the Court overturned the acquittal handed down by the trial judge and convicted the driver instead.

6.3. CASE: COURT HEARING IN THE METAVERSE - 47-001-2333-000-2020-00014-00

On February 9, 2023, the Magdalena Administrative Court used ChatGPT to obtain guidance on how to conduct hearings safely and effectively in the metaverse while fully complying with current laws. The AI provided definitions of concepts such as "avatar" and suggested authentication methods that could meet the legal requirements for identity and security in judicial proceedings.

Based on ChatGPT's responses and the existing legal framework, which included laws such as 270 of 1996, 527 of 1999, and 2213 of 2022, the Court established guidelines on the use of Meta's Horizon Workrooms application, the prior configuration of avatars by the parties to the proceedings, and a multi-layered identity verification system.

The hearing was successfully held on February 15, 2023, in full compliance with procedural laws and without any legal objections from the parties to the proceedings.

7. REPERCUSSIONS OF SELECTED CASES

7.1. ARE THE CASE STUDIES REPRESENTATIVE?

This section of the report is based on a comprehensive analysis of 23 interviews conducted with various actors in the Colombian judicial sector, covering different hierarchical positions and functions. These interviews, conducted in person or by telephone between July and August 2024, provide a combination of quantitative and qualitative data that allow for a holistic understanding of the phenomenon. All interviews are anonymous, and the data collected will be used strictly for academic purposes, with the consent of the interviewees.

Apparently, the case studies reflect an advanced, almost revolutionary use of generative AI in judicial decision-making and process modernization in Colombia. The central question that arises is: are they representative of the reality of AI use by judges? The quantitative and qualitative data collected in the 23 interviews initially suggest not.

In fact:

66% of those interviewed consider these cases to be "unrepresentative" (38%) or "not representative" (28%) of the reality of the Colombian judiciary.

This perception is based on the gap between the advanced use of AI presented in the case studies and the more modest and pragmatic application observed in the daily practice of judicial offices.

However, a deeper analysis reveals important nuances. Although the cases may not reflect the current everyday use of AI by Colombian judges, they are representative of the potential and direction in which the judicial system is moving. Respondents acknowledge that these cases provide concrete examples of the real application of AI in the judicial system, while 33% see them as a tool for "identifying patterns and trends in the adoption of judicial AI" and almost a quarter of those surveyed (23%) dismissed them as "irrelevant."

These quantitative data should be interpreted in light of the anecdotes shared during the interviews: the judicial officials interviewed pointed out that the three cases under study "are not representative of the judicial reality" because, in everyday practice, they are not

using AI to draft judgments or make direct judicial decisions.

Instead, the officials interviewed explained that they are using AI-based tools to optimize tasks that could apparently be classified as administrative, mechanical, and repetitive, such as summarizing and drafting the case histories, summarizing procedural actions taken, summarizing and analyzing extensive documentary evidence, drafting interlocutory or procedural orders, or even as a sophisticated spell checker.

This reality explains why an overwhelming majority of 66% considered the case studies to be "not very" or "not at all" representative of the real situation in Colombian courts.

7.2. WHAT IS THE IMPACT OF THE THREE CASE STUDIES IN COLOMBIA?

Despite this gap between expectation and reality, the interviews revealed an encouraging finding: 85% of respondents identified a strong "interest in innovation" within the judicial system. This enthusiasm for innovation, however, is being channeled in a more pragmatic way than the case studies might suggest and may respond to the immediate need to make up for the lack of technical and human resources to deal with the high volume of work in their offices.

Additionally, 42% of respondents indicated that the most common use of AI identified in the three case studies is to "obtain technical information about cases," such as medical, financial, or technical issues, which, in turn, raises concerns about the ability of judges and their teams to detect hallucinations on issues that go beyond their legal experience and expertise.

Regarding the impact that the use of AI by judges could have, those interviewed believe that it could negatively affect the "legal basis of decisions" (38%), but could improve the "speed of case resolution" (19%), revealing an interesting discrepancy between expectations and current reality. The interviewees' anecdotes suggest that the immediate impact of AI is focused more on optimizing the administrative efficiency of their offices and time-consuming mechanical or repetitive tasks.

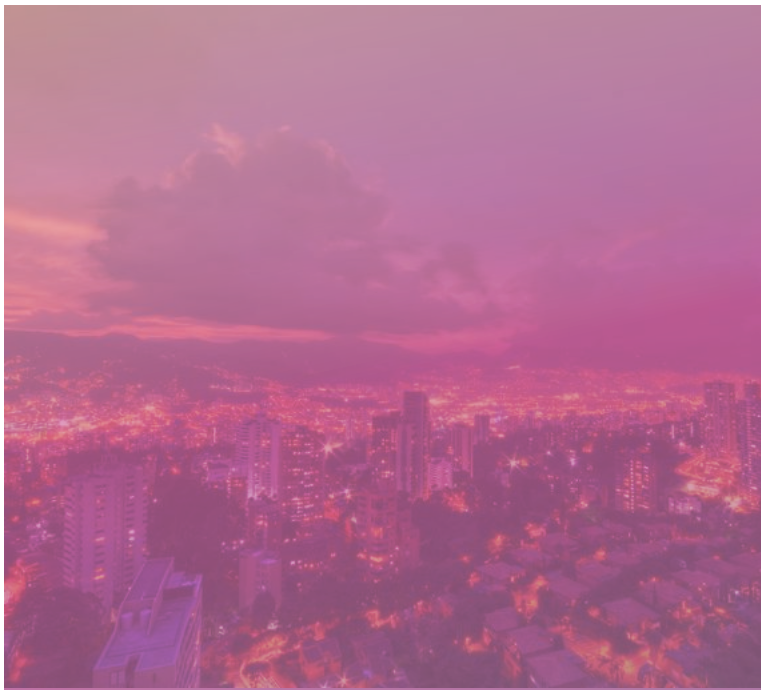
This does not mean that the respondents' perception is wrong, but rather that it anticipates an indirect and long-term effect. The optimization of administrative tasks, such as the organization and summarization of documents, or the rapid analysis of case law, can effectively improve the speed of judicial proceedings and the quality of the legal basis for decisions, but only indirectly.

For example, by saving time on mechanical or repetitive tasks, judges and their teams can devote more time to the analysis of evidence and the legal reasoning behind their decisions.

As for the speed of judicial proceedings, although the percentage is relatively low (19%), it is a crucial aspect for the administration of justice. Indeed, the automation of administrative tasks can significantly speed up judicial proceedings, reducing waiting times and contributing to a more agile and rapid justice system.

The interviewees' notable concern about human responsibility in judicial decisions (42%) contrasts sharply with the current use of AI in mainly administrative tasks. This discrepancy reveals an early awareness of future risks in the judicial sector, which is positive for responsible implementation.

However, it also suggests a possible knowledge gap about the actual capabilities of AI, an underlying resistance to change, and a long-term vision that, although premature, could be valuable for establishing ethical and legal safeguards in advance. This phenomenon underscores the need for more robust education and clear communication about the current and future role of AI in the Colombian judicial system, which will be explored in more depth in the following section.



Finally, interest in evaluating "the impact on the quality and consistency of judicial decisions" (38%) reflects a fundamental concern among respondents about the role of AI in justice. Considering the current use of AI in repetitive or mechanical administrative tasks, future research should focus on how this administrative efficiency translates into better judicial decisions. This involves examining the freeing up of cognitive resources, consistency in information handling, better management of judges' biases, the evolution of the judge's role toward a more strategic approach, and the development of new metrics to evaluate the quality of AI-assisted decisions.

7.3. IMPACT OF RULING T-323 ON THE COLOMBIAN SYSTEM

As already explained, one of the cases under review culminated in Constitutional Court ruling T-323 of 2024. Regardless of its content and scope, this ruling is a landmark case because it is the first ruling by a Constitutional Court in Latin America, and possibly in the world (to be confirmed), that specifically addresses the question:

Can judges use AI tools in judicial proceedings and for decision-making?

The answer was yes, but under certain conditions. While this ruling does not definitively resolve all concerns on the matter, it establishes a fundamental framework for the responsible and ethical use of AI in the administration of justice.

First, the Court articulated twelve essential guiding criteria for the use of AI tools such as ChatGPT in judicial offices. These criteria, which had already been developed by doctrine previously, range from transparency and accountability to suitability and human control, representing an important first step toward the implementation of AI. Transparency, for example, requires judges to clearly demonstrate the use, scope, and location of the results obtained through AI in their proceedings or decisions. This principle is fundamental to safeguarding the right to due process and allowing for effective adversarial proceedings by users of the judicial system in order to guarantee the fundamental right to due process.

The ruling is particularly emphatic in prohibiting the replacement of judicial reasoning by AI systems. This prohibition is crucial to maintaining the integrity of the judicial process and confidence in the justice system, very much in line with the first report we published as part of this same initiative in 2021. Indeed, in line with what had already been developed by doctrine for several years, the Court pointed out that AI cannot replace judges in the interpretation of facts, the assessment of evidence, the reasoning behind decisions, or the adoption of judgments.

To this end, the Court considers its use constitutionally viable in areas such as administrative and document management, judicial management support, and text correction and synthesis. This openness to technological innovation, provided that it does not involve the creation of substantive content or the interpretation of facts, will undoubtedly facilitate the exploitation of the benefits of AI without compromising the integrity of the judicial process.

Finally, the Court suggests that, ideally, the Judicial Branch should have its own AI tool, over which it has full control in terms of algorithms and information processing. This would make it possible to guarantee the security and confidentiality of judicial data more effectively. We have taken the liberty of transcribing this legal consideration 299 of the ruling:

> *"To meet the challenges of the new era and control the risks associated with these practices, it would be advisable for the reasonable and measured use of these technologies in the Colombian judicial system to be carried out through a specialized tool, which is why the Judicial Branch is encouraged to develop efforts that will progressively lead to the implementation of its own AI platform that, designed exclusively for the exercise of the public function of administering justice, will contribute to the efficiency of court offices and facilitate access to information, while reducing risks in areas such as transparency, data protection, hallucinations, and biases".*

In this vein, ruling T-323 of 2024 establishes an initial framework for the use of AI in the judicial branch. While it does not resolve all doubts or completely eliminate the associated risks, it provides a guide and fundamental principles that will serve as a basis for the development of more detailed policies and practices in the future by the Congress of the Republic and the CSJ.

8. PERSPECTIVES OF JUDGES AND OTHER RELEVANT ACTORS

8.1. OPINIONS, PERCEPTIONS, AND OPPORTUNITIES REGARDING THE USE OF AI IN THE JUSTICE SYSTEM

The use of generative AI tools in the Colombian judicial system is currently marginal, ascendant, and unstoppable, with or without institutional support. This section of the report will be developed based on the analysis of data collected through a survey, which reveals significant patterns in terms of the current use of AI, perceptions of its potential, and its potential uses within judicial processes.

The survey, conducted among 182 Colombian judicial officials, consisted of 30 open-ended and closed-ended questions covering a wide range of aspects related to the use and perception of AI in the judicial sphere. Participants, including magistrates, judges, and administrative staff, provided detailed information about their work habits, current use of AI tools, opportunities, and barriers to access, the results of which converge with the survey conducted by the CSJ in July 2024 on the use of AI[5]. This convergent validity, demonstrated by independent teams using different but complementary methodologies, confirms consistent empirical patterns that transcend the limitations of the two individual studies and their different analytical perspectives.

The survey asked about the time spent on various judicial tasks, the use of databases and AI tools, and perceptions of the effectiveness, accuracy, and reliability of tools such as ChatGPT and Gemini. It also explored barriers to AI adoption, such as lack of infrastructure and legal concerns, along with potential benefits and areas of application in the judicial system.

The survey also evaluated the CSJ's management of AI implementation and gathered suggestions for improving its adoption, thus offering a comprehensive overview of the current state and future prospects of AI in the Colombian judicial system. All responses were collected anonymously and strictly for academic purposes for this research.

First, it is noteworthy that there is already an incipient adoption of these technologies among judicial officials. Approximately one in five respondents (22%) say they currently use generative AI tools in their professional work. The survey reflects that, among the platforms preferred by these early adopters, OpenAI's ChatGPT stands out, used by 80% of those who already use generative AI, followed by Google's Gemini (44%) and Microsoft's Copilot (36%).

5. Cite: Superior Council of the Judiciary, Executive Report, Survey on "Artificial Intelligence in the Colombian Justice System."

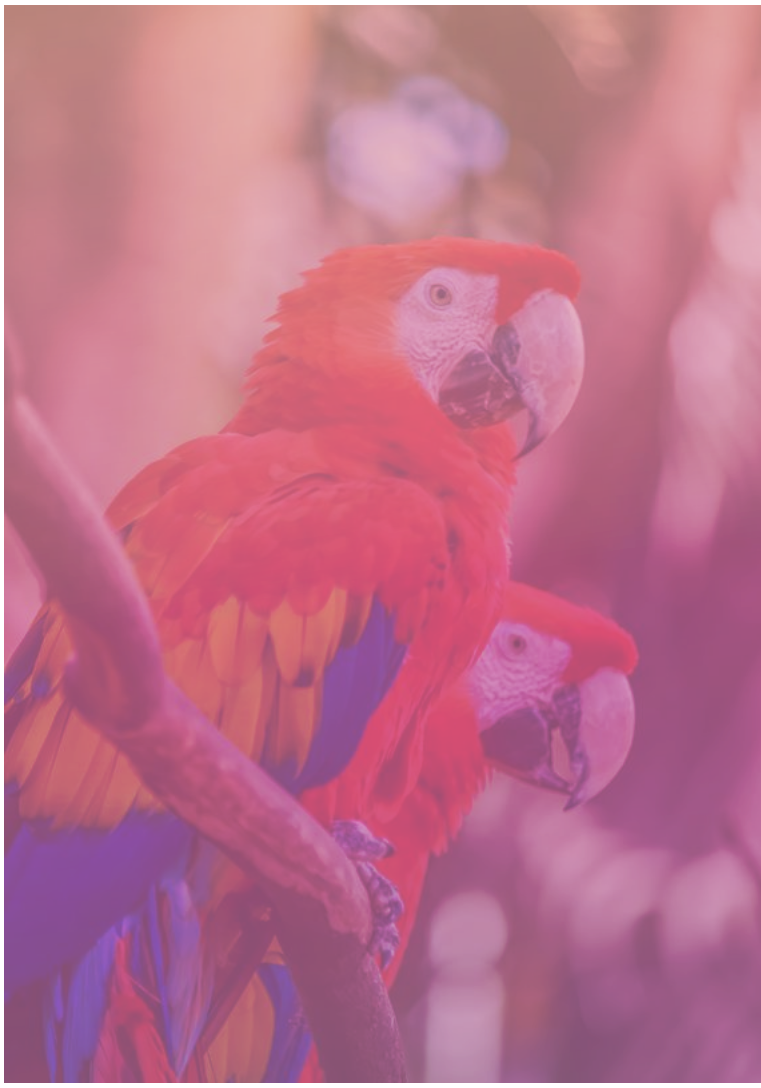
The survey conducted by the CSJ confirmed that ChatGPT is the "most widely used AI tool" among 3,152 judicial officials, being accessible mainly through free versions (42% of total users versus 31% with official licenses)[6]. This convergence transcends differences in sample size and methodological approaches, revealing a consistent pattern where ChatGPT not only dominates the market for judicial AI tools, but its free version is also the predominant gateway to the Colombian judicial technology ecosystem.

These figures, although relatively minor compared to the total number of judicial officials in the country, indicate that the levels of effective implementation of AI are gradually gaining momentum in a traditionally conservative sector that has always resisted technological change, as was the case, for example, in the 1990s with the introduction of personal computers and printers in judicial offices, according to accounts shared by two former judges of the Council of State and the Supreme Court of Justice a few years ago.

However, it should not be forgotten that the predominant use of the free version of ChatGPT could lead to a judicial system that operates at multiple speeds, to the detriment of the right to equality before the law in the courts of justice. Offices staffed by judicial servants who can afford premium subscriptions operate with superior technological capabilities to those limited to free versions or without access at all, creating differences in response times, quality of case law research, and document processing capacity that should not depend on individual purchasing power.

This technological fragmentation multiplies certain systemic risks: while some offices process sensitive information using free external AI tools without unified security protocols, others maintain traditional methods, creating a patchwork of practices that hinders standardization and integrity of the Judicial Branch's technological infrastructure. In this way, the digital divide is perpetuated when innovation depends on personal initiatives rather than institutional policies, establishing an undesirable dynamic where the technological capacity of the official determines the efficiency of the judicial service.

Beyond current use, the data suggest widespread interest and a positive attitude toward the future implementation of AI in the judicial system. This optimism is reflected in perceptions of the potential usefulness of generative AI in various aspectsof judicial work, backed by concrete data on how judicial officials allocate their time to different tasks.



6. Id.

For example, the automation of mechanical and repetitive tasks is emerging as the most promising area of application, with 76% of respondents recognizing its potential in this area. This data becomes even more relevant when considering that 43% of the judicial officials surveyed spend less than 10 hours per week drafting judicial documents and 48% spend between 6 and 20 hours on administrative and logistical management tasks.

Sixty-three percent of respondents believe that AI could be useful for jurisprudential research and legal knowledge management. This perception is in line with the fact that 46% of judicial officials surveyed spend between 6 and 20 hours per week on tasks related to legal research. The implementation of AI in this area promises to facilitate access to and analysis of large volumes of legal information, contributing to more informed and consistent decision-making while significantly reducing the time spent on this task.

Similarly, it is significant that 53% of respondents envision AI applications in the operational management of case files. This data correlates with the considerable amount of time that officials devote to administrative and logistical tasks: 48% spend between 6 and 20 hours per week on these activities. The implementation of AI in this area promises to improve the efficiency of the administrative and logistical processes that support judicial work, potentially freeing up more time for critical tasks that require human judgment.

Perhaps the most notable finding is that 43% of respondents believe that AI could be useful in drafting judicial decisions, including the preparation of facts and background information. This openness to AI assistancein tasks traditionally considered to be at the core of judicial discretion is contextualized by the fact that 45% of civil servants spend more than 21 hours per week drafting judgments, while 37% spend more than 21 hours per week drafting court orders.

However, a deeper interpretation of the converging data from both surveys and their correlations reveals that the adoption of AI by many judicial officials does not seem to be motivated by a desire to innovate, but rather by operational desperation stemming from critical work and operational overload caused by the pre-existing systemic dysfunctionality of the judicial system.

Indeed, this workload and operational overload is echoed in the CSJ survey, where 20% of clerks and 33% of senior officials use AI tools for document management (files), data organization, term control, and document transcription. Within this context, the convergence reveals that the adoption of AI does not respond to a strategic vision of modernization or innovation of judicial services, but rather to operational desperation: 51% of respondents identify "reduction of routine work" as the main benefit, and 30% value "increased efficiency," confirming that respondents see AI as a lifeline to recover the time they should be devoting to legal analysis, evidentiary assessment, and judicial deliberation - essential jurisdictional functions that are compromised by the administrative suffocation of the system and the worrying judicial congestion that seems to have no solution in the near future.

For these reasons, the possibility of AI assisting in the drafting of facts and precedents could free up significant time for judicial officers to focus on legal interpretation and decision-making, potentially improving the efficiency of their offices without compromising the quality and human judgment of judicial decisions.

8.2. IDENTIFIED CHALLENGES

However, the data collected in the survey also reveals a complex picture regarding the implementation and use of AI tools in the judicial sphere. A particularly significant finding is that 78% of respondents said they do not use AI tools, underscoring the magnitude of the challenge facing the Judicial Branch in adopting these technologies.

The concerns and needs expressed by respondents can be categorized into several main areas, reflecting both technical and institutional barriers to the effective adoption of these technologies. In turn, the obstacles and barriers identified will be divided between respondents who currently use AI tools and those who do not yet do so, as this may affect perceptions about the use of these tools. Reading a book or listening to a podcast about the use of a tool is not the same as actually using it to solve a real problem.

A

Obstacles Identified by Judges who have not yet used AI

First, it is noteworthy that the lack of adequate technological infrastructure emerges as the most prominent concern for those interested in using AI, mentioned by 46% of respondents. This data suggests that there is a significant gap between the current technological capabilities of the Judicial Branch and those required to effectively implement AI tools. This concern is reinforced by qualitative comments that explicitly point to the deficiency in the IT and technological infrastructure provided by the CSJ, which will be discussed in more detail below.

Specifically, 73% of participants (133 of the 182 respondents) pointed to the lack of AI tools provided directly by the Judicial Branch as a significant barrier. This data is

particularly revealing, as it indicates not only a lack of resources, but also a possible lack of institutional initiative to incorporate these technologies into the judicial system. The high prevalence of this response suggests an urgent need for judicial authorities to take a more active role in providing official and standardized AI solutions.

Another crucial aspect that emerges from the data is the need for training and education, given that the recurring mention of training requests in the qualitative comments indicates that this is a significant concern. The perceived complexity of using AI tools, mentioned by 19% of respondents, reinforces this need for specialized training that must go beyond a webinar or introductory theoretical course.

The difficulty of integrating AI tools with existing systems, noted by 29% of participants, along with the lack of technical support (32%), constitute additional technical barriers. These data suggest that even if the obstacles of infrastructure and provision of AI tools were overcome, significant challenges would remain in the practical implementation and maintenance of these technologies in the judicial environment in the medium and long term.

Additionally, 21% of respondents expressed fear of disciplinary action resulting from the use of AI. Although this percentage is lower than other concerns, it is still significant and points to a possible lack of clarity in institutional policies on the use of AI in the judicial branch.

B

Current Obstacles Identified by Judges Already Using AI

The risks of using generative AI for specific judicial decision-making, according to the direct experience of 39 of the 182 judicial officials surveyed, are multiple and significant. First, there is the risk of basing decisions on inaccurate or outdated legal information. The data reveal that 69% of respondents believe that AI tools provide accurate and relevant answers only "sometimes," which is particularly concerning in a context where legal accuracy and precision are paramount.

This perception is reinforced by specific comments from respondents, such as: "*Incorrect information regarding regulatory and jurisprudential references, which are sometimes non-existent or contrary to pre-existing theses*" and "*current regulations and jurisprudence. It provides answers that have been repealed by up to a decade.*" These examples illustrate the risk of basing judicial decisions on obsolete or erroneous information, which could have serious consequences for the administration of justice.

The lack of reliability in handling complex legal scenarios is another significant risk. Only 10.3% of officials rate AI's ability to handle complicated legal cases as high (4 or 5 on a scale of 1 to 5), while 43% rate it as poor or low (1 or 2 on the scale). This limitation is reflected in comments from respondents such as: "*It generates responses with a legal framework that does not apply to the case*" or "*I consulted on Colombian regulations governing emergency medical care, but it gave me rules that did not address the issue.*"

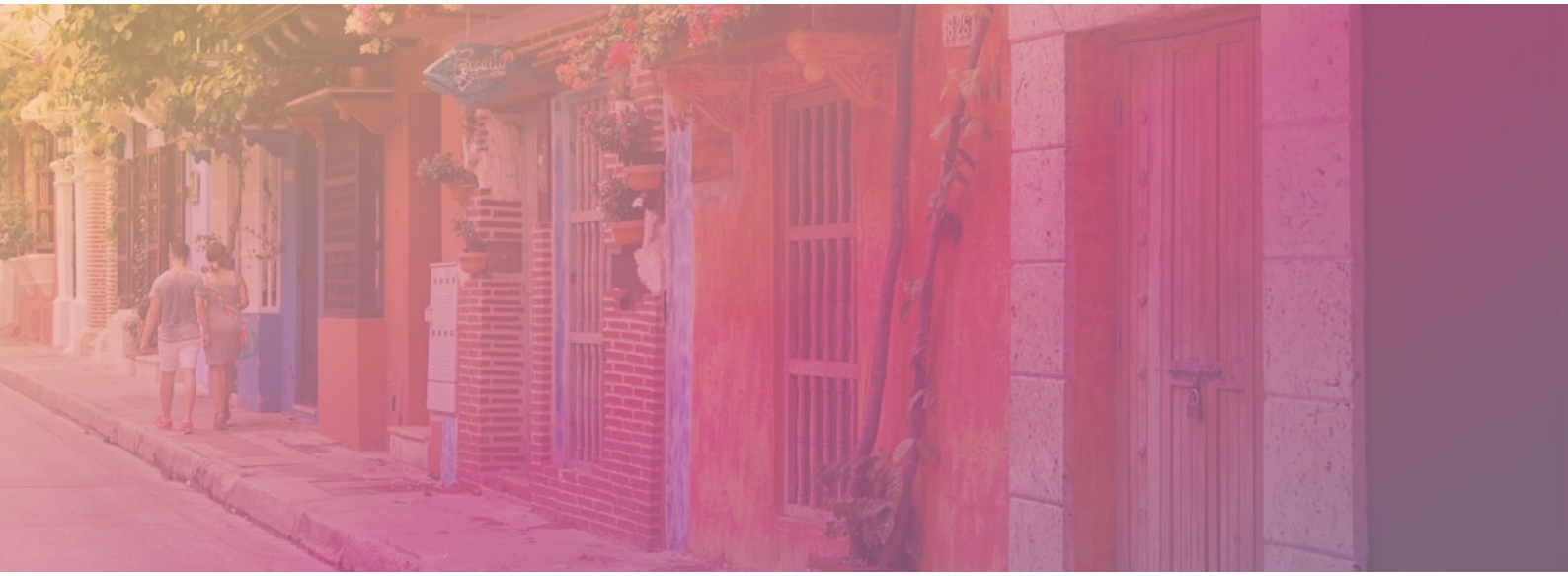
This confirms that the AI tools used by the respondents have an outdated, limited knowledge base that, in some cases, is disconnected from the Colombian legal system. This, coupled with the inability of AI to adequately handle the complexity of the Colombian legal system, could lead to oversimplifications or misinterpretations of complex legal situations.

All of this is correlated with the perceived risk that AI systems tend to generate incorrect or misleading legal information. Fifty-six percent of respondents have experienced this problem, reporting specific cases that illustrate the seriousness of the situation. For example, one respondent noted: "*Incorrect information regarding regulatory and jurisprudential references, sometimes non-existent or contrary to pre-existing theses*." Another official mentioned: "*When consulted as an exercise, it has been verified that they cite non-existent regulations and non-existent case law. I believe that the most common AI tools do not yet have accurate information on national legislation and are therefore unreliable*." This problem is particularly critical in the judicial context, where the accuracy and veracity of information are essential to guarantee the fundamental rights to due process and access to the administration of justice.

The low overall perceived reliability of these tools represents another substantial risk. Only 12% of the officials surveyed consider AI tools to be highly reliable (4 or 5 on the scale), while 41% rate them as not very reliable or not reliable at all (1 or 2 on the scale). This lack of trust is reflected in the need for constant verification, with 46% of respondents indicating that they "always" verify the answers provided by AI and another 28% doing so "almost always."

Despite the challenges and risks identified, it is important to note that the implementation of generative AI in the Colombian judicial system has also reported significant benefits for the 39 officials surveyed. Fifty-one percent of participants identified the reduction of workload related to mechanical or repetitive tasks as the main benefit, suggesting considerable potential for optimizing judicial processes.

In addition, 30% highlighted increased efficiency in court offices as the most important benefit, while 15% valued faster access to relevant information. Although only 2% considered improved consistency in decisions to be the main benefit, these data collectively indicate that, despite the concerns expressed, generative AI is contributing positively to the judicial work of the 39 officials surveyed who already use AI, mainly in terms of operational efficiency and information management.



8.3. DOES THE CURRENT USE OF AI BY JUDGES CORRESPOND TO AN INSTITUTIONAL POLICY OF THE JUDICIAL BRANCH OR TO AD HOC INITIATIVES BY INDIVIDUAL JUDGES?

The survey conducted for this study and the one carried out by the CSJ reveal that the current landscape of generative AI use in the Colombian judicial system presents a dichotomy between the individual initiative of judges and incipient institutional efforts. Indeed, the evidence gathered through the survey suggests that the use of generative AI is predominantly ad hoc, depending on the initiatives and resources of individual judges rather than on institutional decisions and resources provided by the CSJ, with the exception of the pilot test currently being conducted with a few selected judicial offices to test Microsoft's Copilot tool.

According to the CSJ report, the pilot program with Microsoft Copilot consisted of the controlled distribution of Microsoft 365 licenses to facilitate institutional access to Copilot. However, the document did not specify what type of Copilot license was provided (whether it was Copilot Chat or Microsoft 365 Copilot[7]), nor did it indicate the exact number of licenses assigned or the distribution criteria used. According to CSJ data, this initiative contributed to the adoption of Copilot in high court offices, tribunals, corporations, and other agencies, reaching 16.7% "popularity" of use among those surveyed. It is worth noting that, in parallel with the institutional pilot program, 18% of officials chose to pay for subscriptions with their own resources to access these AI services. The 108 AI projects identified in the survey are not part of the institutional pilot program, but are independent initiatives developed by judicial officials, although 61% of these projects ended up using Copilot or ChatGPT, benefiting both from institutionally facilitated access and individual subscriptions[8].

Based on interviews and indirect public sources, we identified that the most visible and successful pilot projects have been developed by judicial officials using Microsoft 365 Copilot. However, despite the undoubted national and international success of these pilot projects, there is no public information from the CSJ on a clear, coordinated, and sustainable strategy to replicate them on a large scale in other judicial offices in the country.

The identification of infrastructure barriers shows another significant convergence between the two studies, albeit with some nuances. While 46% of respondents to this report identified the lack of adequate technological infrastructure as a fundamental limitation, the CSJ institutional study records this barrier in 15% of the 108AI-based projects reported, suggesting that poor infrastructure affects individual officials

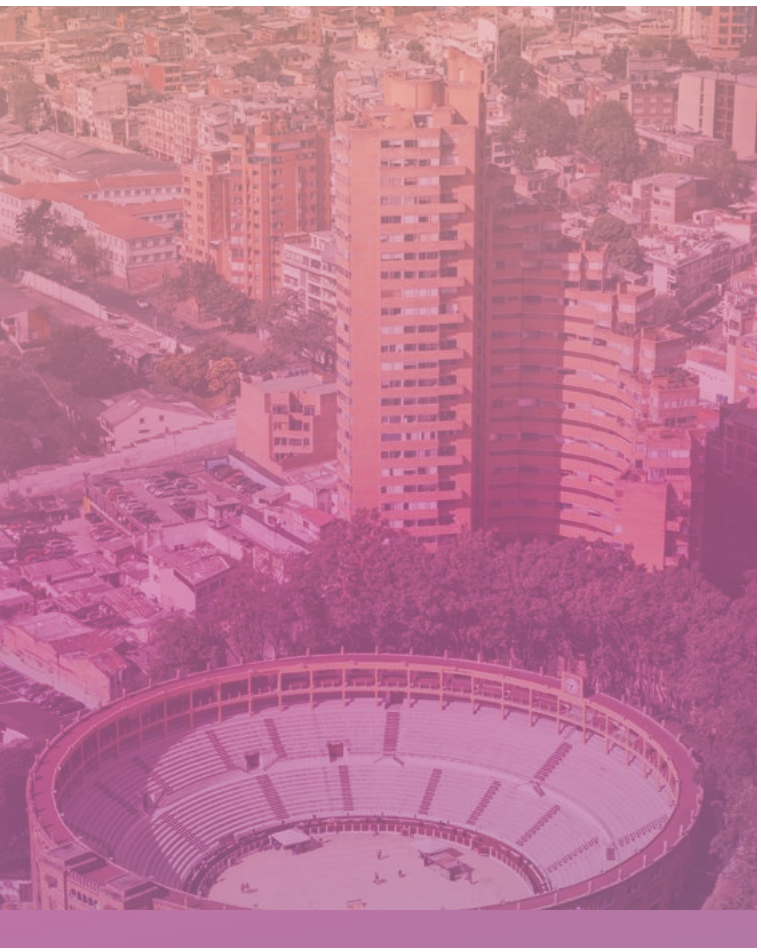
7. https://learn-microsoft-com.translate.goog/en-us/copilot/overview?_x_tr_sl=en&_x_tr_tl=es&_x_tr_hl=es&_x_tr_pto=tc

8. Citation: Superior Council of the Judiciary, Executive Report Survey "Artificial Intelligence in the Colombian Justice System."

more severely than formalized institutional projects.

This convergence is reinforced by the difficulties of integration or interoperability between different information systems, where 29% of our survey closely matches the 12% of the CSJ survey that reports problems with "integration with other systems." Additionally, 32% of our respondents highlighted a lack of technical support, which is complemented by the barriers of "access or availability of data" (12%) identified by the CSJ, showing that the limitations go beyond physical infrastructure to systemic problems of technology management.

This convergent validity between the findings of both surveys confirms that the modernization of systems, computer equipment, and internet bandwidth is not only a need perceived by individual officials, but also a structural barrier that impacts both personal adoption and the development of institutional AI projects in the Judicial Branch.



Concerns about information security and confidentiality show significant convergence between the two studies, revealing consistent patterns in risk perceptions. While our respondents expressed specific concern about the protection of personal data when using applications external to the Judicial Branch, the CSJ survey quantifies this concern at 11% of the barriers reported in AI projects. This convergence becomes even more relevant when considering that the CSJ survey identified information security as the top priority for 18% of judicial officials in defining institutional guidelines. The convergent validity is strengthened by the fact that both studies document the predominant use of the free version of ChatGPT, which means that concerns about data protection are not theoretical but derived from actual practices.

In addition, respondents identified the lack of a unified and comprehensive system as a significant obstacle. The absence of interoperability between current applications hinders the effective administration of justice, both for internal and external users. In the words of one of the interviewees: "The IT and technological infrastructure provided by the Judicial Branch through the Superior Council is deficient. Currently, there is no single, unified system that meets all the needs of internal and external users for the work of administering justice." This finding highlights the need to develop an integrated platform that meets the diverse needs of the judicial system, which does not exist at this time.

Within this context, the data from both surveys, the accounts from the surveys we conducted, and their profound correlations clearly show that judicial innovation has escaped institutional control and is creating a parallel judicial ecosystem where judges self-finance their AI tools, develop their own methods, and create informal knowledge networks. The words of one of the respondents are particularly

illustrativemethods, and create informal knowledge networks. The words of one of the respondents are particularly illustrative on this point when he points out that there should be "*(...) prior training before any process and not just word of mouth from a colleague.*"

A technological revolution is brewing in the corridors of the courts, operating under the institutional radar, where court clerks have taken on the role of architects of their own modernization. The data reveals that this bottom-up dynamic has created informal knowledge networks where judges share experiences on effective prompts, clerks exchange document processing methodologies, and magistrates develop customized protocols for verifying AI-generated information. This self-organization represents a fascinating paradox: on the one hand, it demonstrates a capacity for adaptation and innovation that the institutional apparatus has been unable to generate despite the substantial resources it administers, demonstrating that the judicial system has latent transformative potential that emerges when necessity overcomes bureaucracy.

However, this same capacity for self-management is fragmenting the administration of justice into multiple technological microsystems that operate with different logics, tools, and standards, creating an archipelago of judicial practices where consistency and equity are subordinated to creativity, initiative, leadership, and individual resources. Thus, while the CSJ debates new regulatory requirements, officials have *de facto* created their own technological governance, promoting informal initiatives and guidelines that will likely influence the future of digital justice in our country more than any official paper agreement, thereby transforming the implementation of AI from an institutional process planned by the CSJ into an emerging phenomenon of judicial self-organization.

8.4. IS THERE AN INSTITUTIONAL TRAINING PROGRAM LED BY THE CSJ?

Currently, the CSJ has delivered several seminars, webinars, workshops, diploma courses, and medium-length courses in partnership with the Rodrigo Lara Bonilla Judicial School and some universities.

However, the relevance of these training courses for judicial officials to solve real and specific problems arising from the use of AI in judicial offices presents a complex and nuanced picture. However, the assessment

of the relevance of these training courses reveals a worrying convergence between the perception of quality and the structural barriers identified.

According to the data from the survey conducted for this report, the 182 judicial officials surveyed rated the relevance of training in all its forms and formats, such as seminars, webinars, workshops, diploma courses, and the aforementioned courses, with an average of 3.4 on a scale of 1 (irrelevant) to 5 (very relevant). This is explained by the data from the CSJ survey, where "technical skills and competencies" represent 15% of the barriers to AI projects, ranking as the second most important barrier along with technological infrastructure.

It should be noted in this regard that the assessment measured by our survey did not focus on the academic quality or integrity of the training provided, but specifically on its relevance to solving specific problems that judicial officials face in their daily use of AI. This nuance is essential to understanding the context of the responses and their implications for the practical effectiveness of the training.

Within this context, analysis of the data collected reveals a heterogeneous distribution in terms of the perceived relevance of these training courses. Thirty-four percent of respondents consider them "very relevant," suggesting that, for one-third of civil servants, the content of the training has been highly relevant in addressing the practical challenges they face in implementing AI.

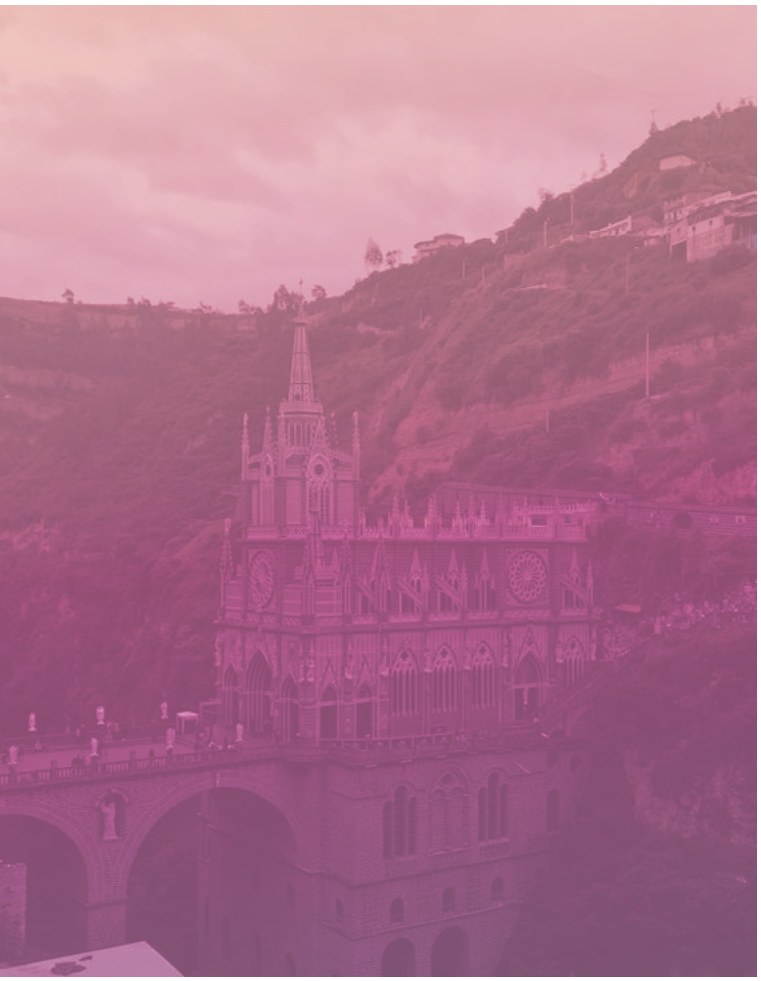
However, it is crucial to note that most respondents fall into lower satisfaction categories. Thirty percent rate relevance as "moderate," while 24% consider it "low" to "slightly relevant." This distribution indicates that more than half of judicial officials perceive that training is not fully aligned with their practical needs in the use of AI in the judicial sphere.

In addition, according to data from the CSJ survey, this barrier is amplified when 11% of CSJ projects report problems with "understanding how the AI tool works," a figure that directly converges with the 19% of our respondents who identified complexity of use as a significant barrier. This convergent validity suggests that the moderate rating of 3.4 reflects deep dissatisfaction with the relevance of the training programs provided as a result of a gap between the theoretical content of the training courses given as of July 2024 and their practical applicability in the everyday judicial context.

This is reflected in the open responses of the respondents, which show a clear demand for more specific, timely training geared toward solving concrete problems.

8.5. HOW HAS THE CSJ PERFORMED IN OVERCOMING THE INSTITUTIONAL AND TECHNICAL BARRIERS FACED BY JUDICIAL OFFICIALS IN USING AI?

The barriers to implementing AI in the judicial branch are not limited to technology alone, but also encompass significant administrative, organizational, and institutional dimensions. A detailed analysis of the perceptions of 182 judicial officials surveyed reveals that the CSJ's performance in managing and mitigating these multifaceted barriers requires urgent attention and a holistic approach. This picture is strongly reflected in the discouraging words of one of the officials surveyed: "We don't have good physical tools, let alone AI."



With an average rating of 2.39 out of 5, the CSJ's performance falls within a critical range between poor and moderate. This assessment reflects a substantial gap between the real needs of judicial operators and the actions implemented by the CSJ, covering both technological and organizational aspects.

As already explained, in the technological sphere, the CSJ's failure to implement the necessary infrastructure highlights a disconnect between operational needs and institutional actions. The high interest in using AI tools and the barriers identified not only demonstrate a clear demand for official AI tools, but also highlight a significant organizational barrier: the lack of a coherent and consistent institutional strategy for the implementation of AI in the Judicial Branch to meet the current needs of its officials.

Organizational barriers are even more evident in the area of training. As already discussed, while 45% of respondents consider training to be relevant or very relevant, a more in-depth analysis reveals that 24% consider it to be of little or slight relevance. This apparent contradiction is clarified in the open-ended responses, which contain multiple references to the need for more and better training. This suggests that, although significant efforts are underway on the part of the CSJ,there is a significant gap between the training offered and the actual needs of civil servants to effectively adopt AI.

The complexity of using the tools, mentioned by 19% of respondents, correlates with the recurring request in open-ended responses for a user manual and clear regulations. This

points to another organizational barrier: the lack of clear policies and guidelines for the use of AI. This shortcoming is even more noticeable when you consider that, despite having legal authorization since Law 270 of 1996, the CSJ has not yet created or implemented an institutional policy that sets out the technical and operational conditions for judges to use generative AI.

The open responses from the judicial officials surveyed also reveal qualitative perceptions of institutional barriers such as "*excessive bureaucracy*" and "*lack of strategic planning*" on the part of the CSJ. Unfortunately, bureaucracy and lack of planning could hinder the agile and effective implementation of technological solutions, even when the economic resources for their acquisition and implementation are already available.

In this vein, an assessment of the CSJ's current performance in managing and mitigating barriers to the adoption of AI-based tools reveals a complex landscape where technological and organizational challenges are intertwined. Infrastructure deficiencies and the lack of official AI tools are exacerbated by organizational barriers such as the lack of clear policies, inadequate training, and perceptions of excessive bureaucracy and poor planning.

As such, the gap between existing legal authorization and the lack of an operational institutional policy underscores the urgency of comprehensive corrective action. Only through a holistic strategy that recognizes and addresses both technological and organizational barriers will the CSJ be able to effectively fulfill its role in modernizing and optimizing the Colombian judicial system in the age of AI.

9. CONCLUSIONS AND RECOMMENDATIONS

This report reveals a marked dichotomy between aspirations for technological modernization with AI and the practical realities the Colombian judiciary faces, highlighting both opportunities and significant challenges. The current adoption of AI in the Colombian judicial sphere, although modest, marks the beginning of a technological transformation in a sector traditionally resistant to change.

Within this context, the empirical findings from the interviews and surveys we conducted, which largely converge with the data from the survey conducted by the CSJ, reveal a Judicial Branch in transition, where the gap between the transformative potential of AI and its effective implementation requires concrete and coordinated actions. The following recommendations propose a comprehensive framework for action to address the institutional, technical, and organizational barriers identified in our research.

The converging data from both surveys and their deep correlations show us that the real barrier is not a lack of regulation, financial resources, infrastructure, tools, or training, but rather a system that prefers "innovation theater" to real digital transformation, protecting existing structures under the pretext of legal caution based on concerns about privacy, security, and discrimination. This situation has forced judicial officials to use predominantly free commercial AI tools, whose systemic risks will likely then be used as justification for imposing further regulatory restrictions.

A. DEVELOPMENT OF INSTITUTIONAL TECHNOLOGICAL INFRASTRUCTURE

The lack of official tools and adequate technological infrastructure emerges as the most significant obstacle to the adoption of AI in the judicial branch. The fact that 73% of respondents identify the absence of institutional tools as the main barrier, while 46% point to deficiencies in basic technological infrastructure, reveals an operational capacity crisis that requires immediate attention and a phased approach to modernization.

First, it is recommended that the basic technological infrastructure of court offices be modernized. Interviews revealed that many offices lack modern computers and stable broadband access, which is a fundamental prerequisite for any digital transformation initiative.

Second, the CSJ should prioritize the procurement and provision of commercial AI tools for court offices. The fact that 80% of AI users currently use ChatGPT on their own initiative and with their own resources is evidence of a clear demand for these tools.

The institutional provision of AI solutions would make it possible to establish standards of use, guarantee information security, and ensure that all court officials have equitable access to these technologies.

Third, it is essential to strengthen digital court records and their interoperability with existing systems. Twenty-nine percent of respondents reported difficulties integrating AI tools with current systems, suggesting the need to develop a technological architecture that allows for seamless interaction between different platforms and applications.

Likewise, the Judicial Branch should improve its data infrastructure by following international protocols and standards. This modernization should include the implementation of robust systems for the storage, processing, and analysis of judicial data, ensuring the security, confidentiality, and availability of information.

B. COMPREHENSIVE JUDICIAL TRAINING PROGRAM

The average rating of 3.4/5 for the relevance of current training, together with the fact that 24% consider it to be of little or slight relevance, points to a critical disconnect between the training offered and the practical needs of judicial officials. This knowledge gap is reflected in low confidence in handling complex cases with AI support, with only 10% of users reporting high capacity.

To this end, a complete overhaul of the training approach is recommended, moving away from the current general seminars and webinars toward practical and specific programs. The new program should place particular emphasis on detecting and managing hallucinations and inaccuracies in AI tools, directly addressing the concerns of 69% of users who report accuracy issues with these tools.

C. INSTITUTIONAL OPERATING FRAMEWORK AND GOVERNANCE

The low rating of 2.39/5 given to the CSJ's performance in AI management reflects a governance crisis that requires urgent attention. This institutional deficiency has created a vacuum that judges are filling individually and in a non-standardized manner, as evidenced by the predominant use of commercial tools paid for by the officials themselves (80% of current users).

The effective implementation of the guide ordered by the Constitutional Court in ruling T-323 of 2024 should be the first step in establishing a clear governance framework. Ideally, this guide should respond to the real technical and legal needs of judicial offices, so it should not be a speculative and conceptual document that simply paraphrases the "best practices" of some international body disconnected from reality.

D. GRADUAL AND FOCUSED OPTIMIZATION

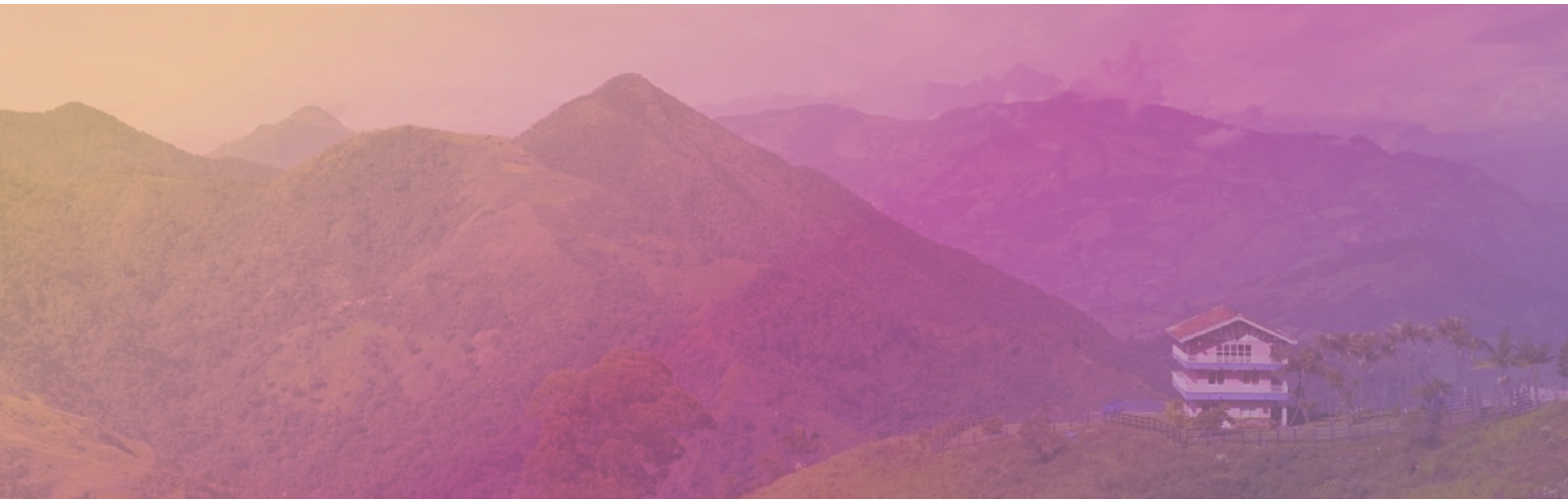
The marked difference between the current use of AI (22% of civil servants) and the recognition of its potential (76% for the automation of mechanical tasks) suggests a significant opportunity for gradual and strategic expansion. The reported success in administrative and mechanical tasks, where 51% of users identify potential benefits, marks a clear path for initial implementation.

It is recommended that the implementation strategy prioritize these areas of lower resistance and risk, gradually expanding to more complex functions such as case law research, where 63% of respondents recognize potential usefulness. This approach would build trust and institutional experience while minimizing the risk of affecting critical judicial processes.

E. SUPPORT AND MAINTENANCE STRUCTURE

The 32% of respondents who cite lack of technical support as a significant barrier, combined with the 29% who report integration problems with existing systems, highlights the need for a robust support infrastructure. It is recommended that the solution include not only a specialized technical support system, but also clear maintenance and update protocols to ensure the operational continuity of the tools implemented.

The coordinated implementation of these recommendations could transform the current landscape of *ad hoc* and limited AI adoption in the judicial branch into a robust and sustainable institutional model. As we stated in our first report published in 2021, the success of this transformation will depend on maintaining a careful balance between technological innovation and preserving the primacy of human judgment in the administration of justice, a fundamental principle reaffirmed by the Constitutional Court in ruling T-323 of 2024. We reiterate: justice is essentially human and must remain so forever.



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11. ANNEXES

11.1. METHODOLOGICAL DETAILS OF THE ANONYMOUS INTERVIEWS

Target population:	Court officials under condition of anonymity.
Sample size:	23 participants.
Purpose:	Qualitative assessment of expert perceptions regarding the use of generative AI by judges in Colombia.
Context:	Academic research focused on specific cases of AI use in the Colombian judicial system.

QUESTIONNAIRE STRUCTURE

Main questions:

1. **Criticality of case studies**: Assessment of the importance of analyzing specific cases.
2. **Knowledge of additional cases**: Identification of other cases of AI use by Colombian judges.
3. **Representativeness of cases**: Assessment of how representative the cases analyzed are.
4. **Usage patterns**: Identification of common patterns in the use of AI.
5. **Institutional factors**: Analysis of factors influencing the decision to use AI.
6. **Impact on judicial processes**: Evaluation of the area most affected by the use of AI.
7. **Critical technical capabilities**: Identification of necessary technical skills.

8. **Impact on public confidence**: Assessment of the effect on public perception.

9. **Priority areas for research**: Identification of aspects requiring further study.

10. **Additional comments**: Space for additional comments.

LIMITATIONS

Small sample **(n=23)**

epresents the perceptions of experts, not necessarily those of the general population.

Application

The results of this survey are intended to inform this academic research on the use of artificial intelligence in the Colombian judicial system and may serve as a basis for the formulation of recommendations and public policies.

11.2. METHODOLOGICAL DETAILS OF THE SURVEY

The research was conducted through an online survey using Google Forms with 182 Colombian judicial officials. Respondents held various positions, including judges, magistrates, secretaries, senior officials, professionals, and other roles within the judicial system. The purpose of the research and the academic purposes for which the collected data will be used were explained to the interviewees.

The survey addressed several aspects related to the use and perception of AI in the judicial sphere through 30 questions that can be grouped into the following areas:

1. **General understanding and perception:** The level of knowledge of AI technologies among judicial operators was investigated.

2. **Use and benefits:** Questions were asked about the current use of generative AI tools, frequency of use, and perceived benefits.

3 **Concerns and risks:** The main concerns and potential risks associated with the use of AI in judicial processes were explored.

4 **Training and awareness:** Research was conducted on AI training initiatives and the level of awareness of related ethical principles and human rights standards.

5 **Regulatory measures:** The existence of guidelines or regulations governing the use of AI in the judiciary was investigated.

6 **Country-specific considerations:** Data was collected on the specific characteristics of AI adoption in Colombia.

7 **Factors influencing adoption or rejection:** Factors influencing the implementation of AI systems were explored.

The survey used a combination of closed-ended questions with Likert scales and open-ended questions to capture quantitative and qualitative data, which was analyzed with the support of various artificial intelligence tools.

All surveys were processed anonymously. The data collected will be used for strictly academic purposes in accordance with the consent of the respondents.