Justice

Digital Transformation Guide

IDB

Justice

Digital Transformation Guide

Authors

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Prologue

The digital transformation of justice has the potential to transform access to and the efficiency of justice systems, addressing historical challenges in innovative ways. Its key benefits include: (i) **greater efficiency and effectiveness** in case management, by reducing processing times and improving information quality; (ii) **improved access to justice services**, through digital tools such as virtual hearings and online portals; and (iii) **greater transparency**, by ensuring public access to information and safeguarding the integrity of legal documents. These improvements not only make the judicial system more efficient but also adapt it to meet the needs of citizens in an interconnected world.

However, Latin America and the Caribbean face at least two significant challenges that limit the impact of these transformations: **inability to provide prompt responses and distrust in the justice system**. According to the *World Justice Project* (WJP), said region ranks among the lowest globally on the Civil Justice indicator due to unreasonable delays, with over one-third of countries scoring significantly below the global average. In 2024, at least six countries in the region registered the lowest scores on this indicator, reflecting structural barriers that hinder the delivery of accessible, timely, and efficient justice. This issue is further exacerbated by a widespread perception of mistrust in the judicial system, with 68% of the population expressing little to no confidence in the judiciary, according to *Latinobarómetro 2023.*

In the face of these challenges, digital transformation emerges as a crucial tool to overcome the existing barriers. However, the success of these transformations relies on the robust institutional capacity of justice systems to effectively integrate digital technologies while upholding the fundamental principles of transparency, impartiality, and fairness that are essential to ensuring access to justice. Solutions based on artificial intelligence, automation, and accessible digital platforms have proven effective in addressing critical challenges such as inefficiency, lack of transparency, and mistrust among the public, while providing innovative tools to both citizens and judicial operators.

The **Justice Digital Transformation Guide** is a practical tool designed to comprehensively address the technical, regulatory, governance, and human talent aspects, supporting the participants of the justice administration ecosystem in their transition towards a 360º digital transformation. Drawing from successful transformation experiences and enriched with data, international references and real-life stories of judicial operators, its content highlights the urgency of prioritizing a digital transformation centered on people and committed to strengthening the institutional capacity of judicial administration. These transformations help increase efficiency in the use of resources, investments, and technological solutions, optimizing the use of public resources, promoting synergies that lead to greater interoperability, improved integration and, ultimately, a more satisfactory experience for citizens and all the professional actors involved.

Both the structure and the content of this document are based on the five pillars of government digital transformation presented in the *Government Digital Transformation Guide published by the Inter-American Development Bank in 2021*[1], specifically adapted to the judicial sector. These dimensions provide a framework to guide priority actions, ensuring effective and sustainable transformation. The key recommendations in the Guide on each of these pillars are the following:

› **Governance and Institutionality Pillar:** It is essential to set up a governing body with clear responsibilities to coordinate, oversee, and ensure the efficient implementation of digital transformation within the justice system. This body must have both the mandate and the necessary resources to coordinate relevant stakeholders and align efforts under a shared strategic vision.

› **Regulatory Framework Pillar**: The digital transformation of justice requires a robust regulatory framework that provides legal certainty as to the use of emerging technologies. In addition, this framework must guarantee fair and transparent access to justice, safeguard fundamental rights, and foster public confidence in the judicial system.

› **Digital Talent and Change Management Pillar:** To promote digital culture within the Administration of Justice, it is essential to implement targeted training programs, effective communication plans, and user support strategies. This will allow a smoother transition to digital environments and a better use of available technological tools.

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1. https://publications.iadb.org/es/guia-de-transformacion-digital-del-gobierno.

› **Infrastructure and Technological Tools Pillar:** It is essential to invest in advanced technological solutions, such as electronic case files, while also ensuring interoperability across the systems of different institutions. This will facilitate a more efficient and collaborative management of court cases, reducing both time and costs.

› **New Digital Processes and Services Pillar:** Digital transformation is not merely concerned with digitizing the existing processes. These processes need to be redesigned to meet user needs, avoiding replicating inefficiency or perpetuating bureaucracy. This includes creating smart and adaptive digital services that promote more accessible and effective justice.

Finally, it is important to remember that digital transformation is not an end in itself, but rather a tool to ensure that the rights of each individual are protected and promoted, thereby strengthening the rule of law across the region. Let us use this opportunity to create a future where justice is truly accessible, efficient, and inclusive.

EMILIO ÍÑIGO PINEDA AYERBE
Manager for the Institutions for Development Sector
Inter-American Development Bank
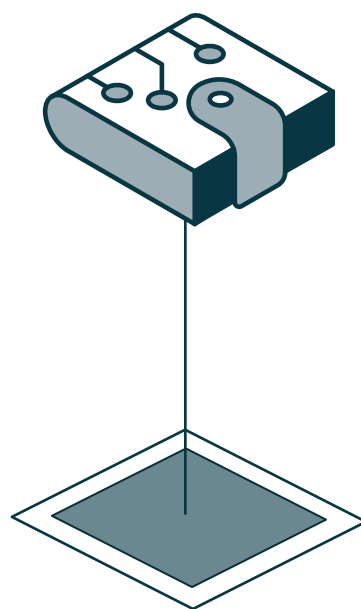
Testimonials

RAFAEL CATALÁ POLO

Secretary of State for Justice of Spain 2002-2004
Minister of Justice of Spain 2014-2018

The justice sector is a key element in any democratic society. Basic services that are highly appreciated by citizens, such as legal certainty, the proper functioning of commercial relations and the resolution of conflicts that may arise both in society and in the economic sphere, depend on the justice system. It is also an essential element in guaranteeing the fundamental rights of citizens in a democratic state. We cannot forget that it is a central actor in promoting the economic development and competitiveness of the territories, which are required to generate greater wealth, progress and well-being of the citizens. Ultimately, the justice system has social, political and economic functions that consist in generating true public value that is accumulated as a transforming heritage of society.

The judiciary is a fundamental pillar in the functioning of modern democracies. In the 21 century, the challenges facing justice are significant, given the context of globalization, technological evolution, and emerging social and political dynamics. Some of the many challenges in the contemporary context are the following:

❯ **Digitalization and technology:** Proliferation of digital information and social networks has transformed the nature of communication and social interaction. This has raised questions about privacy, cybercrime, and information regulation, which calls for a rapid adaptation of the judiciary to these new realities.

❯ **Crisis of confidence in institutions:** In many countries, mistrust in judicial institutions has grown, driven by perceptions of corruption, bias, or inefficiency. Legal practitioners should strive to restore public confidence in the administration of justice.

❯ **Unequal access to justice:** Despite progress, a significant gap in access to justice persists. The most vulnerable sectors of society frequently face economic and social obstacles that hinder their access to the justice system.

› **Political influence:** Independence of the judiciary is crucial, but it is often threatened by political interference. Pressure from governments and elites can compromise the impartiality of judges and the justice system overall.

For these reasons, strengthening the capacities of the justice system is an essential goal for democracy, as it promotes justice and equity in society. In the 21 century, it is imperative for legal professionals to recognize current-day challenges and actively work to strengthen judicial institutions. This involves not only improving access to justice and training for judges, but also fostering a culture of transparency and accountability. Only in this way will it be possible to ensure that the judiciary fulfills its vital function to defend the democracy and human rights in our current society.

Specifically, citizens demand effective and efficient justice services that meet their needs at a reasonable time, manner, and costs. Hence, agility is one of the main attributes of quality, and efficiency is a pillar of good governance. A less bureaucratic Administration of Justice that can meet social needs more diligently is needed.

The digital revolution poses additional challenges that manifest as both opportunities and threats to justice. For years, efforts have been underway to create a digital Administration that integrates technology into the operation of services and procedures. This process of digitalization with lights and shadows will require a significant effort in the coming years to achieve a digital administration that is secure and responsible by default. This challenge requires committed collaboration among administrations, strengthening strategic IT governance mechanisms, and cross-country cooperation to guarantee services such as the digital one-stop shop, in which citizens and companies easily engage with the Administration, regardless of their location or jurisdiction. The digital revolution today paints a picture in which data becomes a strategic asset, which requires the establishment of professional data offices and which promotes the rise of transformative technologies, such as artificial intelligence, whose potential and impact on Justice is such that they require a strategic approach to analyze and promote their use in the sector. There is little doubt at this point that technology is behind most reform processes to which I referred earlier.

Citizens are informed more than ever thanks to modern connectivity and technology capable of influencing the distribution of wealth, the exercise of power, or cultural patterns. Dramatic technological developments are reshaping the perception of public affairs and put in the hands of citizens tools that allow them to stay informed and actively participate. Various risks arise from the digital world and from the emergence of micropowers that, by coexisting with traditional power structures, lead to the atomization of actors. In the near future, many decisions will be guided by big data, and more processes will be automated, liberating humans from repetitive, tedious, and low-value tasks. The post-digital era is making its way, one in which the digital is understood not as an exclusively technological issue but as a human phenomenon,

which must be seen from a political, social, philosophical, legal or anthropological perspectives. Rights, institutions, and guarantees in this context will take central stage on the public agenda, as the current democratic order may not be well-suited for the emerging society on the horizon.

The process of digital transformation of justice that we have been discussing has become a reality in all Latin American countries. Spain is no stranger to this process and, during the time in which I had the honor to lead the Spanish Ministry of Justice, the digitalization of justice was one of the strategic objectives for our government and for our team. Maximizing the efficiency and effectiveness of the justice system as a public service, tailoring services to meet citizens' new demands, fostering a culture of innovation and management were the main axes around which we worked. The plan sought to establish a medium-term project, with a strategic vision and short-term actions and results. To this end, we overhauled the electronic communications system, making it mandatory for all professionals. We implemented the electronic procedural management service in every court across the nation, and we provided the necessary equipment to all professionals to face these challenges effectively.

At the Inter-American Development Bank (IDB), I know that a great deal of work is being done in this field, and a good example of this is this "Justice Digital Transformation Guide", whose foreword I have the honor to write. It addresses with clarity and precision the elements and processes that must be the protagonists of the complex task of digitizing the Administration of Justice and the judiciary. I am convinced that this Guide, this tool, will be of great use to all of us who firmly believe in justice as a key element of our democracy and who are committed to its modernization and reform.

MARÍA EUGENIA LÓPEZ ARIAS

President of the Supreme Court of Justice
Republic of Panama

At the regional level, the Judiciary has implemented important judicial reforms in recent decades, with the goal of ensuring a high-quality, professional, efficient, and effective Justice Administration Service.

In the process of transforming the Justice Administration in Panama, we evaluated the experiences of judicial reforms in Latin America and, as in many countries, we can now confirm that implementing reform actions without incorporating elements related to Information and Communication Technologies (ICT) in the plans created difficulties during execution, which in some cases compromised or delayed the desired outcomes, thus undermining confidence in the reform processes undertaken.

Based on the above, since January 3, 2022, when I assumed the Presidency of the Supreme Court of Justice of the Republic of Panama, I have committed to the modernization of the Justice Administration. I am convinced that judicial transformation undoubtedly requires the integration of new global trends for a variety of reasons, including the following:

❯ the ease that technology provides in improving access to faster, more efficient, and cost-effective justice from a procedural perspective;

❯ the continuous and certified collection of information enabled by digital records, which facilitates more transparent and comprehensive accountability to the public, as well as objective decision-making based on statistical data;

❯ ensuring a suitable environment for future generations by progressively eliminating the use of paper and physical file storage.

As I have expressed in various forums, we are aware that the "virtualization" of judicial proceedings is not the solution to all the problems faced by the Justice Administration System. Given that it is a system composed of a set of interrelated elements, it is equally important to consider organizational changes and new methods to improve the service offered by the Judicial Branch. However, we recognize that technology is a

crucial catalyst in addressing the increasing litigiousness of society, which has contributed to the existing judicial backlog. Although statistics indicate that today countries like Panama are resolving increasingly more cases annually, this situation compels us to implement new mechanisms to offer a swift, continuous, and high-quality justice service.

I am convinced that the proper use of technologies in the context of the operation of the justice system entities depends on the objectives for which they are implemented.

In 2009, as a Magistrate of the Superior Court of Free Competition and Consumer Affairs, the first jurisdiction where the Electronic Judicial File was successfully implemented, I had the opportunity to witness the tremendous efforts of the Judicial Branch. The primary goal of these efforts was to modernize the Administration of Justice by establishing digital channels for filing lawsuits, exchanging procedural documents, and accessing case files 24 hours a day, year-round, and from any device with Internet access. Over the years, I was able to witness the effectiveness we achieved through the integration of technology in the judicial system, which accelerated the processes and brought the courts of justice directly to firms, lawyers, and citizens. Currently, as president of this institution and with the support of the magistrates who are part of it, I have led the Supreme Court of Justice of Panama in implementing digital transformation as one of the key priorities of the Judicial Branch management during this term.

With the support of the Inter-American Development Bank, we have created a Digital Agenda that incorporates a citizen-centered digital transformation model in its design. We exist to serve the citizens, who demand greater efficiency in the processes and improved access to justice. Likewise, we have integrated a change management plan alongside a training plan, both of which are essential elements to ensure the effectiveness of this transformation process.

For the Judicial Branch of the Republic of Panama, the development of the Digital Agenda for the Justice sector must be understood in this context, as it will contribute with specific topics and lines of action to the development of the Institutional Strategic Plan established for the 2020-2023 period.

It is important to reflect on the importance of having a mutually agreed definition of the Digital Agenda within the Judicial Branch, through an inter-institutional approach and with contributions from the stakeholders involved in the judicial process. The success of the actions outlined in the Agenda will especially depend on our ability to ensure that the different stakeholders involved in the justice system embrace and fully adopt these new electronic processes.

As is well known, the Judiciary operates with a limited budget. In addition, state budgets were significantly affected by the COVID-19 pandemic, leading many to question whether investing in computerization of the

courts is justified. To this we can only reply that the need and urgency of such investment are determined by the obligation of justice institutions to meet society's growing demands for efficiency.

The challenge of fully transitioning our justice system into the digital era will call for substantial economic investment. In this regard, based on clear criteria of investment in technology, we must foster joint efforts among the different state bodies to guarantee the necessary resources for the execution and sustainability of the projects outlined in the Digital Agenda of our Judiciary Branches.

I cannot conclude my remarks without reiterating my gratitude to the Inter-American Development Bank, which has provided unwavering support to Panama's justice system for over 20 years. Together, we have worked to establish the roadmap that forms the foundation for the digital transformation process that Panama's justice system will undergo.
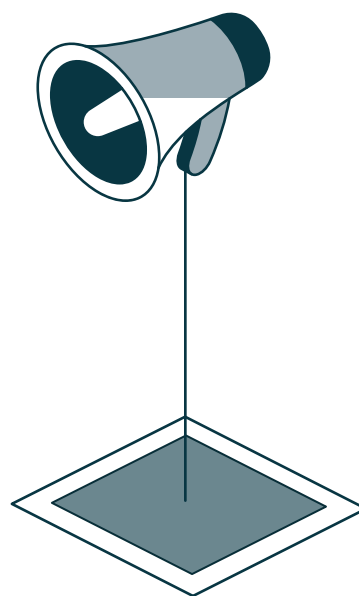
DR. RICARDO WLADIMIR MORALES VELA
Public Defender General
The Republic of Ecuador

The judicial system is the cornerstone of the rule of law, serving as a guarantor of social peace, legal security, protection of human rights, and access to justice. In the exercise of this power, special attention should be given to groups in situations of vulnerability, on whom the judicial system should be particularly focused, ensuring the realization of their rights and the eradication of all forms of discrimination. To enforce these rights, an entire legal framework, including administrative and jurisdictional structures, technological tools, and institutional human talent, has been established, whose goal is continuous professionalization and specialization to deliver effective and timely justice.

In this arduous task entrusted to the justice sector, the implementation of technological tools becomes a decisive factor in establishing an accessible, efficient, and citizen-centered justice system, which upholds the principles of Open Justice. The implementation of information technology will further ensure a high level of security and transparency, coupled with efficient and effective case management, thereby allowing better access to justice services.

Undoubtedly, a system grounded in Digital Transformation is a transversal pillar for the continuous improvement of the administration of justice, especially in today's world, where technological advancements occur at a staggering pace and access mechanisms used by individuals to interact with institutions have multiplied, diversified, and simplified. Remote hearings, digital access to judicial proceedings, and technology, such as automated chatbots and videoconferencing, represent a new communication paradigm.

In the case of Ecuador's Judicial Function, made up by the Jurisdictional Bodies, the Prosecutor's Office, and the Public Defender's Office, it is imperative to have well-defined and efficient automated processes that enable the development of information systems that address the institutional needs. These systems must allow interoperability between the information systems of the judicial entities involved in the procedural dynamics, with the goal to achieve complete digitization of documents and the creation of electronic case files.

A critical aspect of this approach is the emphasis on information security, as it is one of the most valuable assets and a prime target for criminal groups. In the case of the justice sector, particularly in the Public

Defender's Office, which serves highly vulnerable groups, it is an immense responsibility for the institution to guarantee the due protection of personal information of both internal and external users.

Consequently, a justice model cannot be envisioned today without the integration of technological tools that facilitate and optimize the work of judges, prosecutors, public defenders, litigants, lawyers in private practice, and society as a whole. Digital justice also provides an additional guarantee of impartiality, while reducing the risk of corruption at different stages of the legal process.

Digital Transformation should not be viewed as a mere implementation of information systems, but rather as a shift in the culture and organizational structure of institutions. This entails substituting manual and repetitive processes by optimized electronic workflows that add value to judicial management, all with the ultimate goal of safeguarding the fundamental rights and ensuring the administration of justice.
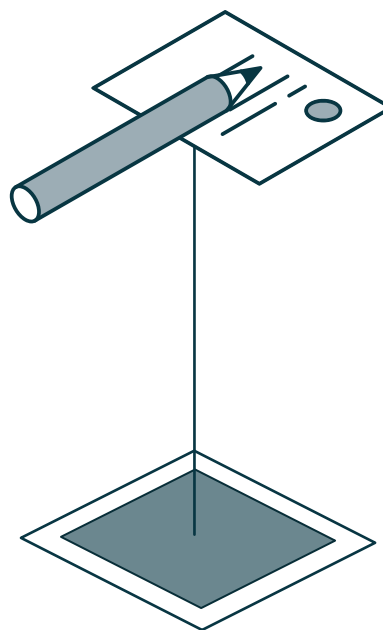
DIANA A. REMOLINA BOTÍA

Magistrate of the Superior Council of the Judiciary of Colombia
President of the Corporation for the terms 2020 and 2024

We are living in times of growing citizen expectations, as they demand judicial services that are not only effective, but also easy to understand and aligned with their realities. As a magistrate of the Superior Council of the Judiciary in Colombia, I am aware that the cross-cutting challenges of the Administration of Justice in Colombia require initiatives that go beyond technology, although it is still a powerful tool to support said goals.

In the Colombian Judiciary Branch, we have been modernizing our processes and services through technology. I cannot help but mention the key milestones, such as the 24/7 digital submission of actions as vital to citizens as the tutela (a legal mechanism to protect fundamental rights), the significant reduction in ink and paper usage enabled by case management systems, electronic signatures, and digital documents and, more recently, the responsible adoption of Artificial Intelligence.

This process has also given us important experiences, lessons learned as well as the challenges to be addressed in the near future. The importance of understanding and recognizing the needs, knowledge, and experience of judicial officers and users in order to achieve results and solutions that are better tailored to their realities, in addition to improving their trust and satisfaction with the justice services, are key aspects that contribute to the development of a true digital culture in the Colombian Judicial Branch through collaborative efforts.

I would like to highlight the opportunity to establish an integrated ecosystem of digital solutions, which takes into account the realities and progress achieved across different areas and jurisdictions. The aim is to foster collective innovation that would result in positive transformations in access, efficiency, management, and provision of services, with the focus on people rather than technology.

For this reason, the Strategy and Plans for Digital Transformation in the Colombian Judicial Branch must build on the progress made and address the lessons and challenges identified, in order to create a unified institutional vision that is continuously renewed and updated in accordance with the demands of a process of organizational change.

In this institutional effort, we have received the support of the Inter-American Development Bank (IDB), which has helped strengthen our abilities to move forward on this path. We are grateful and confident that we will continue advancing towards a dependable, digital, and inclusive justice system in Colombia.
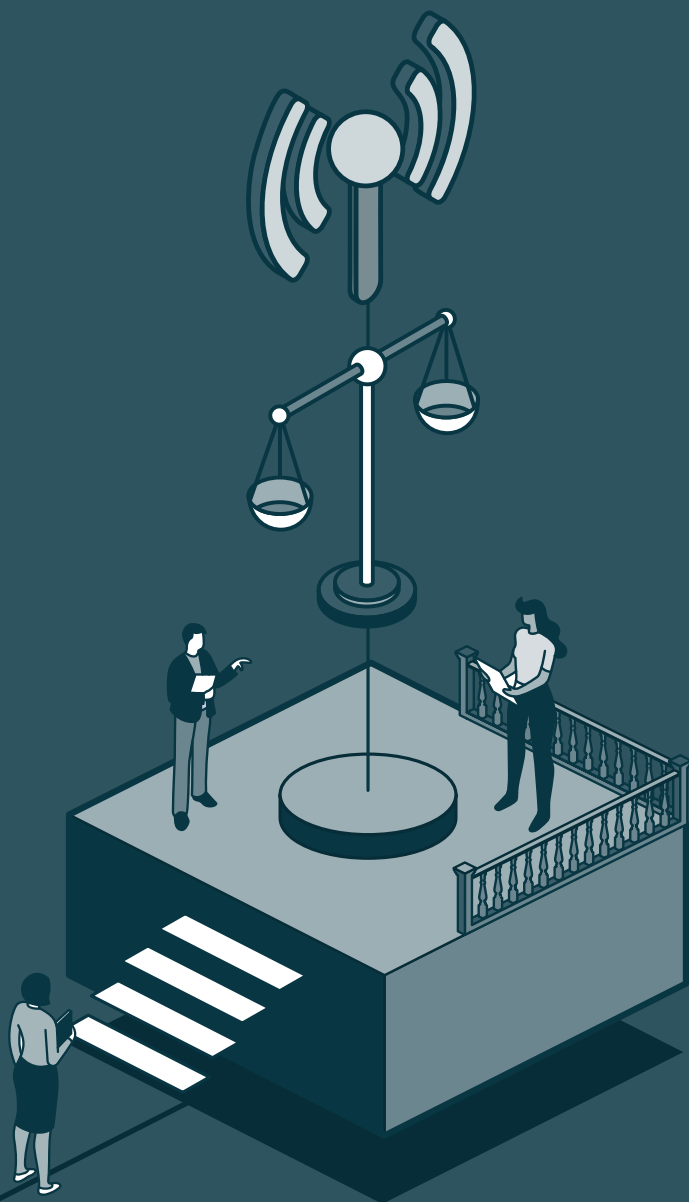
Digital transformation of justice
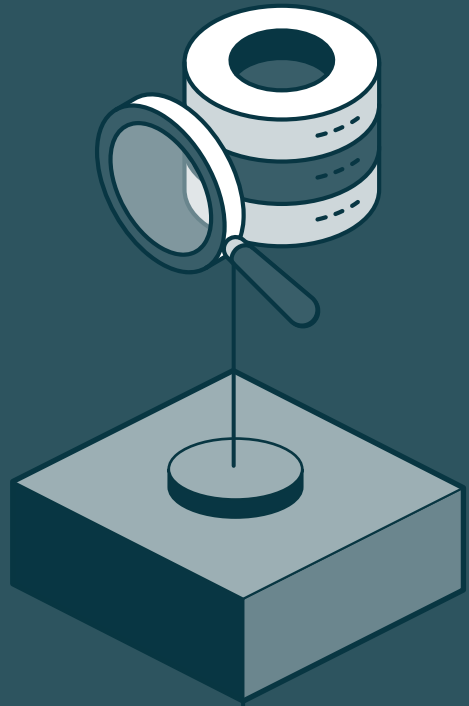
Introduction

Digital transformation
of justice

Introduction

THE DIGITAL TRANSFORMATION OF THE PUBLIC SECTOR UNDENIABLY OFFERS ENORMOUS BENEFITS TO SOCIETY AS A WHOLE.

First of all, it allows public administrations to operate with greater efficiency and effectiveness, both in terms of their internal processes and in their interactions with citizens and companies. On the other hand, for citizens and businesses that receive public services, digital transformation also offers a number of significant advantages. In both cases, these benefits are reflected in key aspects of modern society, such as easier, more transparent, more secure and faster access to information.

To achieve this goal, it is crucial to approach the digital transformation of the public sector comprehensively, avoiding an exclusive focus on information systems, which tend to dominate attention during these major transformations. Therefore, a genuine digital transformation of the public sector must consider five key pillars that encompass the various interconnected aspects. These are: i) Institutionality and Governance, ii) Regulatory Framework, iii) Digital Talent and Change Management, iv) Technological Infrastructures and Tools, and v) Digital Processes and Services. Each of these pillars

includes key elements that, collectively, ensure an orderly digital transformation, supported by well-defined plans, legal certainty, a people-centered approach that makes the most of the available systems and infrastructures. All this with an ultimate goal of enabling the Public Administration to deliver high-quality services through the efficient use of digital tools. In this context, **the IDB has prepared the Government Digital Transformation Guide**,[2] which comprehensively addresses these issues, establishing an **unprecedented reference framework in the field.** This guide has become a point of reference for many countries undergoing their own transformation processes, providing invaluable guidance.

In this installment, **the IDB has prepared a Justice Digital Transformation Guide, which proposes a series of technical and organizational actions to successfully navigate the process of digital transformation in the judicial sector.** This Guide is based on the **progressive nature of the digital transformation process**, understood as the gradual implementation of a set of actions outlined in the document. The ultimate goal is for the Administration of Justice in Latin American and the Caribbean countries to attain the highest standards of modernity, accessibility, agility, security, sustainability, and transparency through the use of technology. This will, in turn, lead to economic and social improvements nationwide, as having an effective and modern public justice service is an incentive to live in and attract investment to the country.

The Justice Digital Transformation Guide is characterized by **neutrality and adaptability**, making it applicable to the Administration of Justice in all countries in Latin America and the Caribbean, regardless of whether they follow Civil Law or *Common Law*. The goal of this document is to serve as a practical guide for countries to implement **the necessary initiatives** to achieve Digital Justice, taking into account the specific features of the administration of each country's justice system.

> THIS DOCUMENT IS AN **ADAPTATION OF THE GOVERNMENT DIGITAL TRANSFORMATION GUIDE,[3] TAILORED TO THE FIELD OF JUSTICE**. THE ORIGINAL GUIDE CONSTITUTES A COMPREHENSIVE REFERENCE FOR DIGITAL GOVERNMENT, STRUCTURING THE DIGITAL TRANSFORMATION PROCESS ACROSS **THE FIVE PREVIOUSLY MENTIONED DIMENSIONS AND ADAPTED FOR THE JUDICIAL FIELD.**

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2.   Government Digital Transformation Guide/IDB.
3.   Government Digital Transformation Guide/IDB.

The Guide stands out for its **holistic approach**, grounded in a broad conceptual vision of Digital Justice. It extends beyond the technological aspect to cover other crucial areas, such as providing strategic direction of the process through solid leadership, establishing a robust regulatory framework to ensure legal certainty in digitalization, and focusing on training and change management. These elements will equip members of the organization with the knowledge and conviction necessary to transition from analog to digital work. Consistent with this holistic approach, this Guide aligns with the IDB's Operational Guidelines for Support of Innovation in Justice Administration Systems.[4] These guidelines seek to guide countries on how to attain more effective, efficient, accessible, and transparent justice.

Thanks to this approach, those responsible for the Administration of Justice in different countries have a manual that details the **actions needed** to achieve optimal Digital Justice across all dimensions of digital transformation. In addition, the Guide features practical examples drawn from real-life situations to contextualize various initiatives in a real-world setting.

Furthermore, it is crucial to consider the importance **of governments having the political will to address the digital transformation of justice, understood as a state policy and a national project, ensuring its continuity through changes in government.** A manual that provides the necessary knowledge to carry out this process is insufficient without real support from the Executive and Legislative Branches. They must provide the economic, human, and material resources necessary for the Judicial Branch to implement these actions effectively.

While some countries in the region are currently going through the early stages of this process, with paper use still prevalent in the Administration of Justice, **a paradigm shift towards digitalization is underway in both the public and private sectors.** An example of this is the strong commitment of Latin American and the Caribbean countries to Digital Government,[5] which should also be expanded to encompass the field of justice. In line with the above, **the Justice Digital Transformation Guide will serve as a roadmap for those in charge of the Administration of Justice in the countries of the region. This guide will channel the political and social will needed to transition from the analogue world to the digital one in the Administration of Justice.**

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4. The Operational Guidelines for the Bank's Support for Innovation in Justice Administration Systems (SAJ) aim to guide the Bank's efforts in strengthening the capacities of SAJs. This document, set to be released soon as an update to the current 2011 Guidelines for Better Performance of Justice Systems, will consider the current judicial context and the IDB's Institutional Strategy.

5. Article/Economic Commission for Latin America and the Caribbean (ECLAC).
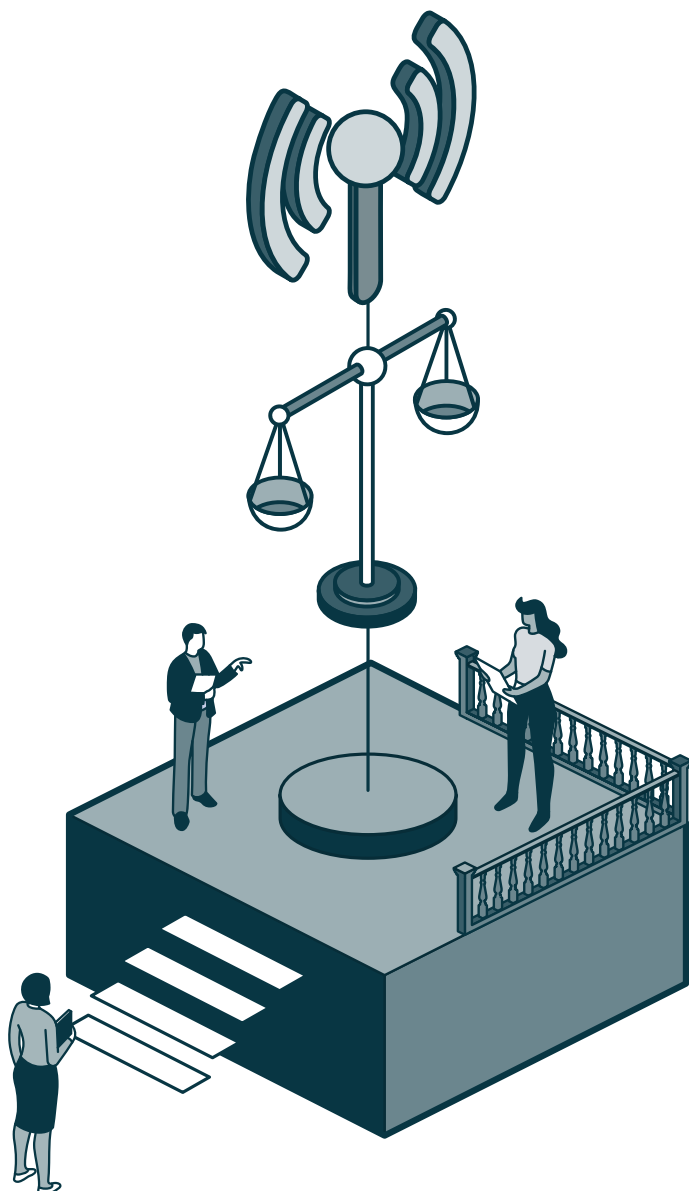
Digital transformation of justice

PROGRESSIVE NATURE OF THE DIGITAL TRANSFORMATION OF JUSTICE

Before exploring the technical aspects of **the digital transformation of justice, it is necessary to point out that it is a continuous and progressive process. To be effective and sustainable, a solid and clear strategy** must be developed, one that considers all the dimensions outlined in this document. Once such a strategy is in place, it is crucial to adhere to it, ensuring that all decisions are based on technical criteria rather than the political ones, and avoiding any improvised actions.

The Digital transformation of justice strategy should include a roadmap with **deadlines to execute initiatives that are both ambitious and realistic and are based on the principle of gradual implementation. This guarantees budgetary efficiency**, preventing the acquisition of unnecessary infrastructures or technological tools during the implementation.

Another important aspect to consider is the **progressive nature of the implementation of technology. This implies advancing step by step, starting with the fundamental technological aspects necessary to implement electronic judicial files across all judicial bodies and gradually introducing more advanced solutions as the country's Digital Justice** matures. For instance, there is little value in implementing a state-of-the-art courtroom recording system, if there is no case management system in place across all judicial bodies to ensure that the recording is digitally signed and stored in the electronic judicial file.

However, it is important to leverage current technological advances to accelerate the transformation process. Thus, it is advisable to consider the concept of **Leapfrogging, which suggests that countries at a lower level of technological development can rapidly advance in the digital transformation process by adopting modern systems, bypassing the intermediate stages**. For example, if a country initiating its digitization of justice wants to implement a hearing recording system, it can directly adopt the latest available technology with advanced functionalities. This would allow the country to bypass older, more limited systems that are currently outdated and to avoid implementing intermediate solutions.

When addressing the progressive nature of digital transformation of justice, it is also crucial to consider its **multiple dimensions**. It is a common mistake to assume that this process is solely about technological issues. As an example, deploying innovative technology for virtual hearings is pointless, if there is no legal framework to support this modality. In this case, remote hearings would be invalid because they do not comply with the existing legislation.

IMPACT OF THE DIGITAL TRANSFORMATION OF JUSTICE

The digital transformation of justice is a comprehensive process that impacts all stakeholders engaged in this public service. Along with the Administration of Justice, which includes all bodies and individuals involved in applying the laws in courts and tribunals,[6] other institutions and groups participate. These include the Public Prosecutor's Office, lawyers who offer legal assistance to citizens involved in legal processes, experts who issue reports, citizens interacting directly with the justice system, and other public administrations that also intervene, such as police forces, hospitals, prisons and toxicology institutes.

Due to the broad impact of digitizing justice on all public powers and society as a whole, digital transformation of justice is a nationwide project that will create positive synergies in both social welfare and the economy overall by enhancing public services through technology.

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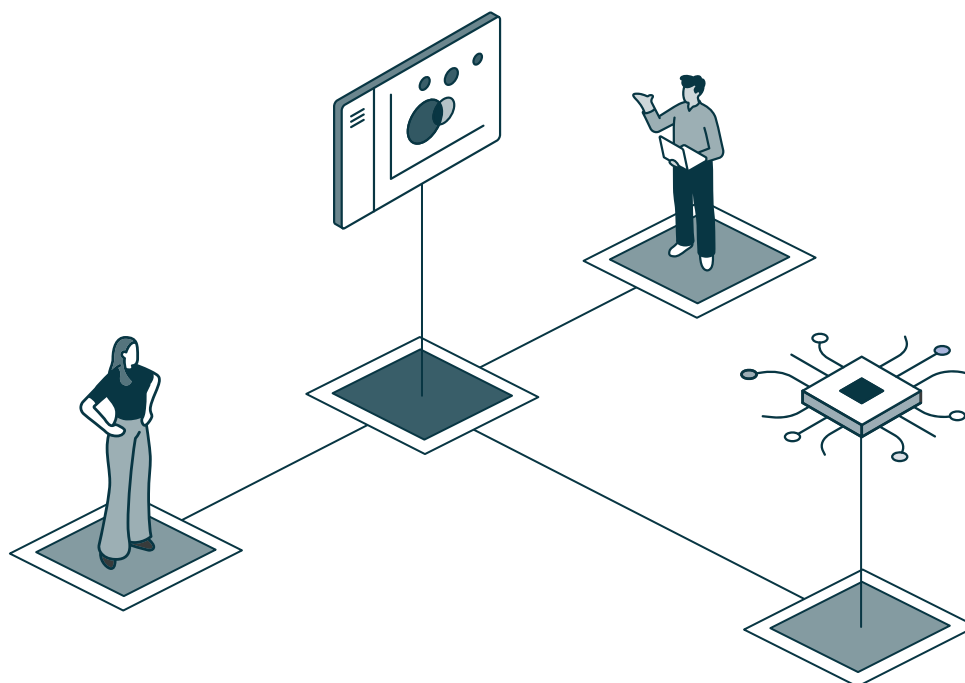
6.   Pan-Hispanic Dictionary of Legal Spanish.

What are the key features for the digital transformation of public justice? They include the following:
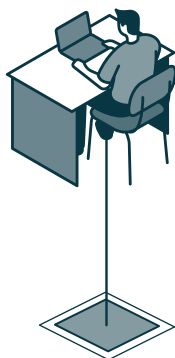
1 **Greater accessibility to justice:** judicial professionals and citizens will be able to access electronic case files of processes they are part of and will be able to process paperwork 24 hours a day, 7 days a week. To this end, it will be essential not only to establish a **regulatory framework** that guarantees citizens and professionals' rights to interact with justice digitally, but also to implement a suitable technological solution for the **judicial services portal** and the associated service that supports said portal, that is, **access to the electronic judicial file**.
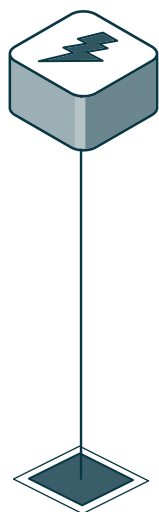
2 **Greater agility:** digitization of documents and processes speeds up information exchange and processing times. Interoperability allows the immediate availability of information thanks to the automated inter-connection of Information and Communication Technologies (ICT). To achieve this goal, it is essential to offer **training** to public employees of the Administration of Justice in the use of technological solutions, so that they know how to work in a digital environment. In addition, from the infrastructure perspective, it is essential to have an adequate **technological infrastructure** that supports electronic judicial processing, the **case management system** that allows digital processing of files and the **interoperability hub,** essential for the automated exchange of information and service sharing.
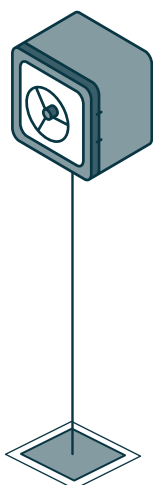
3 **Increased security:** digitizing documents and securely storing these in digital format reduces the risks of loss or deterioration associated with the use of paper. To achieve a secure Digital Justice ecosystem, it is funda-mental to establish a **governing body for digital transformation**, including a designated person responsible for ICT security, such as a CISO (Chief Information Security Officer), and to develop a **Cybersecurity plan** that includes the necessary technical and organizational actions. From a tech-nological perspective, achieving this goal requires having the **electronic archiving platform**, which facilitates the storage of electronic court files, and the **Security Operations Center (SOC)**, which monitors ICT security in the field of justice.
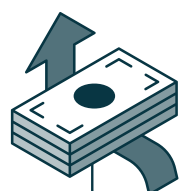
4 **Improved sustainability:** digitalization enhances the environmental sustainability of the judicial system by significantly reducing paper usage and by minimizing physical trips to offices, thereby lowering CO_2 emissions.[7] To address this challenge, it is crucial to emphasize the importance of solutions that allow telematic communication between the Administration of Justice and different stakeholders. These solutions include the **electronic communications system**, which enables professionals and citizens to receive notifications and submit documents without traveling to the judicial offices, the **Virtual Digital Immediacy Desk (EVID)**, a technological solution to carry out procedures and judicial acts digitally, or the virtual hearings' service, which allows to hold hearings without requiring participants to be physically present in court.

5 **Greater transparency:** digitalization enables the extraction and presentation of judicial information in a transparent manner, allowing citizens to know the level of performance of the Administration of Justice. To achieve a more transparent public justice service, it is important to start from an action plan outlined in the **Transparency plan**, along with technological solutions like the **judicial services portal**, which allows citizens to access digital services, for instance **access to judicial statistics**.

6 **Economic and social improvement:** digitalization of justice makes this public service more agile, effective, and transparent, thereby strengthening both citizens[8] and companies' confidence in the country as a place of legal security to live and invest. This will lead to economic and social benefits for all citizens.

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7. 4 lessons from Spain for the digital transformation of justice in Latin America and the Caribbean/IDB.

8. 4 lessons from Spain for the digital transformation of justice in Latin America and the Caribbean/IDB.

AN EXAMPLE OF THE IMPACT OF DIGITAL TRANSFORMATION OF JUSTICE

Country B has been undertaking a comprehensive digital transformation of its justice system for the past ten years. As a result, both the internal functioning of the Administration of Justice and the judicial procedures and interactions with professionals and citizens are conducted digitally.

Daniela
A defense attorney.

Javier
A citizen who hired Daniela to file a lawsuit.

In a country with an advanced digital justice system, Javier has hired Daniela, a lawyer, to provide legal assistance in a debt claim procedure.

Using the electronic communications system, Daniela submits her statement of claim digitally, **as she has full accessibility** to justice from her home through a mobile device, without the need to physically go to court. In addition, once the lawsuit has been filed and the procedure has begun, Javier can access the judicial services portal from any location to view the electronic judicial file of the process in which he participates.

After the electronic submission of the document, the claim is received in the court's case management system, where an electronic case file is created. The entire process is handled digitally. As a result, courthouse personnel will not waste time printing out and making copies of the complaint for all parties involved. This makes **the judicial process more efficient throughout its duration**. For example, if a witness needs to testify on the day of the hearing, they can do so via videoconference, without the need to postpone the hearing if they are unable to attend it in person.

In addition, through the creation of an electronic court file, the court handling the case can send the **necessary electronic notifications** to the parties' lawyers **during the judicial proceedings**. For example, if the court requires any party to submit written arguments, it issues the corresponding request via electronic notification. The court's ability to send notices electronically streamlines the judicial process, eliminating the need for a tedious process of manual delivery. Furthermore, it guarantees the legal certainty of the process, as all information regarding the notification, its full content, delivery details and the individuals' acknowledgement of receipt are recorded in the case file.

In addition, **the electronic court file and its contents will be securely stored** in the Data center and the cloud infrastructure. This ensures that the information is protected from potential risks associated with paper use, such as accidental loss.

Because the hearing is held virtually, neither Daniela, Javier, the defendant's lawyer, nor the defendant themselves need to attend it in person. This eliminates the need for these participants to travel by motor vehicles, thereby reducing the pollution associated with car use. In this way, digital justice **contributes to environmental sustainability**.

During the judicial process, Javier wants to know the average duration of similar cases in Country B to estimate when his case will likely be resolved. To obtain this information, he visits the judicial services portal to consult the latest judicial statistics. This lets him **understand the functioning of justice clearly, transparently, and in real time based on reliable data**.

Finally, the court has processed the case submitted by Daniela and Javier and has issued a final judgment that orders the defendant to pay Javier the amount owed. Despite the defendant's refusal, the court has investigated the defendant's assets using the infrastructure that ensures interoperability among all public administration systems. As a result, the defendant's assets have been identified and seized to cover the debt.

Within the framework of the Justice Digital Transformation Strategy, it is very important to identify and quantify these benefits to clearly understand the advantages and positive impacts that both the Administration of Justice and society will experience after this transformation has been completed. **These benefits reinforce the message that digital transformation does not seek to substitute technology for another technology, but rather seeks to enhance efficiency, effectiveness, accessibility, and equality, while at the same time reducing the environmental impact of the Administration of Justice through the strategic use of technology**. IDB's Operational Guidelines for Support of Innovation in the SAJ outline other types of initiatives, beyond the digital ones, that will also help achieve the stated goals. All these initiatives and interventions, whether digital or otherwise, must be aligned with and integrated into a unified and comprehensive strategy for the transformation and enhancement of justice.

It is recommended that the goals and compliance indicators outlined in the Digital Transformation Strategy incorporate these benefits into their formulation. In this way, the Digital Agenda could include milestones to deliver value or benefits of the Strategy, based on the attainment of the outlined objectives.

ECOSYSTEM OF DIGITAL JUSTICE ACTORS

The Justice Administration System comprises various actors. The primary ones include the **Administration of Justice**, which consists of **courts and tribunals** responsible for administering justice in a country, and the **Public Prosecutor's Office**, whose functions may vary depending on the country. However, one of its most common functions is to promote justice in defense of legality, citizens' rights, and the public interest. Additionally, there are other actors that operate within the framework of justice:

› **Lawyers:** this professional group provides assistance to citizens in legal proceedings or procedures in the Administration of Justice, advocating for their clients' legal interests before this Administration.

› **Citizens:** typically, citizens interact with the Administration of Justice indirectly through their lawyers. However, there are instances in which citizens engage directly with the justice system without lawyer representation, for example, when granting the power of attorney to a lawyer or when pursuing legal action in proceedings where lawyer assistance is not mandatory.

› **Toxicological institute/center:** this public entity provides medico-legal expert reports, including forensic examinations of deceased individuals, victims of aggression, and cases requiring technical-forensic evaluations as requested by a judicial body within the framework of a judicial process. They also examine and determine the composition of all types of chemicals, as well as forensic evidence.

› **Public Defender's Office:** this institution ensures that everyone has equal access to public justice services, providing free legal aid for those who cannot afford to hire a lawyer to represent them before the Administration of Justice. Essentially, its primary function is to assign public defenders to individuals who cannot afford legal representation on their own.

› **Police forces:** the entity responsible for maintaining public order and ensuring compliance with the legal system, with the authority to use force in the exercise of their duties. They interact with the Administration of Justice on a regular basis, presenting detainees before judicial authorities, fulfilling judicial orders, and exchanging information between administrations.

› **Hospitals and healthcare centers:** these centers provide healthcare to all individuals. They interact on a regular basis with the Administration of Justice, send medical reports to the judicial bodies when medical intervention reveals indications of a crime that must be reported to the justice system or when a medical report is required by the judicial body.

› **Penitentiary institutions/prisons:** this public administration manages prisons, ensuring prisoners' safety and enforcing custodial sentences imposed by the Administration of Justice. They maintain an ongoing relationship with the justice system to enforce court rulings and supervise the execution of custodial sentences.

> **Experts:** they are experts in various technical fields, who evaluate and present their conclusions on issues submitted to them, such as physical or psychological injuries, or damage to movable or immovable property. Experts issue reports that are presented or requested within a judicial process, giving testimony on their findings and the expertise.

> **Other public administrations:** various public entities that interact with the Administration of Justice in judicial proceedings within the contentious-administrative jurisdiction, as well as those involved in the continuous exchange of information between administrations to ensure the effectiveness of judicial actions. For example, this includes the exchange of information between judicial authorities and the Land Registry to obtain real estate data, or with the Ministry of Economy and Finance to access tax records, along with numerous other administrations.

> **Banking institutions:** these financial entities facilitate the management of citizens' finances. They maintain an ongoing relationship with the Administration of Justice to execute court-ordered asset seizures and to provide information on individuals' financial holdings, among other responsibilities.

Below is the **ecosystem of the key stakeholders** in the justice system, who are, therefore, part of this digital transformation:

Police forces

Lawyers

Banking institutions

Hospitals and healthcare centers

Public prosecutor's office

Public defender's office

Citizens

MAIN ACTORS OF THE JUSTICE SYSTEM

Courts and tribunals

Other public administrations

Toxicological institute/center

Penitentiary institutions/prisons

Experts

DIMENSIONS OF THE JUSTICE DIGITAL TRANSFORMATION GUIDE

The process of digital transformation of justice is structured across five dimensions, in which specific actions must be taken[9]:

Judicial governance and institutionality

1

Regulatory framework

2

Digital talent and change management

3

New digital processes and services

5

Technological infrastructures and tools

4

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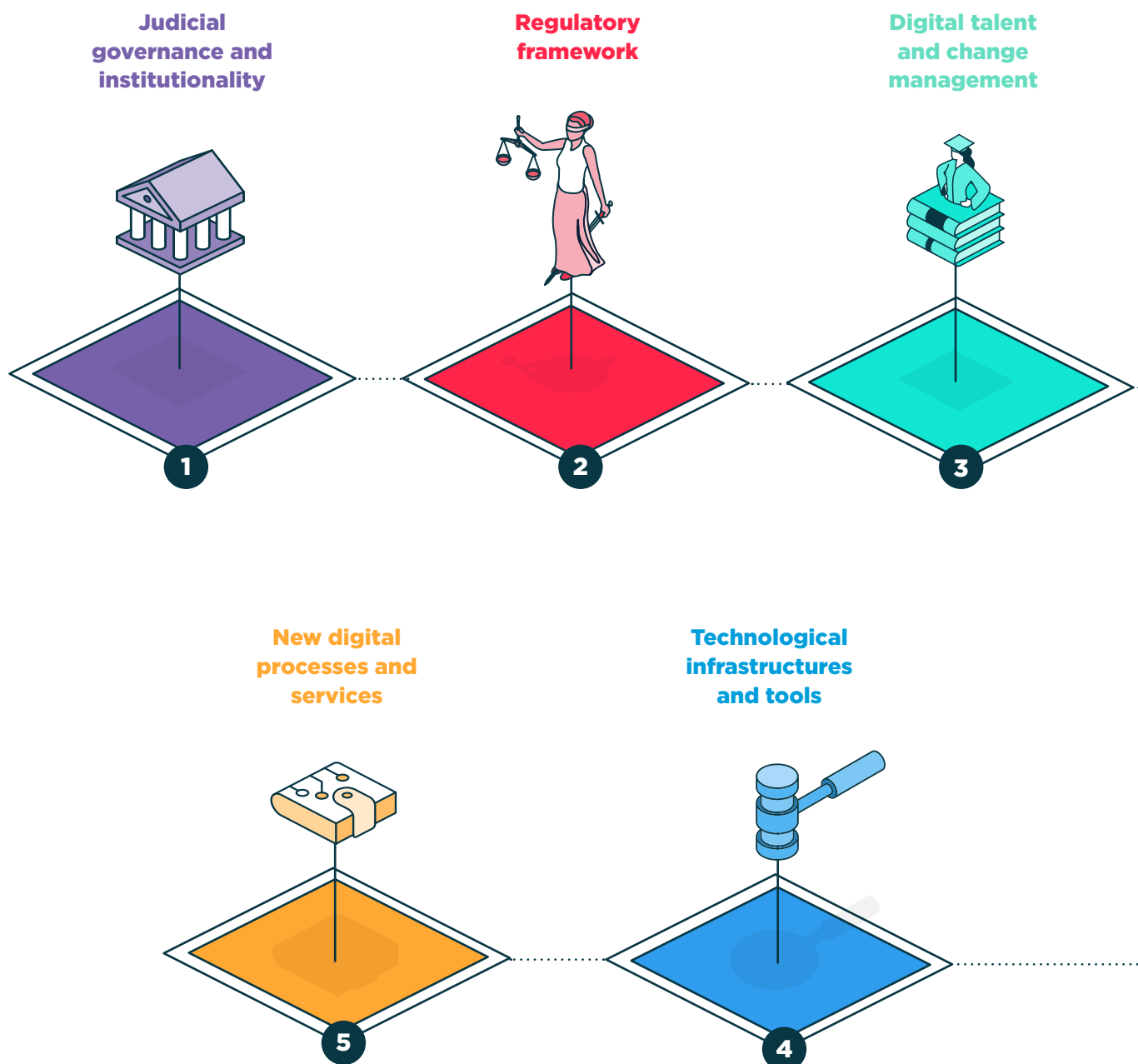
9.   Government Digital Transformation Guide/Page 13/IDB.
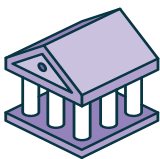
Judicial governance and institutionality

Any process within the digital transformation of justice requires a **governing body that takes organizational and technical measures and promotes necessary regulations to carry out said process, involving all stakeholders with competences in justice-related matters**. This body can be established ad hoc with the participation of all relevant actors and institutions, or it can evolve from an existing organization that assumes the necessary leadership and responsibilities. This implies a transformation of the Administration itself, guided by a model that allows the continuous progress of the Strategy toward the established objectives.

One of the functions of the governing body is to provide strategic direction for the digital transformation of justice. To achieve this, it is crucial to **develop the Strategy that outlines the goals, strategic programs, and initiatives to be implemented within a given timeframe to manage this process**.

Additionally, the governance model should be well-structured and be capable of implementing all the measures defined in the Strategy. It also includes monitoring and control mechanisms that enable the governing body of the digital transformation to access the necessary information to make timely decisions in response to changes throughout the Strategy's implementation, as well as to address emerging demands.
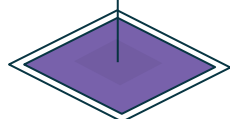
Regulatory framework

A robust regulatory and ethical framework is essential to support the digital transformation of justice, guaranteeing the principle of legal certainty and adhering to a model of technological development of justice always based on respect for fundamental human rights.

It is impossible to equip the justice system with technological tools that meet the demands of today's society without first establishing a regulatory framework that protects and regulates the use of technology. In this process, the digital divide must be taken into account, to ensure that no citizen is excluded from accessing the justice services. Other critical aspects such as information security and system interoperability should also be taken into consideration.
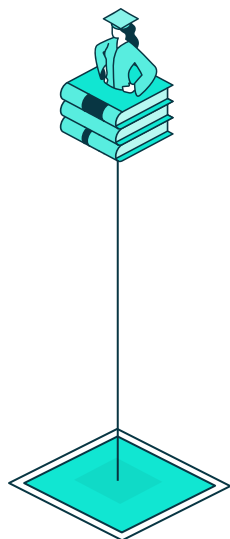
Digital talent and change management

Digital justice represents a cultural shift for users of the Administration of Justice, as they transition from working with paper to working digitally. To facilitate this adaptation, **change management should focus on its key pillars, that are digital training, effective communication of all relevant aspects of this process, and providing support to users** in employing the technological solutions available to them. To do that, specific training, communication, and user support plans are drawn up, tailored to different profiles. These plans encompass the technical and organizational actions necessary to promote digital culture within the Administration of Justice.
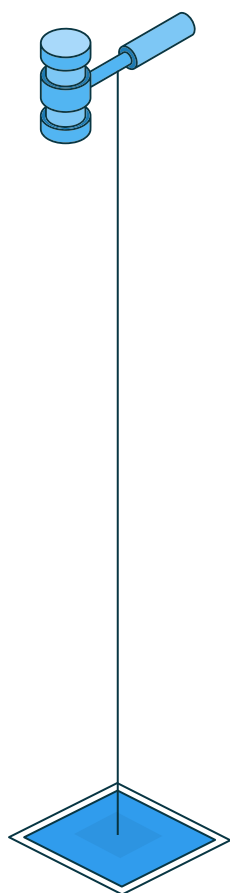
Technological infrastructures and tools

Digital justice requires the development and implementation of technological solutions to establish and expand the electronic judicial file, equipping users with the **most innovative** technology available. To this end, **it is also necessary to implement and adapt the technological infrastructure that supports these solutions, and to provide users with appropriate technological equipment to enable effective operation in a digital environment**. It is necessary to assess the existing tools and enhance them by incorporating functionalities that have not been implemented yet to ensure that all aspects of the judicial file can be managed digitally.

In this dimension, it is important to ensure that **technological solutions are designed with a focus on reusability and interoperability**. The goal of this approach is to achieve technological efficiency and resource reusability, thereby ensuring sustainable digital justice. Another important aspect is that justice should operate in an integrated manner, ensuring that all systems, both internal and external, of the Administration of Justice, as well as those of other administrations and stakeholders, can automatically exchange information.
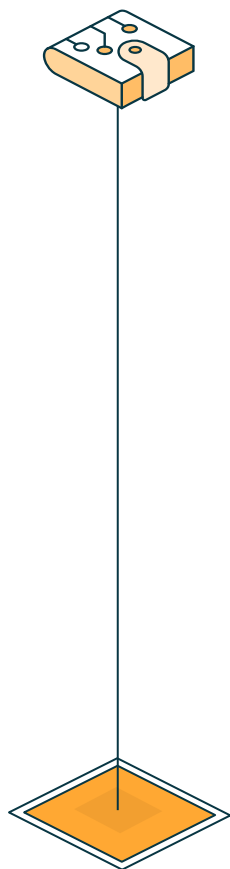
New digital processes and services

To advance in the technological development of justice, it is necessary to understand and analyze the existing workflows, to subsequently redefine and adapt them for the digital environment. When initiating electronic processing, efforts should be made to simplify work procedures by incorporating new digital services that meet the emerging needs, such as the creation of a judicial services portal, electronic communications, and digital signatures, among others. **Digital justice should not imply mere digitizing the existing paper-based processes. Rather, it is crucial to analyze and improve them, streamlining workflows to create added value for both users and the public**.

It is important to highlight that **the introduction of new digital processes and services aims to simplify judicial workflows and to eliminate cumbersome analogue procedures that once hindered the efficient operation of justice**. Therefore, new digital processes and services, rather than adding extra burden on justice users, should improve their work and efficiency by allowing them to complete more tasks in less time, in a more dynamic and intuitive manner.

The Justice Digital Transformation Guide includes five dimensions, each comprising a series of actions. These actions are organized into components (each identified by a five-character alphanumeric code, for example GIJ01). Within these, we observe different subcomponents, each designated by a two-digit numerical code, for example, 01:

Judicial governance and institutionality

[GIJ01] Justice digital transformation strategy

[01] Digital agenda
[02] Roadmap
[03] Technological strategy
[04] Institutional strengthening plan
[05] Risk management plan
[06] Financial and public procurement plan
[07] Cybersecurity plan
[08] Interoperability plan
[09] Data governance plan
[10] Transparency plan

[GIJ02] Governing body for digital transformation

[GIJ03] Digital transformation governance body

Regulatory framework

[MNL01] Specific regulations on electronic judicial administration

[01] Law regulations the use of ICT in justice
[02] Interoperability and security schemes
[03] Technical regulations on interoperability and security

[MNL02] General regulations with on electronic judicial administration

[01] Personal data protection law
[02] Electronic trust services law
[03] ICT Code of ethics

Digital talent and change management

[TDC01] Intrajudicial change management plan I

[01] Justice technology tools training plan
[02] Digital culture plan
[03] Communication plan
[04] User support plan
[05] Protocol of and procedures

[TDC02] Plan of collaboration with judicial academics and the Public Prosecutor´s Office, professional associations and universities

[TDC03] Training and awareness plan for society

Technological infrastructures and tools

[IHJ01] Technological infrastructure

[01] Central or cross-cutting infrastructure
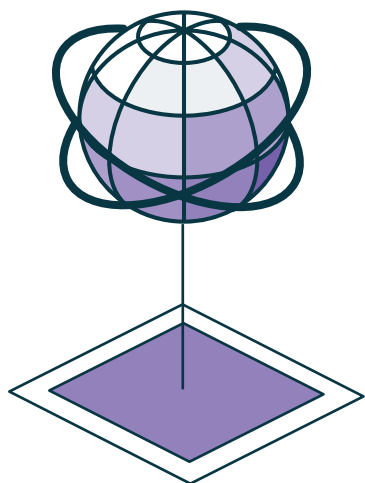[02] Headquarters infrastructure
[03] Courtroom infrastructure
[04] Infrastructure provided by the governing body of digital government

[IHJ02] Digital workplace

[IHJ03] Case management system

[IHJ04] Entry-exit platform

[IHJ05] Electronic archiving platform

[IHJ06] Court records platform

[IHJ07] Electronic communication system

[IHJ08] Electronic file viewer

[IHJ09] Evidence management platform

[IHJ10] Digital identity platform and electronic signature system

[IHJ11] Interoperability hub

[IHJ12] Judicial Data Lake

[IHJ13] Semantic infrastructure

[01] Master directory of judicial data
[02] Processing and classification flows and document templates

[IHJ14] Security Operations Center (SOC)

[IHJ15] Judicial services portal

[IHJ16] Payment systems

[IHJ17] Digital Immediacy Virtual Desktop (EVID)

[IHJ18] Digital justice monitoring system

[IHJ19] ODR platform (Online Dispute Resolution)

[IHJ20] Jurisprudence platform

[IHJ21] Human and material resource management system

[IHJ22] System of judicial auctions

New digital processes and services

[PSD01] Services for the administration of justice

[01] Registry
[02] Digitization and cataloging
[03] Distribution
[04] Processing
[05] Virtual transfer or court files
[06] Enforcement of court decisions
[07] Digital immediacy
[08] Electronic judicial auctions
[09] Electronic scheduling system
[10] Digital jurisprudence
[11] Electronic judicial statistics
[12] Human and material resource management

[PSD02] Services oriental to professionals and citizens

[01] Access to the EJE
[02] Management of communication
[03] Virtual hearings and live streaming of hearings
[04] Online court payments
[05] Electronic power of attorney
[06] Court calendar and appointments
[07] Access to judicial statics
[08] Downloading certificates
[09] Electronic bulletin board
[10] Alternative dispute resolution

01

Judicial governance and institutionality

1.1 Justice Digital Transformation Strategy

1.2 Governing body for digital transformation

1.3 Digital transformation governance body

GOVERNANCE IS THE CORNERSTONE OF DIGITAL TRANSFORMATION OF JUSTICE, AS IT PROVIDES STRONG LEADERSHIP THAT SETS THE COURSE OF ACTION FOR ALL THE ACTORS INVOLVED IN THIS PROCESS.

From an organizational perspective, **governance can be structured through two institutions that serve different but complementary roles**. On the one hand, the governing bodies of digital transformation and, on the other, the governance body itself.

First, there is the governing body of digital transformation. This administrative entity is created within the organizational structure of various public administrations involved in the digital transformation of justice. The main governing bodies of the digital transformation of justice are typically the governing body of the Administration of Justice and the governing body of the Public Prosecutor›s Office. These entities assume the strategic leadership and are responsible for providing technological means and digital services to their respective users. Other governing bodies can also be a part of this process, such as the Ministry of Justice, among others.

Besides, the governing body of one entity may take the lead in digital transformation not only of its own Administration but also of another one. This scenario occurs, for example, when the governing body responsible for the digital transformation in the Ministry of Justice also leads the digitalization initiatives within the Administration of Justice. As can be seen, **there are different possible modalities and scenarios, with the common factor being that the governing body serves as the administrative entity responsible for providing material means and digital services to users of the public administration it supports**, whether that includes the Administration of Justice, the Public Prosecutor›s Office, the Toxicological Institute, the Ministry of Justice or other entities.

Secondly, there is the **governance body for digital transformation**. Said forum unites the governing bodies of digital transformation of public administrations involved in the process of digital transformation of justice and other actors related to justice, such as lawyers and citizens. The goal of this body is to establish a common space that brings together all participants in this process to promote cooperation, build consensus, create a common framework for ICT interoperability and security, and promote Electronic Judicial Administration on a broad scale.

The digital transformation governance body may comprise different sub-bodies and regulatory frameworks to ensure the effectiveness of agreements reached by all participants. Furthermore, this body can offer common technological services to all governing bodies or encourage the sharing of infrastructures and technological tools among them, in order to enhance efficiency in the use of resources and prevent technological duplication. In short, **the purpose of this body is to encourage all governing entities involved in digital transformation of justice to align and pursue a unified course of action, thereby ensuring that the process is coherent and effective**.

The second pillar of governance and institutionality is the development and implementation of the **Justice Digital Transformation Strategy**. This document outlines the action plan to execute the digital transformation of justice. The Strategy may include a Digital agenda that sets out objectives of digital transformation and establishes metrics for their quantitative assessment, as well as a Roadmap that outlines the strategic programs and specific initiatives to be implemented in a given timeframe, adhering to an organizational framework to achieve these objectives.

In addition to the Justice Digital Transformation Strategy, other **Governance Development Plans can also be implemented**, such as the Institutional strengthening plan and the Risk management plan, among others. These plans seek to reinforce specific areas within the process of digital transformation of justice.

USER STORIES ON GOVERNANCE AND JUDICIAL INSTITUTIONALITY:

Juan

Newly appointed president of the Judiciary.

Juan is a seasoned judge with a professional career that has blended judicial duties with management roles. Currently nearing retirement, he has assumed this role as his final responsibility before stepping down. Throughout his career, he has identified numerous issues, which caused the Administration of Justice to operate at a slow pace and face more limitations compared to other state agencies or private sector companies.

Pedro

Head of the Department of Digital
Transformation of Justice.

Two weeks ago, Pedro was appointed by Juan to lead the effort in implementing the digital transformation of the country's Administration of Justice. At 50 years old, Pedro has spearheaded numerous transformation projects in both the private and public spheres, but he has never encountered a challenge of such magnitude. To attain this goal, Pedro leads a newly formed digital transformation department. Although the team is small, it includes top experts in their respective fields and has been allocated a record budget in the country to implement the digital transformation of justice. Pedro and Juan have known each other for a long time and share a history of successful collaboration, which has fostered great trust between them.

Claudia

CFO. Financial manager on Pedro's team.

With extensive experience in public procurement and large contract management. She is well acquainted with the challenges and complex situations that can arise in these cases.

Jerónimo

CTO. Head of technology on Pedro's team.

He has many years of experience and in-depth knowledge of the current juncture. Jeronimo has a clear vision of the technological evolution of the Administration of Justice, but his ideas do not always align with the management's perspective.

HISTORY: FIRST 100 DAYS

Juan wants a plan that unequivocally showcases his commitment to enact change. He gets down to work and reflects on his professional experience. He consults with colleagues to identify the key goals and direction for the transformation of justice. Once he has a clear vision, he reaches out to Pedro.

Pedro receives a call from Juan to discuss the objectives for the next three years. During the meeting, Juan raises the following **issue: "The justice system needs to be more agile**. The duration from when a lawsuit is filed until its resolution often spans years, decades or even longer. Pedro, this is a problem that must be solved. You have a budget of one hundred million dollars and three years to help resolve this issue. While we will also implement actions in other areas, such as

the workforce reform, staff redistribution, organizational changes, specialization of departments, digital transformation will be pivotal in tackling this issue."

Pedro returns to his office and summons the leadership of the department of digital transformation of justice to kick off the work. After reviewing the commission's objectives with the team, the work begins.

The team conducts a **preliminary analysis to assess the capabilities and resources required to launch the Roadmap**. This estimate reveals that a team will require two senior project managers, three officials from the Administration of Justice with deep knowledge of the current system, and a consultant with extensive expertise in digital transformation and process reengineering. Fortunately, Pedro's team already has the necessary personnel, except for the three expert officials. After discussing this matter, John suggests three potential candidates for these roles.

The team begins working intensively to develop the first version of the Digital agenda, analyzes the perspectives on the problem and sets clear objectives. Then, possible actions are assessed including their respective pros and cons, SWOT analyses are conducted, brainstorming sessions are held, experts are consulted, etc. To carry out John's commission, they have to propose **clear measures** to ensure that:

❯ **Data and documents are managed, processed, and transmitted digitally.** Significant bottlenecks and delays have been detected while generating copies, transferring paper files, and shipping documents among offices, etc.

❯ **Communication between all parties must be conducted with full guarantees, in a timely manner, using electronic formats.** At present, everything is handled through postal mail, which can delay the scheduling of a court hearing by several months until all parties are properly notified.

Based on the above, the **following goals have been established:**

❯ In the next 36 months, reduce the use of paper generated in judicial bodies by 50 percent, decrease paper documents generation by 75 percent in the Public Defender's Office, among citizens, lawyers, and other stakeholders.

> In the following 30 months, implement a system that allows 80 percent of notifications to third parties to be made electronically.

After completing the evaluation of the initial draft of the Digital strategy, Pedro presents it to Juan and his office. He describes the research and consultations made, the current situation, and the objectives established. Following this review, minor modifications are made to the overall Strategy, but what really has an impact are the changes to the targets established. Waiting for 30 months for 80 percent of notifications to be made electronically is too long, this goal must be attained within 24 months.

In addition, Pedro coordinates with the strategic management leaders from other departments involved in the global strategy, such as the Legal and Personnel Departments, to ensure that initiatives with interdependencies are properly aligned with the schedules, preventing any unforeseen issues arising. He also coordinates with external stakeholders, including the lawyers' collective.

Armed with all this information and the new directives of the president of the Judiciary, Pedro reconvenes with his team to proceed with the plans.

STORY: WE HAVE A PLAN

Pedro meets with his team, urging **Jeronimo** and **Claudia** to focus entirely on the project in the coming weeks. The goal is to formulate a strategy that addresses the challenges ahead.

Considering the established goals, **the following programs have been defined:**

> **ICT infrastructure program.** This program aims to adapt the capabilities of both data processing centers (ensuring adequate processing, storage, communications, cooling, etc.) and of judicial bodies (to equip them with secure connections, personal computers, and tools necessary for effective document and data management).

> **Change management program** focuses on training the staff of the Administration of Justice and on raising awareness among different

professional and civic organizations regarding this new operational approach. The operation manual for judicial offices must also be established within this new paradigm, outlining the steps to be taken and detailing the required training and support activities. It is essential for the manuals to include protocols to manage system failures or exceptional situations that may disrupt normal operations.

❯ **Service development program.** A program must be put in place to coordinate the actions necessary for the service launch. This program extends beyond mere development, encompassing the comprehensive steps needed for the launch and operation of the service. This includes not only the development of the service itself, but also the incident support strategy, collection of service usage metrics, operation and management of the service, as well as its evolution and adaptation.

Pedro's team is **finalizing each of these programs by specifying the associated activities, projects, or subprograms.** Additionally, Pedro is considering **the regulations that will support these initiatives**, which are currently in the processing phase. Each of these programs incorporates specific considerations related to risk management, cybersecurity, financial aspects, and interoperability, among other factors, which collectively form the strategic plans.

Once the Roadmap and the details of the programs and other plans that comprise the Strategy have been finalized and presented to Pedro, **he concludes: "We have a plan. Let's get to work, everyone."**

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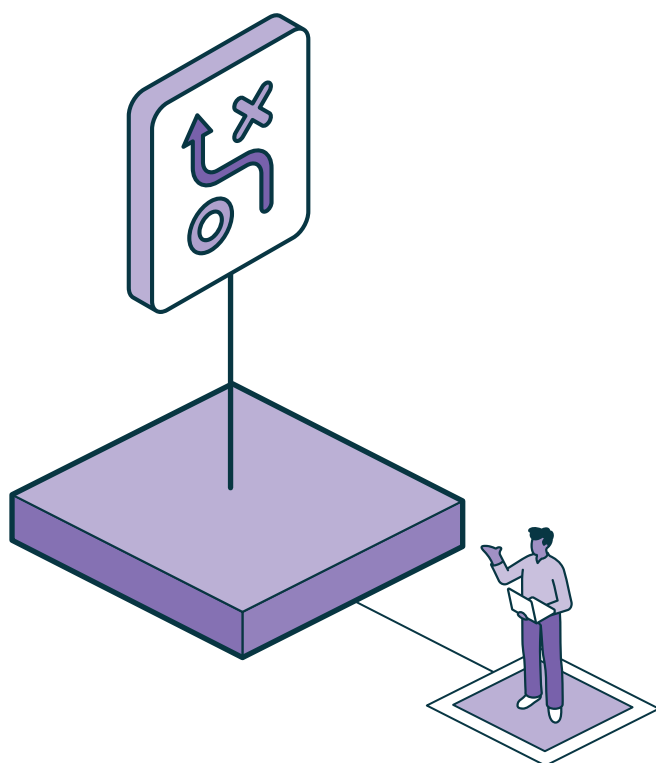
Justice Digital Transformation Strategy

The Justice Digital Transformation Strategy is the document that outlines the action plan to digitally transform a country›s judicial system within a specified timeframe.

The **scope of this document can vary based on its intended audience.** It may address only the Administration of Justice or expand to other related public actors. The first option would be to create a **Strategy dedicated solely to the digital transformation of the Administration of Justice.** In this scenario, each administration that intervenes in the justice ecosystem can develop its own strategy. It is crucial for all strategies to adhere to common guidelines and maintain coherence to ensure that all stakeholders are aligned in their actions. The primary responsibility for developing the Strategy would rest with the governing body overseeing the digital transformation of justice. However, it is advisable that all initiatives affecting third parties related to justice be coordinated with their respective governing bodies of digital transformation. In this regard, the Governance Body for the Digital Transformation of Justice will play a key role in ensuring that different transformation initiatives are aligned with each other.

Secondly, the **Justice Digital Transformation Strategy as a whole could be developed, with objectives and initiatives aimed at digitizing both the Administration of Justice and other entities within the judicial sector,** such as the Public Prosecutor›s Office. In this case, the Strategy would be developed through a consensus among all governing bodies of digital transformation affected by this document. One approach would be for governing bodies to use the **governance body for the digital transformation of justice** as a forum for this collaborative effort.

Regarding the **scope of the Strategy in terms of the issues it covers**, several scenarios could arise. First, the **Strategy could specifically focus on modernizing justice through technology.** The second option could be to implement a **Global Strategy for Improving the Administration of Justice, encompassing both technological and non-technological means necessary to achieve the goals.** In this second case, it is essential for different departments to align initiatives that are interdependent. For example, if a technology initiative aims to replace physical paper notifications with electronic ones, technological actions will need to align with those of the Human resources department to ensure that technological changes are coordinated with adjustments in the roles of public employees responsible for distributing notifications. In this regard, actions of the Global strategy must be thoroughly examined to ensure that the entire organization is aligned with digital transformation comprehensively.

THE CORE COMPONENTS OF THE JUSTICE DIGITAL TRANSFORMATION STRATEGY INCLUDE **THE DIGITAL AGENDA, WHICH CONTAINS THE DIGITAL TRANSFORMATION OBJECTIVES,** AND **A ROADMAP DETAILING THE STRATEGIC PROGRAMS, AND, WITHIN THESE, SPECIFIC INITIATIVES TO BE IMPLEMENTED** IN THE DESIGNATED TIMELINE.[10] THE THIRD COMPONENT PERTAINS TO THE **STRATEGIC PLANS TO DEVELOP** THE INITIATIVES OUTLINED IN THE JUSTICE DIGITAL TRANSFORMATION STRATEGY.

Overall, regarding all activities in this Guide, **the individual in charge must assess whether they have the required resources and capabilities to execute said tasks.** If any deficiencies are identified, mechanisms must be put in place to secure said resources. Attempting an activity without the necessary personnel, data, skills, or other resources risks generating errors or inaccuracies, which could adversely affect the development of subsequent activities reliant on the previous results. These inaccuracies can become a source of problems as the digital transformation process advances. From an efficiency perspective, they can lead to higher costs in terms of time, resources, and missed opportunities to address the problems. The resulting costs will likely exceed the expense of providing the necessary resources to carry out the activity correctly from the onset.

The Strategy begins with the analysis of the current state of the Administration of Justice, assuming that the Strategy is specific to this Administration. If a Justice Digital Transformation Strategy is developed with a broader impact, then the analysis must focus on the overall state of the justice system. To carry out the **AS-IS diagnostic,** it is crucial to consider all organizational, budgetary, technological, and process-related aspects of the Administration or administrations involved. This approach allows to clearly identify the initial situation and **to highlight strengths and areas for improvement that must be addressed to ensure a successful digital transformation of justice.**

To carry out this assessment, all actors within the scope of the Strategy should be analyzed through the lens of five dimensions of digital transformation. This analysis should offer an accurate and up-to-date picture of the current status of these stakeholders. To carry it out, **it is crucial to have reliable sources of information and to establish a framework for active collaboration with the responsible parties within the Administration or administrations involved in the scope of the Strategy. This will facilitate the exchange of necessary information and ensure thorough analysis.**

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10. Government Digital Transformation Guide /Page 36/IDB.

THE JUSTICE DIGITAL TRANSFORMATION GUIDE PLAYS A VITAL ROLE DURING THIS DIAGNOSTIC PHASE. **ONCE THE AS-IS ANALYSIS HAS BEEN COMPLETED, A COMPARISON IS MADE BETWEEN THE CURRENT STATE OF THE ADMINISTRATION OF JUSTICE AND OF OTHER PUBLIC ENTITIES IF THE STRATEGY HAS A BROADER SCOPE, AND THE GUIDE CONTAINING THE ACTIONS NEEDED TO ACHIEVE IDEAL DIGITAL JUSTICE (TO-BE).** THIS MAPPING PROCESS HELPS TO IDENTIFY THE ACTIONS THAT NEED TO BE TAKEN AND HAVE NOT BEEN IMPLEMENTED YET.

After analyzing the state of affairs of the Administration of Justice and any other administrations within the scope the Strategy and after mapping this against the Justice Digital Transformation Guide, it is recommended to conduct a SWOT analysis **(Strengths, Weaknesses, Opportunities, and Threats). This analysis** provides a clear and detailed overview of the current state of these institutions, allowing for more effective strategic decision making.

To understand this analysis, it is necessary to define each of the terms used:
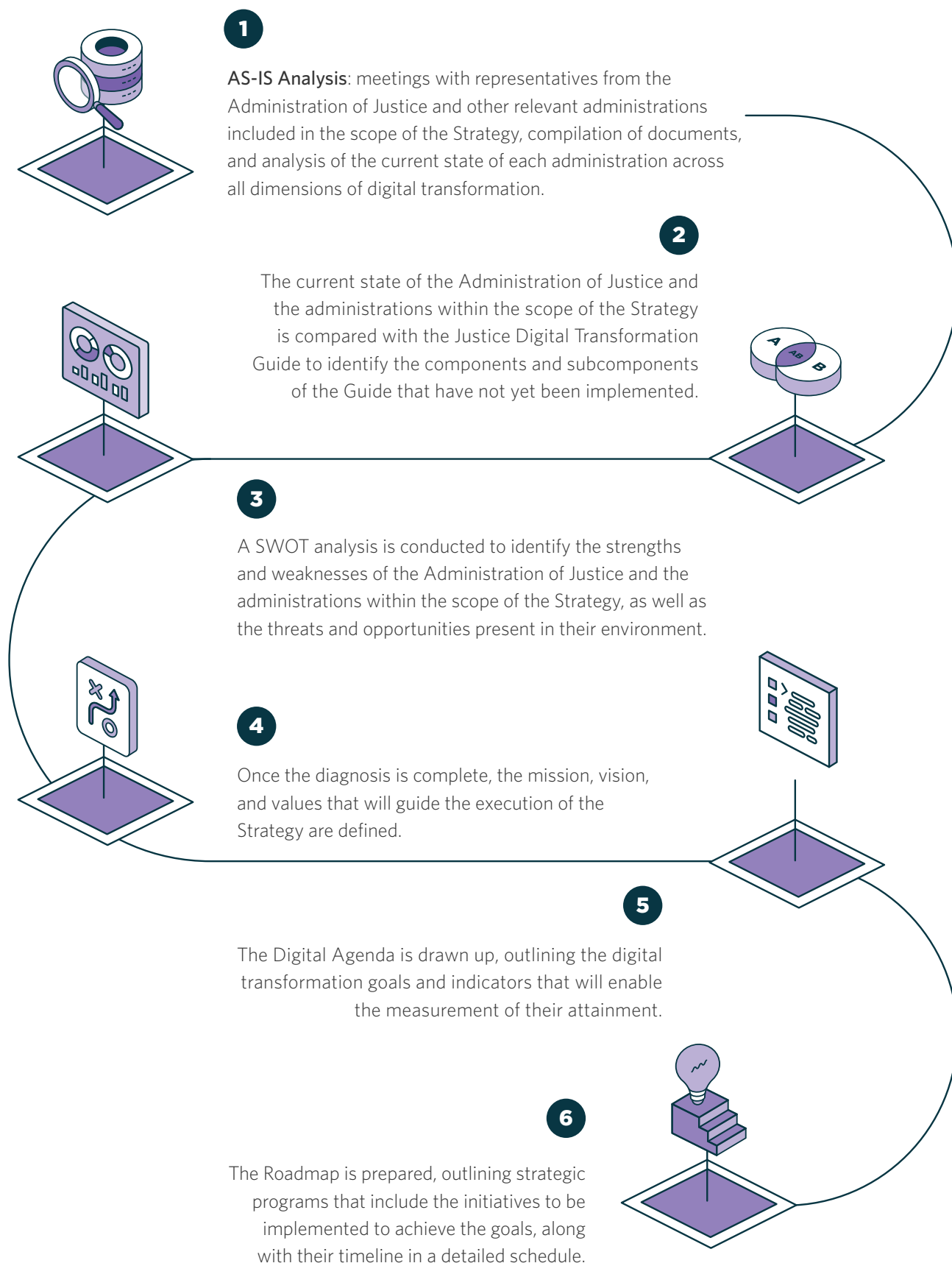
› **Strengths:** internal resources and favorable conditions in the Administration of Justice or administrations within the scope of the Strategy in the process of digital transformation of justice.

› **Weaknesses:** aspects that limit the development capacity of the Administration of Justice or other entities involved in the Strategy, due to their internal characteristics.

› **Opportunities:** factors external to the Administration of Justice or administrations within the scope of the Strategy that support and enhance digital transformation.

› **Threats:** external factors that could hinder the implementation of the Justice Digital Transformation Strategy or jeopardize the viability of the process.

Once the SWOT analysis has been completed, it will offer a clear overview of the strengths to be further leveraged in the Strategy and the weaknesses to be addressed through the initiatives outlined in the document.

The next step will be to define the **mission, vision, and values** of the Strategy:

› **The mission refers to the primary goal of the Plan.** For example, it aims to ensure citizens' right to effective judicial protection by providing efficient and accessible justice 24/7 through the use of technology.

› **The vision represents the desired end state of the Plan, reflecting the type of justice that it aspires to achieve,** for example, inclusive, transparent, and accessible justice through digital justice.

› **The values or principles guiding the development and implementation of digital transformation,** such as reducing public spending, reusing resources, and emphasizing a citizen-centered approach.

Once the described diagnostic actions have been completed and the mission, vision, and values of the Strategy have been defined, the next step is to draw up the Digital agenda and the Roadmap. These will establish digital transformation objectives that align with the needs of the Administration of Justice and other public actors involved in the Strategy, along with initiatives designed to achieve those objectives.

1

AS-IS Analysis: meetings with representatives from the Administration of Justice and other relevant administrations included in the scope of the Strategy, compilation of documents, and analysis of the current state of each administration across all dimensions of digital transformation.

2

The current state of the Administration of Justice and the administrations within the scope of the Strategy is compared with the Justice Digital Transformation Guide to identify the components and subcomponents of the Guide that have not yet been implemented.

3

A SWOT analysis is conducted to identify the strengths and weaknesses of the Administration of Justice and the administrations within the scope of the Strategy, as well as the threats and opportunities present in their environment.

4

Once the diagnosis is complete, the mission, vision, and values that will guide the execution of the Strategy are defined.

5

The Digital Agenda is drawn up, outlining the digital transformation goals and indicators that will enable the measurement of their attainment.

6

The Roadmap is prepared, outlining strategic programs that include the initiatives to be implemented to achieve the goals, along with their timeline in a detailed schedule.

1.1.1 DIGITAL AGENDA

The Digital agenda **outlines the strategic objectives for the digital transformation process, explains the rationale for their inclusion, and specifies the indicators that will measure their success.**[11]

Digital transformation objectives outlined in the Digital agenda must align with the country's Digital Transformation Strategy[12] or with that of the Administration of Justice, as well as with other administrations within the scope of the Strategy, especially if a prior Strategy has already been established and will be succeeded by a new one. To accomplish this alignment, it is essential to analyze the objectives or strategic axes defined in the country's Digital Transformation Strategy or that of the Administration of Justice, as well as those of other Administrations within the Strategy's scope. Based on these assessments, the objectives for the Digital Agenda of the new Justice Digital Transformation Strategy can be established.

This methodology ensures that the Digital agenda sets realistic objectives, grounded in the feasibility, as they are based on the results of previous strategic plans and projects. These results are crucial for shaping the objectives for the new time horizon, ensuring continuity of the work accomplished so far.[13]

> WHEN DEFINING OBJECTIVES, IT IS CRUCIAL TO DISTINGUISH BETWEEN THE MEANS AND THE END. FOR INSTANCE, IMPLEMENTING A JUDICIAL SERVICES PORTAL IS NOT THE GOAL, BUT RATHER A MEANS TO AN END. THE GOAL WOULD BE TO ENHANCE THE ACCESSIBILITY OF JUSTICE FOR BOTH PROFESSIONALS AND CITIZENS, ENSURING EQUAL, 24/7 INTERACTION THROUGH DIGITAL PLATFORMS.

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11. Government Digital Transformation Guide /Page 36/IDB.
12. Government Digital Transformation Guide /Page 38/IDB.
13. Guía de Transformación Digital del Gobierno/Página 38/BID.

In addition, **the objectives are designed according to the *SMART*[14] concept, meaning that they must be Specific, Measurable, Achievable, Relevant, and Time-bound:**

❯ *Specific:* clearly defined and aligned with the goal at hand.

❯ *Measurable:* quantifiable, allowing for an objective assessment of progress and compliance.

❯ *Achievable:* attainable and realistic.

❯ *Relevant:* focused on results and aligned with the goals, that is, relevant to what is pursued as the goal.

❯ *Time-bound:* set within a specific timeframe.

To assess the attainment of the objectives, it is necessary to define indicators and parameters that quantitatively measure their level of execution, for example, in percentages or numerical scales. Such an approach enables easy monitoring of the objectives' progress over time. Based on an earlier example, one indicator could be the number of online procedures enabled for professionals and citizens within twelve months, or the annual number of procedures completed online through the judicial services portal.

Proper monitoring of the objectives **should be conducted using Key Performance Indicators (KPIs), which help track progress toward the objectives and evaluate the levels of achievement.** Updating these indicators requires establishing the processes and procedures necessary to identify, collect, and process data. Setting targets and indicators is a complex task that may require multiple hierarchical levels.

Additionally, **benefits associated with each objective should not be overlooked at this stage,** as they help to clearly outline the improvements in the Administration of Justice once the objectives are fully or partially attained.

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14.   Government Digital Transformation Guide /Page 40/IDB.

EXAMPLE OF THE DIGITAL AGENDA PREPARATION:

Fernando
CIO of the ICT Directorate of the Judicial Branch of Country A.

Fernando, the CIO of the ICT Directorate in the Judicial Branch of Country A, is developing the Digital Transformation Strategy for the Administration. After assessing the institution's current situation and outlining the mission, vision, and values of the Strategy, the next step is to create the Digital agenda.

To design the Digital agenda, Fernando **uses the previously approved Strategy as a starting point to define the objectives for the digital transformation of the justice system. He analyzes its strategic axes to set the digital transformation goals of the new Digital Agenda.**

During the analysis of the previous Strategy, it was identified that one of its pillars, which is now outdated, is strengthening the institutional structure of the Judicial Branch. To address this pillar, one of **Fernando's objectives is to establish a culture of digital justice in the Administration of Justice,** as it will help reinforce the institutional structure of the Judicial Branch.

Once the objective has been determined, **indicators are designed to track progress.** For this goal, one example of an indicator could be **the annual number of training sessions delivered within a 12-month period.**

Once the digital transformation objectives have been defined, Fernando will consider how to address them and will design strategic programs that encompass various initiatives. After developing these programs, he will create a

diagram illustrating how each strategic program relates to the objectives of the Digital Agenda:

STRATEGIC PROGRAMS

1 Establish a governing body for the digital transformation of justice and provide the necessary resources

2 Develop a regulatory framework for ICT in the justice system

3 Implement a comprehensive change management strategy in the Administration of Justice

4 Provide mobile workstations for users of the Administration of Justice

5 Acquire and implement the necessary technological infrastructure

6 Fully implement the Electronic Judicial File

	Objective 1 Strengthen leadership in the digital transformation process	Objective 2 Offer legal certainty in the use of ICT of justice	Objective 3 Implement a culture of digital justice in the Administration of Justice	Objective 4 Encourage users of the Administration of Justice to adopt digital workflows l	Objective 5 Minimize judicial processing times by implementing digital file management
1	X				
2		X			
3	X				
4				X	X
5				X	X
6				X	X

INTERNATIONAL GUIDELINES FOR THE DEVELOPMENT OF THE DIGITAL AGENDA:

European Commission: 2023 Management Plan of the Directorate-General of Justice.[15] The mission of this Directorate-General is to protect and strengthen the rights of individuals residing in the European Union, whether they are citizens, employers, or workers.

United States: Digital Government Strategy.[16] Developed by the State Department, the Digital Government Strategy seeks to create a 21-century Digital Government that provides improved digital services to the American public.

Spain: the National Artificial Intelligence (AI) Strategy[17] aims to establish a framework that promotes the development of inclusive, sustainable, and citizen-centered AI.

United Nations: E-Justice Digital Transformation to Close the Justice Gap.[18] This paper explores the opportunities and risks associated with e-justice from a development perspective, offering specific guidelines for responsible digitalization in the legal sector while at the same time highlighting the emerging trends in judicial digitalization in recent years.

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15. 2023 Management Plan, European Commission.

16. Digital Government Strategy/US Department of State.

17. National Strategy for Artificial Intelligence/Ministry for Digital Transformation and Public Function.

18. E-Justice Digital transformation to close the justice gap/ONU.

1.1.2 ROADMAP

After defining the Digital agenda, the Roadmap is drawn up, **outlining different strategic programs with specific initiatives designed to achieve the objectives previously set in the Digital agenda. These programs are organized against a timeline that specifies the execution schedule for each initiative.**[19]

The Roadmap defines the actions required to achieve each goal. It is important **to remember that these actions can contribute to the achievement of multiple objectives. When defining them, maintaining a holistic view of their impact on the overall digital transformation of justice is essential.** Therefore, strategic programs can target one, several, or all of the objectives set out in the Digital agenda. When a program addresses all of them, it is classified as a cross-cutting strategic program.

With regard to the definition of programs and initiatives, **they should be specific enough to clearly outline the required actions, while also leaving certain flexibility in the methodology** employed for their implementation. For example, one initiative could involve establishing a Security Operations Centre (SOC) within the Administration of Justice. This initiative not only clearly defines the required actions but also allows certain flexibility in how they can be accomplished, accommodating an array of methods and approaches without prescribing a specific formula.

Another relevant aspect is that **actions are organized in the schedule logically, considering technological, regulatory, and change management perspectives.** For example, from a technological perspective, in the timeline it would not be logical to prioritize the implementation of an AI-powered chatbot before setting up a case management system. It is essential to first lay the foundations for digital transformation with electronic judicial processing before moving to more advanced technologies.

It is also important to set **realistic timelines for the actions outlined in the schedule. These timelines must be tailored to the technical, organizational, and budgetary capacities** of the Administration of Justice and other administrations included in the scope of the Strategy. **The deadlines specified in the Roadmap should align with other development plans within the Strategy.** For instance, if the Digital Transformation Strategy for Justice establishes a timeframe for implementing the Interoperability Hub, the Interoperability plan should align with this timeframe to ensure consistency between the two documents.

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19.   Government Digital Transformation Guide/Page 36/IDB.

In the timeline, it is advisable to prioritize the implementation of the technological infrastructure first. Subsequently, the remaining technological initiatives that rely on this infrastructure for operation must be scheduled. This is because infrastructure provides the essential communications, storage, computing, and interoperability needed for systems and applications to function effectively.

With regard to **regulatory and change management initiatives, it is also advisable to implement them in the early stages of the timeline, prior to the roll-out of technological tools and solutions.** The aim is to ensure that users are properly trained in their use and that the necessary legal framework is in place, providing the required certainty and guarantees for their secure operation once they are fully implemented. For example, if a courtroom recording system is set up for virtual hearings, but court employees are not trained in its use and there are no regulations governing virtual hearings, even if the system is already in place, users will be unable to operate the system. Additionally, without legal guidelines, there is a risk that the validity of hearings held through this medium could be challenged.

INTERNATIONAL REFERENCES FOR THE DEVELOPMENT OF THE ROADMAP:

United States: Department of Justice Digital Strategy.[20] This Strategy was developed in accordance with a White House memorandum and the Digital Government Strategy, referred to in the previous point.

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20. DoJ Digital Strategy/ US Department of Justice.

EXAMPLE OF THE ROADMAP DEVELOPMENT:

Fernando

CIO of the ICT Directorate of the Judicial Branch of Country A.

Once Fernando has drawn up the Digital agenda, he prepares to design the Roadmap. To do that, he will determine the initiatives to be included within each strategic program. Thus, **a document can be prepared outlining the program, its expected impact, and the initiatives to be included:**

PROGRAM 3
Comprehensive change management in the Administration of Justice

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Explanation

Raising awareness, providing training, and supporting public employees of the Judicial Branch of Country A in the use of ICT in the justice system and in key aspects of digital transformation through training sessions, effective communication, and user assistance.

Expected impact

1. Knowledge and understanding of digital justice among public employees of the Judicial Branch.

2. Reducing resistance to change among public employees of the Judicial Branch.

Initiatives included and their anticipated timelines

INITIATIVE	0 to 6 months	7 to 12 months	13 to 18 months
Initiative 1 Provide ICT training to Judicial School instructors, focusing on digital justice and fostering a digital culture.		12 months	
Initiative 2 Establish weekly virtual and in-person training sessions for court personnel.	6 months		
Initiative 3 Create a network of digital transformation facilitators to mentor and support public employees in the use of ICTs.		12 months	

Fernando then analyzes the implementation sequence of different initiatives outlined in the Strategy, which will be reflected in a detailed timeline. In this

step, it is important to consider the principle of gradual implementation and to maintain technological coherence when planning the timeline for each initiative:

INITIATIVES

	2S 23	1S 24	2S 24	1S 25	2S 25
Initiative 1 Train the instructors of the Judicial School in ICT, focusing on digital justice and promoting digital culture.	███	███			
Initiative 2 Schedule weekly virtual and in-person training sessions for court staff.			███		
Initiative 3 Establish a network of digital transformation facilitators to mentor and support public employees in the use of ICT.				███	███

1.1.3 TECHNOLOGICAL STRATEGY

To ensure the digital transformation of the Administration of Justice with proper safeguards and to implement the Justice Digital Transformation Strategy, it is necessary to confirm that **the responsible IT unit is adequately equipped and prepared** to meet the challenge. The adaptations to be undertaken must be based on monitoring a **technological strategy**, which, if not already in place, must be developed.

Technology not only supports day-to-day operations, but also drives innovation, improves efficiency and creates new opportunities in organizational operational processes, namely in the way court officials perform their duties, as well as in the way users relate to justice. However, for technology to fulfill these functions, it must be **aligned with the global justice strategy** established in the country.

The Technological strategy should serve as a roadmap for adopting, implementing, and managing technologies in the governing body of judicial digital transformation. This roadmap should be closely **aligned with the strategic objectives and goals of the justice system,** ensuring that every technology investment, every IT project, and initiative contributes, either directly or indirectly, to achieving the overall objectives defined.

In this context, it is particularly relevant that, to achieve the desired outcomes regarding the use of ICT, institutions must strengthen their strategies, structures, processes, and essential tools, while also addressing the cultural change inherent in this process. This requires an evolution toward a flexible operating model that can continuously adapt to technology-driven transformations.

Achieving the expected benefits goes beyond mere implementation of technology. It is a holistic process that requires the coordination of various organizational areas. From strategy to execution, to internal structures and tools used, all must be aligned to support the institution's mission. At the same time, cultural change plays a vital role. Adopting a flexible and adaptable mindset is essential for navigating the evolving dynamics of technology and leveraging it as a competitive advantage. This comprehensive transformation ensures that institutions not only embrace ICT, but also use them to significantly improve their operations and responsiveness in an increasingly dynamic environment.

Strengthening ICT in a public organization is crucial for driving comprehensive improvements. This initiative not only affects operational efficiency, but also impacts vital areas such as transparency, accountability, decision making and citizen participation. The implementation of advanced technological solutions contributes to greater efficiency in administrative and operational processes. At the same time, it boosts transparency by facilitating access to key information and traceability of government actions. Accountability is strengthened by having accurate and auditable digital records, which allow for

more effective oversight. In turn, strengthening ICT also positively affects the management of public resources. Well-implemented technology can optimize public spending, aligning it more efficiently with the priorities and needs of the population. In addition, the use of ICT favors informed decision making, based on up-to-date data and real-time analysis. This results in better and more strategic decisions. Citizen participation is enhanced by offering digital channels to involve society in public processes and policies.

Improved functioning of ICT in the public sector transcends technology and becomes a catalyst for a more efficient, transparent, and participatory administration, reaffirming its positive impact on the well-being and progress of society overall. This dynamic highlights the need **to focus on establishing efficient processes, mechanisms, and methodologies to determine which ICT resources and initiatives should be implemented,** as well as to define how and who should participate in these decisions. As a result, the **use of methodologies and frameworks, such as COBIT,**[21] **TOGAF,**[22] **ITIL,**[23] **or PMBOK,**[24] which are some of the best known among many others that support corporate ICT Governance emerges as a key factor in the success of organizations in their digitalization strategy and is a crucial factor to be taken into account by individuals who define these strategies.[25] ICT governance in an organization, supported by these approaches, emerges as an essential element for the success in the digitalization strategy of organizations. These **methodologies provide clear guidelines and robust structures that guide decision making** around technology initiatives. By leveraging the best practices and principles set out in these frameworks, organizations can optimize their ICT investments, mitigate risks, and improve the alignment of their efforts with the company's overall goals.

Choosing the IT strategy and planning its strategic implementation play a key role in the smooth integration of IT systems and organizational processes. This efficient approach also contributes to the timely delivery of IT projects and their budgetary compliance, ultimately strengthening the strategic alignment of ICT with business objectives. A well-implemented ICT strategy guides the direction of technology investments, considering not only the current needs, but also long-term prospects. Meticulous planning of strategic implementation ensures that IT systems are harmoniously integrated with the organization's processes, generating synergies, and optimizing operational efficiency. One of

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21.   COBIT | Control Objectives for Information Technologies | ISACA

22.   TOGAF | www.opengroup.org

23.   What is ITIL®? | Axelos

24.   PMBOK Guide | Project Management Institute (pmi.org)

25.   Joshi, A., Benitez, J., Huygh, T., Ruiz, L., and De Haes, S. (2022). Impact of IT governance process capability on business performance: Theory and empirical evidence. Decision Support Systems, 153, [113668]. https://doi.org/10.1016/j.dss.2021.113668

the most significant achievements of this approach is the strategic alignment of ICT with the general objectives of the organization. By ensuring that technology decisions and their implementation reflect the goals of the organization, an environment is fostered in which investment in ICT is perceived as an opportunity to improve public service by both public employees and society as a whole.

Several studies have empirically confirmed that ICT governance contributes to improving organizational performance,[26] while also pointing out that poorly implemented ICT governance can have counterproductive effects.[27] Another study published in 2022, conducted in 881 organizations from 19 different fields,[28] concludes that organizations capable of identifying, designing, implementing an ICT governance model that applies ICT decision making, planning, modernization, and service delivery systems, improve the performance of technology use and, ultimately, business performance as well. The study highlights that the implementation of clear and well-defined ICT decision-making processes involves and engages senior management of organizations in technology decisions, such as how much to invest or where to allocate IT investments. These decisions are important for improving the attainment of technological objectives and, therefore, a governance system based on sound practices improves IT performance.

On the other hand, it has been empirically demonstrated that improved ICT performance has a positive and direct impact on business results. IT agility is the basis to enable fast and flexible processes and agile responses across organizations, which will help them optimize process costs and service portfolio. Optimal IT performance allows an organization to anticipate social trends, improve service and achieve high levels of customer and citizen interaction and satisfaction.

These results are similar to those obtained in other studies conducted in public sector organizations in Brazil, which conclude that IT performance is positively correlated with the performance of the organization as a whole. Notably, using widely recognized ICT governance frameworks has a significant

26. Lunardi, G. L., Becker, J. L., Maçada, A. C. G., & Dolci, P. C. (2014). The impact of adopting IT governance on financial performance: An empirical analysis among Brazilian firms. International Journal of Accounting Information Systems, https://ideas.repec.org/a/eee/ijoais/v15y2014i1p66-81.html

27. Pang, M.-S. (2014). IT governance and business value in the public sector organizations — The role of elected representatives in IT governance and its impact on IT value in U.S. state governments. Decision Support Systems, 59 https://www.sciencedirect.com/science/article/abs/pii/S0167923613003096

28. Lunardi, G. L., Becker, J. L., Maçada, A. C. G., & Dolci, P. C. (2014). The impact of adopting IT governance on financial performance: An empirical analysis among Brazilian firms. International Journal of Accounting Information Systems, https://ideas.repec.org/a/eee/ijoais/v15y2014i1p66-81.html

29. Heindrickson, G. & Santos Jr, C. (2014). Information technology governance in public organizations: How perceived effectiveness relates to three classical mechanisms. Journal of Information Systems and Technology Management. https://www.scielo.br/j/jistm/a/465SmSNq5Np6XTK77GsSqxb/?lang=en

positive impact on ICT governance efficiency[29] and on IT performance. In addition, the relationship mechanisms between IT and other organizational units, in the context of IT governance, determine IT performance. There is therefore widespread evidence indicating a positive correlation between the quality of governance, IT management and the performance of organizations.[30]

In the public sector, the focus on the proper implementation of IT frameworks has become more pronounced as public administrations have turned into highly technology-demanding organizations and generators of digital services. They have shifted toward transformation processes, where issues related to performance, transparency, service quality, and efficiency have become central priorities.[31]

This explains why numerous frameworks for IT governance and management have emerged, driven by both private initiatives and by standardization organizations, such as ISO.[32] This Guide mentions some of them by way of illustration, such as COBIT (Control Objectives for Information and Related Technology), PMBOK (Guide to the Project Management Body of Knowledge), TOGAF (Open Group Architecture Framework), and ITIL (Information Technology Infrastructure Library), which have established themselves as the most important references in the industry. These frameworks aim to ensure effective control and optimization of technological resources, guarantee the provision of IT services aligned with business requirements, and allow senior management to make strategic ICT-related decisions.

The effectiveness of ICT governance, as proposed by COBIT, is manifested in its focus on monitoring and measuring decisions. Monitoring processes enable those responsible for both ICT and the organization to assess and ensure the consistency of ICT decisions with internal and external control requirements. This, in turn, contributes to reducing inefficiencies in IT systems and preventing technological failures

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30. Dias, C. M. V. e M., Silva, J. F. & Dias, A. C. A. e M. (2021). The impact of IT governance and management on the performance of Brazilian public-sector organizations. https://periodicos.uninove.br/riae/article/view/17117/9166

31. Mitra, Sabyasachi & Sambamurthy, V. & Westerman, George. (2011). Measuring IT Performance and Communicating Value. MIS Quarterly Executive. 10. https://aisel.aisnet.org/misqe/vol10/iss1/6/

32. Algunas de las más relevantes podrían ser:

    ISO/IEC/IEEE 24765:2017 - Systems and software engineering — Vocabulary

    ISO/IEC 33001:2015 - Information technology — Process assessment — Concepts and terminology

    ISO - ISO 9001 and related standards — Quality management

    ISO - ISO/IEC 20000 IT service management – A practical guide

    ISO - ISO/IEC 27000 family — Information security management

    ISO - ISO 14001 and related standards — Environmental management

    ISO/IEC 38500:2015 - Information technology — Governance of IT for the organization

    ISO 21500:2021 - Project, programme and portfolio management — Context and concepts

that can impact the organization's activities. By offering a comprehensive framework for ICT governance, COBIT promotes the implementation of metrics that monitor asset performance and ICT-related activities. This adoption of metrics helps avoid investments in inefficient technology and improve the relationship between technology and business operations. It also enhances the strategic impact of ICT on the organization's core functions. In addition, COBIT establishes a set of best practices and controls that enable IT leaders and organizational management to assess and ensure that IT decisions meet internal and external control requirements. This reduces the inefficiencies and risks associated with IT implementation. COBIT is an integrative framework that facilitates the integration of any other reasonable framework or standard. It is characterized by its non-imperative and non-procedural approach. Rather than imposing, its nature is recommendatory: it suggests rather than prescribes. Beyond establishing rigid rules, COBIT outlines desirable results and provides methods and metrics to achieve them, without imposing detailed procedures, although it does propose a process reference model.

This approach allows organizations to choose the path that best suits their specific needs and contexts, building on previous work and efforts. COBIT, in its approach to IT governance and management, provides a structure that helps to clearly separate responsibilities and roles between the strategic level of governance and the operational level of management. Clear boundaries and responsibilities are defined between the governance and management bodies. This prevents excessive concentration of power and lack of oversight, while allowing each level to focus on its specific responsibilities. This separation of responsibilities and roles between the strategic level of governance and the operational level of management is crucial to ensure effective decision making, proper oversight, and efficient execution of IT activities.

Decision making in organizations often becomes a complex process, and, in many cases, can be inaccurate due to the use of inconsistent, untimely, fragmented, and unreliable information. Comprehensively managing information on the behavior and trends of projects, programs, and portfolios, incorporating data that covers aspects such as scope, time, cost, risks, pending problems, and performance, simplifies the decision-making process at all levels of management. This approach not only promotes more informed and accurate decision making, but also strengthens governance within the organization.

This governance is based on the capacities and competencies of the different areas involved, in line with the best practices defined in the guide "Guide to the Project Management Body of Knowledge" (PMBOK). This guide establishes key principles for effective project management and decision making based on reliable and timely data. Projects and their management take place in a broader context than that of the project itself. Understanding this context is essential to ensure that projects and the decisions made throughout their life cycle are aligned with the organization's objectives. In addition,

it ensures that projects are managed in accordance with the criteria, processes and methodologies established internally in the organization. This alignment with the broader environment translates into greater coherence between the project's initiatives and the overall vision of the organization, thus favoring the attainment of results and the efficient use of public resources. Project management is a process that includes initiating a new project, planning it, commissioning and executing it, monitoring it, and measuring progress and performance. It involves identifying project requirements, establishing objectives, managing constraints and limitations; all this, taking into account the expectations of the interested parties. The PMBOK guide sets the standard for project management and documents the essential information for initiating, planning, executing, monitoring, and closing a project. This guide identifies project management processes that have been recognized as best practices in most projects and cases.

The continuous growth in IT investments in various organizations has generated a scenario in which management of IT infrastructures and services has become more complex. Implementing a service management framework such as ITIL becomes a valuable resource in this situation. The central purpose of ITIL is to disseminate the best practices in Information Technology Service Management. This methodology has been designed with the purpose of reducing the costs associated with the provision and support of IT services, while ensuring that security requirements and information demands are effectively addressed. In addition, ITIL is geared toward maintaining and constantly improving reliability, consistency, and quality levels in the delivery of technology services. ITIL provides a structured and well-defined approach to IT service management. As IT investments grow, the need to effectively manage these investments and optimize their impact becomes critical. ITIL offers processes and best practices to address this complexity, helping organizations more efficiently and effectively manage their IT infrastructures and services. With ITIL, organizations can streamline the management of their IT services, establish clear processes for their management, and define specific roles and responsibilities.

An enterprise architecture is a framework that helps organizations understand and manage their business assets, including processes, people, information, applications, technology, and data. A well-designed enterprise architecture enables organizations to achieve their strategic goals, improve operational efficiency, and reduce risks. The objective of enterprise architecture is to configure a cross-cutting service that accommodates multidisciplinary profiles and provides the necessary collaboration so that the solutions adopted are developed in accordance with the needs of users and with the organizational objectives, promoting the adoption of global and homogeneous solutions throughout the organization. A well-structured enterprise architecture allows the organization to adapt more easily to both internal and external changes, which is especially important in an ever-evolving environment. TOGAF helps establish a clear structure for creating and maintaining this comprehensive vision, allowing for a deeper and more accurate understanding of how all aspects of the organization work. TOGAF fosters communication and

collaboration between work teams by establishing a common language and structure to describe the enterprise architecture. This facilitates communication between departments and teams, which can improve understanding and efficiency in implementing changes and projects.

In addition to the relevant implementation of methodologies and processes that must be carried out within the scope of the governing body to conduct the Digital transformation and technological strategies in a convenient and coordinated manner, important decisions must be made that must focus on the main lines of work of the Technological strategy itself. These aspects will include, for example, the **choice of technological architecture,** the adoption of **free or proprietary software, the internal or external development strategy,** as well as the **processes to handle exceptions to the general guidelines** of the previous points.

The selection of alternatives for each aspect can be either comprehensive or mixed. **A mixed approach, with clear selection criteria for each alternative, is often recommended,** since, given the diversity of projects and initiatives within the broad scope of the judicial system, a flexible technological environment is required to respond to various existing needs. The following is a brief analysis of some of the most relevant technological aspects that should be included in the technological strategy:

Technology architecture:
on-premises or cloud

One of the most critical decisions in the Technological strategy is the choice between on-premises or cloud architecture. Both options have their advantages and disadvantages, and the right choice will depend on the specific needs of the organization.

› **On-premises:** This option means that servers, storage, and other infrastructure components are kept within the organization's premises. It is ideal for organizations that need full control over their data and systems, especially in highly regulated industries. However, maintenance and upgrade costs can be elevated, in addition to requiring highly specialized personnel.

› **Cloud:** Cloud adoption allows organizations to access technology services and resources over the internet, without the need to maintain physical infrastructure. The cloud is ideal for entities seeking scalability, flexibility, and cost reduction. Nonetheless, there may be concerns regarding data security and dependency on cloud service provider. The constant and rapid evolution of this technological architecture model makes it necessary to review whether the premises that traditionally make this alternative unviable are still in force (lower costs, better security, new adapted regulations, trends of large manufacturers, among others).

Free or proprietary software

Another important decision regarding the use of technology is the choice between free software and proprietary software.

› **Free software:** offers greater flexibility, since the source code is readily available and can be modified based on the needs of the organization. In addition, the initial costs tend to be lower. However, it may require a higher level of internal technical support and does not always have the same level of warranty as proprietary software.

› **Proprietary software:** usually includes technical support, updates, and security guarantees, which can reduce the risks associated with its use. However, licensing costs can be significant and software customization is limited.

The choice between open source and proprietary software should align with the organization's internal technical capabilities, customization needs, and its budget.

In-house or outsourced development

When it comes to software development and other technological solutions, organizations must decide whether to do the work in-house or outsource it.

› **In-house:** development offers greater control over the final product and allows for better alignment with the specific needs of the organization. However, it can be costly and time-consuming.

› **Outsourcing:** allows the organization to consult external experts and reduce development costs. However, it can lead to problems of control and dependence on the supplier.

The decision between the in-house or outsourced development should consider factors such as delivery times, costs, in-house capabilities, and the need for control over the final product.

These decisions are examples of issues that should be part of the Technological strategy, which will help achieve the established strategic objectives. The organization and **its teams must have clear technological guidelines and criteria** for using one approach or another.

Not all situations and projects will fit perfectly within the guidelines set out in the Technological strategy. Therefore, it is essential to establish **clear processes to handle exceptions.** These processes should allow for a **rigorous assessment of the specific needs** that justify the exception, ensuring that any deviation from the general strategy is justified and that such an exception does not compromise the strategic objectives of the organization, but rather helps to achieve them more effectively than by following the general strategic approach.

Defining and shaping the strategy is a complex and highly time-consuming task for the different teams of the Administration of Justice, but even when defined, the work cannot be considered as concluded. For a strategy to be effective, it is essential to determine the **mechanisms that allow its monitoring, control and adaptation.** This premise is valid in any type of strategy, but in the technological field, where the environment is constantly changing, monitoring and adaptation mechanisms of the strategy are essential.

Monitoring **the Technological strategy** should be an ongoing process, for example, should be done on a monthly basis, involving a regular review of the defined metrics and the identification of areas for improvement. During this monitoring process, it may be necessary to adapt from fundamental issues (such as prioritizing a project or introducing a new initiative) to more significant matters, such as revising or setting new objectives and defining or eliminating metrics.

These adaptations are necessary and may be driven by internal factors within the IT unit (problems or modifications in projects, contracts, budget, human capital, etc.) or external factors (shifts in organizational policies and priorities, regulatory modifications, new technological paradigms, or global events).

Therefore, it is also necessary to define a process for integrating adaptations to the technological strategy, including fundamental aspects such as channels for submitting change proposals, the process of accepting changes, and implementation and communication of these changes.

In addition to the aspects mentioned above, there are other critical factors to consider when developing and executing a Technological strategy: budget, IT unit staff (their number, training, change management capabilities, etc.) or strategic support (commitment and involvement of justice sector leaders) stand out as the most relevant factors.

The implementation of the Technological strategy involves significant changes in the way the IT unit operates, mainly oriented toward standardization and orderly and predictable decision making. Change management is crucial to ensure that change is implemented effectively and that employees are prepared to adapt to new ways of working. This includes clear and continuous communication regarding the purpose and benefits of changes, as well as the support needed to facilitate this transition.

Based on the above, it follows that creating and executing a Technological strategy is a complex process that requires cautious planning and rigorous implementation. Following a structured approach that includes aligning with the global judicial strategy, adopting appropriate methodological frameworks, defining objectives, projects, and initiatives to be implemented, and conducting continuous monitoring and adaptation, judicial systems across different countries ensure that their investment in technology not only supports their current operations, but also drives their future growth and success.

1.1.4 INSTITUTIONAL STRENGTHENING PLAN

THE INSTITUTIONAL STRENGTHENING PLAN OUTLINES THE ACTIONS THAT THE ADMINISTRATION OF JUSTICE AND OTHER ADMINISTRATIONS WITHIN THE STRATEGY'S SCOPE WILL TAKE TO BUILD A ROBUST AND STABLE INSTITUTIONAL FRAMEWORK, THEREBY FACILITATING DIGITAL TRANSFORMATION OF JUSTICE. **THE MAIN GOAL OF THIS PLAN IS TO ADDRESS SPECIFIC DEFICIENCIES, WEAKNESSES, OR CHALLENGES THAT MAY BE AFFECTING THE INSTITUTION'S EFFICIENCY, EFFECTIVENESS, GOVERNANCE, OR ITS ABILITY TO ACHIEVE ITS OBJECTIVES AND GOALS.**

This Plan ensures effective governance of the digital transformation of justice, equipped with the necessary skills and competencies to lead this process sustainably over time, supported by adequate human, logistical, and expertise resources.

This Plan includes an **analysis of technical, logistical, organizational, and competence capacities available to the Administration of Justice and the administrations covered by the Strategy, necessary to execute the digital transformation process.** Through this assessment, the needs of administrative entities in charge of the digital transformation of justice will be identified, such as the governing bodies of digital transformation or the institutions responsible for training public employees in digital skills. Various organizational and reinforcement initiatives will be included in the Plan to enable these entities to lead this process effectively.

Human resources are a key focus of this Plan. If the analysis reveals that the Administration of Justice or the administrations included in the scope of the Strategy lack sufficient public employees to manage the digitalization of justice, or if the existing staff, while adequate in number, lack the required qualifications, the Plan will include the actions to address these situations. These will involve determining the required number of human resources and their necessary qualifications, as well as hiring additional staff to ensure the stable execution of the projects.

Another essential aspect to address in this Plan is **the internal positioning of the administrative entities responsible for the digitalization of justice within the organizational chart of this Administration or other administrations.** These entities should be adequately positioned within the Administration of Justice or the corresponding administration covered by the Strategy, enabling them to exercise their

functions and disseminate guidelines on this process. Therefore, if it is determined that the current positioning of administrative entities limits their ability to function effectively, the Plan will include an initiative to restructure their position within the organizational chart.

Competences **related to digital transformation of justice are another key element of this Plan.** The distribution of competences among different administrative entities will be analyzed, and, if any gaps or overlaps are identified, initiatives will be introduced to reinforce or reassign those competences.

EXAMPLE OF PREPARING THE INSTITUTIONAL STRENGTHENING PLAN:

Fernando
CIO of the ICT Directorate of the Judicial Branch of Country A.

After developing the Digital Transformation Strategy for Justice, Fernando proceeds to design the Institutional strengthening plan for the Judiciary. The goal is to establish a governing body for digital transformation with the capabilities needed to lead this process effectively.

To prepare this Plan, Fernando takes the following actions:

Initial assessment:

› **Problem identification:** a diagnostic assessment of the institution is conducted to identify areas that require reinforcement. These may include weaknesses in management, human resources, processes, finances and infrastructure, among other aspects.

› **Clear objectives:** clear and measurable objectives are defined for institutional strengthening, aligned with the institution's mission and vision.

Analysis and planning

›   Resource identification: the necessary resources, such as personnel, budget, technology, and expertise, are identified to achieve the stated objectives.

›   Strategies and actions: specific strategies and actions are designed to address the problems identified and achieve the objectives. This can include changes in policies, processes, staff training, technology acquisition, among other measures.

›   Time planning: a detailed timeline is established that sets deadlines for each action, prioritizing critical actions.

Implementation

›   Resource allocation: necessary human and financial resources are assigned to implement the planned actions.

›   Monitoring: follow-up and monitoring systems are set up to evaluate progress toward the goals' attainment, ensuring compliance with the established deadlines.

Communication and participation

›   Internal communication: it is important to keep all members of the institution informed about the Plan and its progress. This fosters participation and encourages feedback.

›   External communication: it is essential to maintain the rest of stakeholders related to the justice system informed about the institutional strengthening actions underway.

Evaluation and adjustments

› **Continuous evaluation:** regular assessments are conducted to evaluate the impact of the implemented actions in relation to the established goals.

› **Adjustments:** at times, modifications to the Plan are needed based on the results obtained and on changes in the environment.

Documentation

› **Recording all information:** documenting every stage of the process, from the initial evaluation to the final results.

› **Lessons learned:** the lessons are learned and best practices for future institutional strengthening projects are documented.

› **Final report:** a final report is prepared summarizing the achievements and results obtained during the process of institutional strengthening.

1.1.5 RISK MANAGEMENT PLAN

THE RISK MANAGEMENT PLAN OUTLINES THE METHODOLOGY THAT THE ADMINISTRATION OF JUSTICE AND OTHER ENTITIES INVOLVED IN THE STRATEGY WILL USE TO IDENTIFY, ASSESS, CONTROL, AND MANAGE RISKS THROUGHOUT THE DIGITAL TRANSFORMATION PROCESS. THE PRIMARY PURPOSE OF THIS PLAN IS TO PROACTIVELY ANTICIPATE, UNDERSTAND, AND MANAGE RISKS, MINIMIZING THEIR NEGATIVE IMPACT WHILE MAXIMIZING POTENTIAL OPPORTUNITIES.

To develop this Plan, established methodologies such as the **MAGERIT system should be used**, as they offer a framework for ICT risk analysis and management.[33]

It is important to note that **there is no such thing as zero risk** and, therefore, the likelihood of a risk fully materializing cannot be completely eliminated. However, **this Plan should adopt a proactive approach**, focusing on the early identification of risks and the implementation of all possible measures to prevent their occurrence and to mitigate any potential harm to the Administration of Justice and other administrations included in the Strategy. The methodology outlined in this Plan must specifically focus on risk management, selecting a specific strategy for each identified element, such as:
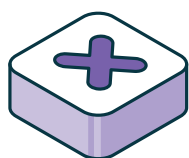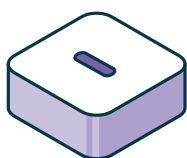
| Cancel the risk | Mitigate the risk | Transfer the risk | Accept the risk |
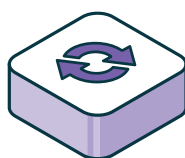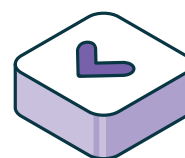
Techniques such as cost-benefit analysis can be employed. Based on said analysis, a clear contingency plan should be developed to address any risks that may materialize.

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33. MAGERIT/Portal of Electronic Administration of Spain (PAE).

In addition, it should be recognized that **risk management is an ongoing, evolving process.** As risks can change over time, the Risk management plan must remain flexible and adaptable to new threats and opportunities. Active collaboration and engagement with stakeholders are essential to the success of this Plan.

INTERNATIONAL REFERENCES TO DEVELOP THE RISK MANAGEMENT PLAN:

European Union: The European Union Agency for Cybersecurity's (ENISA) Risk Management and Risk Assessment (RM/RA) Framework[34] provides a comprehensive overview of the relevant literature related to the cyber threat landscape in Europe.

United States: The Public Safety Risk Assessment Clearinghouse (PSRAC)[35] offers evidence-based information on how to use risk assessments effectively and appropriately to build safe families and communities.

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34. Risk Management/Risk Assessment (RM/RA) Framework/European Union Agency for Cybersecurity.
35. Public Safety Risk Assessment Clearinghouse/US. Department of Justice.

EXAMPLE OF THE ELABORATION OF THE RISK MANAGEMENT PLAN:

Fernando
CIO of the ICT Directorate of the Judicial Branch of Country A.

Fernando is developing an ICT Risk Management Plan for the field of justice. The primary goal is to manage the risks inherent in strategic digital infrastructure, solutions, and services nationwide, with a particular focus on the Administration of Justice.

To prepare this Plan, Fernando takes the following actions:

› **Establish the context:** during this stage, the context in which the Administration of Justice operates is described and the limits and scope of the Risk management plan are established. This may include an overview of this Administration, its objectives, the specific projects or activities to which the Plan applies.

› **Identify risks:** during this phase, a comprehensive review of the Administration of Justice and other administrations within the scope of the Strategy is carried out. Their activities and processes are analyzed to identify potential risks. This may involve collaborating with experts and reviewing relevant documents and data. Subsequently, the identified risks are classified into different categories. For example, risks inherent in each dimension of the digital transformation of justice can be identified, with further subgroups created for specific types of risks.

> › **Assess risks:** the likelihood and potential impact of each identified risk are evaluated. This can be done using qualitative methods (based on value judgements) or quantitative methods (based on data and metrics). Dash-boards can be created to present data on the identified risks in a structured manner. This technology allows thorough risk monitoring. Additionally, risks are classified based on their severity and priority.
>
> › **Develop mitigation strategies:** at this stage, strategies are created to reduce the probability or impact of the identified risks. These may include preventative measures, contingency plans, or risk transfer strategies.
>
> › **Implementation plan:** an action plan is developed that outlines the miti-gation measures for each identified risk, including specific timelines, responsible parties, and the required resources.
>
> › **Monitoring and control:** a continuous monitoring system is established to track risks and implement mitigation measures. This may involve regu-larly reviewing key risk indicators.
>
> › **Communication and reporting:** establishing how information regarding risks and mitigation measures will be communicated to both internal and external stakeholders.
>
> › **Training and awareness:** training is provided to employees and relevant stakeholders to ensure they comprehend the Risk management plan and their roles and responsibilities within it.
>
> › **Review and continuous improvement:** periodic reviews of the Plan are conducted to assess its effectiveness. The Plan will also be adjusted as needed to address changes in the environment and newly identified risks.
>
> › **Documentation:** all aspects of the Risk management plan are recorded, including the identified risks, mitigation strategies, reports, and reviews.

1.1.6 FINANCIAL AND PUBLIC PROCUREMENT PLAN

Another fundamental aspect in any digital transformation of justice is ensuring that the governing body or bodies of digital transformation in charge of leading the process have the appropriate budget allocation. This ensures that they can carry out the digitalization of justice with organizational and functional independence, adjusting their budget based on the needs identified in the Plan. To achieve the previously established goals, it is necessary to develop a comprehensive, organized, and detailed Financial and public procurement plan, which will include the deadlines, costs and resources.

THE FINANCIAL AND PUBLIC PROCUREMENT PLAN OUTLINES THE **ACTIONS TO MANAGE THE FINANCIAL RESOURCES OF THE GOVERNING BODY OR BODIES RESPONSIBLE FOR LEADING THE DIGITAL TRANSFORMATION STRATEGY. ITS OBJECTIVE IS TO ENSURE AN EFFICIENT USE OF PUBLIC FUNDS AND TO ACHIEVE SPECIFIC GOALS AND OBJECTIVES.** THIS PLAN WILL GUARANTEE THAT PUBLIC RESOURCES ARE USED EFFECTIVELY, AND THAT POLICIES AND PROGRAMS ARE IMPLEMENTED EFFICIENTLY AND TRANSPARENTLY.

This Plan aligns with the objectives of the Digital Transformation Strategy, which aim **to rationalize the use of public resources** and promote the collective use of existing services whenever possible. There is also a commitment to the interoperability of electronic systems and the joint provision of services, emphasizing **financial efficiency.** This can be easily accomplished at a lower cost by implementing shared services. Therefore, this Plan focuses on **responsible resource management,** seeking **to redirect spending according to the defined strategy** to achieve the best possible results.

During the preparation of this Plan, the following concepts should be considered:

› **Capex:** capital expenditures made to acquire assets that provide benefits to the organization.

› **Opex:** operating expenses of the organization, including employee salaries, rental costs, office supplies, consulting fees, among others.

This Plan must encompass both the investments and the expenses required to implement the Digital Transformation Strategy. In addition, savings obtained through the benefits derived from the total or partial achievement of the objectives must be included.

This Plan should also outline a scenario that ensures the sustainability of the system by projecting the costs associated with the ongoing operation of the transformed administration. These projections can be used as input to assess decisions of the Strategy, such as choosing between a proprietary infrastructure or a public/private cloud solution.

In addition, this Plan should identify available public procurement mechanisms to make the necessary acquisitions. It should explore opportunities for public-private collaboration, involvement of public enterprises, and other alternatives to optimize and streamline contracting times and procedures.

In addition, it should be noted that **the transformation, which focuses on sharing resources and general ICT services across the entire Administration, can contribute to lowering costs.** This facilitates the implementation of the projects outlined in the Digital Transformation Strategy, ensuring relative budgetary stability. For example, if a country already has an electronic communications service for citizens, the justice sector could leverage this service without having to invest in developing a new one. This approach aligns with the vision of the Government Digital Transformation Guide, which recognizes the reuse of existing resources as one of the key functions of the digital transformation governing body.[36]

Furthermore, as previously mentioned, digital transformation of justice is a process that evolves gradually. From a financial perspective, this requires making **sustained and balanced investments over time,** aligned with the needs and priorities of each stage of the transformation process.

In this regard, digital transformation processes typically require a higher initial investment, as it is important to acquire the bulk of infrastructure and establish the entire organizational structure. However, as this process advances, expenses decrease until they reach a **stable level that allows to maintain the existing infrastructure and organizational structure,** as well as to initiate new projects.

In short, **the allocated investment must align with the principle of sustainability,** which implies that technological projects must be sustainable in the long term. This not only involves investing in the design, development, and subsequent implementation of the system, but also ensures its ongoing maintenance and regular updates to meet current technological standards. Therefore, the management of the governing body must anticipate these needs and adjust budgetary investment accordingly to ensure they are fully covered.

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36. Government Digital Transformation Guide/Page 25/IDB.

The graph below illustrates the inverse relationship between the required investment and the level of progress in the digital transformation of justice. As shown, **in the earlier stages of the process, the required investment is greater, and it gradually decreases until it reaches an optimal and stable point over time.** However, this investment may fluctuate, such as when a major project needs to be undertaken, even if the degree of technological maturity is already advanced.
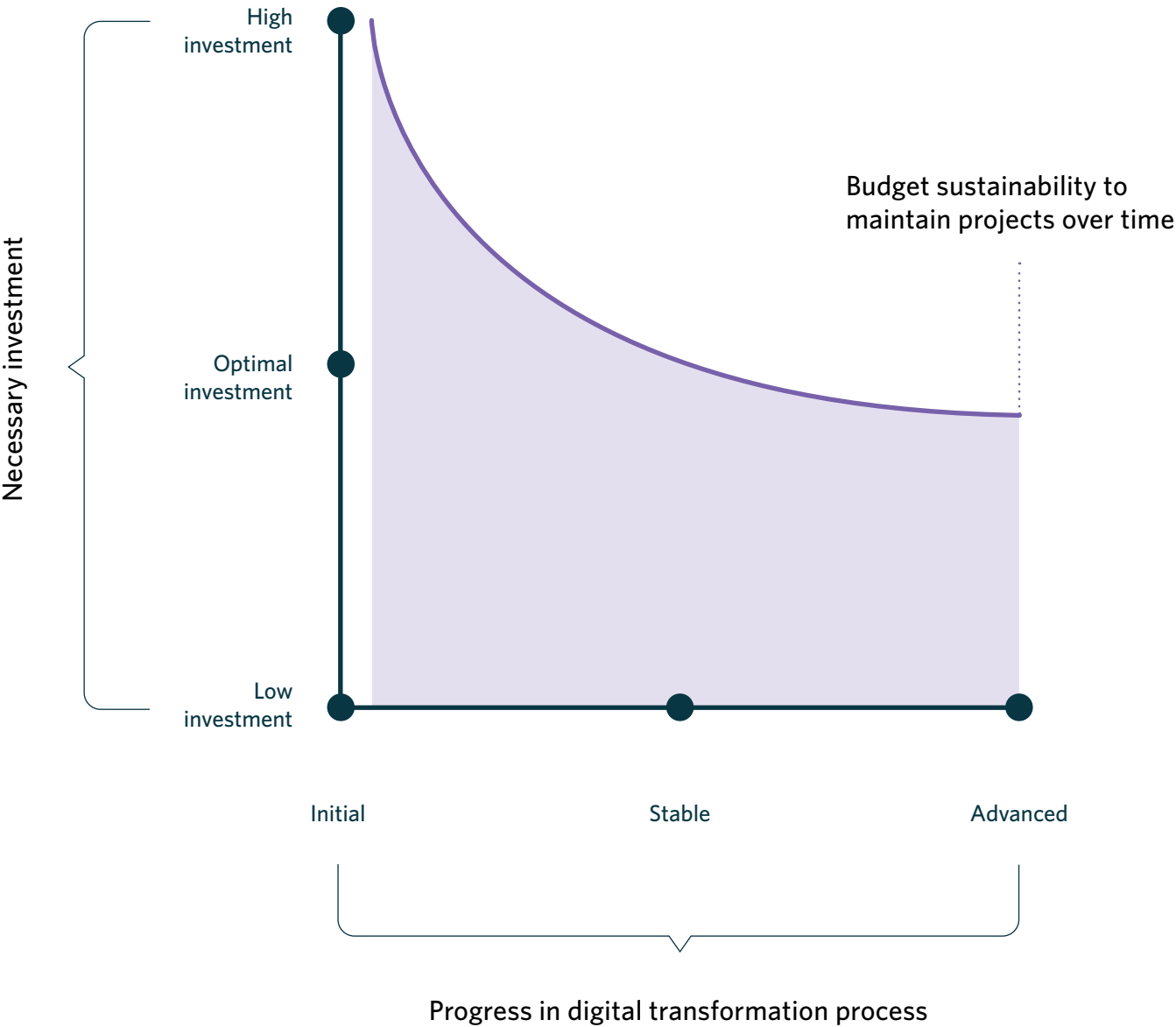
Budget sustainability to maintain projects over time

Necessary investment

High investment

Optimal investment

Low investment

Initial · Stable · Advanced

Progress in digital transformation process

INTERNATIONAL REFERENCES FOR THE PREPARATION OF THE FINANCIAL AND PUBLIC PROCUREMENT PLAN:

United States: The federal judiciary's contracting policies[37] outline the procedures for contracting, bidding, and other related activities.

European Commission: the Commission's Action Plan on Public Procurement[38] lists a series of concrete actions to assist member states improve the performance of administrations and beneficiaries during public procurement in cohesion policy investments.

EXAMPLE OF THE PREPARATION OF THE FINANCIAL AND PUBLIC PROCUREMENT PLAN:

Fernando
CIO of the ICT Directorate of the Judicial Branch of Country A.

Fernando is preparing the Financial and public procurement plan for the ICT Directorate of the Judicial Branch, as this administrative entity leads the digital transformation of the justice system.

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37. Procurement Policies/United States Courts.
38. European Commission's Action Plan on Public Procurement.

To develop the Plan, Fernando undertakes the following actions:

› **Establish objectives and strategies:** specific objectives intended to be attained by investing in ICT are determined. These financial and investment objectives must align with the programs and initiatives included in the Justice Digital Transformation Strategy.

› **Assess current needs:** a comprehensive evaluation of existing ICT systems and resources is conducted to identify areas for improvement. In addition, obsolete systems and infrastructure are identified to allocate budget for their renovation.

› **Define the budget:** the investment budget for the digital transformation of justice is established, which is to be managed by the governing body overseeing the transformation. This budget is categorized into specific areas, such as hardware, software, personnel, training, and maintenance.

› **Prioritizing investments:** investments are ranked based on their impact on attaining the objectives. It is prudent to focus on areas that provide the highest return on investment.

› **Continuous audit and evaluation:** periodic audits are carried out to evaluate the effectiveness of ICT investments, along with the necessary adjustments based on current circumstances.

1.1.7 CYBERSECURITY PLAN

THE CYBERSECURITY PLAN **OUTLINES THE STRATEGY TO SAFEGUARD ICT IN THE JUSTICE SYSTEM, APPLIED UNIVERSALLY ACROSS THE ENTIRE ADMINISTRATION OF JUSTICE AND ADMINISTRATIONS IN THE SCOPE OF THE STRATEGY.** THIS DOCUMENT PROVIDES ESSENTIAL GUIDELINES FOR ACTION IN ICT SECURITY, AIMING TO IMPLEMENT A COMPREHENSIVE RISK MANAGEMENT MODEL TAILORED TO THE ORGANIZATIONAL AND TECHNOLOGICAL ENVIRONMENT OF BOTH THE ADMINISTRATION OF JUSTICE AND OTHER ADMINISTRATIONS INCLUDED IN THE SCOPE OF THE STRATEGY.

This Plan adopts a comprehensive approach to security, addressing people, processes, and technology, recognizing that ICT security affects all areas of the organization. This includes every user within the Administration of Justice and other administrations under the Strategy, who will implement the technical and organizational measures contemplated in the Plan as part of their daily responsibilities. These measures are also tailored to the internal work processes followed in these Administrations, and technology is employed to detect and mitigate potential risks.

Among the key aspects to identify in the Cybersecurity plan is **the governance of security and how it is structured within the governing body of digital transformation.** For example, establishing **a security committee to guide actions in this area, approve security regulations or make critical decisions while managing a security incident is key to ensure effective and efficient cybersecurity operations.** In the case of this governing body for digital transformation, its members must be formally appointed, possess the authority to act and make decisions, and actively engage with the areas they represent.

The key actions outlined in the Justice ICT Cybersecurity plan include:

❭ **Development and approval of the safety regulatory framework:** this framework includes a security policy that sets guidelines for proper security management and serves as a basis for future standards and procedures. This regulatory framework also includes mandatory security standards for all users. Its development must take into consideration the applicable legislation in each respective country, as well as national and international standards.

❯ **Alignment of processes within the Administration of Justice and administrations included in the Strategy with security regulations:** the work processes in the Administration of Justice and public actors within the scope of the Strategy must align with the guidelines set out in the security regulations. To ensure this, compliance audits are to be conducted to periodically assess the alignment of internal processes with the standards requirements.

❯ **Security culture and awareness:** all users of the Administration of Justice and other administrations included in the Strategy must adopt a culture of best practices in ICT security and be aware of potential negative consequences of improper use of the technological tools provided to them. To achieve this, a Culture and awareness plan can be developed, outlining a series of actions to disseminate knowledge in the field of security.

❯ **Security training plan:** includes a series of training initiatives on ICT security in the justice sector, aimed for all users. This Plan also outlines the technical and human resources required to deliver these training sessions on a regular basis.

❯ **Technical security reviews:** this action involves technical audits to identify vulnerabilities in operating systems and communications. These audits analyze the issues related to the detected vulnerabilities and implement the necessary measures and strategies to mitigate them.

❯ **Risk analysis:** a risk analysis is conducted for ICT in the justice sector, followed by the development of a treatment plan to address the identified risks and prevent their occurrence.

❯ **Framework for the technological development of justice systems:** continuous improvement of technological systems is essential to align with evolving security standards. This requires different actions, such as defining and verifying ICT security requirements and standards or enhancing system availability and reliability.

❯ **Creation of a Security Operations Center (SOC):** it is advisable to create a SOC equipped with the necessary technological resources to detect, analyze, and resolve cybersecurity incidents around the clock all year round. To achieve this, the cybersecurity infrastructure continuously monitors and analyzes activity across networks, servers, terminals, databases, applications, and websites looking for signs of vulnerabilities or abnormal system behavior that could indicate a security incident.

INTERNATIONAL REFERENCES FOR THE PREPARATION OF THE CYBERSECURITY PLAN:

European Union: the Cybersecurity Strategy[39] encompasses the security of essential services such as hospitals, energy networks, and railways, in addition to the security of the growing number of connected devices at homes, offices, and production plants.

United Kingdom: The National Cyber Strategy 2022[40] is a plan designed to ensure that the United Kingdom upholds its confidence, capability, and resilience in this rapidly evolving digital world. It continues to embrace, innovate, and invest to protect and advance the country's interests in cyberspace.

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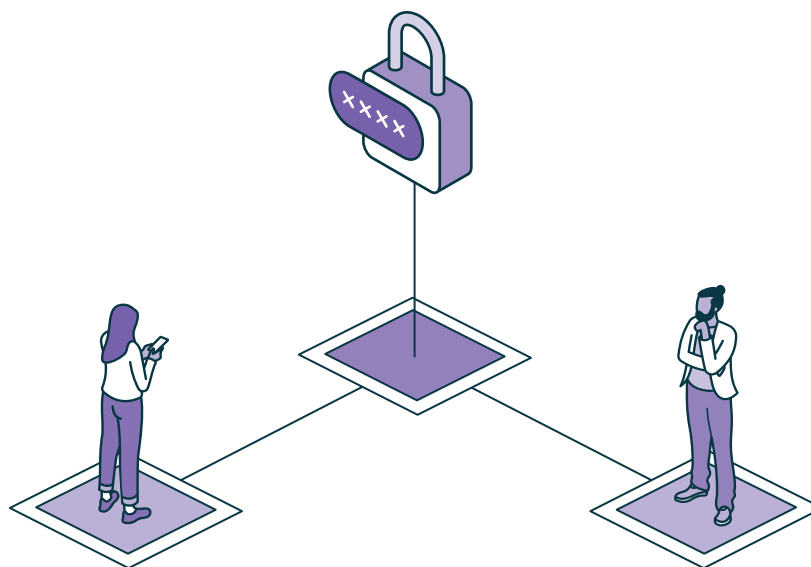
39. Cybersecurity Policies/Comisión Europea.

40. National Cyber Strategy 2022/UK government.

EXAMPLE OF THE PREPARATION OF THE CYBERSECURITY PLAN:

Fernando
CIO of the ICT Directorate of the Judicial Branch of Country A.

To prepare the Cybersecurity plan of the Judicial Branch, Fernando undertakes the following actions:

› **Asset and risk assessment:** critical digital assets within the Administration of Justice, such as systems, data, applications, and networks, are identified and assessed. Potential risks to these assets are also analyzed, including both internal and external threats, vulnerabilities, and their possible consequences.

› **Goal setting:** clear cybersecurity objectives are established, such as safeguarding sensitive court records or ensuring the continuity of services.

› **Design of policies and procedures:** cybersecurity policies are established to define the rules and practices that must be adhered to within the organization. These policies cover aspects such as strong passwords, data access, and the use of mobile devices, among others. Specific procedures are also set up to implement these policies and to respond to security incidents.

› **Resource allocation:** the resources are identified that are needed to implement and maintain security measures, including personnel, technology, and budget considerations.

› **Implementation of security measures:** technical security measures are adopted, such as firewalls, antivirus software, encryption, two-factor authentication, and intrusion detection systems.

› **Vendor evaluation:** if the Administration of Justice uses third-party services, vendors are assessed and monitored to ensure they meet cybersecurity standards.

› **Cybersecurity incident response plan:** an incident response plan is developed and lays out the steps to be taken should a cyberattack or a security breach occur. This includes incident reporting, containment, recovery, and communication with stakeholders.

› **Testing and drilling:** regular simulations and assessments are conducted to evaluate the effectiveness of safety measures and the team's readiness to respond to incidents.

› **Documentation and communication:** all policies, procedures, and changes made to the Cybersecurity plan are documented and communicated to stakeholders.

1.1.8 INTEROPERABILITY PLAN

Another major aspect of the technological modernization of justice is **interoperability, understood as the ability to communicate and automatically exchange information between different ICT systems.** This includes both internal interoperability within the Administration of Justice and external operability with other related parties.

> **THE INTEROPERABILITY PLAN OUTLINES THE TECHNICAL AND ORGANIZATIONAL ACTIONS NECESSARY TO ENSURE THAT ICT SYSTEMS IN THE FIELD OF JUSTICE OPERATE EFFICIENTLY AND COMMUNICATE AUTOMATICALLY. IT IS ESSENTIAL FOR THE INTERCONNECTION OF SYSTEMS ACROSS COURTS, THE PUBLIC PROSECUTOR'S OFFICE, LEGAL PROFESSIONALS, AND OTHER STAKEHOLDERS. THE PLAN PROMOTES AGILITY, EFFICIENCY, TRANSPARENCY, ERROR REDUCTION, AND IMPROVED ACCESS TO INFORMATION FOR ALL PARTIES INVOLVED.**

The Plan addresses interoperability along **four key dimensions:**

> **Organizational dimension:** it is based on the decisions and agreements made by representatives of different stakeholders to ensure that ICT are interoperable. In this dimension, one of the most important actions is to establish **the digital transformation governance body, which is the forum that unites representatives of the governing bodies of digital transformation of the Administration of Justice, the Public Prosecutor's Office and other involved administrations to forge collaboration agreements, ensuring interoperability of ICT systems, and promoting Electronic Judicial Administration.** This body must possess autonomy, competence and authority to make binding decisions, ensuring their effectiveness is not compromised.

The organizational dimension also includes actions related to accessing and publishing exchange services, generating information brokers, and managing different information providers.

❯ **Legal dimension:** refers to the regulatory framework governing the interoperability of the ICT systems within the justice sector and with those of other administrations. The primary action outlined in the Interoperability plan is to create the Interoperability and security schemes. These schemes are developed through different Technical Guides on Interoperability and Security,[41] as well as the Technical Application Guides[42] that serve as technical standards.

These standards define the technical requirements and technological benchmarks that ICT systems must adhere to, while respecting the principle of technological neutrality. This principle means that, while no specific technology is mandated, there are certain requirements that systems must meet to enable automated data exchange (**more details in the regulatory framework dimension**).

- Interoperability scheme: this standard sets out the principles and requirements of the interoperability of justice ICT systems. Its goal is to ensure both the interconnection of internal systems across all courts and tribunals, and the external interconnection of the Administration of Justice's systems with those of other related actors.

- Security scheme: it is the standard that establishes the principles and requirements of cybersecurity of the ICT of justice with the aim of protecting digital assets, sensitive information, and the technology infrastructure of the Administration of Justice.

- Interoperability and security technical guides: these Guides **offer technical guidelines and recommendations on how to achieve interoperability and security in the field of ICT.** The main guides include the Authentication Guide, the Certificates and Electronic Signature Guide, the Electronic Court Document Guide, the Electronic Court File Guide, the Certified Document Digitization Guide, and the Authentic Copying and Conversion Guide.

- Technical application guides: These guides provide **specific instructions on how to apply the principles and standards set out in the Interoperability and security technical guides.** They complement the above guides by providing practical details on the implementation of technical standards and security guidelines, tailored to specific use cases. One of these is the Technical Guide for Implementing Technical Standards for Interoperability between judicial bodies and the Public Prosecutor's Office, as well as between judicial bodies and professional associations, among others.

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41. Technical Regulations/State Technical Committee on Electronic Judicial Administration.

42. Technical Standards for Interoperability/Electronic Administration of Spain.

› **Semantic dimension:** refers to the need for systems to adopt common data standards, ensuring that the format and meaning of the exchanged information are consistent and mutually agreed on by all parties involved. The main components of this dimension include the **master directory of judicial data and processing workflows.** In addition, the establishment of **data tables is required.**

- **Master directory of judicial data:** this component of the semantic infrastructure serves as a centralized, structured data repository, enabling the sharing and exchange of information.

  The directory houses **data tables** that consolidate common information used in the Administration of Justice, as well as data related to information exchanges with citizens and other administrations. It also contains the associated definitions and codifications.[43]

- **Processing flows:** these refer to the processes and procedures that govern the movement and management of court cases throughout their life cycle in the judicial system. These flows indicate the sequence of steps that must be followed to navigate the various stages of a case, from its initial presentation to its final resolution. With the support of this semantic infrastructure, processing flows can be automated and systematized.

› **Technical dimension:** comprises the technological infrastructure that enables interoperability between systems. The core of these infrastructures is the **Interoperability Hub,** which allows the strategic technological services within these systems to be shared and assessed by the entire Administration of Justice. The Interoperability Hub will implement the Technical guides and publish the relevant services for future integration.

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43. Master Data Tables/State Technical Committee on Electronic Judicial Administration.

EXAMPLE OF THE PREPARATION OF THE INTEROPERABILITY PLAN:

Fernando

CIO of the ICT Directorate of the Judicial Branch of Country A.

To prepare the Interoperability plan of the Judicial Branch, Fernando undertakes the following actions:

› **Identification of actors and their needs:** all actors within the justice system are identified and their interoperability requirements are assessed. To this end, the current ICT interoperability map (AS-IS) is drawn up, providing a clear picture of internal communications between the judicial bodies that form the Administration of Justice, as well as between the Administration of Justice and other relevant stakeholders.

Once the current state of ICT interoperability is understood, a conceptual interoperability map is created, outlining the ideal communication that should exist within the Judiciary and between the Judiciary and other justice-related stakeholders (TO-BE).

› **Definition of objectives:** clear interoperability objectives for the justice system are established.

› **Establishment of standards and protocols:** data standards and communication protocols necessary to enable interoperability are defined.

› **Technology selection:** technology required to attain interoperability is assessed and selected, such as application integration systems, web services, shared databases.

› **Architecture design:** technical architecture is designed that allows interoperability of systems, including the creation of access points and shared services.

> › **Data management:** practices and policies are established for effective data management, ranging from data formats standardization to information classification and data security.

> › **Security and privacy:** measures are put in place to ensure protection of sensitive data. This includes user authentication, data encryption, and access control.

> › **Implementation planning:** a detailed plan to implement interoperability measures is developed. This should include a timeline, allocation of responsibilities, and required resources.

> › **Continuous evaluation:** a process is implemented to continuously measure the effectiveness of interoperability measures and to make adjustments as needed.

> › **Regulatory compliance:** ensures that the Plan adheres to all regulations and legal standards related to interoperability, privacy, and data security.

INTERNATIONAL REFERENCES TO DEVELOP THE INTEROPERABILITY PLAN:

Spain: The National Interoperability Scheme[44] encompasses a set of criteria and recommendations regarding the security, preservation, and standardization of information, as well as the formats and applications that must be considered by public administrations to ensure interoperability in technological decision making.

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44. National Interoperability/Electronic Administration Scheme of Spain.

1.1.9 DATA GOVERNANCE PLAN

The data generated from the performance of a public activity, including those conducted by the Administration of Justice and other administrations within the Strategy, have become a public resource that must be preserved, protected, and leveraged to provide reliable and timely information to public administrations officials. This enables informed decision making that enhances data-based public policies. In addition, they serve another essential purpose, which is to provide citizens with transparency regarding the justice system functioning and management of public resources allocated to this Administration.

> TO MANAGE AND MAKE EFFECTIVE USE OF THE DATA COLLECTED BY THE ADMINISTRATION OF JUSTICE AND OTHER ADMINISTRATIONS INCLUDED IN THE SCOPE OF THE STRATEGY, WITH THE AIM OF ENHANCING GOVERNANCE, **THE DATA GOVERNANCE PLAN IS ESTABLISHED. THIS PLAN OUTLINES THE PRACTICES DESIGNED TO MANAGE AND CONTROL DATA WITHIN THE JUSTICE SYSTEM,** FOCUSING ON ENSURING THE QUALITY, RELIABILITY, INTEGRITY, SECURITY, AND EFFECTIVE MANAGEMENT OF JUDICIAL DATA THROUGHOUT ITS ENTIRE LIFECYCLE, FROM COLLECTION TO STORAGE AND DISTRIBUTION.

The Data governance plan should align with the **Data Office** strategy and guidelines, which, if it does not exist, should be created. This office, comprised by legal and technical professionals, establishes objectives related to the pursued data (such as KPIs, automation, future predictions, etc.) and defines and designs projects that will collect data and contribute to this overarching data strategy.

Implementing a Data governance plan is essential to leverage all available information within the Administration of Justice and other administrations included in the Plan. This will enable the transformation of data into valuable insights for the governing body, aiding in the evaluation of the degree of maturity of digital transformation of justice, addressing the need to **measure this process through objective and reliable indicators.**

THIS PLAN IS ALIGNED WITH THE INTEROPERABILITY PLAN, SINCE IN ORDER TO USE DATA IT IS NECESSARY TO HAVE AN INTEROPERABILITY ECOSYSTEM IN THE ADMINISTRATION OF JUSTICE. THANKS TO THIS ECOSYSTEM, DATA WILL BE AVAILABLE FOR USE. ADDITIONALLY, A **JUDICIAL DATA DICTIONARY** MUST BE CREATED THAT ORGANIZES AND DESCRIBES DATA IN DETAIL, SERVING AS A REFERENCE RESOURCE WITH DEFINITIONS, DESCRIPTIONS, METADATA, AND OTHER RELEVANT INFORMATION.

From a technological solutions perspective, one of the main actions that the Plan addresses is the implementation of dashboards. **These dashboards visually present data on judicial activity and other relevant information regarding the functioning of the Administration of Justice and other administrations included in the Strategy in a structured and easily understandable manner.** As an example, a judicial activity dashboard can be implemented, which would allow those responsible for the Administration of Justice to monitor court performance in real time, identify work overloads or other situations that need correction.
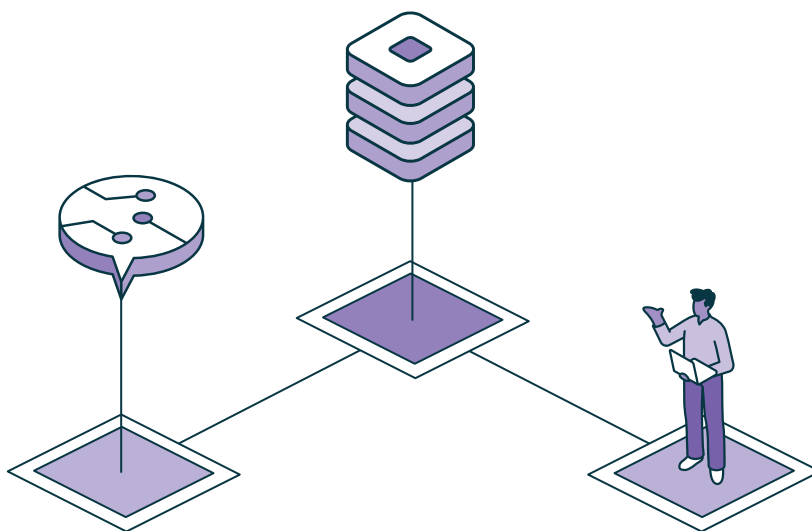
This Plan should establish the methodology for consistent data management within the framework of the Digital Transformation Strategy. To do this, one of the **main methodologies** used in both public and private sectors can be selected, such as:

> **DCAM:** Data Management Capability Assessment Model.[45]

> **DAMA:** Data Management Association.[46]

> **DGPO:** Data Governance Professionals Organization.[47]

> **MAMD:** Alarcos Data Enhancement Model.[48]

These methodologies seek **to identify different data sets and ensure critical aspects, such as security, storage, version control, quality assurance, and data ownership.**

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45. DCAM - Data Management Capability Assessment Model/Data Management Council.

46. DAMA – Data Management Association.

47. DGPO - Data Governance Professionals Organization.

48. MAMD - Alarcos Data Enhancement Model.

INTERNATIONAL REFERENCES TO GUIDE THE DEVELOPMENT OF THE DATA GOVERNANCE PLAN:

United States: in the healthcare sector, the United States Core Data for Interoperability (USCDI)[49] was established. It comprises a standardized set of health data classes and constituent elements to enable the interoperable exchange of health information nationwide.

European Commission: the Life Cycle Data Network[50] was launched in 2014. It aims to provide a global infrastructure to publish quality-assured Life Cycle Assessment (LCA) datasets from various organizations.

LCA is a technique used to assess the environmental impact of products from the extraction of raw materials through to their disposal. The LCA database, part of the National Agricultural Library project, offers freely accessible datasets and life cycle assessment tools.

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49. United States Core Data for Interwoperability (USCDI)/ National Coordinator for Health Information Technology.

50. Life Cycle Data Network/Comisión Europea.

EXAMPLE OF THE PREPARATION OF THE DATA GOVERNANCE PLAN:

Fernando
CIO of the ICT Directorate of the Judicial Branch of Country A.

To prepare the Data governance plan of the Judicial Branch, Fernando takes the following actions:

› **Definition of objectives and scope:** specific objectives that data governance aims to achieve in the judicial field are identified.

› **Creation of a data office:** this office is established within the digital transformation governing body to manage and lead data governance initiatives.

› **Current status assessment:** a comprehensive evaluation of the current state of court data is realized, identifying existing systems, databases, data flows, and practices

› **Identification of stakeholders and roles:** this step involves identifying all relevant parties, including judges, lawyers, support staff, citizens, and other stakeholders. Subsequently, each stakeholder's roles and responsibilities in data governance are defined.

› **Development of policies and procedures:** policies and procedures are developed that address critical aspects of data governance, such as data quality, security, privacy, retention, and management of unstructured data.

> › **Establishing standards and metadata:** data and metadata standards are defined to enable the uniform description and classification of data.

> › **Data security:** security measures are put in place to protect sensitive data, including encryption, authentication, and access authorization.

> › **Implementation of data governance tools:** specific tools are defined to manage data quality, metadata cataloguing, and auditing.

> › **Continuous evaluation and improvement:** an ongoing evaluation process is established to measure the success of data governance and to make necessary improvements.

1.1.10 TRANSPARENCY PLAN

Transparency is essential in the justice system to build citizens' trust in the functioning of the Administration of Justice and other administrations in the scope of the Strategy. Furthermore, transparency allows citizens to access essential information, such as the legal rules governing their activities, data on the state of public services, judicial rulings and, the opportunity to observe judicial hearings, which are generally open to the public.

> **TRANSPARENCY IS A PRIMARY GOAL OF JUSTICE,** AND ACTIONS TO IMPROVE IT ARE USUALLY PART OF AN OVERALL REFORM PLAN. HOWEVER, A **SPECIFIC TECHNOLOGICAL TRANSPARENCY PLAN** CAN ALSO BE CREATED, FOCUSED ON ENHANCING TRANSPARENCY THROUGH TECHNOLOGY. THIS PLAN SHOULD BE CONSISTENT AND ALIGNED WITH THE OVERALL REFORM PLAN. THE TRANSPARENCY PLAN BRINGS TOGETHER TECHNICAL AND ORGANIZATIONAL ACTIONS TO ENSURE OPEN AND COMPREHENSIBLE ACCESS TO INFORMATION REGARDING THE JUDICIAL SYSTEM, ITS PROCESSES AND DECISIONS.

Like the Data governance plan, **the Transparency plan also aligns with the Interoperability plan**. This alignment ensures that data made available to citizens, which supports transparency in justice, is facilitated through the interoperability of all systems and databases. For example, judicial statistics are made possible through the interoperability between the case management system and the portal where this information is published.

To address this area, the governing body for digital transformation develops a Transparency plan that includes the following actions. This plan is designed to incorporate new measures or adapt the proposed actions as needed:

›   **Creation of a judicial transparency portal:** this entails setting up a public web portal dedicated to judicial transparency. This portal stores all information related to judicial statistics and relevant data on the functioning of the Administration of Justice, existing case law, the legal regulations governing this public service, and other pertinent laws. It also includes the web link to access court hearings broadcast through digital platforms such as YouTube or the internal channel of this Administration. **It is possible to create a dedicated transparency web portal or incorporate this content into the judicial services portal.**

›   **Regulations:** every individual will have access to the applicable legal regulations in the country. This Plan establishes access to a database containing all regulations organized by subject. It is necessary to include regulations related to the functioning of the Administration of Justice, procedural laws and key codes like the Civil Code and the Criminal Code. Transparency in this area is essential, as people must have access to these rules to understand and incorporate their requirements into their daily lives.

›   **Statistics:** judicial statistics will be made accessible to everyone, offering insights into the state of the justice system through data. This statistical information is automatically extracted to ensure reliability and is updated in real time. Key indicators included in the judicial statistics are the number of cases entering the judicial system, the number of cases in progress and resolved, processing times from entry to conclusion, and other relevant metrics.

›   **Case law:** access to judicial rulings is accessible to everyone, allowing them to understand the decisions made by the court and the legal reasoning behind them. Knowledge of case law is a crucial mechanism to ensure the transparency of the justice system. However, it is important to clarify that judgments containing sensitive personal data, such as names, last names, addresses, legal status information, **must be anonymized. This ensures that citizens can access their content while safeguarding the right to privacy and protecting personal data.**

From the transparency perspective, it is of vital importance that this Plan establishes a consistent framework for all programs and activities within the Digital Transformation Plan. It should establish mechanisms to contribute data and content, while also defining which data or information should be publicly accessible for transparency reasons. In addition, it is important to define a set of data available upon request, as well as a separate subset that cannot be published or distributed, ensuring that data protection and the impartiality of judicial action are not compromised.

INTERNATIONAL REFERENCES TO PREPARE THE TRANSPARENCY PLAN:

European Commission: Freedom of Information Portal.[51] Under Article 15 of the Treaty on the Functioning of the European Union, citizens and residents of EU countries have the right to access documents of the European Parliament, the Council and the European Commission. This means that citizens can obtain a variety of documents held by the Commission and other institutions, including legislative information, official documents, historical archives, as well as minutes and agendas of the meetings.

Spain: The Transparency Portal of the General State Administration[52] is regulated by Law 19/2013, enacted on December 9. This law ensures transparency, grants access to public information and promotes good governance.

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51. Freedom of Information/European Commission.

52. Transparency Portal of the General Administration of the State of Spain/General Administration of the State of Spain.

EXAMPLE OF THE PREPARATION OF THE TRANSPARENCY PLAN:

Fernando
CIO of the ICT Directorate of the Judicial Branch of Country A.

To prepare the Transparency plan of the Judicial Branch, Fernando undertakes the following actions:

› **Definition of goals and scope:** specific goals of the Transparency plan within the context of ICT are identified. For example, the following aspects are considered: What areas of the judicial system will be addressed? What outcomes are expected from the implementation of this plan?

› **Identification of stakeholders:** all relevant parties are identified, including judges, lawyers, administrative staff, citizens, and other entities involved in the judicial system.

› **Assessment of the current situation:** a comprehensive assessment of the current situation of transparency in the judicial system is made, including the use of ICT in this area.

› **Selection of indicators:** key indicators are defined to assess the level of transparency in the judicial system. These may include the availability of information online, access to court records, and response time to inquiries, among other relevant aspects.

> › **Policies and procedures:** policies and procedures are developed, clearly outlining how information is provided and what data is made publicly available online.

> › **Communication and outreach:** transparency policies and procedures are actively and transparently communicated to stakeholders and the general public.

> › **Continuous evaluation and improvement:** an ongoing evaluation process is established to measure the success of the Transparency plan and to implement necessary improvements.

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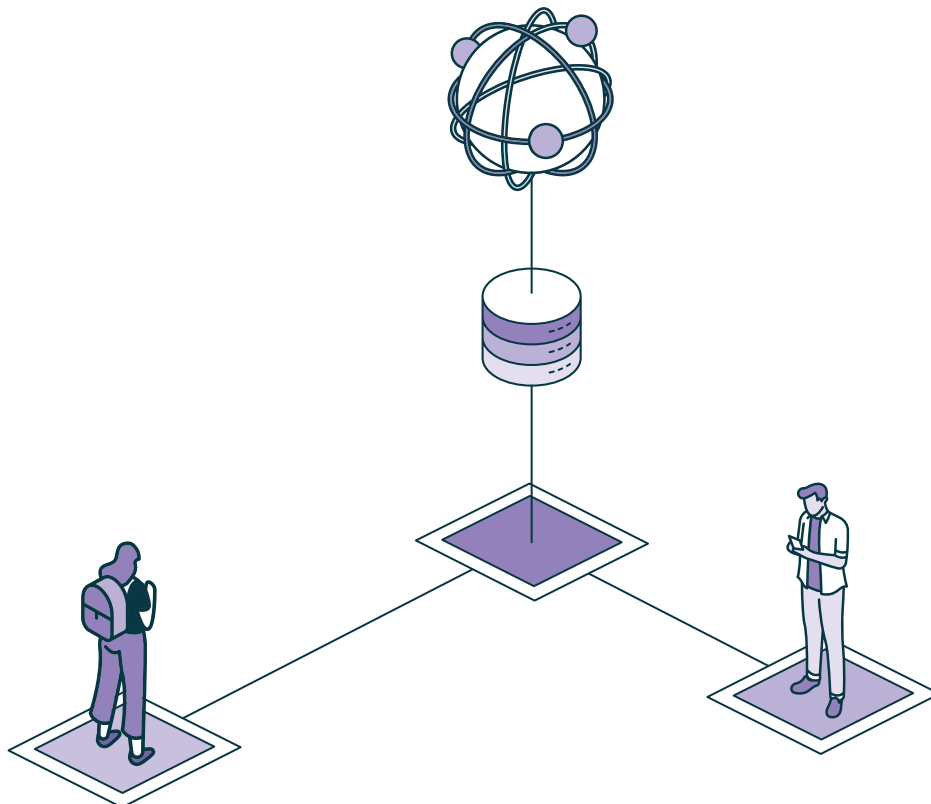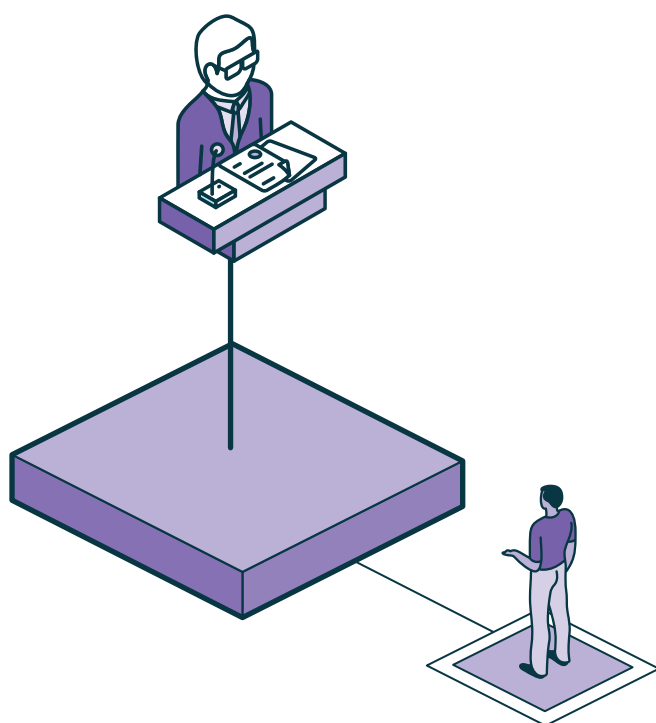
Governing body for digital transformation

The governing body for digital transformation is an administrative body integrated into various public administrations involved in the process of digital transformation of the justice system. Its role is to provide technological means and digital services to users within its area of competence.

Based on this general definition, digital transformation of justice may present various scenarios. In some systems, **each participating Administration may have its own governing body. For example, the Administration of Justice may have its own governing body, while the Public Prosecutor's Office and other entities such as the Toxicological Institute or the Ministry of Justice could have separate governing bodies.** In this scenario, each entity would provide material resources and digital services exclusively to its respective users.

In other systems, **a single governing body may oversee the digital transformation of both the Public Administration it is part of and of other administrations to which it provides technological means and services.** This scenario can occur, **for example, if the Ministry of Justice's governing body for digital transformation is also tasked with providing digital resources and services to the Administration of Justice's users.** In this case, the Ministry of Justice, which is different from the Administration of Justice, provides digital resources and services to its own users and to those of the Administration of Justice.

Regardless of the chosen modality, it is crucial for the entities or the governing body to have a proper structure, be equipped with the required material and financial resources, and the competencies needed to effectively fulfill their mission.
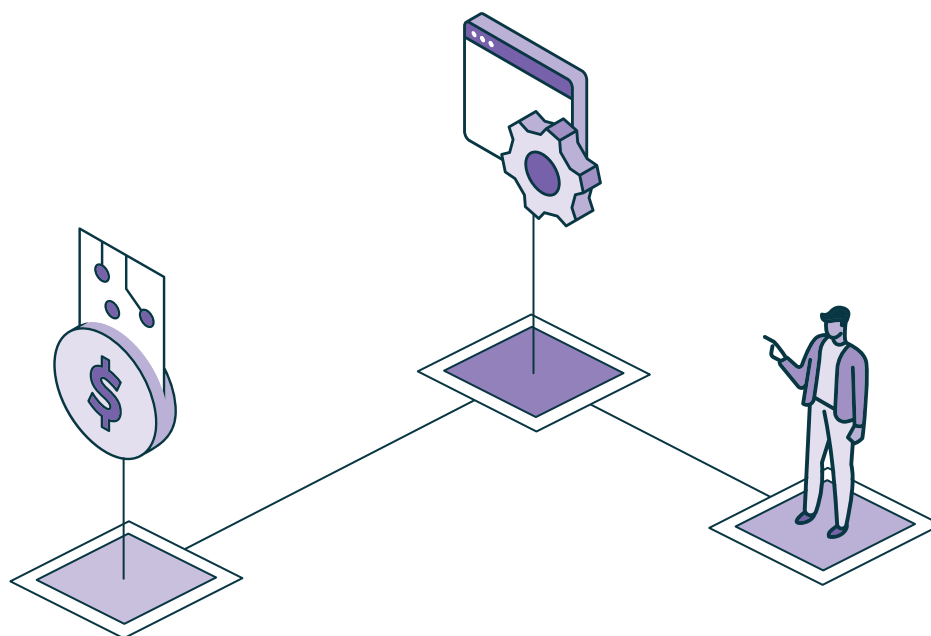
INTERNATIONAL REFERENCE FOR DIFFERENT GOVERNING BODIES IN VARIOUS PUBLIC ADMINISTRATIONS INVOLVED IN DIGITAL TRANSFORMATION OF JUSTICE:

Panama: the **Judicial Branch has the Directorate of Modernization and Institutional Development,**[53] which leads the digital transformation of the Judicial Branch and provides digital resources and services exclusively to its users. On the other hand, the **Office of the Attorney-General of the Nation of Panama has its own Directorate of Information Technology**[54] in charge of ICT within this Administration.

In this case, each mentioned Administration has its own governing body for digital transformation, which provides resources and services exclusively to its users.

INTERNATIONAL REFERENCE OF A GOVERNING BODY OF AN ADMINISTRATION INVOLVED IN DIGITAL TRANSFORMATION OF JUSTICE THAT LEADS THE DIGITAL TRANSFORMATION OF ANOTHER ADMINISTRATION.

Spain: in this country, **the Directorate General for Digital Transformation of the Administration of Justice, under the Ministry of Justice,**[55] oversees the strategic direction and provision of material resources and digital services to the users of the Ministry, the Administration of Justice and the Public Prosecutor's Office.

As demonstrated, the same governing body holds authority over various public entities in the digital transformation process of the justice system.

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53. Directorate of Modernization and Institutional Development/Judicial Branch of Panama.

54. Directorate of Information Technology of the Office of the Attorney General of the Nation of Panama.

55. Structure of the Ministry of Justice/Ministry of Justice of Spain.

1.2.1 COMPETENCIES OF THE GOVERNING BODY FOR DIGITAL TRANSFORMATION

After analyzing the different modalities that the governing body for digital transformation might adopt, the next step is to outline its **competencies and functions.** From a general perspective, its role is **to define and implement the Digital Transformation Strategy for the Administration it serves or the entire Digital Transformation Strategy of the Justice System,** when a unified action plan is developed for all entities involved. This overarching role encompasses several specific competencies, such as the provision of digital media and services, among others that are detailed below:

> **The strategic direction of the digital transformation of justice:** to fulfill this role, the governing body for digital transformation develops various strategic plans that map out the path to digitize justice. On the one hand, the Strategy for the Digital Transformation of Justice, as detailed above, is formulated. This strategy outlines the technical and organizational actions that this governing body will undertake to meet the established goals.

> In addition to the Plan mentioned above, other plans are also developed to cover various aspects of the strategic direction for digital transformation. These primarily include the Institutional strengthening plan, the Risk management plan, the Cybersecurity plan, the Financial and public procurement plan, the Interoperability plan, the Data governance plan, and the Transparency plan.

> **Provision of digital services:** the governing body for digital transformation provides various digital services. Some are specifically targeted at users of the Administration of Justice, while others are offered to all users across the board. Common cross-cutting services include managing digital services that affect all users, coordinating these users' technological needs with the governing body for digital transformation, overseeing the cybersecurity of all ICT systems and their data, and managing technological projects from their initial definition and design phases to full implementation.

> **Communicating the process of digital transformation of justice:** the governing body for digital transformation is responsible for communicating all aspects related to this process. This includes deciding what information is communicated, identifying target users, and determining the means of communication. Communication covers both internal communications within the governing body for digital transformation, involving members and users of the Administration of Justice, and external communications with other related entities, mainly professionals in the judicial field, citizens and other administrations.

> **Monitoring the digital transformation process:** it can be achieved through various means. One primary method is the steering committee, where the directors of the governing body for digital transformation periodically review the Justice Digital Transformation Strategy. Monitoring the status of the digital transformation process through structured and up-to-date information provided by dashboards is also highly effective.
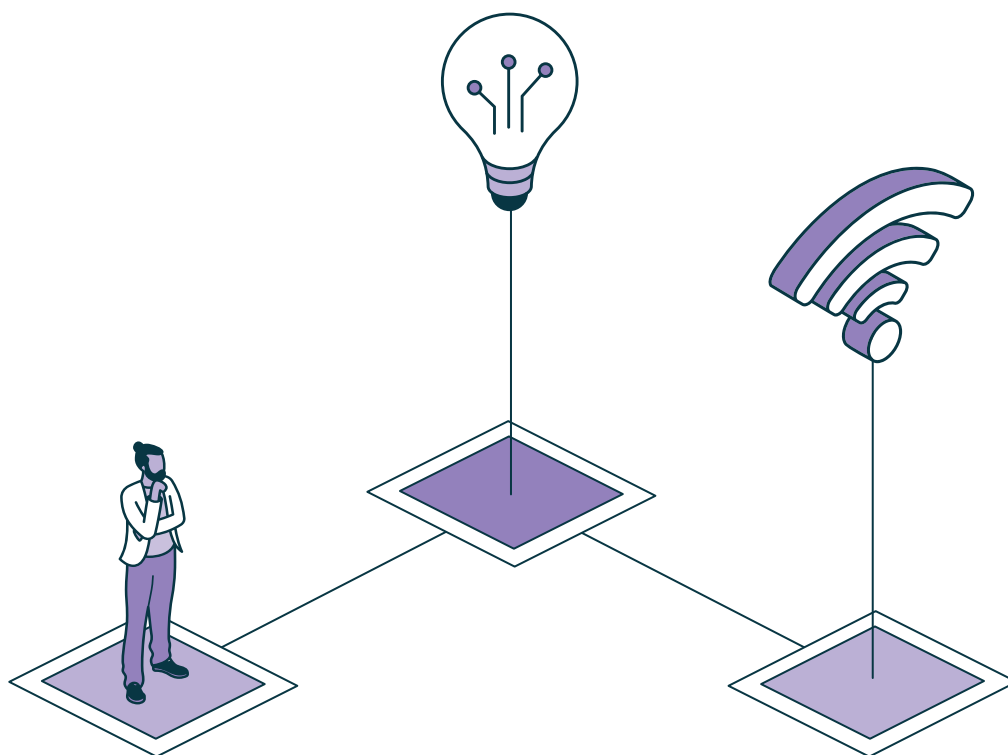
› **Coordinating with the governing body of the Digital Government:** if the Administration of Justice has its own governing body for digital transformation and there is also a governing body for Digital Government within the General State Administration, it is necessary for both administrative entities to coordinate their efforts effectively. Considering the above, the governing body for digital transformation of the justice system acts proactively by promoting different collaboration and cooperation efforts with the governing body for Digital Government. This ensures that all initiatives are aligned and follow a unified action plan.

1.2.2 BOARD COMPOSITION OF THE GOVERNING BODY FOR DIGITAL TRANSFORMATION

Another relevant aspect is the composition of the governing body for digital transformation. Regardless of the adopted modality, it is important for this body to have a management structure with the technical expertise and experience to effectively lead the process. The main management positions are detailed below:

› **CIO (Chief Information Officer):** director of ICT systems and the head of the governing body. This leader oversees the implementation of an ICT policy that applies to the entire Administration they service. In addition, he/she ensures that this technology aligns with the entity's objectives, makes decisions related to managing available human, technological, and budgetary resources, establishes ICT standards and policies, and coordinates the actions of the governing body. He/she is the global head of the Digital Transformation Strategy within their area of competence.

› **CFO (Chief Financial Officer):** This role involves planning, implementing, managing, and overseeing all budgetary activities for the governing body of digital transformation. However, the CFO delegates budget planning to the CIO, who has the ultimate responsibility for its approval. The CFO is also responsible for the Financial and public procurement plan.

› **CCO (Chief Communications Officer):** director of communications for the governing body and head of the Communication Office. Their primary role is to define and implement the entity's Communication Plan and determine the form and means for both internal and external communication. However, their actions must always align with the CIO's guidelines.

› **CDO (Chief Data Officer):** This position oversees the management, storage, and analysis of data within the governing body. The CDO's primary function is to define what data will be used, how, when, and for what purpose. As with other management positions, the CDO's decisions require the ultimate approval of the CIO. The CDO is also responsible for the Data governance plan.

› **CTO (Chief Technology Officer):** this managerial position is responsible for overseeing the technical aspects of ICT with the justice system. The CTO's functions include implementing the Digital Transformation Strategy for the Administration they serve, ensuring that technological actions align with the objectives of the governing body for digital transformation. The CTO defines, standardizes, and oversees the technological elements that form the foundation of programs and projects within the Roadmap.

› **CISO (Chief Information Security Officer):** this managerial position oversees the security of ICT information for the Administration they serve. Its primary role is to ensure that information security aligns with strategic objectives. To this end, it is responsible for the Cybersecurity plan.

› **CXO (Chief Experience Officer):** this managerial position ensures that technological services are delivered to users at a quality level that meets the standards set by the governing body for digital transformation. This role involves making decisions related to service management.

1.2.3 INTERNAL MECHANISMS FOR DECISION MAKING IN THE GOVERNING BODY OF DIGITAL TRANSFORMATION

The steering committee is in charge of strategic decision making and coordination of technical and organizational actions of the governing body for digital transformation. This committee meets periodically and includes the directors mentioned above.

THE STEERING COMMITTEE SERVES AS **THE PLATFORM WHERE THE CIO, LEADING THE GOVERNING BODY, COLLABORATES WITH OTHER MANAGEMENT POSITIONS TO OVERSEE THE EVOLUTION OF THE STRATEGY AND ITS EXECUTION.** WITHIN THIS COMMITTEE, MANAGEMENT POSITIONS CAN PROPOSE DISCUSSION TOPICS FOR THE MEETING AND ESTABLISH AN AGENDA THAT OUTLINES THE ISSUES TO BE ADDRESSED. **THE COMMITTEE'S DECISIONS ARE MADE IN ACCORDANCE WITH THE PRE-APPROVED RULES FOR ADOPTING AGREEMENTS.**

The most effective approach is for the steering committee to meet on a regular basis. However, extraordinary sessions may also be convened for urgent matters or to address issues that require more detailed oversight. For example, the Covid-19 pandemic compelled the Administrations of Justice to swiftly implement numerous technological initiatives to ensure the continuity of justice. Therefore, in situations like this, convening extraordinary sessions of the governing body to make urgent decisions is crucial.

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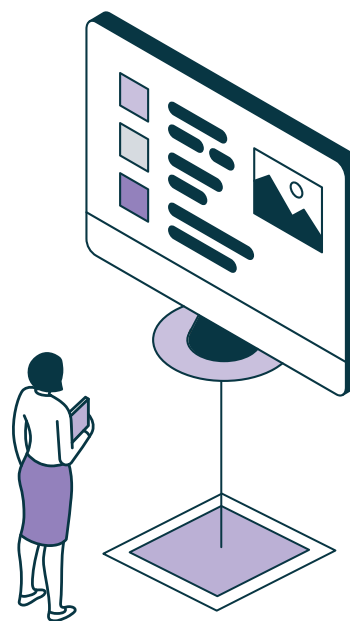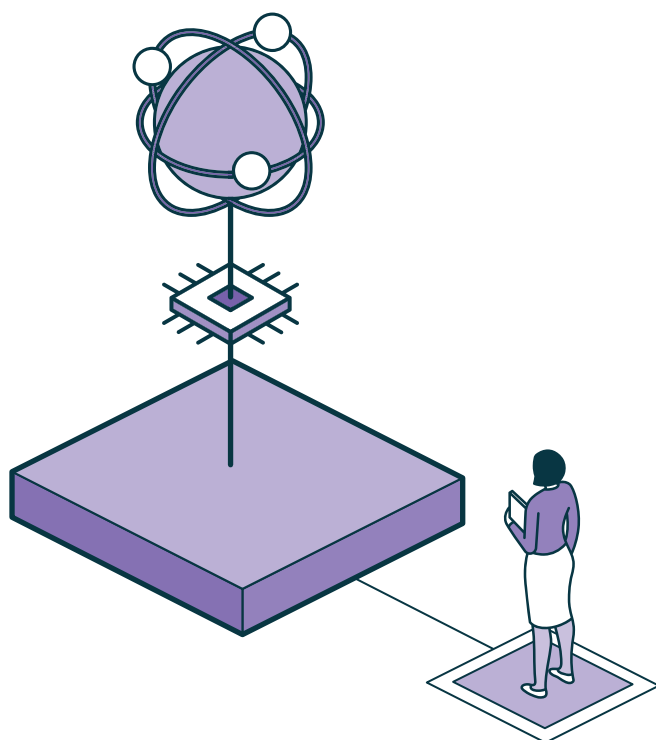
Digital transformation governance body

The process of digital transformation of justice requires the participation of all relevant actors. Their participation implies that technological decisions affecting multiple stakeholders must be made in agreement with all of them. Otherwise, these decisions will not be accepted, leading to significant resistance to change.

> TO ADDRESS THIS CHALLENGE, IT IS PROPOSED TO CREATE A **DIGITAL TRANSFORMATION GOVERNANCE BODY THAT CAN TAKE VARIOUS FORMS.** THIS COULD INVOLVE ESTABLISHING A **COMMITTEE** THAT INCLUDES HEADS OF DIGITAL TRANSFORMATION GOVERNING BODIES AND OTHER STAKEHOLDERS, SUCH AS LAWYERS OR CITIZENS, THROUGH AD HOC **WORKING GROUPS.** ALTERNATIVELY, AN **ADMINISTRATIVE UNIT** COULD ASSUME THE ROLE OF A GOVERNANCE BODY. **REGARDLESS OF THE CHOSEN MODALITY,** THE BODY'S GOAL WOULD BE TO COORDINATE ALL PARTIES INVOLVED IN DIGITAL TRANSFORMATION OF JUSTICE, ENSURE ICT INTEROPERABILITY, STRENGTHEN COOPERATION AMONG ACTORS, PROMOTE ELECTRONIC JUDICIAL ADMINISTRATION AND STRIVE TO MAKE DECISIONS WITHIN THIS PROCESS AS CONSENSUAL AS POSSIBLE AMONG ALL PARTIES INVOLVED.

The governance body, regardless of its form, must be a **forum for dialogue and consensus among the digital transformation governing bodies of the different actors in the justice system. Primarily, repre-sentatives of the Administration of Justice, the Public Prosecutor's Office and other administrations involved in the judicial sector must participate. In addition, the governing bodies representing other stakeholders, such as lawyers and citizens,** will also participate in this body to address issues and projects that affect them. For instance, an electronic communications system project affecting lawyers would fall under this scope.

It is **advisable for this body to have a regulatory framework** that defines its internal composition, outlines the participation methods for the responsible positions in the governing bodies of the different stakeholders, and establishes mechanisms for adopting agreements, whether through majority voting, qualified voting, or any other agreed-upon methodology. However, the most crucial aspect is that decisions should be inclusive and consensual, ensuring all actors feel engaged and committed to the process.

Furthermore, the governance body **could have the authority to offer cross-cutting technological services to different actors within the justice system.** This approach ensures an efficient use of digital services, preventing duplication of efforts in developing services that another entity or the governance body itself has already implemented and that could be reused, thus enhancing technological efficiency.

The **functions** of this body are:

❯ Promote compatibility and **ensure internal interoperability of justice ICT systems, as well as external interoperability with other ICT systems.**

❯ Prepare **joint action plans and programs** to foster the development of Electronic Judicial Administration.

❯ Promote **cooperation between other public administrations** and the Administration of Justice.

INTERNATIONAL REFERENCES FOR THE DIGITAL TRANSFORMATION GOVERNANCE BODY:

Spain: the Administration of Justice of Spain has the State Technical Committee for Electronic Judicial Administration (CTEAJE), whose main functions include setting the necessary guidelines to ensure interoperability of systems and applications within the Administration of Justice, as well as promoting cooperation across different administrations. In addition, the CTEAJE establishes the criteria on which the necessary collaboration must be based.[56]

The CTEAJE is governed by a specific legal framework that regulates its structure, competencies, operation, and decision-making processes. This regulation is outlined in Royal Decree 396/2013, enacted on June 7.[57]

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56. State Technical Committee for Electronic Judicial Administration.

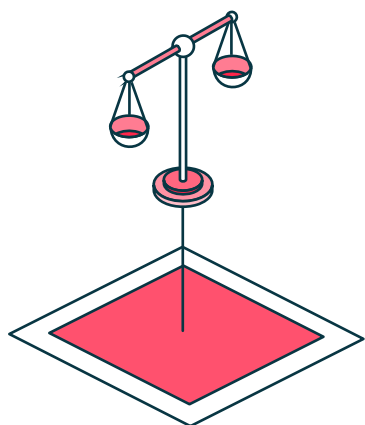57. Royal Decree 396/2013/Official State Gazette of Spain.
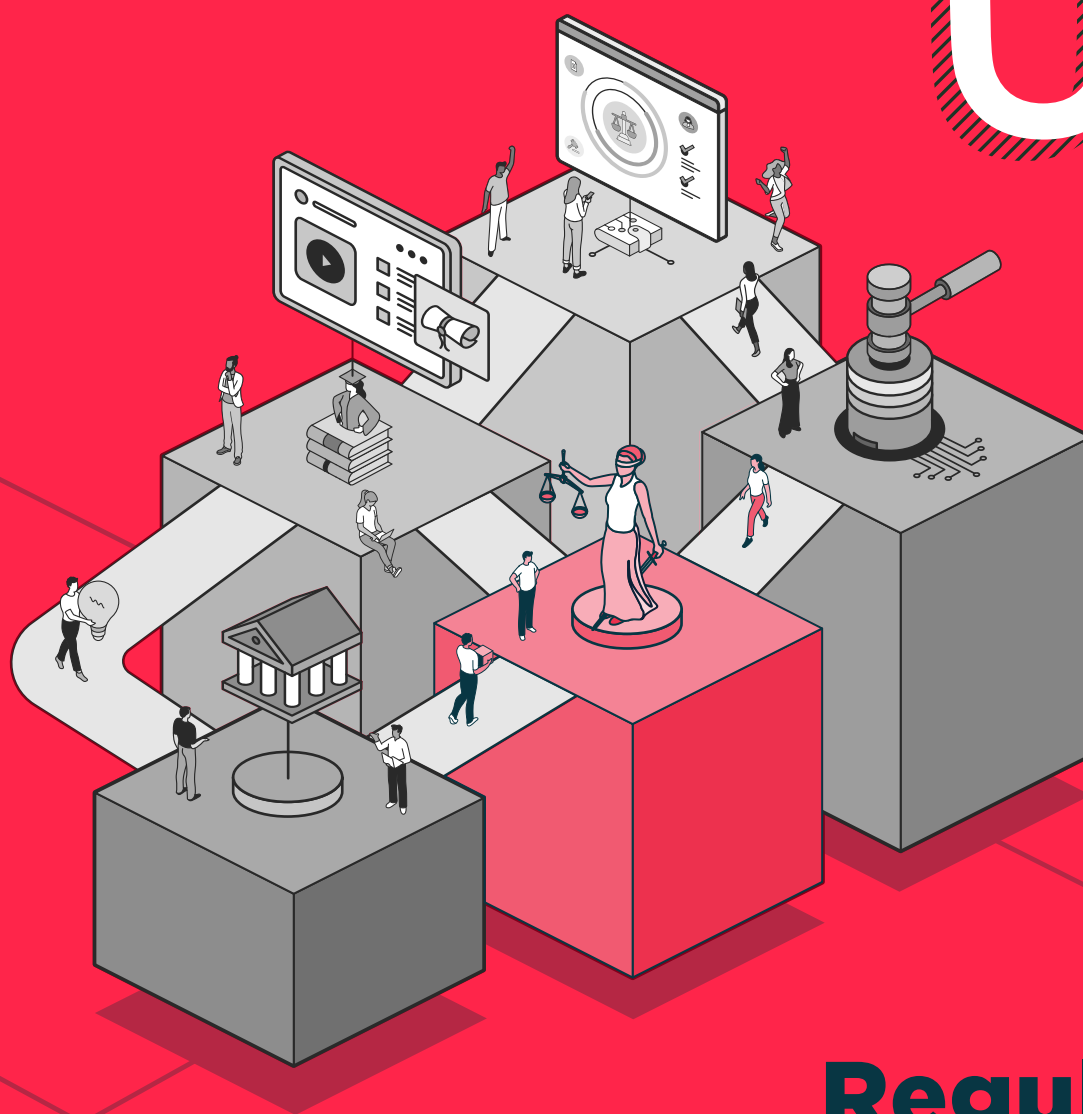
Regulatory framework
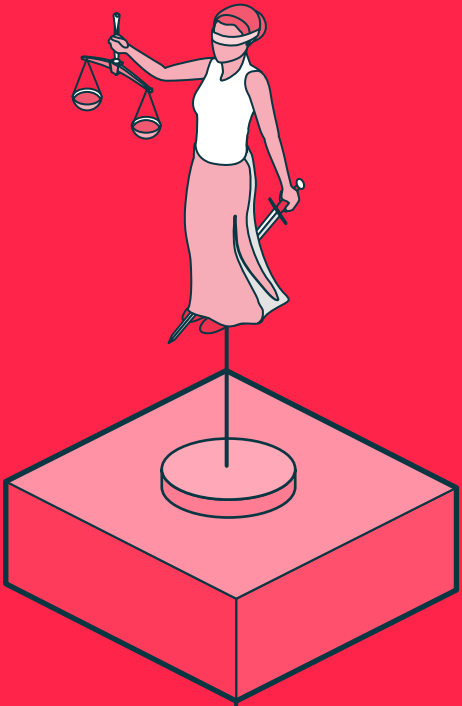
2.1 Specific regulations on electronic judicial administration

2.2 General regulations with an impact on electronic judicial administration

DIGITAL TRANSFORMATION OF JUSTICE IS A COMPREHENSIVE PROCESS THAT GOES BEYOND THE PURELY TECHNOLOGICAL ASPECT.

This process requires legal certainty while establishing a robust regulatory framework that defines the rights and obligations of ICT users within the Administration of Justice, including professionals, the Public Prosecutor's Office, citizens, and other related actors. In addition, the technical aspects of ICT should be regulated to ensure the security and interoperability of all systems and applications.

THE ICT REGULATORY FRAMEWORK INCLUDES LAWS, LOWER-LEVEL REGULATIONS SUCH AS SCHEMES AND GUIDELINES, AND MAY BE COMPLEMENTED BY AN ETHICAL FRAMEWORK. THE ICT REGULATIONS VARY FROM COUNTRY TO COUNTRY, BUT THEY ARE GENERALLY THE RESPONSIBILITY OF THE JUDICIARY[58]**, RATHER THAN THE ADMINISTRATION OF JUSTICE. HOWEVER, IN THE ABSENCE OF THIS GENERAL FRAMEWORK, THE ADMINISTRATION OF JUSTICE MAY CREATE A SPECIFIC LEGAL FRAMEWORK, CONSISTING OF A LAW ON THE USE OF ICT IN JUSTICE, INTEROPERABILITY AND SECURITY SCHEMES, TECHNICAL GUIDELINES, AND A CODE OF ETHICS.**

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58. Guía de Transformación Digital del Gobierno/Página 189/BID.

If a specific legal framework for ICT in justice is needed, it is important to consider the **distinct nature of the relationship between the Administration of Justice and citizens.** Unlike many other public services, justice services often involve direct interaction between citizens and judicial staff. Conversely, **in the Administration of Justice, citizens perform most acts and procedures through legal professionals, typically lawyers**. For this reason, it is vital for the developed regulatory framework to be integrative, encompassing all actors involved in the justice system within its regulations.

The regulatory framework of the Electronic Judicial Administration can be based on the **right of citizens to interact with the Administration of Justice electronically,** ensuring that all constitutional guarantees and relevant laws are upheld. This right, already recognized in legislation such as Spain's, according to Article 5.1 of Royal Decree-Law 6/2023, dated December 19,[59] serves as the regulatory foundation for the approval of related provisions. This right is also echoed in the Ibero-American Charter of Electronic Government, whose objectives include the definition of the right of citizens to interact electronically with their governments and public administrations[60]. Argentina is also aligning with this approach, as it is drafting a Law on electronic access for citizens to public and administrative services, whose Article 1.a recognizes citizens' right to such access[61].

In addition, it is crucial for this framework to regulate the actions of judges, magistrates, and other public employees within the judicial system, as well as the actions of members of the Public Prosecutor's Office. This ensures that their digital actions carry the same legal validity as in-person actions.

Standards will also be approved to establish a **technical framework that regulates the methodology and the process of developing and implementing technological systems and solutions,** in order to standardize these processes and guarantee technological neutrality and interoperability. Harmonizing and standardizing technical standards will ensure that solutions are interoperable, reusable, and sustainable.

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59. Royal Decree-law 6/2023/Official State Gazette of Spain.
60. Ibero-American Charter of Electronic Government.
61. Draft Law on citizens' electronic access to public services and administration.

In practical terms, it is important to recognize **that technology advances faster than the regulatory framework. Therefore, this factor must be considered when including articles that regulate technological aspects,** such as digital signatures or electronic communications, within laws. Such laws inherently involve a lengthy legislative modification process, posing a risk that the law will become obsolete before the corresponding technological solution is fully implemented and operational.

Given the evolving nature and the timing gap between regulations and technology, **it is important for the regulatory framework to be flexible. Technical standards must be easily adopted without requiring cumbersome regulatory reform processes, which could prevent the framework from keeping pace with swift technological advancements. However, it is essential for the regulation to ensure the right to due process, providing all necessary guarantees for the parties involved.** To prevent this from happening, a tiered regulatory framework can be established, distinguishing between standards that set a general ICT framework and those that address the technical aspects of technology, allowing for a more dynamic reform process.
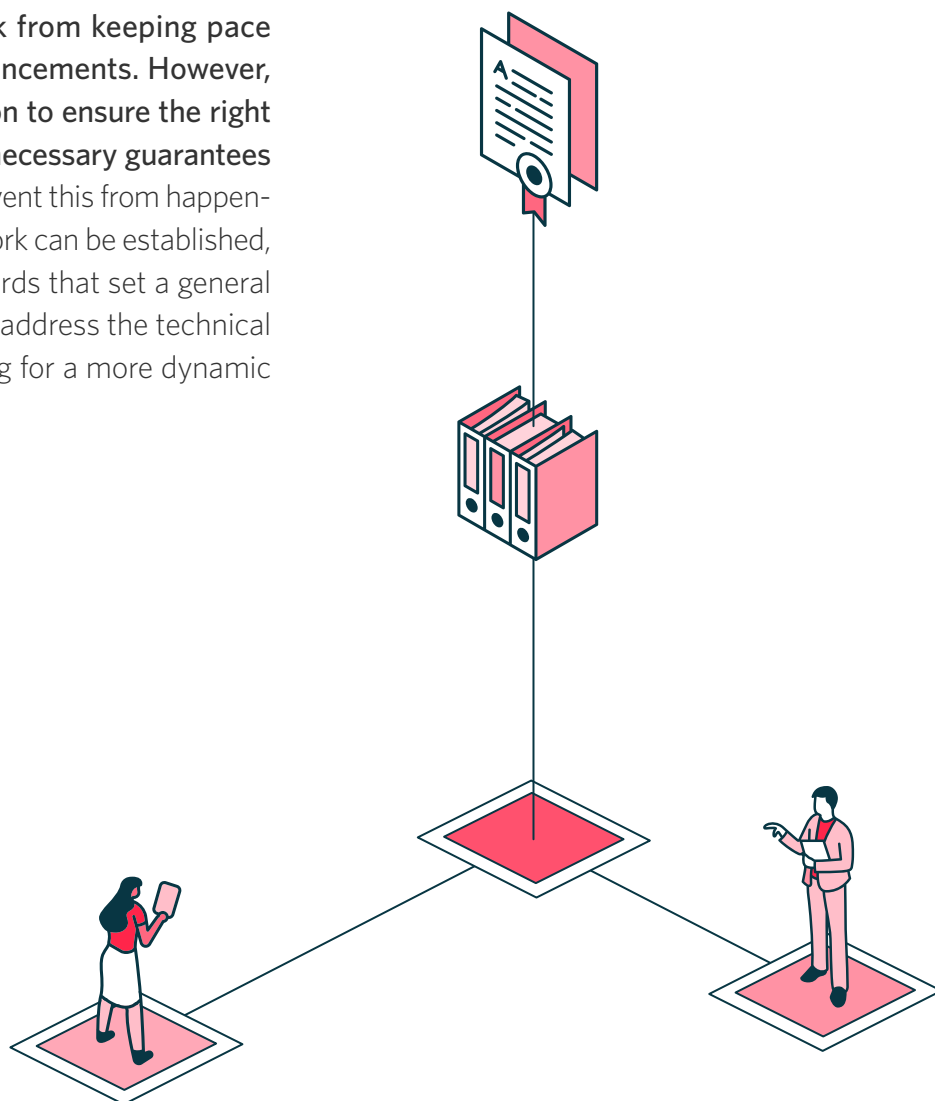
USER STORIES ABOUT THE REGULATORY FRAMEWORK:

Juan Carlos
Head of digital transformation in the green region.

Rafael
Head of digital transformation in the blue region.

Mar
Head of legal services in the blue region.

STORY: WE NEED TO TALK

Digital transformation of justice is underway in a federal state composed of several regions. Each region supports the Administration of Justice with its own principles and strategies. Over time, these varying strategies, investments, and uses of technology have given rise to a **situation where citizens, lawyers, or judges work and engage with the justice system differently depending on their region. Another serious challenge they face is the difficulty exchanging data and documents and providing judicial assistance across regions.** This results in a notable loss of efficiency in judicial actions and has been exploited by organized crime gangs, who benefit from the lack of communication among courts in different regions.

This situation has reached a critical point. Consequently, a committee of experts has been convened, **bringing together representatives from all regions. Their goal is to harmonize the functioning of the Administration of Justice in the 21 century.** To achieve this, a baseline of rights and duties must be established for all stakeholders engaged in judicial proceedings, including citizens, companies, lawyers, judges, prosecutors, forensic doctors, and actors. **This regulatory framework must ensure that all actors enjoy the same rights and obligations, regardless of their region.** In addition, another crucial issue must be addressed, such as the exchange of data and documents within the Administration of Justice and between the Administration and other government bodies and companies.

Juan Carlos and Rafael, both part of this working group, are used to frequent communication and collaboration. Given that their regions are neighboring, they often have to devise ad hoc solutions to tackle the challenges posed by certain legal proceedings. In this working group, both rely on their experience to approach tasks at hand. They must clearly and concretely define the rights and obligations of different actors involved in judicial proceedings. This approach will help prevent the issues at hand. For example, while lawyers have a system for digital document filing, there may be no legal mechanism to mandate its use. This results in documents being submitted through different channels and formats, significantly complicating the judicial body's workflow.

Rafael emphasizes the importance of addressing the fundamental issues such as data and document exchange across regions, which currently rely on out-dated methods such as transporting paper files in vans or sending CDs or hard drives by post. Rafael stresses that for effective communication, they need to speak the same language, which means having analogous mechanisms across regions and maintaining minimum safety standards.

Rafael's comment sparks an engaging debate, with numerous contributions from various participants. One of the most notable is that of Juan Carlos, which focuses on what seems like a trivial point: "speaking the same language". Rafael exposes profound issues when exchanging information among judicial actors in his region. He states: "If it's like this in my own region, I can't even begin to imagine the challenges if we communicated across regions." Specifically, **he highlights some of the following aspects:**

❯ **Digital identity.** In his region, some users do not have or want to have a digital identity, while others are overwhelmed by the multitude of ways to prove their identity. This generates quite a few challenges in authenti-cating, authorizing, and tracing various participants in the digital realm.

❯ On the other hand, **data exchange** involves aspects that must be agreed on, requiring intra- and extra-regional agreements to ensure effective data sharing. Both basic and technical aspects must be considered, for example: what data will be exchanged? in what format? under what scheme? The case number of the procedure has to be the same, unlike the current situation

where each region uses slightly different formats. Organizational aspects of these exchanges need to be reviewed. For instance, it is necessary to determine when judicial assistance is sent from one region to another, where it is directed, who receives it, and who is responsible for it. Rafael states that, without properly defining these parameters, all technical efforts will be wasted.

❯ Finally, exchanging data and documents is essential. However, when a **paper court file** arrives from another region, officials face the hurdle of manually inputting information into the system. For example, there is no unified criterion among regions to identify the stage of a judicial procedure, or sometimes there is data that is mandatory and necessary in one region but is not required in another. Officials responsible for the arduous task of uploading files to the system realize that their work is undervalued.

After Rafael's speech, a great stir arises as many participants for the first time realize the magnitude of the challenge. Following a short recess, the debate continues.

Finally, Juan Carlos takes the floor to present the conclusions he has drawn from this interesting debate, saying: **"We need regulations that force us to operate in a digital format.** This will involve a great deal of effort from different regions, as it will pressure us to prepare and implement new systems and mandate agreement on a unified language. However, it will also allow us to mandate the use of these systems and ensure a uniform approach. While this will be challenging, complex and costly, it seems to be the only way forward to ensure legal compliance and integration."

Juan Carlos' words are endorsed by all participants who propose that the conclusions and details of the debate be presented as expert recommendations. These recommendations will be assessed by Judiciary officials as they take the first steps toward enacting a law that regulates the use of ICT within the Administration of Justice, establishes common exchange and security schemes, and defines technical standards that facilitate said exchanges.

STORY: SETTING LIMITS

Rafael, back in his region after participating in the committee of experts, continued to ponder on the discussions and implications of the recently proposed initiative. Specifically, he reflected on the model that allows the Administration of Justice to interact digitally and what it would entail. Indeed, **the Administration of Justice will have extensive digital capabilities to know everything about everyone. In some respects, this could potentially compromise the rights of individuals or companies.**

To delve deeper, he called his management team to his office to discuss the extent to which they should use artificial intelligence for profiling defendants. He also inquired whether they could cross-reference the stored data of all citizens or companies to facilitate judicial investigations.

For a moment, his team was silent at such questions, until **Mar** spoke up and addressed Rafael bluntly: "No way, Rafael! What you propose, although it might seem beneficial for achieving better justice, goes against the law and ethics. We cannot use data from one judicial proceeding to investigate another, nor can we label someone based on their age, race, educational level, economic level, or similar criteria to establish precautionary measures." **Mar reminded Rafael that regulations regarding the protection of personal data must be adhered to**. She suggested that perhaps the law could be analyzed to see if any modifications were needed to allow the Administration of Justice to act in specific types of proceedings. However, she emphasized that the Administration of Justice must operate within the limits of the law.

Mar continued: **"It's important to follow the rules, but it's also critical to apply technology ethically**. We are at a pivotal moment in technological development, where we need to consider what we should do rather than what we can do. Developing systems that undermine key principles like equality, non-discrimination, or human dignity is fundamentally unfair. Allowing a machine to profile individuals essentially means letting it pass judgement. Where is human dignity and free will? Who monitors the development of such systems? How do we ensure that the power to classify people doesn't solely rest in the hands of programmers or an unintentional algorithm? Are we going to leave it to a data analyst to select data sources to train a system with these characteristics, considering the implicit biases that can arise? **We must make legal and ethical decisions regarding these new systems and assess them from a human perspective."**

Rafael and the rest of the team remained silent after Mar's intervention. A few moments later, Rafael spoke up again: "I think you have identified a good point, Mar. We need to reflect calmly and **analyze the implications of relying on technology and its impact on our region and country."**

Rafael wrapped up the meeting by instructing his team to consider forming and governing an ethics committee that would comprehensively assess solutions from an ethical perspective, moving beyond just opportunities and returns as they have done so far. The goal of this group is to identify diverse profiles that should participate, such as philosophers, technicians, legal experts, and others. This is crucial to ensure no details are overlooked. Mar interrupted Rafael: "Don't forget about protecting personal data." Rafael nodded and instructed Mar to work with the team to analyze the current state of information systems and to evaluate their compliance with **data protection regulations.**
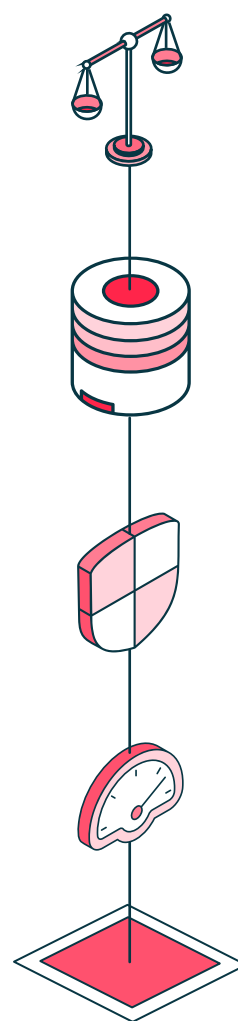
2.1
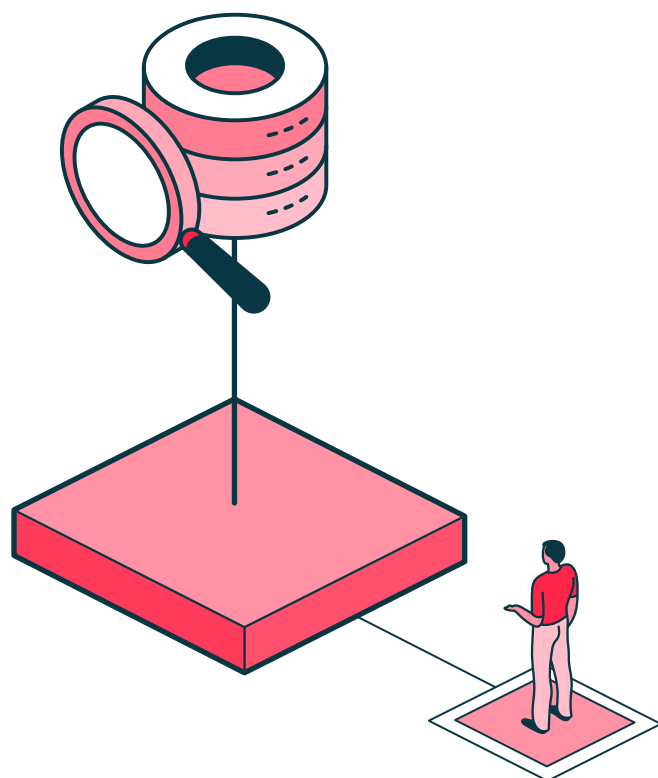
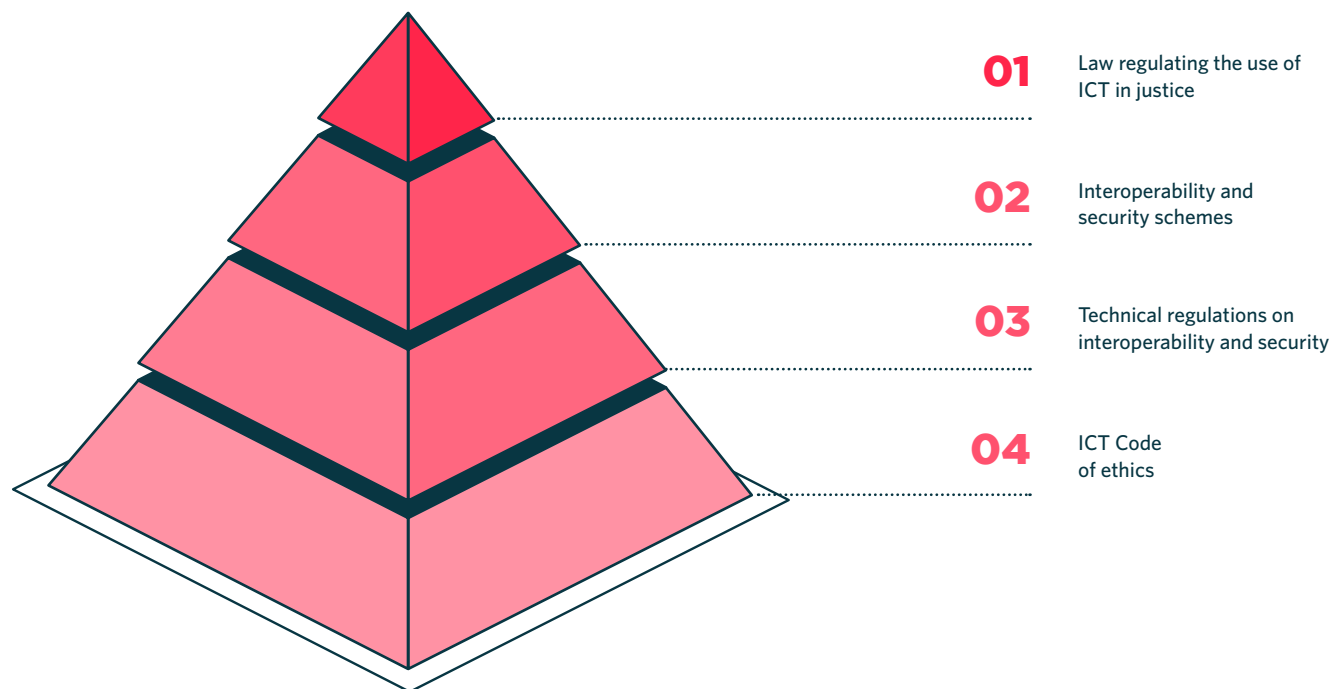# Specific regulations on electronic judicial administration

Creating specific regulations for Electronic Judicial Administration is necessary in countries where digital transformation of justice lacks a general legal framework for ICT applicable to all public administrations. In such cases, it is necessary to fill the regulatory gap with a set of **regulations that may have different hierarchical ranks, such as laws, decrees, or ministerial resolutions, depending on each country.**[62]

The regulatory model proposed here is based on a **four-level regulatory pyramid,** adaptable to the legal context of each country:

❯ At the first level, or the base of the pyramid, is the **ethical framework** that establishes basic ethical principles that must guide the entire digital transformation process.

❯ At the second level there are technical regulations, which include **Technical guides for interoperability and security, and Technical guides for application**. These standards develop the Interoperability and Security Schemes from a technical perspective.

❯ At the third level there is the **Interoperability and security scheme,** which regulates the general aspects of these areas, establishing common principles that ensure the interoperability and security of ICT systems.

❯ At the top of the pyramid is the **Law regulating the use of ICT in justice,** which mainly regulates the use of electronic means and the general legal framework of Electronic Judicial Administration.

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62. Government Digital Transformation Guide/Page 189/IDB.

01	Law regulating the use of ICT in justice
02	Interoperability and security schemes
03	Technical regulations on interoperability and security
04	ICT Code of ethics

2.1.1 LAW REGULATING THE USE OF ICT IN JUSTICE

The laws regulating ICT in justice can be **specific, created ad hoc to govern the Electronic Judicial Administration,** or they can be **general laws that oversee the Electronic Administration as a whole.** These provisions would apply to the General State Administration overall, including the Administration of Justice.

In addition, **there is the possibility of regulating ICT in justice through basic judicial and administrative regulations,** which encompass provisions that affect the Electronic Judicial Administration or the broader Electronic Administration. However, while amending basic judicial or administrative regulations may be more tedious in terms of legislative reform steps than creating ad hoc ICT legislation, integrating core legislation and digital legislation within the same body of law can enhance recipients' commitment to compliance with both sets of regulations. This approach could prove more effective than establishing a separate regulation for governing ICT.

The Law regulating the use of ICT in justice focuses specifically on regulations in Electronic Judicial Administration. It governs the technological systems of justice and their use and establishes the rights and obligations of stakeholders. **The main advantage of this approach is that it provides regulations tailored to the needs of Electronic Judicial Administration.**

INTERNATIONAL ICT REGULATION REFERENCES:

Chile: Law 21.180 on the Digital Transformation of the State provides a legal framework for Electronic Administration[63]. **Additionally, Law 20886 amends the Code of Civil Procedure to establish the digital processing of judicial proceedings**[64].

Spain: Spain had a specific legal framework regulating the Electronic Judicial Administration, through **Law 18/2011, enacted on July 5, which focused on the use of information and communication technologies in the Administration of Justice**[65]. However, this Law has been repealed and the ICT of justice is currently regulated by **Royal Decree-Law 6/2023, of December 19, which approves urgent measures for the implementation of the Recovery, Transformation and Resilience Plan in public service justice, civil service, local government and patronage**[66]. The previous Law 18/2011 serves as an important instructional and illustrative example in this Guide. It demonstrates how a specific law regulating ICT in justice can be structured to complement basic judicial or administrative regulations.

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63. Law 21.180 of digital transformation of the State/Government of Chile.
64. Chile Law - Law 20886 – Library of the National Congress (bcn.cl).
65. Law 18/2011/Official State Gazette of Spain.
66. Royal Decree-Law 6/2023/Official State Gazette of Spain.

Regardless of the type of regulation used, **it is important for this regulation to prioritize the rights of citizens in their relationship with justice.** To ensure that the digital transformation of justice does not negatively impact citizens' access to justice, it is advisable to focus efforts on preventing the **digital divide. This gap is evident in the greater difficulty that some social groups face in accessing the ICT necessary to interact digitally with the Administration of Justice.**

The problems caused by the digital divide have become more evident during the Covid-19 pandemic, as states were forced to digitize rapidly and unexpectedly. This urgency became even more crucial for the justice system, as access to this public service is a fundamental right enshrined in the constitutions of most democratic countries and in resolutions issued by international organizations such as the UN. **Resolution 67/1 of September 24, 2012, by the UN General Assembly stands out,**[67] as it reaffirms the goal of guaranteeing equal access to justice and expresses the commitment to adopting all necessary measures to achieve said goal.

To address this need, States have a two-pronged obligation regarding the digital transformation of justice. Firstly, they must not **prevent access to justice via electronic means and, secondly, they must develop an organizational and institutional structure that ensures all citizens can universally access justice digitally.**

Beyond the right to universal access to Digital Justice, **citizens also gain several other rights,** such as the right to obtain electronic copies of documents in the electronic judicial file of the processes they are part of, the right to know the status of proceedings through technological means, to have the Administration of Justice preserve electronic documents that form part of a file, to use identification and electronic signature systems, to ensure the security and confidentiality of data stored in the Administration of Justice systems and to choose the applications and systems for interacting with this Administration.

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67. Article/United Nations (UN).

With respect to **legal professionals,** it is advisable for the law to address both their **rights and obligations to interact with the Administration of Justice through electronic means. Spanish legislation aligns with this approach.** Article 6.1 of Royal Decree-Law 6/2023, dated December 19, explicitly grants professionals the right to interact with the justice system through digital means. Similarly, Article 6.3 of the said Royal Decree mandates that these professionals must use electronic means to interact with the justice system.[68] This implies recognizing the right to access and to know the status of the proceedings electronically, in which they are procedural representatives of the party involved. It also includes obtaining electronic copies of documents that are part of those proceedings. Conversely, the regulation also includes **the obligation for professionals to use electronic means** when interacting with this Administration. **To implement this legal obligation, one potential approach is to establish a transitional period from when the rule takes effect until the requirement to interact electronically with justice is fully enforced. This would allow professionals to have time to adapt to the new situation.**

With regard to the **Administration of Justice and the Public Prosecutor's Office, it is advisable that regulations mandate the use of the electronic means** available to them. Without this obligation, due to the entrenched culture of paper use in many administrations, users are unlikely to adopt ICT in justice without a rule enforcing their use.
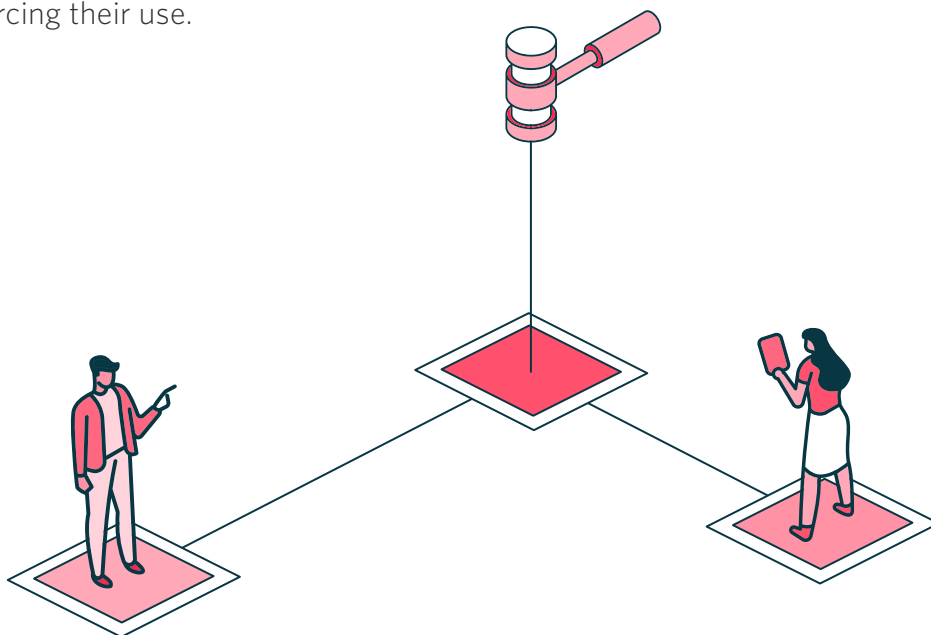
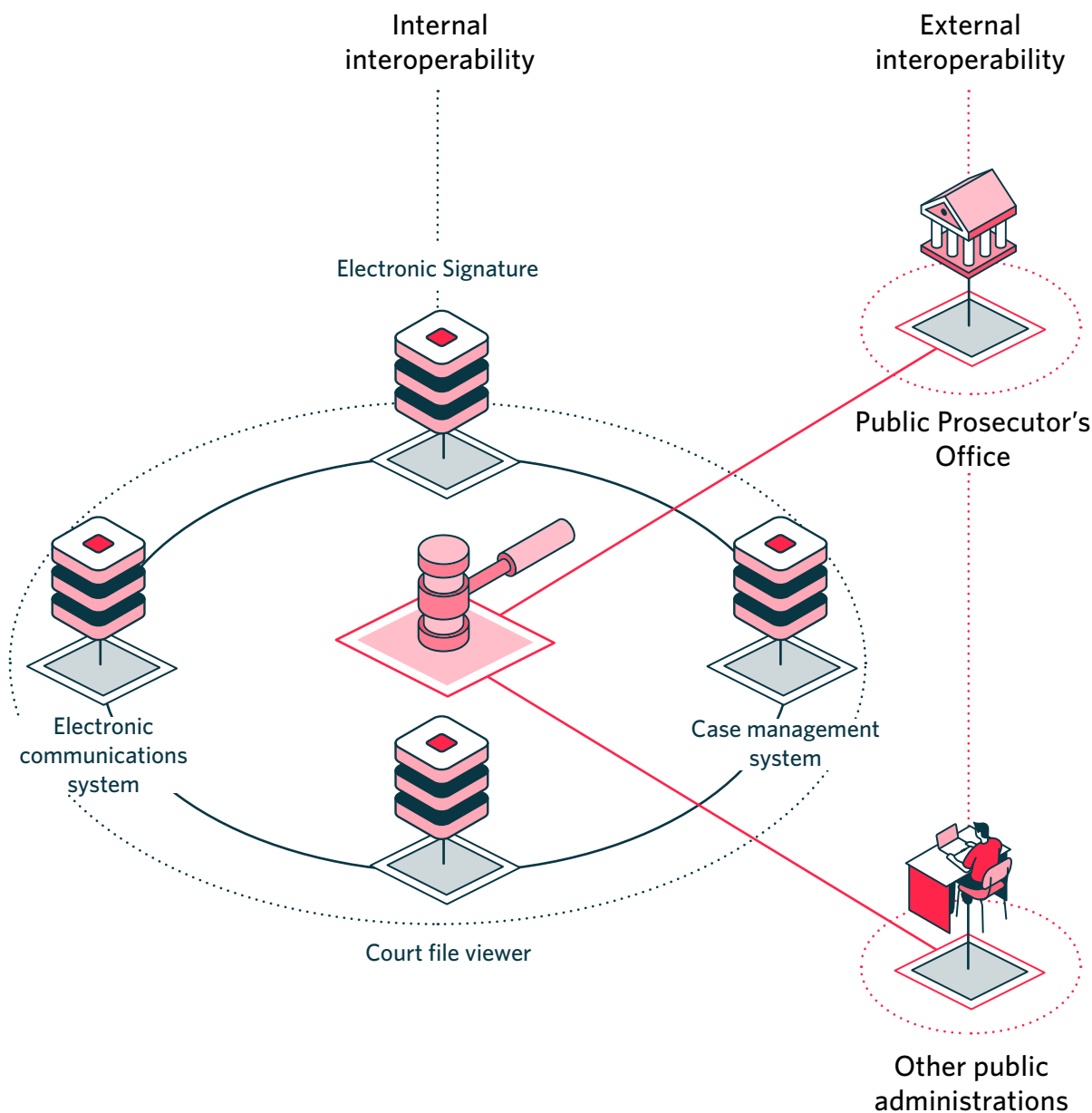68. Royal Decree-Law 6/2023/Official State Gazette of Spain.

2.1.2 INTEROPERABILITY AND SECURITY SCHEMES

Interoperability and cybersecurity are essential aspects of the digital transformation of justice and are inherently cross-cutting. **To ensure that ICT systems meet common quality standards, it is necessary to implement a specific regulatory framework addressing these areas. This framework must establish the principles and requirements for interoperability and cybersecurity** that the Administration of Justice and other public administrations will adhere to, ensuring that all systems can exchange information in an automated and secure manner.
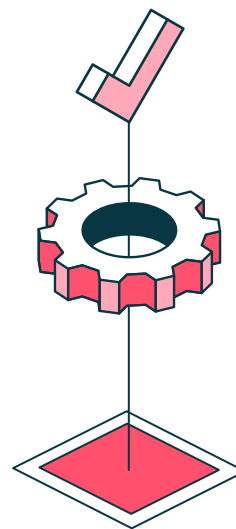
THIS REGULATORY FRAMEWORK FOR INTEROPERABILITY AND SECURITY IS BASED ON THE NOTION THAT **NO SINGLE SYSTEM OR MONOLITHIC INFRASTRUCTURE CURRENTLY EXISTS. INSTEAD, WITHIN THE SAME ADMINISTRATION, MULTIPLE INTERNAL SYSTEMS MUST INTEROPERATE SECURELY.** FOR INSTANCE, A CASE MANAGEMENT SYSTEM COMPRISES A NUMBER OF TECHNOLOGY MODULES THAT CONTINUOUSLY INTEROPERATE. IF THE ADMINISTRATION OF JUSTICE USES BOTH A CASE MANAGEMENT SYSTEM AND AN ELECTRONIC COURT FILE VIEWER, THESE SYSTEMS MUST INTEROPERATE DESPITE BEING PART OF THE SAME ADMINISTRATION. THEREFORE, **REGARDLESS OF WHETHER A COUNTRY'S DIGITAL TRANSFORMATION IS MANAGED AT THE LEVEL OF THE GENERAL STATE ADMINISTRATION WITH A SINGLE GOVERNING BODY OVERSEEING ICT OF ALL ADMINISTRATIONS, AN INTEROPERABILITY SCHEME AND A SECURITY SCHEME ARE NECESSARY TO GUARANTEE THE INTERNAL INTEROPERABILITY OF THE DIGITAL ECOSYSTEM AT THE REGULATORY LEVEL.**

The following image illustrates this issue:

Internal interoperability

External interoperability

Electronic Signature

Public Prosecutor's Office

Electronic communications system

Case management system

Court file viewer

Other public administrations

Considering the context mentioned earlier, the Interoperability Scheme and the Security Scheme are the pillars of the normative dimension of interoperability:

› **Interoperability scheme:** includes a set of norms and standards that promote system interoperability and information sharing between the ICT of the Administration of Justice internally and across various public administrations externally. Its main purpose is to ensure that government information systems are compatible, facilitating collaboration, efficiency, and high-quality service delivery to citizens and businesses.

This scheme can cover different aspects of interoperability:

- **General technical standards:** these include technical provisions and specifications that must be adhered to during the design and implementation of ICT.

- **Semantic interoperability:** standards for data representation and sharing are defined, ensuring that different systems can understand and use information consistently.

- **Information security:** data security and protection measures are established to guarantee confidentiality, integrity, and availability of information.

- **Service-Oriented Architecture (SOA):** promotes the adoption of service-oriented architecture, enabling applications and systems to offer and consume services in a standardized manner.

- **Access and authentication policy:** defines user and system authentication policies and mechanisms that enable secure access to government systems.

- **Identity management:** outlines how user identities are managed, ensuring both their integrity and authentication.

- **Document management:** defines how electronic documents are managed and archived.

- **Electronic data exchange:** establishes rules for the exchange of electronic data between public administrations.

> **Security scheme:** encompasses a set of information security regulations and guidelines applicable to ICT in the Administration of Justice and other public administrations. The primary objective of this scheme is to ensure the security of government entities' information systems, thereby safeguarding the confidentiality, integrity, and availability of data and technological infrastructure.

This scheme can address different aspects of information security:

- **Security policy:** defines general policies and guidelines for information security.

- **Security risk management:** establishes processes and procedures for identifying, assessing, and managing information security risks.

- **Identity and access management:** defines how user and system identities are managed and how access to systems and data is controlled.

- **Physical security:** includes measures to protect the physical infrastructure housing information systems, like data processing centers.

- **Network and communications security:** addresses network and communications security, including data encryption and protection against cyber threat protection.

- **Information systems security:** establishes guidelines to protect systems and applications, covering security patching and vulnerability management.

- **Security incident management:** defines processes for detecting, reporting, and responding to security incidents.

- **Security training and awareness:** promotes training and awareness of information security among the Administration's personnel.
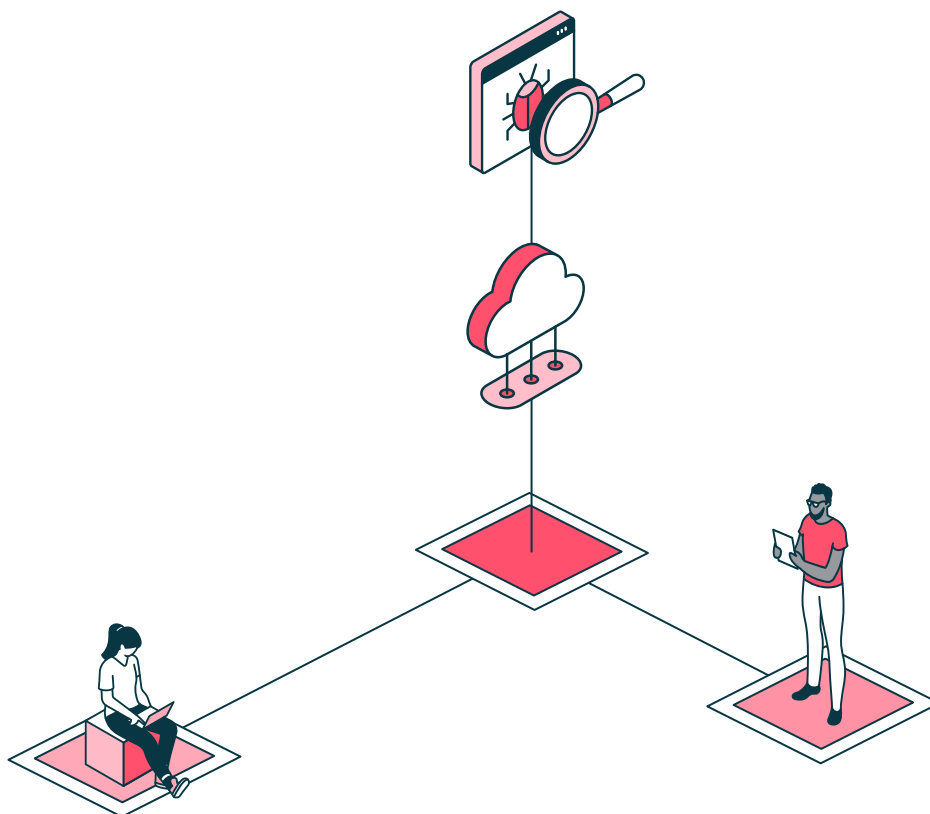
INTERNATIONAL REFERENCES FOR THE INTEROPERABILITY SCHEME AND THE SECURITY SCHEME:

Spain: this country has implemented a **National Interoperability Scheme**[69] and a **National Security Scheme**[70] that establish the principles and requirements for interoperability and security, which are mandatory for Spanish public administrations.

European Union: at the EU level, the exchange of criminal records data among member states has been facilitated through the ECRIS system[71]. This electronic system interconnects the criminal records databases of all EU member states, enabling a rapid, reliable, and easily transferable exchange of conviction information.

To develop the Interoperability and Security Schemes, it is of utmost importance to involve the heads of all public administrations to ensure the maximum consensus. In addition, it is essential for all administrations to feel involved in these documents, given their relevance in developing and implementing ICT. This involvement ensures they will comply with the standards established by the schemes. **To achieve this consensus, the governance body for digital transformation is essential as it serves as an instrument of cooperation, enabling the heads of different entities to participate and reach agreements for a joint drafting of the schemes.**

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69. National Interoperability/Electronic Administration Scheme of Spain.

70. National Security/Electronic Administration Scheme of Spain.

71. Exchange of information on criminal records between EU Member States/European Commission.

2.1.3   TECHNICAL REGULATIONS ON INTEROPERABILITY AND SECURITY

Based on the Interoperability and Security Schemes, which provide theoretical guidelines to ensure that the ICT of all public administrations can interoperate and remain secure, **it is essential to establish a technical regulatory layer. This layer would define the technological aspects of ICT interoperability and security in the judicial field. To address this need, Technical interoperability and security guides are developed.** These guides regulate the technical components required for the electronic judicial file, encompassing different electronic judicial documents within the file. They also cover other actions within the Administration of Justice, such as electronic signatures, digitization of documents, and copies of court documents.

Additionally, **Technical implementation guides are needed to provide specific guidance on applying the principles and standards set out in Technical interoperability and security guides. These guides facilitate interoperability between specific actors.** For example, when a court requests an expert medical report from the toxicology center.

Technical implementation guides provide examples, use cases, procedures, and best practices for applying Interoperability and security guides in scenarios that involve two-way exchanges between actors, such as between the courts and the Public Prosecutor's Office. Once the types of interchange have been analyzed, each one is matched with the corresponding Interoperability and security guides. Actors are identified, and specific interchanges are established. Additionally, the security measures to be applied in each interchange are analyzed. **It is highly recommended that the Technical application guides be clear enough for technicians to implement them without needing to understand the specific functionality or the business context.**
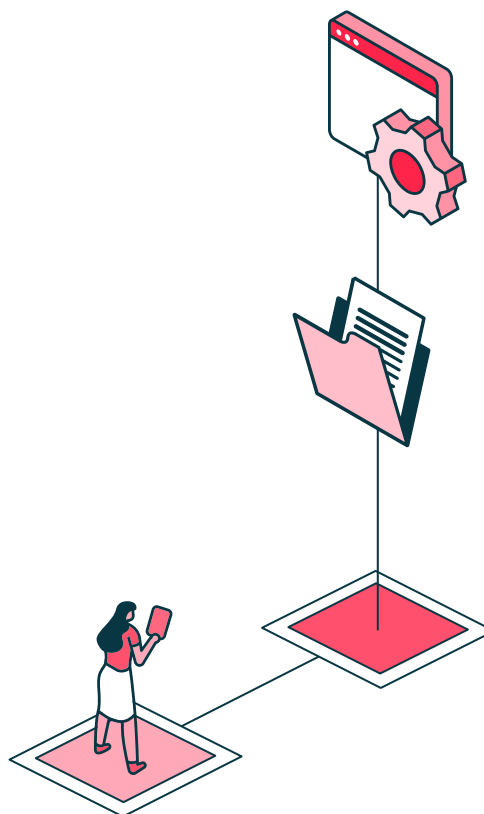
EXAMPLE OF HOW TECHNICAL INTEROPERABILITY AND SECURITY GUIDES AND TECHNICAL APPLICATION GUIDES WORK:
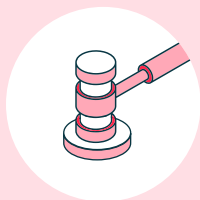
Criminal Court of
Country A.

Toxicology Center of
Country A.

The criminal court of Country A requests an expert medical report from the toxicology center regarding the injuries sustained by a citizen who was a victim of an injury crime currently being processed in this court.

The court issues an electronic resolution requesting a report, which is then sent to the toxicology center through the electronic communications system that links both institutions. **This electronic judicial document adheres to technical specifications outlined in the Technical interoperability and security guides, specifically the Technical guide of the electronic judicial document.**

However, the toxicology center has its own technical specifications for the content of the expert medical report that will be issued to the court. These specifications may differ from those set by justice regulations. When the judicial body receives the electronic expert file, it remains unaltered. Instead, another electronic judicial document is created to accompany it. Therefore, **Technical implementation guides are developed to ensure that the involved parties agree on how to execute the described communication. The electronic judicial file does not cover the specifications of this particular information exchange between the criminal court and the toxicology center.**

2.1.3.1 TECHNICAL INTEROPERABILITY AND SECURITY GUIDES

The main Technical interoperability and security guides are detailed below:

❯ **Authentication, certificates, and electronic signature guide:** establishes guidelines for managing electronic signatures in the field of justice. This guide covers the basic concepts, such as the authenticity of electronic judicial documents and the use of a digital identity system for secure and reliable participant identification and authentication.

❯ **Electronic court document guide:** details all the components that electronic court documents and other documents incorporated into the electronic court file must include, as well as the technical structure and format to facilitate their exchange.

❯ **Guide to the electronic judicial file:** establishes the structure and technical format of the electronic court file, as well as the specifications for referral services and their availability.

❯ **Certified documents' digitization guide:** establishes the requirements that must be met by users of the Administration of Justice when digitizing documents in paper or other non-electronic formats. This guide ensures that digitized documents, processed through photoelectric means, maintain their authenticity.

❯ **Authentic copying and conversion guide:** provides technical guidelines for generating both electronic copies and paper copies of electronic court documents as well as for converting the format of these documents.

❯ **Standards catalog guide:** establishes common standards for all public administrations concerning the design, implementation, and availability of electronic documents, files, and digital services. It also covers interaction with third-party organizations.

❯ **Declaration of compliance guide:** institutions use this guide to declare their compliance with interoperability and security regulations, which will later be certified by the appropriate body through the Certification Guide.
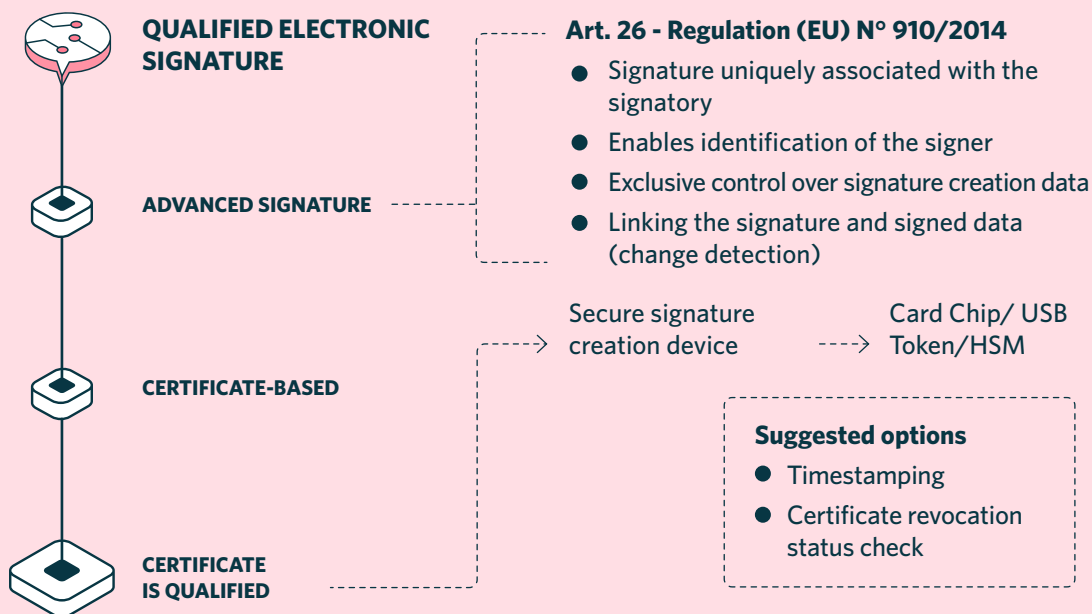
INTERNATIONAL REFERENCES OF TECHNICAL INTEROPERABILITY AND SECURITY GUIDES:

Spain: this country has developed its own Interoperability and Security Guides[72], mentioned above and approved within the framework of the CTEAJE. Here are excerpts of their content to illustrate how they function:
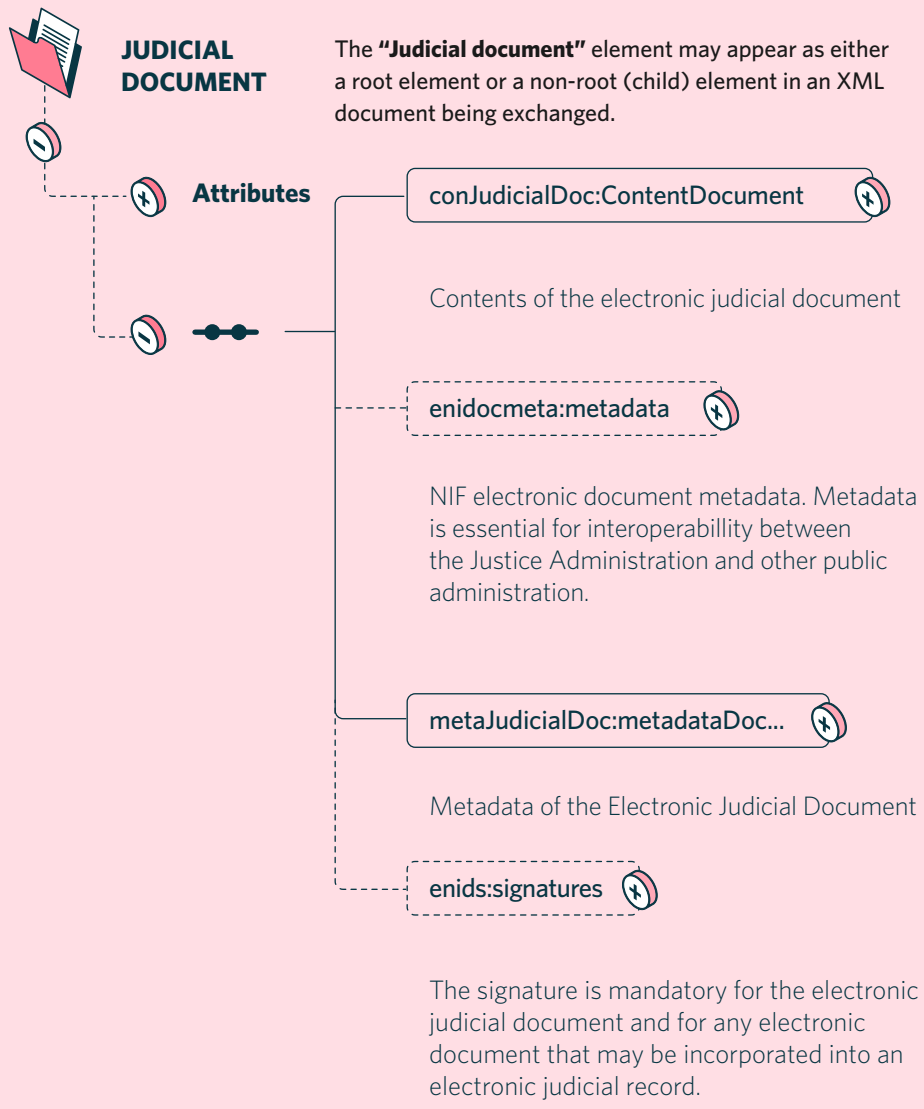
The diagram of the types of electronic signatures in the Authentication, Certificates, and Electronic Signature Guide:[73]

QUALIFIED ELECTRONIC SIGNATURE

ADVANCED SIGNATURE

Art. 26 - Regulation (EU) N° 910/2014
- Signature uniquely associated with the signatory
- Enables identification of the signer
- Exclusive control over signature creation data
- Linking the signature and signed data (change detection)

CERTIFICATE-BASED

Secure signature creation device ---> Card Chip/ USB Token/HSM

CERTIFICATE IS QUALIFIED

Suggested options
- Timestamping
- Certificate revocation status check

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72. Interoperability and Security Guides/Ministry of Justice of Spain.

73. Guide to authentication, certificates and electronic signatures/page 34/Ministry of Justice of Spain.

The diagram of the content of a court document from the Electronic court document guide[74]:

JUDICIAL DOCUMENT

The **"Judicial document"** element may appear as either a root element or a non-root (child) element in an XML document being exchanged.

Attributes

conJudicialDoc:ContentDocument

Contents of the electronic judicial document

enidocmeta:metadata

NIF electronic document metadata. Metadata is essential for interoperabillity between the Justice Administration and other public administration.

metaJudicialDoc:metadataDoc...

Metadata of the Electronic Judicial Document

enids:signatures

The signature is mandatory for the electronic judicial document and for any electronic document that may be incorporated into an electronic judicial record.

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74. Guide to electronic court document/page 22/Ministry of Justice of Spain.

2.1.3.2 TECHNICAL IMPLEMENTATION GUIDES

Technical implementation guides seek to provide specific guidance on applying the principles and standards outlined in Technical interoperability and security guides. They complement the above guidelines by offering practical details on implementing technical standards and security guidelines tailored to specific use cases.

These Guides facilitate **the exchange of information between different actors within each country's justice ecosystem. Consequently, each justice system, considering its unique situations, has different Technical implementation guides tailored to the specific data exchange needs of each country, addressing specific use cases.**

For instance, if a court needs to send an electronic judicial file to the Public Prosecutor's Office during a judicial proceeding, the latter must incorporate this file into its information system. Each file has unique characteristics and metadata that might differ from those of the electronic fiscal file. To facilitate this exchange between the two parties, the Technical implementation guide defines how to implement the Technical interoperability and security guides in this specific context. In this case, it is the transfer of the electronic judicial file between the Administration of Justice and the Public Prosecutor's Office.

However, each country may develop its own Technical application guides to address specific use cases. Below are some of the main Technical application guides:

❯ **Technical implementation guide between the courts and the Public Prosecutor's Office**: outlines how to apply the principles and standards of the Interoperability and security guides to ensure interoperability between the courts and the Public Prosecutor's Office.

❯ **Technical implementation guide between the courts/ Public Prosecutor's Office and justice professionals**: outlines how to apply the principles and standards of the Interoperability and security guides to ensure interoperability between the courts or the Public Prosecutor's Office, on the one hand, and legal professionals, especially lawyers, on the other.

❯ **Technical implementation guide between the courts/ Public Prosecutor's Office and penitentiary institutions**: establishes how to apply the principles and standards of the Interoperability and security guides to ensure interoperability between the courts or the Public Prosecutor's Office, on the one hand, and penitentiary institutions, on the other.

❯ **Technical implementation guides between the courts/ Public Prosecutor's Office and police forces**: outlines how to apply the principles and standards of the Interoperability and security guides to ensure interoperability between the courts or the Public Prosecutor's Office, on the one hand, and police forces, on the other.

❯ **Technical implementation guide between the courts/ Public Prosecutor's Office and hospitals**: outlines how to apply the principles and standards of the Interoperability and security guides to ensure interoperability between the courts or the Public Prosecutor's Office, on the one hand, and hospitals, on the other.

❯ **Technical implementation guides between the courts/ Public Prosecutor's Office and the toxicology center**: outlines how to apply the principles and standards of the Technical interoperability and security guides to ensure interoperability between the courts or the Public Prosecutor's Office, on the one hand, and the toxicology center, on the other.

❯ **Technical implementation guide between the courts/ Public Prosecutor's Office and banking institutions:** outlines how to apply the principles and standards of the Interoperability and security guides to ensure interoperability between the courts or the Public Prosecutor's Office, on the one hand, and banking institutions, on the other.

2.2
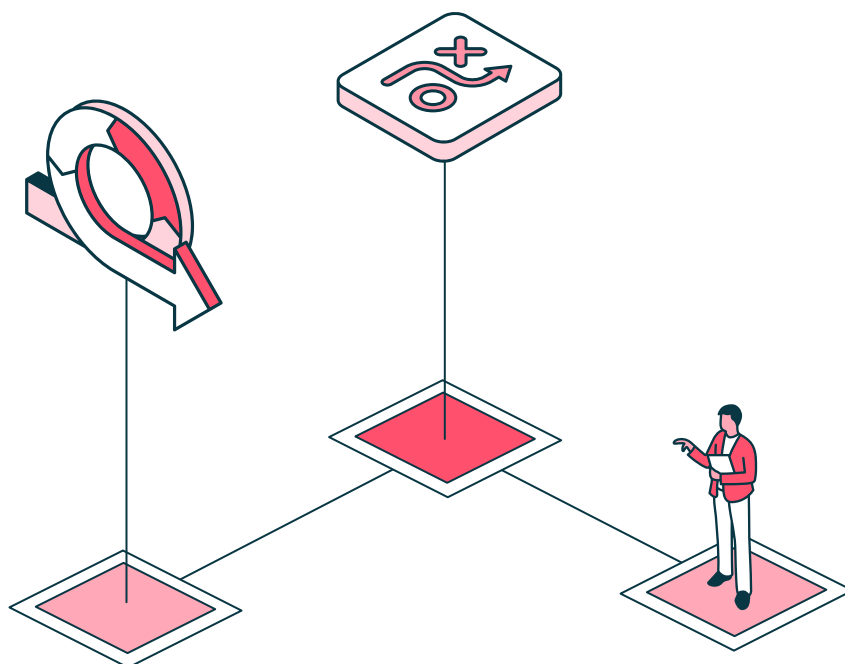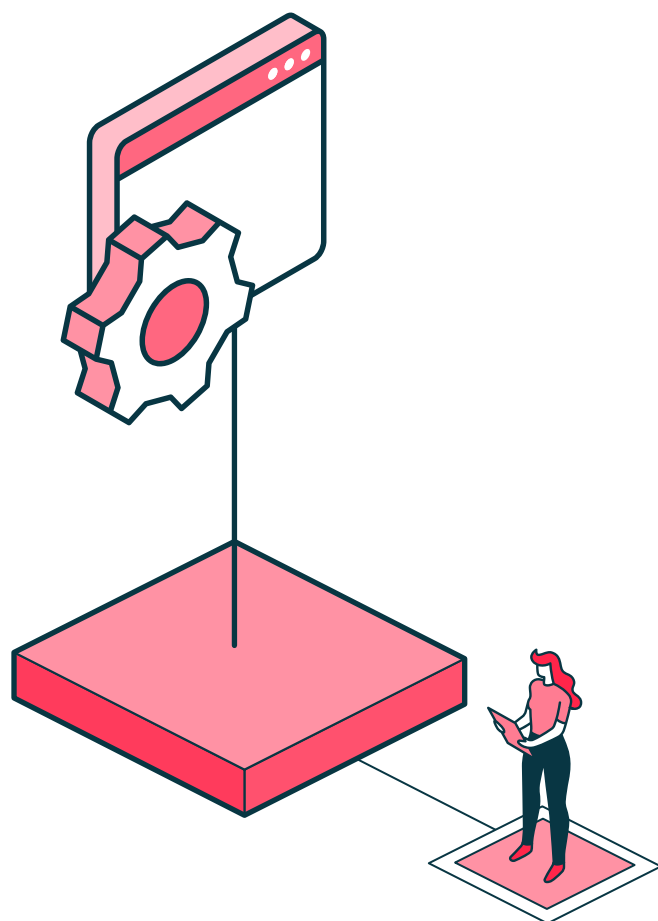
General regulations with an impact on electronic judicial administration

Beyond the specific regulations for Electronic Judicial Administration, several **general regulations strongly influence the digital transformation of justice**. These include the Personal Data Protection Law, the Electronic Trust Services Law and the ICT Code of ethics, even though they are not explicitly intended to regulate this process.

WHEN ESTABLISHING THE REGULATORY FRAMEWORK FOR ICT IN JUSTICE, IT IS ADVISABLE **FIRST TO VERIFY WHETHER THE GENERAL REGULATORY FRAMEWORK MENTIONED ABOVE IS ALREADY IN PLACE. IF IT DOES NOT EXIST, IT WILL BE NECESSARY TO CREATE SPECIFIC REGULATIONS APPLICABLE TO THE ELECTRONIC JUDICIAL ADMINISTRATION TO ADDRESS THIS REGULATORY GAP.**

For instance, if a country lacks a Personal Data Protection Law that specifies the conditions under which the governing body of digital transformation can process data for non-jurisdictional purposes, such as system development and training, this gap must be addressed. This can be done by either creating a specific regulation for the Administration of Justice or by adding a new article in the Law regulating the use of ICT in justice.
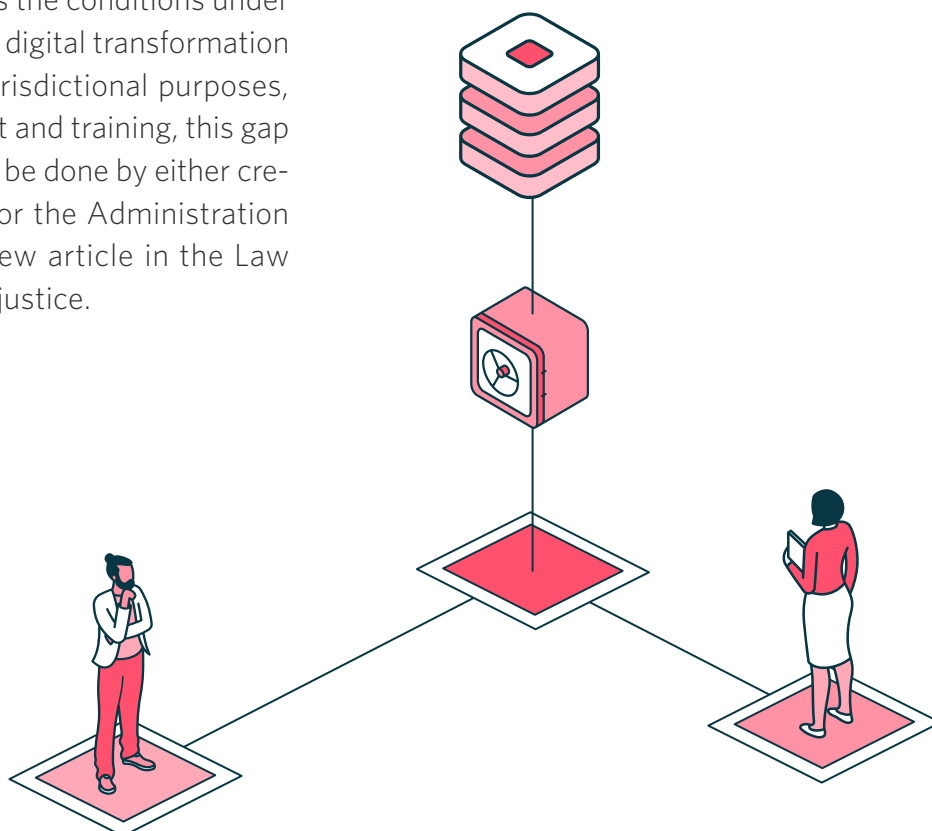
2.2.1 PERSONAL DATA PROTECTION LAW

It is important that the specific regulatory framework of Electronic Judicial Administration aligns with each country's Personal Data Protection Law, since all aspects of digital transformation of justice from data governance to the routine activities of judicial bodies require personal data processing. This is because the information that is processed on a daily basis contains ample sensitive data, such as identities, addresses, health information, and more.

Based on the regulations of the Personal Data Protection Law, it is recommended to establish which bodies hold the status of **data controllers** within the Administration of Justice. These bodies will be responsible for determining the purposes and means of data processing and will act as **data processors**, meaning they are the entities that process personal data through the data controller.

In addition, while processing personal data, the Administration of Justice and the governing body of digital transformation must adhere to the principles of processing, such as lawfulness, transparency, fairness, data minimization, and accuracy, among others.

The **cases of fair processing (legitimate bases for processing)** significantly impact personal data management in the field of justice. In other words, it is related to the **specific circumstances under which the Administration of Justice and the governing body of digital transformation can process personal data.** Typically, the cases involve **processing data to fulfil a legal obligation** or when a judicial body processes data as part of its judicial activities. The second case is when processing is necessary to serve a public interest. For example, this happens when the governing body of digital transformation implements a data governance system, processing personal data to enhance the public service of justice.
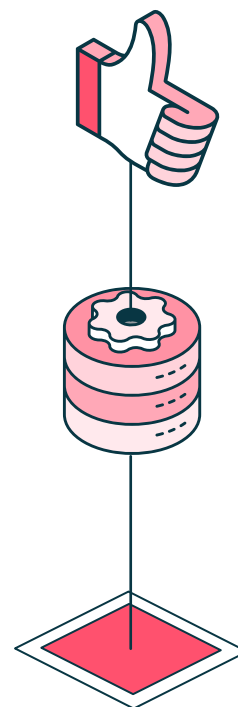
INTERNATIONAL REFERENCES FOR PERSONAL DATA PROTECTION REGULATIONS:

European Union: Regulation (EU) 2016/679[75] common to all EU states was approved, which establishes a robust legal framework for the protection of personal data. This regulation addresses aspects that impact the Administration of Justice, including data processing to fulfil a legal obligation or a mission of public interest. **These situations justify data processing within technological initiatives that require its use under the mission of public interest.** This example is shown in Articles 45 and 50 of the regulation.

Argentina: Law 25,326 on the protection of personal data was approved in Argentina.[76]

Costa Rica: this country has approved Law **No. 8968 on the Protection of the Person against the Processing of their Personal Data.**[77]

Brasil: this country has approved the **Lei Geral de Proteção de Dados Pessoais (LGPD) – LEI Nº 13.709, on August 14, 2018.**[78]

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75. Regulation (EU) 2016/679/European Union (EU).

76. Law 25.326/Government of Argentina.

77. Law Nº 8968/Costa Rican Legal Information System.

78. LEI Nº 13.709/Government of Brazil.

2.2.2 ELECTRONIC TRUST SERVICES LAW

The Electronic trust services law is a general legal framework established by each state. Although it has a broad scope, impacting both Digital Administration and the private sector in areas like e-commerce, **it also has great importance in Digital Justice. This is because it establishes a regulatory framework that digital identity and electronic signature systems used by actors of the justice system must adhere to.**

This law typically regulates certain common aspects:

❯ **Types of electronic signatures are** determined, which include the simple electronic signature, the advanced electronic signature, and the qualified electronic signature. Each type has specific technical and legal requirements to ensure their validity and reliability.

❯ The law regulates **electronic certification service providers** that issue digital certificates to verify the authenticity of electronic signatures, and the identity of parties involved in electronic transactions.

❯ Guidelines and regulations are established to **ensure the security and confidentiality of data** and information transmitted and stored electronically.

❯ Legal validity of electronic documents is affirmed, ensuring their equivalence with paper documents.

❯ The law outlines **the responsibilities and obligations of all parties involved** in electronic transactions, including certification service providers and users of electronic services.

Based on the general regulation presented by the Electronic Trust Services Law, the impact of this regulation on the digital transformation of justice is analyzed:

❯ **Advanced and qualified electronic signature:** the Law regulates advanced and qualified electronic signatures, which implies that the ICT used in the field of justice must be compatible with these types of signatures. This enables the submission of electronic documents and evidence in court proceedings, eliminating the need for paper documents.

❯ **Electronic certification services:** the Law regulates digital identity certification services, including the issuance of qualified certificates to validate the identity and authenticity of the parties involved in judicial processes. This is essential for ensuring the security and reliability of documents and information presented in court.

❯ **Access and secure communication platforms:** the Law promotes the use of secure platforms and electronic communication systems to present documents and evidence. This includes case management systems, virtual courtrooms, and other digital environments that facilitate online communication and the presentation of evidence. Therefore, these solutions must be compatible with digital identity and electronic signature systems. For example, to access the case management system, public employees must log into the system or, in the case of virtual hearings, the judge digitally signs recordings of virtual hearings.

INTERNATIONAL REFERENCES OF ELECTRONIC TRUST SERVICES REGULATIONS:

European Union: the Regulation approved by the European Union, commonly known as **eIDAS (Regulation (EU) No. 910/2014) serves as a framework**[79] **that governs digital identity and electronic signatures across all EU member states.** To achieve this, it sets standards and norms for simple electronic signatures, advanced electronic signatures, and qualified electronic signatures, and governs the issuance of qualified certificates and online trust services. Additionally, it regulates electronic transactions and their management. At the time of preparing this guide, changes to the eIDAS Regulation **(Regulation (EU) No. 910/2014) are being released, amending it to establish the European Digital Identity Framework.**

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79. Regulation (EU) No. 910/2014/European Union (EU).

2.2.3 ICT CODE OF ETHICS

THE ICT CODE OF ETHICS COMPRISES A SET OF ETHICAL PRINCIPLES, STANDARDS, AND GUIDELINES THAT REGULATE THE BEHAVIOR AND CONDUCT OF INDIVIDUALS IN THE ICT FIELD. ITS MAIN OBJECTIVE IS TO **PROMOTE ETHICAL AND RESPONSIBLE PRACTICES IN THE DESIGN, DEVELOPMENT, IMPLEMENTATION, AND USE OF INFORMATION TECHNOLOGIES.**

History underscores the importance of an ethical regulatory framework that supports human progress. Take the industrial revolution, for example. Despite technological advancements, it generated significant situations of inequality and poverty, with technological and social progress advancing at mismatched paces.

It is crucial for the ICT Code of ethics to align with humanistic values, respecting fundamental human rights within a democratic framework and the rule of law. Some **general ethical principles** that this Code might include are:

› Fundamental rights as the basis for reliable ICT.

› Respect for human dignity.

› Individual freedom.

› Respect for democracy, justice, and the rule of law.

› Equality, non-discrimination, and solidarity.

› Citizens' rights.

Taking as a starting point the general ethical principles set out above, the Code of ethics can explore specific ethical concepts directly related to the development, implementation, and usability of ICT:

› When developing ICT and deciding on the technological components to be used, it is crucial to consider their **impact on sustainability. In this regard, promoting the reuse of technological**

infrastructures and resources, as well as reducing the use of economic and personal resources are highly relevant.** In this context, the interoperability of systems plays an essential role for ensuring the sustainability of technology.

❯ In relation to inclusive implementation and usability of ICT, it is advisable to adopt an **inclusive approach, ensuring equal access and usage across all social groups**. This approach helps bridge the **digital divide** by ensuring that all social groups have equal access to technology, regardless of economic resources, knowledge, or other barriers. This ensures that technological advancements benefit everyone equally.

❯ Once ICT have been implemented, their regulation should align with the **principle of balanced allocation of rights and obligations**. This should be based on the technological capabilities and maturity of both the Administration of Justice and other actors that interact with it, ensuring a clear assignment of rights and obligations. Otherwise, there could be regulations imposing obligations on citizens beyond their capacity to fulfill. For instance, citizens without access to basic technology might be compelled to interact with the justice system digitally, which could be highly challenging for them.

The ethical principles and components detailed above should be reflected in **concrete requirements to make ICT in justice ethically reliable:**

❯ **Human action and oversight:** Justice ICT support the autonomy and decision making of individuals who supervise these technological systems.

❯ **Transparency:** technology behind any system must be explainable, adhering to the principle of transparency. This includes transparency of data, the system and models that are part of the technological solution.

❯ **Technical soundness and safety:** technological systems should be developed with a risk-preventive approach to ensure they behave as expected and minimize unintended and unforeseen damage.

❯ **Privacy and data management:** privacy is a fundamental right that must be safeguarded by preventing harm and ensuring the integrity, authenticity, and relevance of data.

❯ **Diversity, non-discrimination and equality:** Justice ICT must incorporate models and developments that respect the diverse nature of society and prevent any form of discrimination. In addition, equal access to technology must be guaranteed for everyone.

❯ **Social and environmental well-being:** social welfare and environmental protection must be integral throughout the entire life cycle of justice ICT. This measure is closely related to the principle of efficiency.

❯ **Accountability:** individuals should oversee technology and be accountable for its outcomes.

To ensure the above requirements are met, various **technical and non-technical methods can be implemented:**
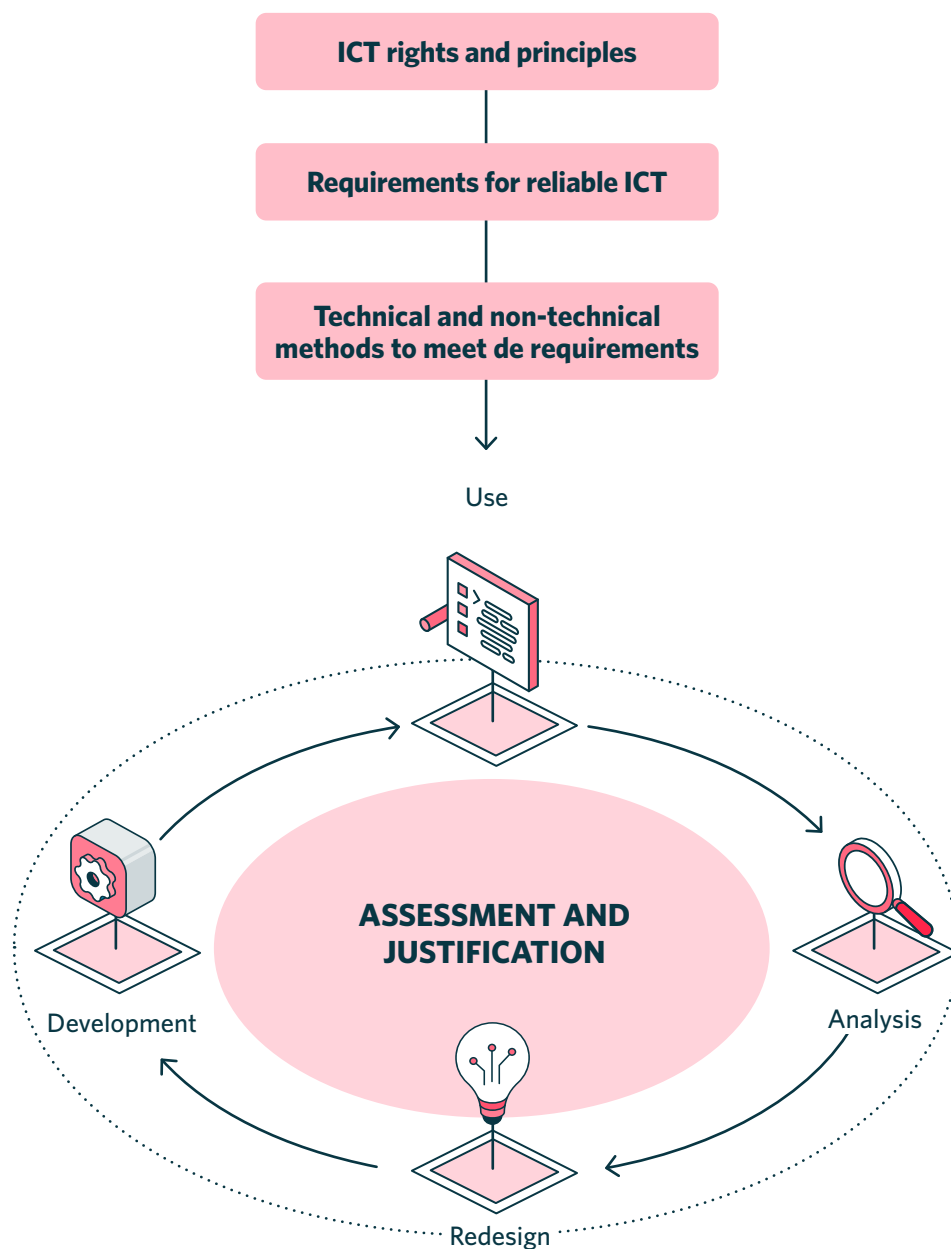
With regard to **technical methods,** ensuring compliance with the requirements involves implementing architectures for reliable ICT. These include **incorporating procedures (or imposing restrictions on them), within the ICT architecture.** This involves creating a compendium of regulations integrated into a whitelist, specifying behaviors that ICT must always adhere to. Additionally, a blacklist outlines behaviors that a technological system must never exhibit.

Another technical method is known as **ethics and the rule of law by design.** Under this approach, ICT systems are designed to comply with the rights, principles, and requirements listed above. Therefore, **these ethical concepts are integrated into ICT design.**

Tests and **system validations** can also be conducted to observe how ICT systems behave in a test environment and to validate their functionality before their effective implementation.

Another method relies on **service quality indicators,** which allow monitoring whether the ICT system's service is adequate and if it complies with the Code of ethics requirements.

In addition, there are several **non-technical methods** that can be implemented. These include the Codes of conduct applicable to members of the organization where technological justice systems are developed and implemented, ensuring accountability of the governing body of digital transformation to make sure the developed systems comply with ethical requirements, implementing training and awareness programs designed to promote an ethical mindset and obtaining certifications granted by expert organizations to validate that the ICT systems of justice adhere to the required ethical framework.
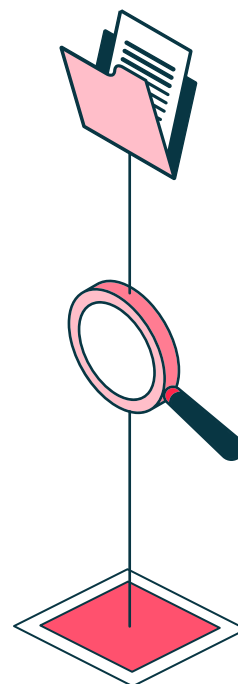
INTERNATIONAL CODE OF ETHICS REFERENCES:

United Kingdom: the **Data ethics and AI guidance**[80] developed by the UK government serves as a valuable reference framework for creating a Code of Ethics. This guide provides an ethical framework for the use of data and AI in the public sector.

Chile: another relevant framework is **the Guide for the Ethical Formulation of Data Science Projects developed by the Chilean government.**[81] **It establishes an ethical framework for developing and implementing ICT systems to support decision making based on AI and Big Data.** Its purpose is to prevent the creation of discriminatory biases, misuse of personal data, or any other actions that could infringe on individuals' rights.

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80. Data ethics and AI guidance/UK Government.

81. Guide to the Ethical Formulation of Data Science/Digital Government Projects in Chile.
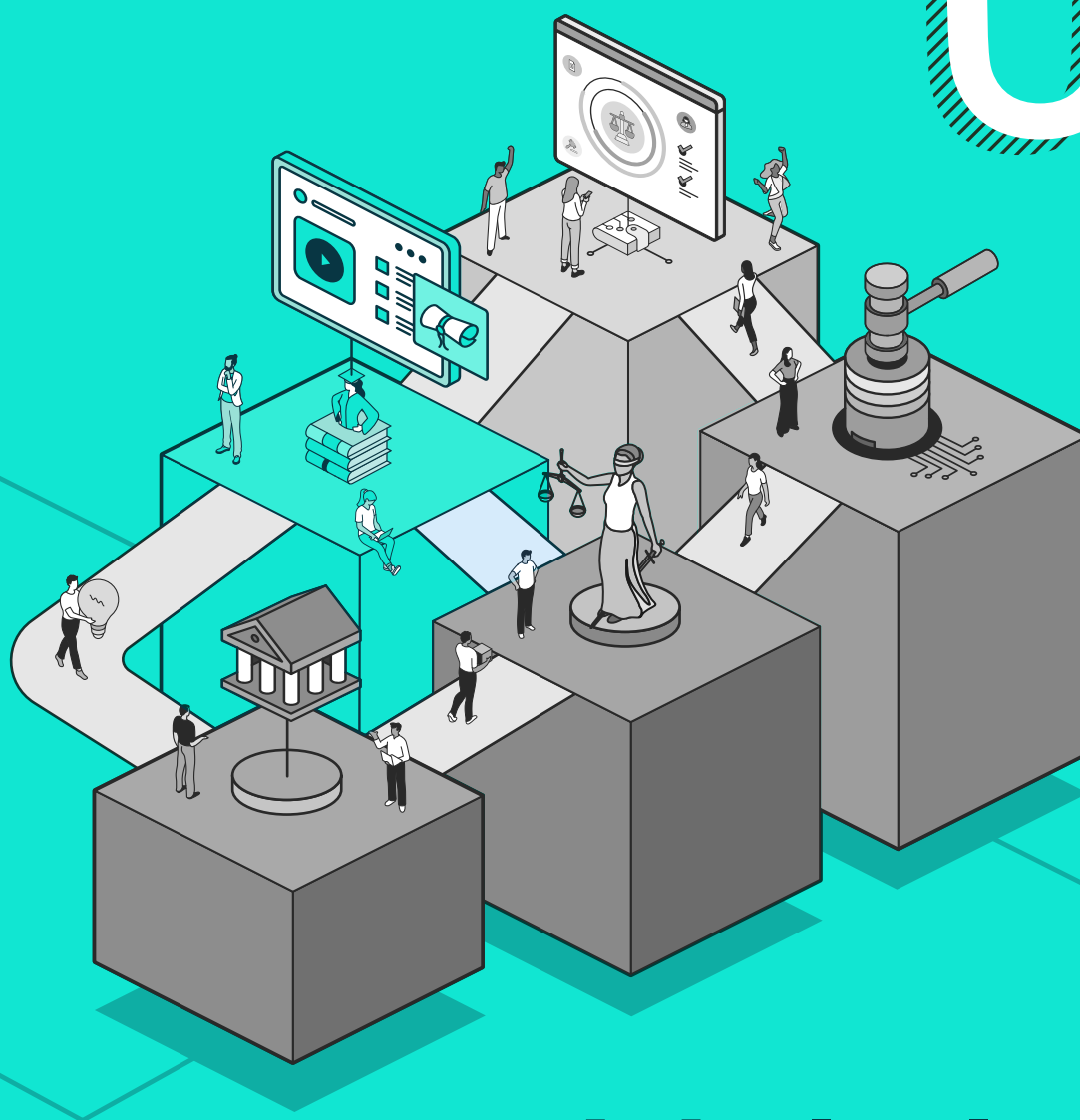
Digital talent and change management
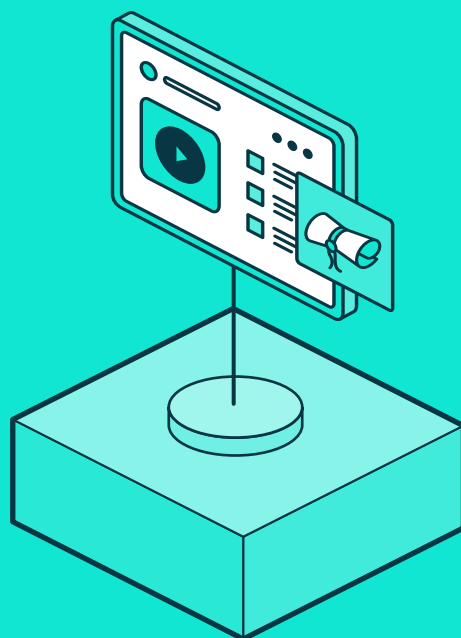
3.1 Intrajudicial change management plan

3.2 Plan of collaboration with judicial academies and the Public Prosecutor's Office, professional associations and universities

3.3 Training and awareness plan for society
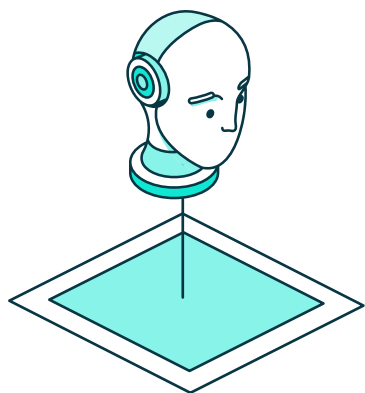
DIGITAL TRANSFORMATION OF JUSTICE IS A PROCESS OF INNOVATION THAT TRANSCENDS MERELY EQUIPPING THE ADMINISTRATION OF JUSTICE OF A COUNTRY WITH ADVANCED TECHNOLOGY.

This is because **every digital system or tool is ultimately designed to be used by people. Therefore, it is crucial that people not only understand and use technology effectively but also embrace this paradigm shift.** Otherwise, the phenomenon known as "resistance to change" occurs, where users of technology do not accept the change brought by Digital Justice and refuse to use the available resources.

As can be seen, no matter how many innovative technological resources are implemented in the Administration of Justice, **without establishing a culture of Digital Justice within this organization, ICT will not be effective on their own.** This is because users might be reluctant to use them, or, if compelled by regulations, may not use them efficiently. Therefore, **this aspect of digital transformation emphasizes the importance of human capital and their motivation to naturally and proactively embrace these changes in their work and in understanding justice.**

It is advisable for **each country's Digital Justice model to view technology as a tool to achieve specific goals.** Enhancing the pace and efficiency of judicial processes by using digital means is an example of this approach. The means are ICT, and the goal is to improve the agility of judicial processing. This vision stands in contrast with the traditional approach, which viewed technology as an end in itself and overlooked essential aspects such as change management.

INNOVATION MEANS EMBRACING CHANGE. INTRODUCING **INNOVATION IS ABOUT SHIFTING ORGANIZATIONAL** CULTURE, THE WAY THINGS HAVE BEEN TRADITIONALLY DONE, BUILT ON ACCUMULATED KNOWLEDGE. FOR EXAMPLE, VALUES, BELIEFS, OR INTERPRETATIONS DEEPLY ROOTED IN AN ORGANIZATION OFTEN LEAD TO THE PHRASE "IT HAS ALWAYS BEEN DONE THIS WAY". WHILE THESE COMPONENTS ARE VALUABLE FRUITS OF EXPERIENCE, THEY CAN ALSO ACT AS BARRIERS TO CHANGE.

BREAKING AWAY FROM THE ESTABLISHED PARADIGM IS NOT EASY. THAT IS WHY **COMPREHENSIVE CHANGE MANAGEMENT IS ESSENTIAL. IT SHOULD ENCOMPASS TRAINING, COMMUNICATION, AND USER SUPPORT** WITHIN THE ADMINISTRATION OF JUSTICE AND WHILE COLLABORATING WITH THIRD-PARTY EDUCATIONAL INSTITUTIONS TO HELP MANAGE CHANGE OF DIFFERENT PROFESSIONAL STAKEHOLDERS. IN ADDITION, IT REQUIRES PAYING ATTENTION TO THE TRAINING OF CITIZENS, AS THEY ARE KEY BENEFICIARIES OF THE PUBLIC SERVICE OF JUSTICE.

To effectively manage change, a **collective attitude is essential.** It should encompass three components that begin with the governing body of digital transformation and extend to all members of the Administration of Justice and the related groups: taking ownership of personal or professional performance, self-motivation, awareness, resource and constraint management, and striving for progress through a culture of continuous improvement.
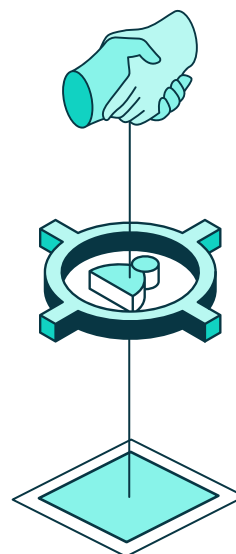
DIGITAL TALENT AND CHANGE MANAGEMENT USER STORIES:

Lucas
Head of digital talent and change management of the blue region.

Ana
Analyst on Lucas' team, specializing in organizational culture changes.

STORY: PREACHING AND NOT IN THE DESERT

Lucas has just joined the digital transformation department as head of digital talent and change management. This position highlights the department's realization that **true digital transformation hinges on people.** Previously, the department only had a training unit that produced manuals, held lectures, and ran a user support center that received calls, often filled with users' anger and frustration. This model was far from effective, showing very low performance. Users were used to being handed in a new program and told that all the answers were in the user manual, which they should consult. This situation has caused mistrust between digital transformation agents and users, who have felt burdened by having to do their job while also managing the often-faulty systems imposed on them.

After analyzing **the situation, Lucas realizes he must prioritize working with people. He needs to help them understand how technology works and how it can aid in their day-to-day tasks.** They should see technology as an ally, rather than an enemy.

After analyzing the current situation, Lucas has found that 60 percent of the Administration of Justice staff feel more comfortable working with paper than with computers. The outlook is bleak, as **Ana,** a member of Lucas' team, tells him. However, they have the opportunity to make small changes that will have a big impact. "Let's get to work," says Lucas. Ana and Lucas begin brainstorming ways to improve the detachment from technology identified in the analysis.

Lucas begins: "We can't just hand a manual or a video to users and expect them to quickly master the system, stay motivated, and perform well." "This is a fundamental mistake we need to address," says Ana. "We have to accompany them," Lucas adds. Ana nods in agreement and continues: **"The problem is we provide them with a technologically advanced system, but we don't guide them on how to use it. The processes in a paper-based office are different from those in a digital format.** For example, you no longer need to make multiple copies like you do with paper, or physically link documents. We need to analyze office processes, starting with the most common ones, and see how they translate into the digital format. We need to have contingency plans for when technology fails. Knowing what to do if something fails during a court hearing is critical. If we can anticipate and prepare for these scenarios, we will be able to empathize with users, reduce their frustration and pressure, and adapt our training processes effectively. This approach has to be integrated into our training programs and extend to promotions and the retention of talent."

Lucas nods: "I totally agree, this has to be the beginning." From his experience, it is not usually about users not knowing what to do with a system, but rather not knowing the next step in the new judicial process. Lucas explains: **"The key is ensuring users go through a digital immersion process.** We have to lower that 60 percent by any means necessary. Before teaching them how to multiply or divide digitally, we must start with the basics: adding. We need to leverage the digital skills that users already have from online shopping, internet banking, or messaging to draw parallels with our systems. In other words, users are expected to have two passwords to access their online baking

and transfer between accounts. We need to explain why we ask for long and complex passwords. The goal of using two passwords or a long and complex one is indeed the same: to ensure system security. We also need **to raise awareness about various security threats, both technological and through social engineering.** By doing so, we can empower them to act as the best antivirus or firewalls!"

Ana nods: "I think it's a good approach, Lucas! On this foundation, we can build talent."

Lucas continues: "Ana, if they changed your computer's operating system, what would you like to be told?" Ana reflects for a moment and answers: "Well, I think the first thing I would like to know is the reason for the change. If I'm satisfied with my operating system, why would someone come and change it?" Lucas smiles: "Exactly, change for the sake of change is pointless. First of all, **we need to explain why the change is happening and what its purpose is. This will allow users to feel part of the process, understand their role, and be more receptive to change.** All training plans should begin with this part, making sure it is well understood. To create materials, much of the work done by the training department can be reused:

› Prepare materials in paper, electronic format, videos, etc.

› Deliver both online and in-person sessions.

Ana interrupts: "Yes, but we should also establish the role of an advanced user. We need to identify those who show the most interest and provide them with more detailed training. They can then train their colleagues. It's always easier to learn from someone you work closely with, rather than a stranger." Lucas nods as Ana continues: "In addition, we need to improve our training evaluation. Post-course satisfaction surveys are necessary, but they are not sufficient. We need to go further, perhaps by integrating the **user support center.** By analyzing the calls received, we can gauge the users' **needs, problems, and requests.** This

feedback should be crucial in refining and improving our training programs. For example, if we get numerous calls with complaints about password changing, we have to figure out if it is a system issue or a lack of understanding about password requirements. By pinpointing the problem, we can roll out targeted and precise training actions to address these specific problems, reducing user frustration".

Lucas agrees with Ana. After a pause, he asks: "Alright, but how will everyone find out about this? **We need to communicate with our users,** other actors involved in the judicial process, and even the general public. The latter need to know what they can do and how to engage with the Administration of Justice." Ana takes the lead and says: "Look, here is how I would approach it:

› For our users, we need to **establish a comprehensive communication plan to inform them about the changes.** This plan should include management communications, posters, specific events, work groups, and more. Sending an email notifying them of a course or attaching a work guide is not enough. We have to communicate from the beginning, and it has to be from person to person. This does not mean that it has to be face-to-face, but we do it through in-person events, online sessions, or hybrid meetings.

› On the other hand, we need a comprehensive catalog of all organizations that interact with the Administration of Justice. **We need to dedicate specific resources to their training and establish a network of trainers.** Keeping everyone constantly updated and implementing an active listening process is crucial. The ultimate goal here is to identify what is working and what is not. It might seem obvious, but often the lack of feedback leads us to wrong decisions.

› Finally, and most challenging, we have the **citizens. This is the most complex aspect due to their large numbers and varied levels of knowledge.**

However, we cannot leave them behind. We have to identify the main services and develop a media campaign across television, press, social networks, etc. Additionally, we should identify organizations that bring together large segments of society to maximize our dissemination efforts, such as associations and trade unions."

After listening carefully to Ana, Lucas answers: "This sounds good to me, we have a lot of work ahead of us, but with these ideas I am **positive we can achieve a true digital transformation focused on people."**

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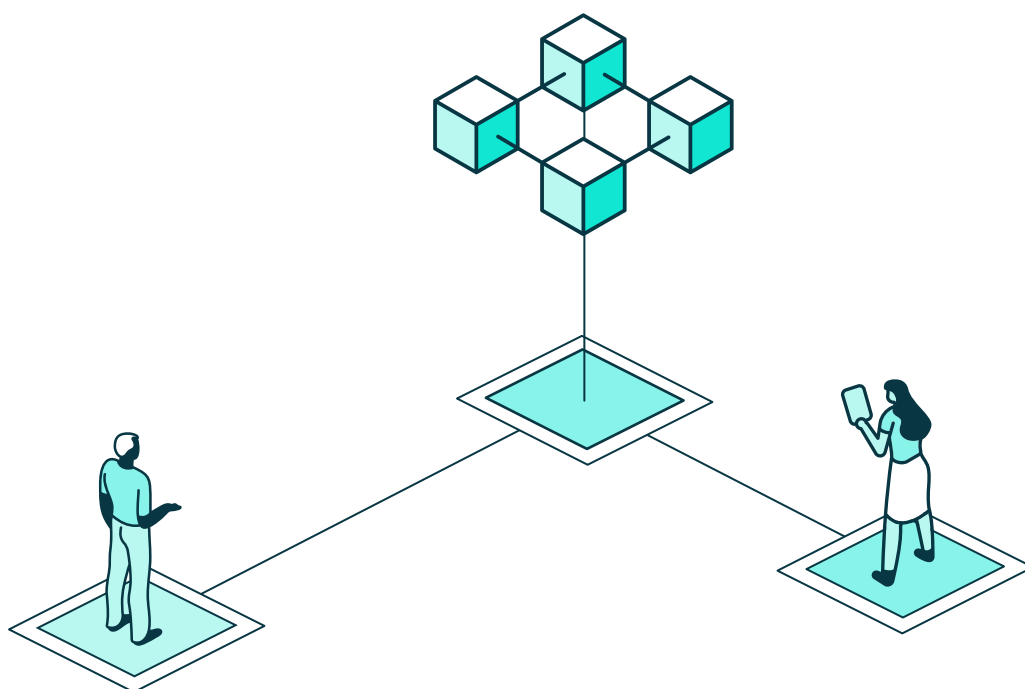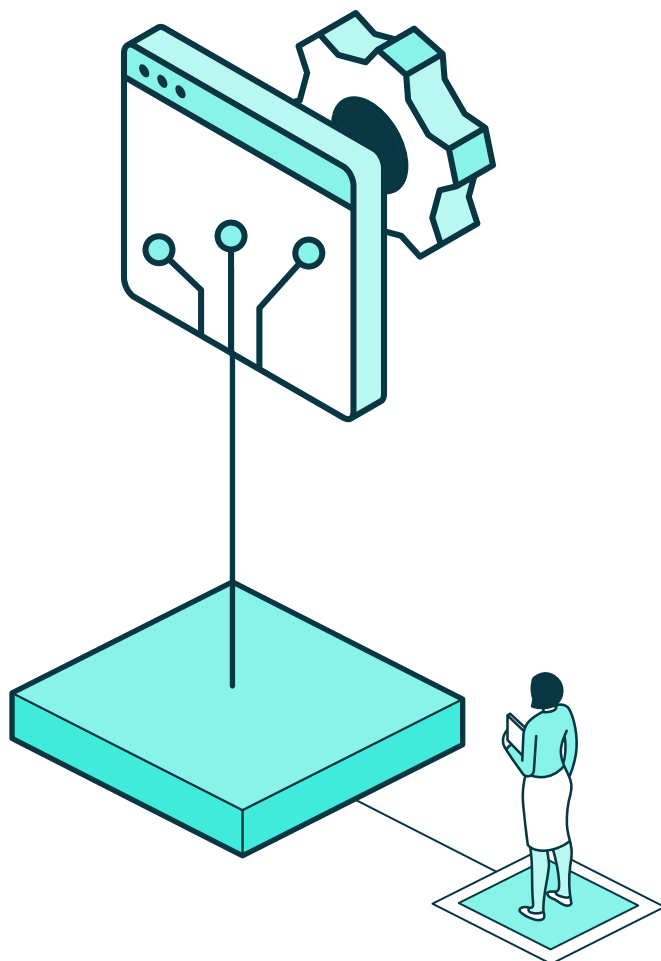
Intrajudicial change management plan

The Intrajudicial change management plan includes specific strategic plans that provide a holistic approach to change management. The first step involves training in digital skills for ICT in justice through a Training plan in technological tools of justice. The goal is for public employees in courts and tribunals to gain the skills to use digital tools correctly, effectively, and safely. This technological knowledge is further enhanced through the Digital culture plan, which aims to familiarize users of this Administration with the digital era.

The training is complemented by a Communication plan that covers both internal and external communication. The goal of this plan is to ensure that public employees of the Administration of Justice, as well as other stakeholders, are informed of all relevant aspects of digital transformation of justice. The actions outlined in the Plan foster a climate of certainty that will contribute to reducing resistance to change.

Additionally, this area includes a User support plan, which outlines the necessary actions to provide public employees of the Administration of Justice with effective and rapid responses to incidents, requests, and queries they may have regarding the use of ICT in justice. This Plan ensures that technology is not perceived as a limiting factor, despite the potential difficulties that may arise from its use.

3.1.1 JUSTICE TECHNOLOGY TOOLS TRAINING PLAN

The Training plan in justice technology tools comprises a structured set of activities designed to develop, improve, and strengthen the skills and knowledge of public employees of the Administration of Justice when managing the implemented technological solutions.

This Plan has a **dual positive impact.** Firstly, it enhances **human capital** by equipping public employees of the Administration of Justice with the necessary knowledge to effectively use the technological solutions and equipment provided to them. This will also help reduce resistance to change, which occurs when users are unfamiliar with digital tools. Second, it affects **the functioning of justice,** because without the necessary digital skills, users cannot efficiently use the solutions, leading to delays and inefficiencies in the justice system.

As for the **public entity responsible for training public employees** in digital skills, two options are proposed, without excluding other possible alternatives:

› The first option is for the **Judicial Academies** to take on the responsibility of training public employees in the use of digital justice tools. In addition, these Academies would educate users on broader aspects of **digital culture** that go beyond the mere use of technological tools. In addition, they would specialize in training users in other areas of the judicial career beyond just technology. For example, they could offer internships for trial procedures or court management.

› The second option involves the governing body of digital transformation, which is responsible for implementing digital tools and services, establishing a pedagogical technical office. This office would have trainers specialized in teaching the use of technological tools. This training in the digital area can be complemented with general digital culture training provided by the Judicial Academies. This will equip users with a broader understanding and knowledge of technology, beyond the specific tools they use. In this approach, the governing body of digital transformation would focus on training users in the specific digital tools it implements. Meanwhile, the Judicial Academies would handle training in broader aspects of the judicial career, beyond ICT, and provide general knowledge about digital culture.

INTERNATIONAL REFERENCES FOR LEADERSHIP IN DIGITAL SKILLS TRAINING FOR PUBLIC EMPLOYEES IN THE ADMINISTRATION OF JUSTICE:

Mexico: the Judiciary has a dedicated educational institution for training public employees of the Administration of Justice: **the Federal School of Judicial Training.**[82]

Guatemala: the Judicial Branch has the **School of Judicial Studies**[83], whose function is to train public employees of the Judicial Branch, including judges, magistrates, judicial assistants, administrative personnel, technical personnel, and candidates for the judicial career, among others.

Spain: the **Center for Legal Studies** (CEJ)[84] is responsible for training users of the Administration of Justice. A Digital Competence Framework[85] has been developed to train Justice staff in ICT. This training is further complemented by the training received by users of the technological tools that is provided by the governing body for the digital transformation of justice, which in this case is the Directorate General of Digital Transformation of the Administration of Justice. This serves as an example of the second modality discussed earlier, in which a country has a Judicial Academy that offers general training in digital skills to users. Meanwhile, the governing body responsible for the development and implementation of digital tools takes on the specialized training in the use of these tools.

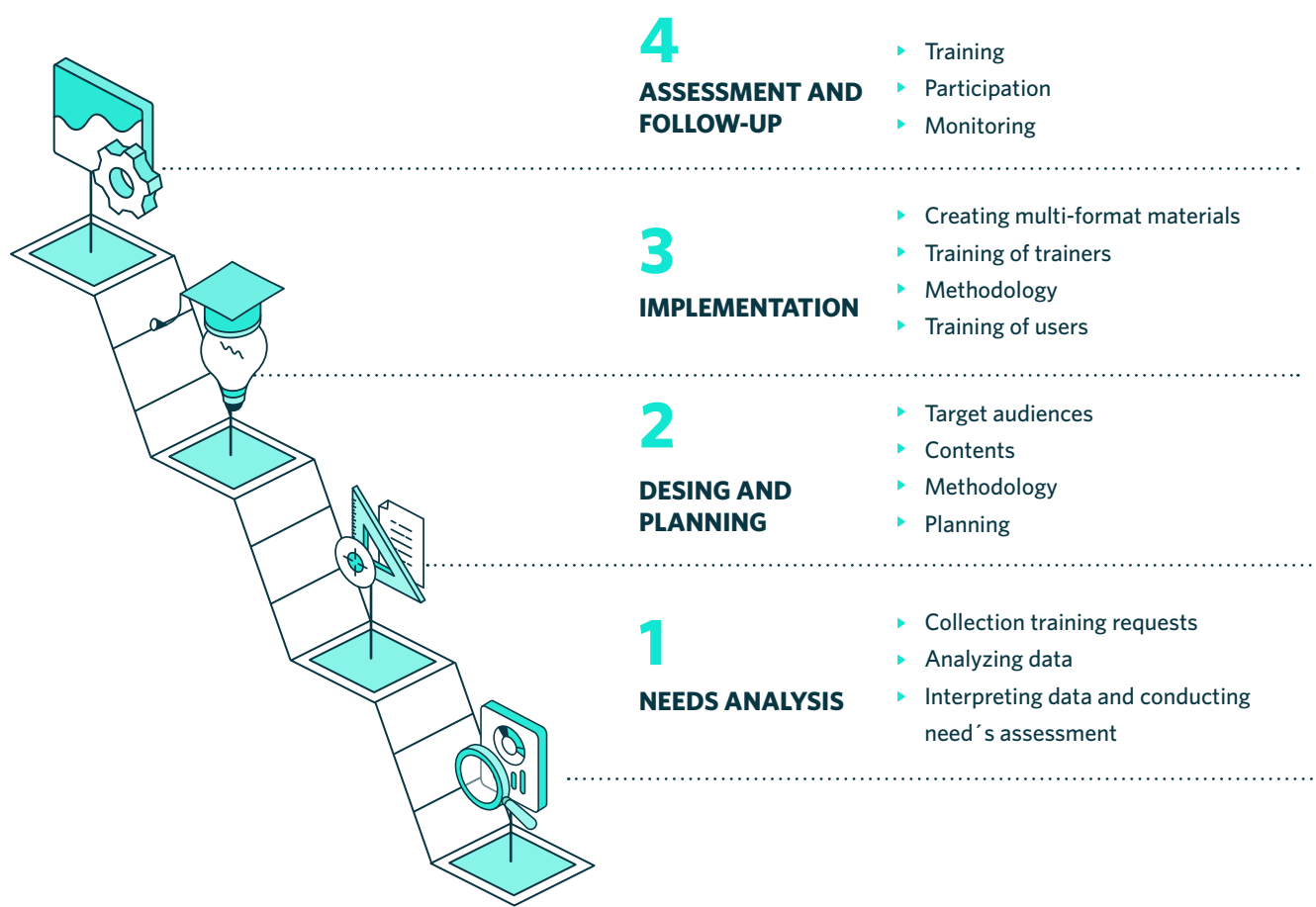
82. Federal School of Judicial Training.

83. School of Judicial Studies.

84. Digital Competence Framework for the Training of Justice Staff/Center for Legal Studies (CEJ).

85. Digital Competence Framework for the Training of Justice Staff/Center for Legal Studies (CEJ).

To draw up the Plan, it is necessary to establish the **objectives in this area.** Once defined, the Plan's different actions, aimed at achieving these objectives, are materialized. The proposal in this document includes four key actions:

❯ **Needs analysis:** the professional roles of users are identified, their level of competence in ICT is evaluated, and their training needs are diagnosed.

❯ **Design and planning:** training profiles are defined, and training itineraries tailored to the specific professional roles are designed.

❯ **Execution:** multi-format training content is created, and both trainers and users are trained.

❯ **Evaluation and monitoring:** The entire training cycle is coordinated and evaluated to identify new needs.

4

ASSESSMENT AND FOLLOW-UP

▸ Training
▸ Participation
▸ Monitoring

3

IMPLEMENTATION

▸ Creating multi-format materials
▸ Training of trainers
▸ Methodology
▸ Training of users

2

DESING AND PLANNING

▸ Target audiences
▸ Contents
▸ Methodology
▸ Planning

1

NEEDS ANALYSIS

▸ Collection training requests
▸ Analyzing data
▸ Interpreting data and conducting need´s assessment

The first action is the **needs analysis,** which involves identifying the training needs of users based on three main criteria: their professional role within the organization, their level of competence in ICT, and the needs associated with technological implementation at any given time.

To carry out the diagnosis of training needs, the following process can be carried out:

❯ **Collection of training demands:** training demands may arise from the integration of new public employees into the Administration of Justice, who will therefore require specialized training in ICT for justice. Training demands can also be related to the implementation of a new ICT solution, requiring focused training on its functionalities and usage. Finally, there may be ad hoc requests for training on specific tools.

❯ **Analysis of information:** training demands are analyzed using a matrix that includes professional profiles, the number of recipients, and other relevant data.

❯ **Interpretation of information and diagnostics of needs:** based on this analysis, initiatives are defined to meet the identified training demands.

Once the diagnosis is complete, the initiatives are defined, which implies determining the set of training actions aimed at equipping users of the Administration of Justice with the skills to use technological applications in their daily work. In this **design and planning phase,** the following actions are carried out:

❯ **Recipients:** users who will receive the training are specified and classified according to their training profiles.

❯ **Contents:** contents that will provide the necessary knowledge to the users are determined.

❯ **Methodology:** based on factors such as user needs, technological implementation timelines or court availability, the most suitable methodology is determined. Among the proposed options are:

- **Online training**: through a virtual classroom, interactive practical cases are presented that simulate the real use of applications in a judicial context. Additionally, all training materials can be stored in this classroom, making them available to users 24/7.

- **Face-to-face training:** in-person training sessions based on practical cases presented in a classroom by trainers specialized in ICT for justice. These face-to-face sessions can be complemented with online training through the virtual classroom.

- **On-site training:** consists in actions aimed at resolving doubts in the workplace after the implementation of a new technology.

❯ **Planning:** training itineraries are defined and scheduled based on implementation dates or the specific circumstances of each court. With regard to time planning, it is essential that **training activities be carried out regularly, as training is a continuous process throughout the professional lives of public employees. Knowledge must be acquired and reinforced continuously.**

The next phase is **execution.** In this phase of the training cycle, the training actions defined in the Plan are put into practice. This stage involves **three sequential and fundamental activities: creation of multi-format materials, training of trainers, and training of users.**

❯ **Creation of multi-format materials**: for each training action, a multidisciplinary team can be formed, which should include experts in the Administration of Justice and in ICT for justice, along with specialists in the creation of didactic and pedagogical materials.

❯ **Once the training team has been formed, they will be in charge of designing the teaching material in the most suitable format.** Depending on the ICT content, the type of implementation, and the selected training modality, they will determine which pedagogical materials to create and in what format.

❯ **Training of trainers: trainers will be educated in the knowledge of ICT for justice and will develop skills in communication and knowledge transmission.** The goal is to establish a network of stable, qualified and up-to-date trainers, who not only have technical expertise in ICT, but also excel at conveying that knowledge to public justice employees in an engaging and clear manner.

Staff who are going to play a role very similar to that of the trainer could also be included within this scope. **In some countries they are referred to as drivers of digital transformation.** They focus solely on advising and assisting users of the Administration of Justice in a very practical way, addressing specific ICT-related challenges that arise in their daily work at judicial quarters. The staff providing practical support to users in the daily use of ICT for justice would be **composed of the procedural staff of the Administration of Justice.** These individuals are especially involved in digital transformation and are skilled at conveying the uses and examples applicable to the available technological tools in a relatable way.

❯ **Training for users:** training is provided to end users of the Administration of Justice. At this stage, trainers deliver the sessions outlined in the training plan using the chosen modality: online, in-person, or on-site training.

The last action of this Plan is the **evaluation and monitoring phase,** which involves **monitoring the training and analyzing the results to draw conclusions and ensure continuous improvement.** This phase of the Plan aims to ensure that the planned actions are carried out in accordance with the established parameters, while using the continuous improvement as a mechanism to identify the strengths and weaknesses of the training initiatives.

Three criteria are proposed to evaluate public employees' training:

❯ **Learning:** measure the knowledge that users have acquired throughout the training period.

❯ **Participation:** measure the level of participation of users in training actions.

❯ **Satisfaction:** assess user satisfaction through surveys and by rating the support received in judicial venues.

3.1.2 DIGITAL CULTURE PLAN

User training in the Administration of Justice covers all aspects of the digital era, providing a comprehensive understanding of technology. This approach helps users grasp its role within **the justice ecosystem and in its broader impact on contemporary society.**

THE DIGITAL CULTURE PLAN IS AN EDUCATIONAL PROGRAM AIMED AT PUBLIC EMPLOYEES OF THE ADMINISTRATION OF JUSTICE, DESIGNED TO PROVIDE AN UPDATED UNDERSTANDING OF DIGITAL ISSUES AND TRENDS. IT AIMS TO HELP USERS ADAPT TO THE DIGITAL WORLD BY PROVIDING A SOLID FOUNDATION OF KNOWLEDGE ON DIGITAL CULTURE. ITS VALUE LIES IN THE FACT THAT A LIMITED UNDERSTANDING OF TECHNOLOGY, APPLICABLE ONLY TO A SPECIFIC AREA, DOES NOT ALLOW USERS TO ADAPT TO THE CHANGE THAT THE DIGITAL ERA IMPLIES.

The Digital culture plan can include the following components:

❯ **Digital literacy:** teaching people basic skills in using ICT, such as operating digital devices, web browsing, using common computer programs in daily life, understanding apps and basic concepts of online safety.

❯ **Understanding technology**: provide insights into emerging technologies and their impacts on society, including AI, blockchain, the Internet of Things (IoT), and automation.
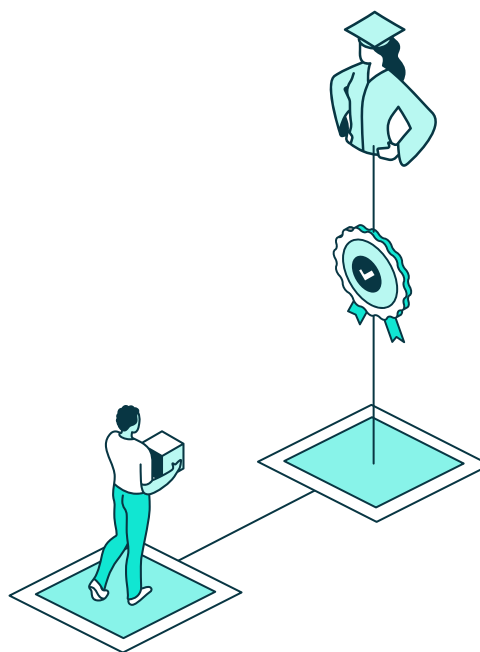
❯ **Online security**: teach safe online practices, including protecting personal data, managing passwords, preventing cyberattacks, and understanding the concept of backups, among other security measures.

❯ **Digital privacy**: educate users about the importance of online privacy and how to protect personal information in a digital world.

❯ **Digital citizenship:** promote responsible behavior online, which includes respect for others, combating cyberbullying, and encouraging civic participation online.

❯ **Data culture:** educate users about the importance of data in contemporary society and how it is used in areas such as analytics, decision making, and business intelligence.

❯ **Digital trends**: keep people informed about the latest trends in technology and digital culture, such as social media, virtual reality, and more.

❯ **Social and economic impact**: analyze how digital technology has influenced the economy, education, politics, culture, and other aspects of society.

3.1.3 COMMUNICATION PLAN

Communication is a cornerstone of change management, which is important for public employees of the Administration of Justice and other stakeholders, who need to stay informed about the relevant aspects of digital transformation of justice. **This communication fosters a climate of certainty, ensuring that users are well-informed. This way, they can be aware of any aspect of ICT that affects their field in advance.** Such certainty reduces resistance to change, because technological actions to be implemented are known in advance, giving the stakeholders time to adapt their behavior and incorporate this technology in their workflows and interactions.

Effective communication will not only create the climate of certainty and stability needed for the digital transformation of justice but will also **reinforce the transparency of the actions taken and enhance the role of the Administration of Justice itself in this process.** For example, if a country's Administration of Justice is undertaking several digital transformation initiatives, but the work realized is not given due publicity, this effort will not have the dissemination it deserves. Such dissemination is essential for citizens to recognize **the significant work being accomplished using public resources, since effective communication has become so crucial that it allows the following paradigm: what is not known, does not exist.**

THE COMMUNICATION PLAN CONTAINS A SERIES **OF INITIATIVES DESIGNED TO MANAGE EFFECTIVE COMMUNICATION REGARDING THE IMPLEMENTATION, DEVELOPMENT, AND USE OF ICT WITHIN THE ADMINISTRATION OF JUSTICE.** THIS PLAN INCLUDES TWO DIMENSIONS: **INTERNAL COMMUNICATION,** WHICH OCCURS BETWEEN THE ADMINISTRATION OF JUSTICE AND ITS PUBLIC EMPLOYEES, AND **EXTERNAL COMMUNICATION** BETWEEN THE ADMINISTRATION OF JUSTICE AND RELATED EXTERNAL STAKEHOLDERS, SUCH AS THE PUBLIC PROSECUTOR'S OFFICE, PROFESSIONALS OR CITIZENS, AMONG OTHERS.

The design and execution of the Plan can be undertaken by the governing body for digital transformation or by another administrative entity within the Administration of Justice or the General State Administration. **The first option is highly recommended, as it is the governing body of digital transformation with the most extensive knowledge of the initiatives that are being implemented.** If this option is chosen, a technical communication office can be established within the organizational chart of the governing body. However, **in both cases, it would be advisable for users' representatives, who will be the recipients of various communications, to participate. Their involvement ensures the clarity and relevance of the messages being conveyed.**

The key components of the Communication Plan are detailed below:

❯ **Communication objectives**: clearly define communication objectives, such as informing about digital transformation initiatives, increasing understanding of the technologies used, and promoting buy-in and participation.

❯ **Audience identification**: identify the target groups for each communication action. This can be done by initially distinguishing between internal users (public employees of the Administration of Justice) and external users (public employees of the Public Prosecutor's Office and other administrations related to justice, as well as professionals and citizens). Once the initial differentiation is made, a more specific categorization can be made by groups. For instance, within the internal users, the group of judges can be considered.

❯ **Key messages:** develop clear and compelling messages that effectively communicate the benefits, goals, and impact of digital transformation of justice.

❯ **Communication channels**: select the appropriate communication channels to effectively reach the audience. To do this, it is important to analyze which means of communication is most effective for transmitting the message to each specific group. All available communication channels can be used, including communication with users of the Administration of Justice through corporate email, official websites, and social media platforms such as Twitter, Facebook, Instagram, and other content platforms, such as YouTube.

AT THIS POINT, IT IS IMPORTANT TO RECOGNIZE THE PARADIGM SHIFT IN COMMUNICATION. **WE HAVE MOVED FROM ONE-WAY COMMUNICATION CHANNELS,** SUCH AS TELEVISION, WHERE THE SENDER BROADCASTS MESSAGES TO THE RECEIVER WITHOUT ANY POSSIBILITY OF REPLY, **TO TWO-WAY COMMUNICATION. IN THIS NEW MODEL, THE SENDER AND RECEIVER CAN EXCHANGE MESSAGES IN REAL TIME,** AS SEEN ON SOCIAL NETWORKS. INCORPORATING TWO-WAY COMMUNICATION MEDIA IS HIGHLY RECOMMENDED BECAUSE THEY WILL ALLOW FOR USER FEEDBACK, WHICH IS HIGHLY VALUABLE FOR THE ADMINISTRATION OF JUSTICE TO MAKE IMPROVEMENTS.

❯ **Evaluation and feedback:** implement evaluation and feedback mechanisms to measure the effectiveness of communication strategies and make adjustments as needed.

❯ **Crisis management:** develop crisis management plans to address any issues or setbacks that may arise during the digital transformation process and communicate effectively in emergency situations.

❯ **Continuous adaptation:** update the Communication plan to meet evolving needs and make progress in the digital transformation of justice.

INTERNATIONAL REFERENCES OF COMMUNICATION ACTIONS RELATED TO THE PROCESS OF DIGITAL TRANSFORMATION OF JUSTICE:

Argentina: the Judicial School of the Council of the Magistracy of the Nation[86] operates an official YouTube channel where they conduct communication activities regarding the digital transformation of justice.[87]

Colombia: the Judicial Branch operates an official **Twitter account where they communicate about the digital transformation of justice.**[88]

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86. Judicial School of the Council of the Magistracy of the Nation of Argentina.

87. YouTube/ video of Digital Transformation in the Judiciary (September 2023) - Class 3.

88. Official Twitter account of the Judicial Branch of Colombia.

3.1.4 USER SUPPORT PLAN

Change management also requires that users of the Administration of Justice have the support to quickly resolve any incidents, requests, and queries related to the use of ICT in justice. The purpose of **user support serves two key objectives.** Firstly, **it is necessary for the smooth operation of the Administration of Justice** that any ICT-related incidents encountered by public employees be resolved promptly, as these issues can impact the agility and effectiveness of justice. For example, if a user is unable to access the electronic communications system, it will slow down the court's electronic judicial processing. On the other hand, effective user support **will help reduce users' resistance to change by reinforcing the perception that technology is an ally in their work,** rather than an additional problem.

THE USER SUPPORT PLAN OUTLINES ACTIONS BASED ON DURATION, INVESTMENT, AND IMPACT TO ADDRESS INCIDENTS, REQUESTS, AND INQUIRIES FROM USERS. IT INCLUDES MEASURES TO MANAGE INCIDENTS THAT DISRUPT SERVICES, AIMING TO RESTORE NORMAL OPERATIONS AND MINIMIZE IMPACT. ADDITIONALLY, THE PLAN FEATURES A SYSTEM TO RESPOND TO QUERIES, MANAGING CHANGES, FACILITATING ACCESS TO SERVICES, AND RESOLVING ISSUES RELATED TO ICT IN THE JUSTICE SYSTEM.

With respect to the implementation of the initiatives outlined in the Plan, there are several possible approaches. One option is for the governing body of digital transformation to take on user support by establishing a technical office to manage the service, which would include help desks integrated into its structure. **This approach is most advisable when the governing body of digital transformation owns the systems.** The second option involves having a third administration manage the systems, similar to how transversal systems are provided by the governing body of Digital Government. This third administration can handle user support for the services provided by its systems. However, the most advisable option is to centralize user support for ICT in justice within the governing body of digital transformation. It is this body that inherently possesses full knowledge of ICT and has the capacity to respond to incidents, requests, and queries.

The User support plan typically encompasses two main service formats:

❯ **Remote assistance**: includes telephone assistance provided by **help desks with expert technicians in ICT of justice, available 24/7, 365 days a year to resolve incidents, requests, and queries.** It also includes an automated support service managed by a **chatbot** equipped with AI machine learning technology, capable of self-learning through use. This system can handle specific generic requests that do not require human intervention, providing assistance through a user-friendly conversation interface.

❯ The second modality involves **face-to-face support** managed by **expert ICT operators who are present** in the daily operations of the courts, resolving incidents, requests, and queries of users on site.

To assess the effectiveness of the initiatives in the Plan, different monitoring actions can be implemented. These include conducting **user satisfaction surveys** and measuring key factors known as **Key Performance Indicators (KPIs) of the service,** such as response time, time to resolve incidents or requests, and the number of interactions needed to resolve issues.

ANOTHER ACTION WITH A POSITIVE IMPACT IS THE **FEEDBACK FROM USERS AND HELP DESK TECHNICIANS TO THE ICT SOLUTION DEVELOPMENT TEAMS.** THIS FEEDBACK ENABLES THE IMPROVEMENT AND ADAPTATION OF SOLUTIONS IN NEW VERSIONS, WHILE ADDRESSING INCIDENTS TO PREVENT SIMILAR ISSUES FROM HAPPENING IN FUTURE ICT TOOLS.
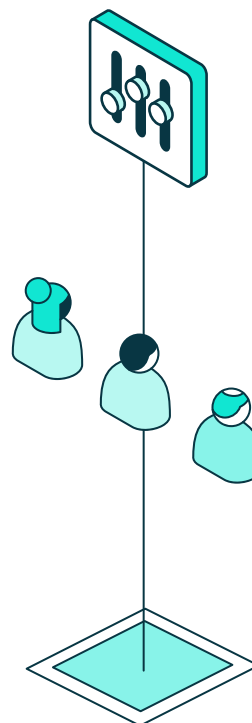
3.1.5 PROTOCOL OF ACTIONS AND PROCEDURES

Change management also requires that users of the Administration of Justice, who will be affected by the digital transformation, can first-hand experience how this transformation translates into in their daily practices. This involves demonstrating how tasks previously performed in an analogue manner will now be carried out digitally.

It is important to note that **analog and digital processes are different. In other words, it is not about users performing the same actions that they did in an analogue manner, but rather adopting new technological solutions.** For instance, in the case of issuing testimonies or certifications of judicial decisions, if there is a digitally signed resolution with a Secure Verification Code (CSV), it holds the value of an authentic copy, thus eliminating the need to perform this operation.

THE PROTOCOL OF ACTIONS AND PROCEDURES ENCOMPASSES ALL THE ACTIVITIES THAT USERS OF THE ADMINISTRATION OF JUSTICE TRADITIONALLY PERFORMED DURING JUDICIAL PROCEDURES AND ILLUSTRATES HOW THESE TASKS WOULD BE CARRIED OUT USING NEW TECHNOLOGICAL SOLUTIONS. THIS PROMOTES REAL AND EFFECTIVE TECHNOLOGICAL TRAINING FOR THE USERS.

To draft this Protocol, it is necessary to first **analyze the real operations of the judicial bodies in each phase of the judicial procedure, following the traditional analogue methodology.** Once this analysis is complete, **a solution addressing the changes associated with implementing the electronic judicial file in the process is proposed.** This methodology ensures that users can easily understand changes in their workflows.

The most relevant elements of the Protocol of actions and procedures are:

❯ **Documentation of traditional processes**: it is necessary to thoroughly detail the procedures and activities that were conducted in the Administration of Justice before the introduction of ICT. This includes the steps, documents involved, interactions, and responsibilities of different actors.

❯ **Technology integration**: explains how technological solutions will be implemented in each of the previously documented stages and activities. This can include automating processes, digitizing documents, accessing online court services, and more.

❯ **Updated procedures:** an updated version of ICT procedures and activities is provided, detailing how electronic documents are managed, how systems are accessed online, and how interactions occur within a digital environment.

❯ **Evaluation and feedback:** it is advisable to establish mechanisms to evaluate and continuously improve the process, taking into account feedback from users and stakeholders.
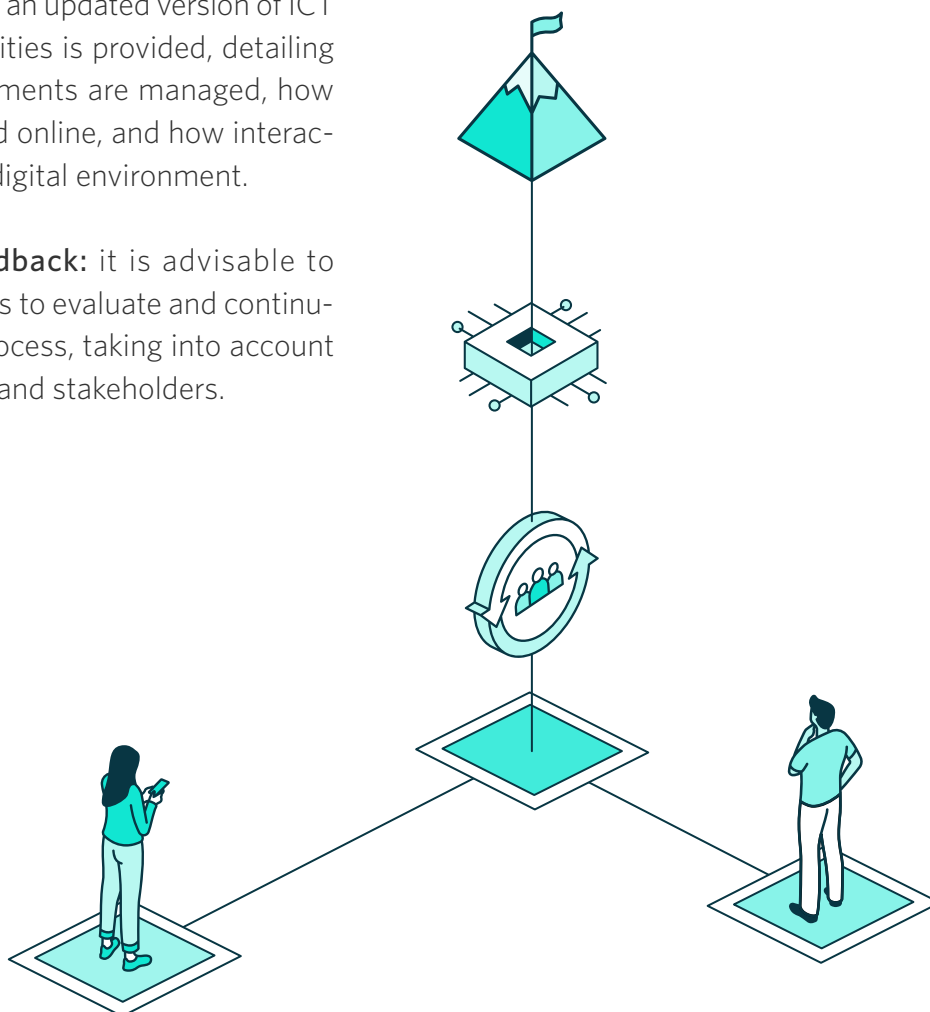
3.2

Plan of collaboration with judicial academies and the Public Prosecutor's Office, professional associations and universities

In the digital transformation of justice, change management has a transversal nature that involves introducing a new culture of Digital Justice across various groups, including public employees of the Administration of Justice, the Public Prosecutor's Office, other administrations, professionals, lawyers, experts, and citizens.

> TO IMPLEMENT CHANGE MANAGEMENT AMONG SUCH A LARGE AND DIVERSE GROUP OF PEOPLE FROM DIFFERENT BACKGROUNDS, IT IS ADVISABLE TO **COLLABORATE WITH EXISTING THIRD-PARTY INSTITUTIONS. THESE INSTITUTIONS POSSESS THE RESOURCES AND KNOWLEDGE TO EXECUTE DIFFERENT ACTIONS REQUIRED FOR THIS MANAGEMENT AND THAT WILL BE INDISPENSABLE ALLIES FOR DISSEMINATING AND INSTILLING THE CULTURE OF DIGITAL JUSTICE.**

To address this need for collaboration, it is advisable to define and implement a **collaboration plan with Judicial Academies and the Public Prosecutor's Office, professional associations and universities.** This plan should include a series of initiatives based on cooperation between different institutions, whether public or private, with the main objective of promoting and materializing change management in the digital transformation of justice among the members of the Administration of Justice and other related stakeholders.

The starting point of the Plan is to **define the strategic objectives** for collaboration between different institutions. Once these goals are set, **the ecosystem of public and private institutions that can contribute to managing change in the digital transformation of justice is analyzed.** The three most common institutions are the **Judicial Academies,** responsible for training public employees of the Administration of Justice, the **Academies of the Public Prosecutor's Office,** which train public employees of this Administration, **professional associations,** especially Bar Associations, whose functions usually include training and communication actions for the professionals they represent, and **universities,** which serve as centers for the universal dissemination of knowledge.

After analyzing the institutional ecosystem and identifying the institutions that can cooperate in change management, it is necessary to conduct a **study of these institutions' internal capacities to undertake change management actions.** For example, most justice administrations in the region have judicial academies. However, their educational programs do not include training in digital justice skills. Therefore, if this is the case, it is advisable for the governing body of digital transformation to leverage the structure,

staff, and resources of these Academies to offer such training. This involves actively collaborating with the Judicial Academy to provide it with the necessary support in creating both **the Training Plan for Technological Tools of Justice** and the **Digital Culture Plan.**
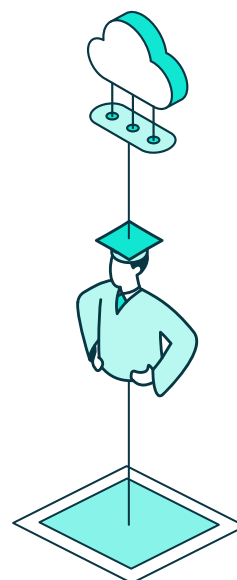
INTERNATIONAL REFERENCE FOR TRAINING IN DIGITAL SKILLS CARRIED OUT BY JUDICIAL ACADEMIES:

Colombia: "Rodrigo Lara Bonilla" Judicial School provides training on ICT of justice.[89]

Another strong ally in managing change are the **professional associations, particularly the Bar Association.** It is important to remember that in most countries membership in these institutions is mandatory, which brings together all lawyers, making it an effective channel for disseminating knowledge. The cooperation of these institutions can include both training in digital skills related to technological solutions that affect lawyers, such as the electronic communications system essential for court communications, and training in digital culture. Additionally, they can undertake communication actions on relevant aspects of Digital Justice that may be of interest to legal professionals.

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89. Judicial School of Colombia.

INTERNATIONAL REFERENCE OF COLLABORATIVE ACTIONS BY BAR ASSOCIATIONS IN THE FIELD OF TRAINING, COMMUNICATION, AND USER SUPPORT OF ICT IN JUSTICE.

Spain: Spain's Madrid Bar Association (ICAM) has implemented various training and support actions related to the electronic communications system for lawyers.[90] In addition, ICAM uses its social networks to keep lawyers informed about news and updates concerning technological solutions in justice.[91]

In addition to the referred institutions, **universities,** as universal centers of knowledge, play an important role in managing change. Establishing a framework for active collaboration with these institutions is one possibility. This would ensure that university law students receive training on the role of digital transformation in the Administration of Justice and its practical implications for this public service. Additionally, it would prepare students to work effectively in the context of Digital Justice.

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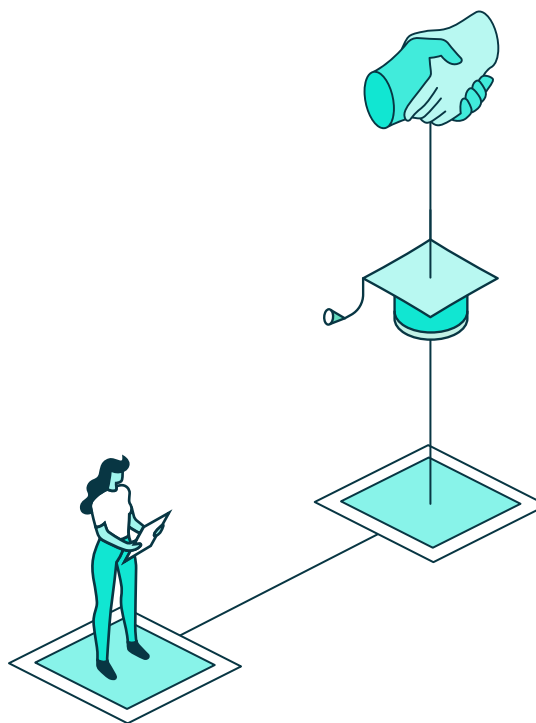
90. ICAM.

91. Official Twitter account of the ICAM.

3.3
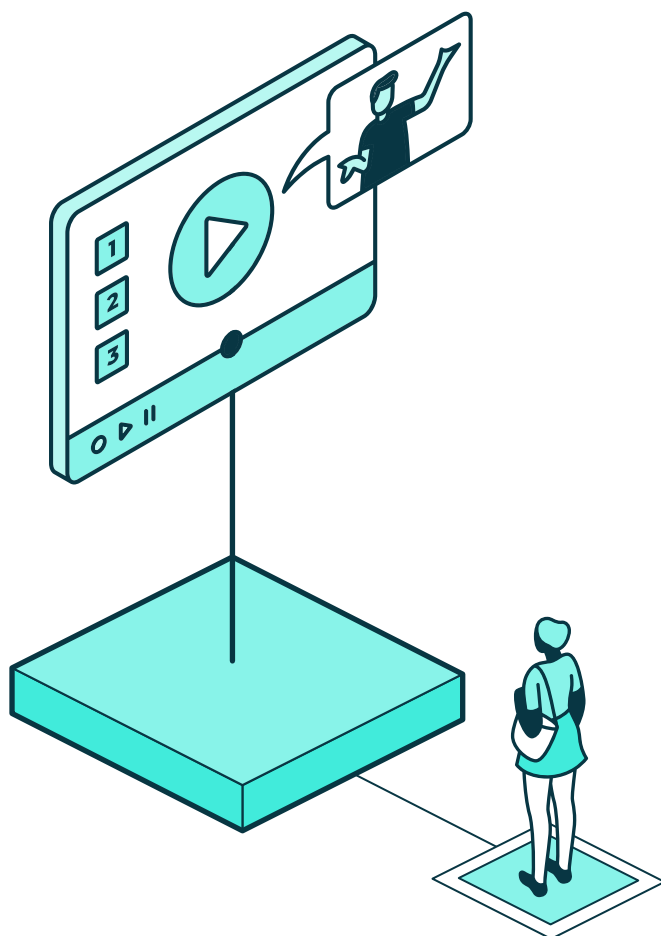
Training and awareness plan for society

While citizens can still interact with the Administration of Justice using analogue means to avoid the digital divide, it is crucial that change management in the digital transformation of justice embrace an inclusive vision. This perspective would address training, communications and the needs that may arise in digital interactions between citizens and this Administration. Additionally, it should raise awareness about the culture of Digital Justice among this group.

IN THIS CONTEXT, THE **TRAINING AND AWARENESS PLAN** ENCOMPASSES A SERIES OF INITIATIVES, WHOSE **MAIN GOAL IS TO EDUCATE SOCIETY ABOUT THE CULTURE OF DIGITAL JUSTICE. IT ALSO FOCUSES ON PROMOTING SAFE, RESPONSIBLE, AND EFFECTIVE USE OF THE DIGITAL SERVICES MADE AVAILABLE TO THEM.**

To effectively implement the Plan, the first step is to conduct a **diagnosis of citizens' digital skills. This assessment will help us understand their level of digital culture,** both general digital skills and the specific skills and knowledge related to ICT in justice. For example, it will indicate if citizens have the knowledge to use digital justice services. Once the level of digital culture is understood, **the objectives of the Plan can be established to address the deficiencies of digital culture identified in the diagnosis.**
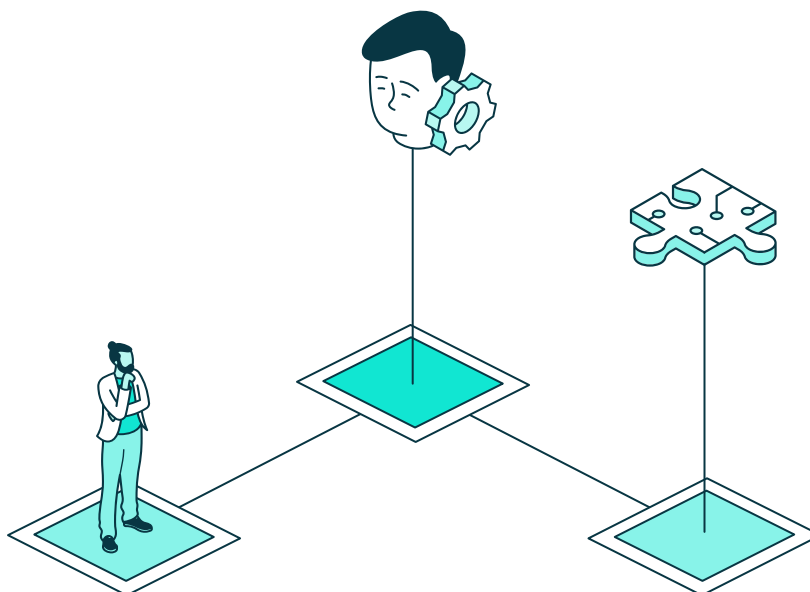
The Plan will help **this group to understand the rationale behind the digital transformation of this public service and its positive impact.** For example, without such a Plan, citizens might be unaware of crucial digital services like online access to the content of electronic judicial files for proceedings they are involved in. Additionally, they might waste time traveling to court to complete procedures that could be conveniently done from home via any mobile device. To address this situation, it is advisable to implement **communication initiatives aimed at raising citizens' awareness of the available digital services.**

It is important for this Plan to include training initiatives **that guide citizens on using the ICT that are relevant to them.** For example, the Plan should cover the steps required to access the judicial services portal, log in with a digital identity system, and complete procedures online.

Along with this information provided to citizens, it is advisable to include in the Plan the deployment of a **system to manage incidents, requests, and queries that this group may have regarding the use of ICT.** For instance, if the judicial services portal experiences a service disruption, it would be beneficial for citizens to have a reliable channel to address that issue. This could include telephone support provided by a help desk, direct communication with the governing body of digital transformation through two-way communication channels, or other alternatives.
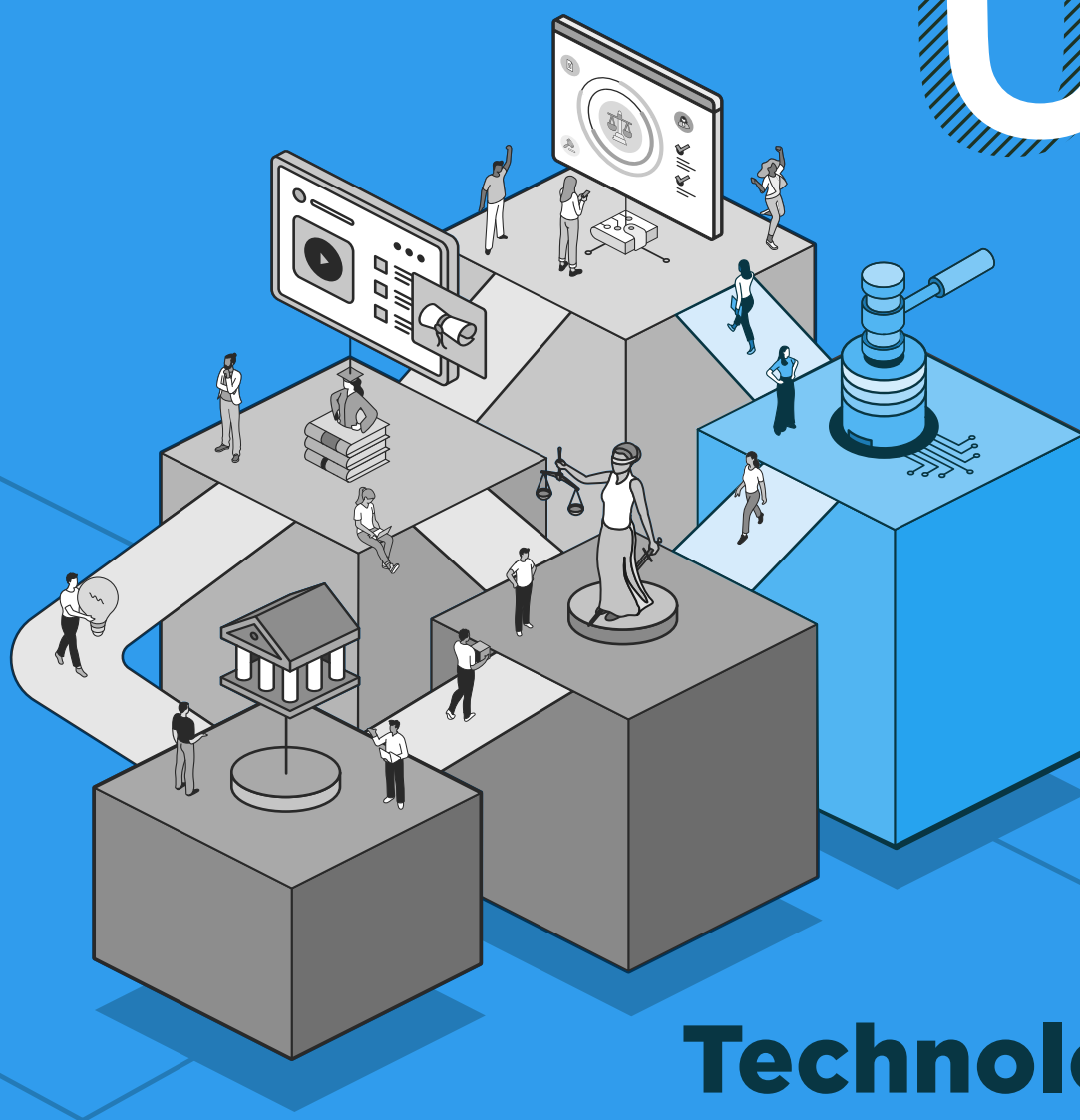
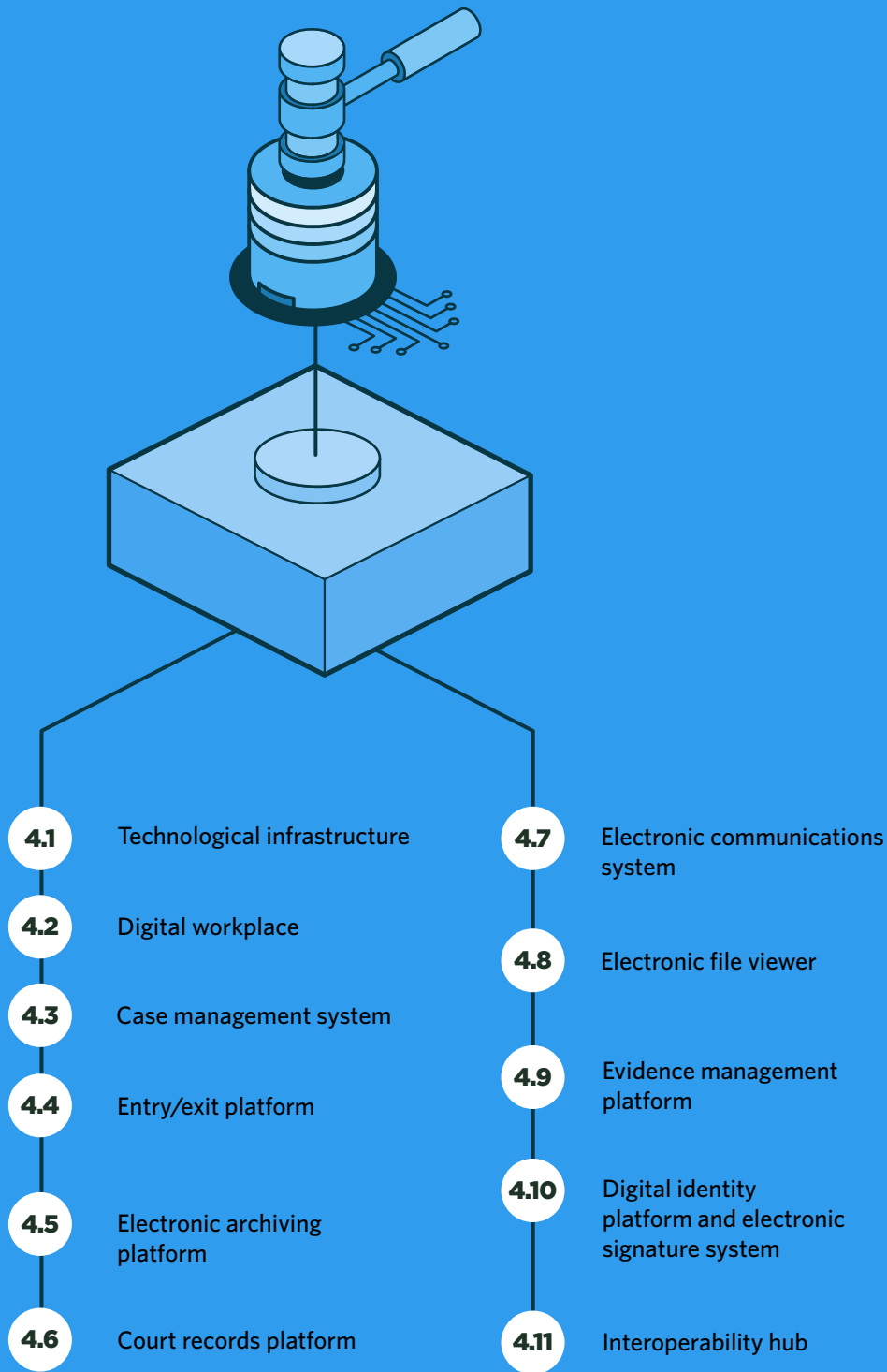**INTERNATIONAL REFERENCE FOR DEVELOPING A TRAINING AND AWARENESS PLAN FOR SOCIETY:**

Unión Europea: the European Digital Competence Framework (DigComp) has been created[92], which is a detailed framework aimed at developing citizens' digital competence in Europe.
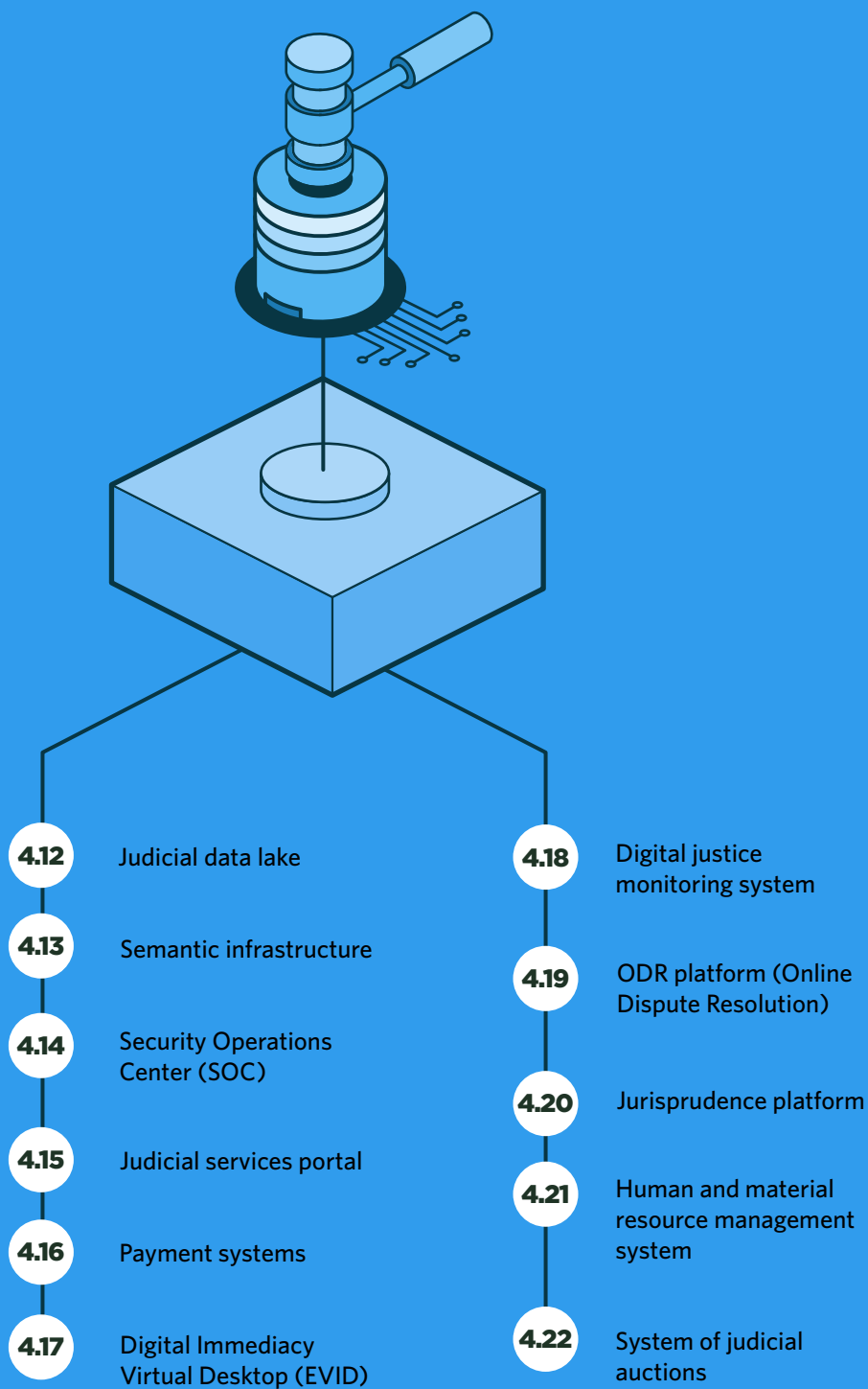

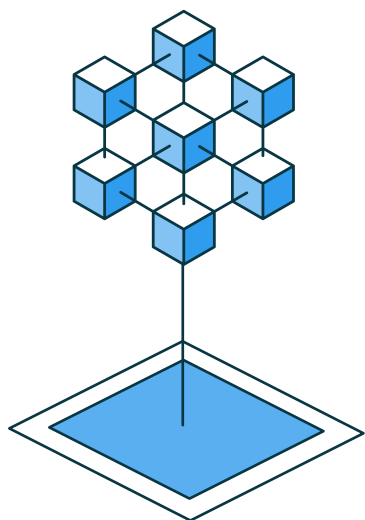92. European Digital Competence Framework DIGCOMP/European Commission.
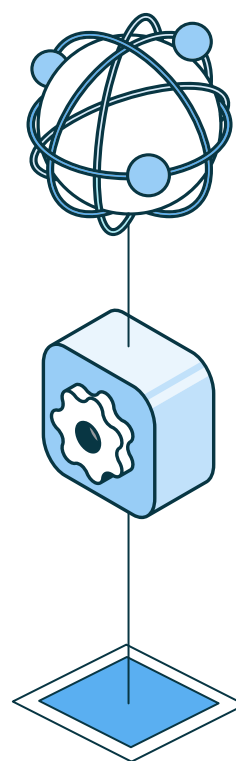
Technological infrastructures and tools

4.1	Technological infrastructure	4.7	Electronic communications system
4.2	Digital workplace	4.8	Electronic file viewer
4.3	Case management system	4.9	Evidence management platform
4.4	Entry/exit platform	4.10	Digital identity platform and electronic signature system
4.5	Electronic archiving platform	4.11	Interoperability hub
4.6	Court records platform		

4.12 Judicial data lake

4.13 Semantic infrastructure

4.14 Security Operations Center (SOC)

4.15 Judicial services portal

4.16 Payment systems

4.17 Digital Immediacy Virtual Desktop (EVID)

4.18 Digital justice monitoring system

4.19 ODR platform (Online Dispute Resolution)

4.20 Jurisprudence platform

4.21 Human and material resource management system

4.22 System of judicial auctions

THE ADMINISTRATION OF JUSTICE REQUIRES A ROBUST TECHNOLOGICAL INFRASTRUCTURE WITH SUFFICIENT CAPACITY TO SUPPORT ELECTRONIC JUDICIAL PROCESSING, STORE MASSIVE AMOUNTS OF DATA, FACILITATE THE AUTOMATED EXCHANGE OF DATA WITH THE ICT SYSTEMS OF OTHER RELATED ACTORS AND ENSURE THE IMPLEMENTATION AND CORRECT FUNCTIONING OF TECHNOLOGICAL TOOLS USED BY PUBLIC EMPLOYEES OF THE ADMINISTRATION OF JUSTICE, AND IMPLEMENT DIGITAL SERVICES FOR THIS ADMINISTRATION, FOR PROFESSIONALS AND CITIZENS. IN ADDITION, IT IS ESSENTIAL THAT THE INFRASTRUCTURE MEET THE HIGHEST STANDARDS OF INFORMATION SECURITY.

In this dimension, it is important **to consider the concept of digital transformation that focuses on the shared use of technological infrastructures and tools.** This approach enables the efficient management of financial resources, ensuring they are appropriately allocated to the ICT need of the Electronic Judicial Administration. Therefore, it is recommended that the governing body of digital transformation conduct a prior analysis of the necessary infrastructures and digital tools. This analysis should determine whether these ICTs are already available in the General State Administration and provided by the governing body of the Digital Government. If these resources are available and can be shared, this approach would help avoid duplication of systems and would reduce the associated economic costs.

ADDITIONALLY, WHEN THE ADMINISTRATION OF JUSTICE ACQUIRES OR DEVELOPS ITS OWN **INFRASTRUCTURES AND TECHNOLOGICAL TOOLS, THEY MUST COMPLY WITH THE STANDARDS AND REQUIREMENTS OUTLINED IN THE <u>INTEROPERABILITY AND SECURITY SCHEMES</u> AND IN THE <u>TECHNICAL GUIDES</u> DESIGNED TO DEVELOP THESE SCHEMES.** IT IS VERY IMPORTANT TO NOTE THAT ELECTRONIC JUDICIAL ADMINISTRATION RELIES ON A DIGITAL ECOSYSTEM COMPOSED OF MULTIPLE APPLICATIONS. THESE APPLICATIONS MUST BE ABLE TO INTERCONNECT AND EXCHANGE INFORMATION IN AN AUTOMATED WAY.

Another aspect to consider is the principle of **technological neutrality**. Said principle involves adopting an impartial and equitable approach to technology, ensuring that no specific technology is unjustifiably favored over others. Therefore, it is convenient to focus on selecting **the technology that is most effective based on the specific needs of the solution, rather than tailoring the needs to fit a particular technology.** [94]

Notably, the role of **the Administration of Justice is not only to implement the necessary infrastructures and technological tools, but also to assume their maintenance and improvement throughout their life cycle, ensuring the sustainability of the solutions.** This need arises from the inherent nature of technology, **which is in a constant state of evolution.** To prevent Digital Justice from becoming outdated with obsolete infrastructures and tools, it is crucial to maintain a continuous process of renewal and evolution. Another important reason is that, as mentioned in the discussion on technological neutrality, tools are created based on the needs of users, and these evolve over time. Therefore, infrastructures and tools must adapt to these changes to remain relevant.

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93. Government Digital Transformation Guide/Foreword/IDB.

USER STORIES ABOUT INFRASTRUCTURES AND TECHNOLOGICAL TOOLS:

Rafael
Head of blue region transformation.

Alejandro
Director of technology of the blue region.

Juana
Digital transformation manager in a foreign country.

STORY: INTERNATIONAL VISIT

Just over a year ago, an ecosystem to support the Electronic Judicial Administration was launched in the blue region. The indicators of each system, or KPIs, as well as the global indicators defined as "the percentage increase in procedures" or "the reduction of waiting times", are showing a notable improvement in the functioning of the Administration of Justice. These results are gaining significant attention at regional, national, and international levels. In fact, many neighboring countries are showing strong interest in the model and the strategy used to support digital transformation.

The Judiciary has received a request for a visit from a neighboring country seeking to identify the best practices and learn from the implementation errors to adapt these insights for their own digital transformation efforts. The Judiciary, as expected, accepts this request and proposes an agenda of meetings with experts to facilitate this exchange.

As part of these meetings, a gathering with heads of digital transformation and technology in the blue region is planned. Representing the foreign country, **Juana,** the head of digital transformation, will attend. The meeting takes place at the technological services center of the blue region. After the introductory presentation and a cordial chat, the meeting proceeds with a visit to the facilities.

Rafael begins the tour with the building's hall, explaining to Juana the architectural details and the construction process. He mentions that they will start the visit from the bottom up and opens a door leading to a wide staircase that descends to an underground level. Alejandro informs Juana that their first stop will be "the engine room", which is the data processing center. After descending several meters, they arrive at the doors guarded by a security agent. After completing the necessary accreditations, all three are granted access, accompanied by the person in charge of the room. Upon entering, Juana is taken aback by the sheer size of the center and by the noise it generates. After touring the main room, they leave and proceed to the center's unpacking and assembly room. The noise level is significantly lower here, allowing them to have a conversation. Juana, surprised by the size, remarks that the space is much larger than she expected. Alejandro explains that this is the main center, but they also have another center. While not as large, this secondary center is capable of independently managing critical services. Juana mentions that she expected a large portion of the services to be in the cloud, with a much smaller on-premises infrastructure. Alejandro explains that their strategy is to have the necessary capacity to meet the "usual" demand using their own infrastructure. In the event of excess demand or any type of contingency, a protocol is activated with several cloud infrastructure providers. This ensures that services can be provided through these cloud solutions, thereby preventing any disruption of service. Alejandro also tells her that they are working on increasing the redundancy of supplies, such as electricity, refrigeration, and communications, to be as prepared as possible in case of any issues.

Juana listens carefully to the explanation and asks whether all the services are provided centrally from the data processing core or if there are servers distributed throughout the judicial quarters. At this point, Rafael takes the floor and comments: "We used to have servers deployed in all judicial buildings. Back then, technology did not offer any other options. To ensure users could work in an agile and efficient manner, it was necessary. This setup led to various issues: security, configuration, backups, among others. Gradually, technology has helped us overcome these challenges. First we centralized one server per main

building, then we consolidated it into one server per city, and finally we unified everything at the regional level." Then Joan interrupted, asking, "Is there nothing in the headquarters?" Rafael continued: "Yes, we do have infrastructure in the headquarters. We have communications and security systems in place that allow users to connect to our regional headquarters. We have duplicated these elements in large headquarters to ensure that if one fails, the operations can continue without interruptions. In addition, we have installed several devices to assist headquarters staff, professionals, and citizens. For example, we have information screens and self-service kiosks. We manage these elements from here, which allows us to send local messages of help or global messages to all judicial venues. This capability was extremely useful during the pandemic, as we published the daily safety instructions and updated protocols on the giant screens at the entrance of each court. This ensured everyone was informed about the instructions that needed to be followed."

Juana, showing great interest, gestured to ask another question: "But, do you also have these screens in the rooms where court hearings are held?" "Well," Rafael smiled, "Those rooms are special, since they have additional equipment and materials. Considering that court hearings need to be recorded in audio and video, the rooms are equipped with cameras, microphones, video capture devices, and screens used for the presentation of evidence and videoconferences. **Essentially, we have a mini-television studio in each room!"** The three of them smiled, and Rafael kindly indicated the way up back to return to the building's hall.

On the way up, Juana asked the team a new question: "So, are all the services provided centrally from your data centers?" Alejandro replied: "For the most part, yes. However, **some services are provided at other locations by different entities in the region. At the time, it was analyzed whether it made sense for each Treasury, Health or Justice Department to have their own payment gateway, and it was determined that we all shared the same needs.** So, the regional government provides a unified service that we all use, which allows us to save money and time, reduce complexity of tasks, and minimize headaches."

The three of them laughed heartily, and before they knew it, they had reached the 1st floor. "On this floor, we have a mock courthouse," Rafael said. "Here, we have arranged the various **positions that users occupy in a court and the multiple configurations that can be set up.** This way, you can see the **different configurations of screens and setups: hybrid solutions of desktop and laptop computers, laptop with docking stations, large screens, dual screens, user station with only laptops, and even cell phones and tablets. In addition, not only do we have the equipment, but we also have replicated the programs that are used.** This allows us to test new versions or programs across all workstations, as well as to identify potential digital ergonomics issues. For example, the other day we realized that a new system we had prepared was totally inoperable on one laptop, given that the amount of information was high and therefore was poorly presented."

Juana appeared very surprised by this initiative: "In my experience, managing multiple teams is usually associated with a lot of problems. **Control and security of information must also be a big problem.** How do they manage it?"

Alejandro nodded and said: "Juana, it's not just a problem, it's hell! A few years ago, the templates or models of each device belonged to each respective device, and data was on the device itself. We launched campaigns to ensure that important data was stored in shared folders with respective backups, but the truth is that no one implemented that. Every time a computer or laptop broke down, was lost or stolen, we had a big problem on our hands as we didn't know what information it contained. Despite being encrypted, the information was lost. A few years ago, we initiated a **cloud user station project with the goal of turning every user's device into a simple terminal. These terminals load an operating system that runs in our data processing center.** That is, the user turns on the computer and its operating system starts running. Nothing important is installed on that computer; if you want to access judicial information, you have to click on a link that will allow you to connect to your **remote user station, which runs in a secure and controlled way in our data processing center.** If the computer is broken or stolen, the problem is easily resolved. Just give them a new computer from which they can connect to their remote user station, which will always remain available, and their data will be secure."

Rafael interrupts him: "In addition, this allows us to implement a pilot system of *BYOD or Bring Your Own Device.* There are still users who have not received a laptop to telework. But they do have a laptop or desktop computer at home. This system allows you to work safely on an unsecured computer."

Juana exclaims: "What you have set up is impressive! So, the case management system is not accessed from the physical computer, but rather from the virtual workstation that is in the data processing center." Alejandro nods: "That's right, Juana, everything runs inside the data processing center. This offers high levels of security and control. In addition, **it is no longer like it used to be, when part of the case management system had to be installed directly on the computer. Now everything is on the web. The new case management system has evolved into a modular system tailored to the profile of each user, the type of procedure, jurisdictional order, etc. However, all this is based on a single, unified system for streamlined management.** This offers us many benefits compared to the multiple standalone systems or modules we used to have before, which forced users to continuously switch between applications in their daily work."

Juana kept nodding and then took the floor again: "Rafael, Alejandro, you have to tell me all about this, this is the key to the solution. What is the structure of the modules that you have implemented?"

"Let's see, this is going to take some time," Alejandro says clearing his voice, "Let's go to the meeting room where we have a blackboard and, what is better, a coffee machine."

Before delving into the components of this dimension, for didactic purposes **it is convenient to explain the difference between the fourth dimension of infrastructures and technological tools and the fifth dimension of new digital processes and services.**

On the one hand, technological infrastructures and tools are defined as follows:

› **Technological infrastructure:** the physical components and technical bases that allow the operation of computer systems and networks.

› **Technological tools:** apps and software systems that are used to perform specific tasks.

On the other hand, digital processes and services can be defined as follows:

› **Digital processes:** sequences of automated activities that are carried out using digital systems to attain a specific goal.

› **Digital services:** services provided by digital means, leveraging technological infrastructure and digital processes.

IN SHORT, **TECHNOLOGICAL INFRASTRUCTURES AND TOOLS INCLUDE HARDWARE AND SOFTWARE, WHILE DIGITAL PROCESSES AND SERVICES REFER TO THE CAPABILITIES AVAILABLE TO USERS IN THE DIGITAL ENVIRONMENT.** BASED ON THE ABOVE, SOMETIMES TO BUILD A DIGITAL SERVICE IT IS SUFFICIENT TO HAVE A PLATFORM OR A TECHNOLOGICAL TOOL THAT SUPPORTS IT. ON OTHER OCCASIONS, FOR A DIGITAL PROCESS OR SERVICE TO WORK, IT IS NECESSARY TO HAVE ONE OR SEVERAL INFRASTRUCTURES AND TECHNOLOGICAL TOOLS TO SUPPORT IT.

A GOOD EXAMPLE OF THE ABOVE IS THE TECHNOLOGICAL SERVICE TO **ACCESS THE ELECTRONIC JUDICIAL FILE FOR PROFESSIONALS AND CITIZENS.** THIS DIGITAL SERVICE IS PART OF **NEW DIGITAL PROCESSES AND SERVICES.** HOWEVER, THIS SERVICE REQUIRES INFRASTRUCTURE AND TECHNOLOGICAL TOOLS THAT OPERATE IN THE BACKGROUND. THIS MEANS THAT WHAT THE USER VISUALIZES ON THEIR COMPUTER IS THE INTERFACE OF THE SERVICE, WITH ITS RESPECTIVE FUNCTIONALITIES, BUT IT IS THE INFRASTRUCTURE AND TOOLS THAT ENABLE AND TECHNOLOGICALLY SUPPORT SAID SERVICE. **TECHNOLOGICAL INFRASTRUCTURES AND TOOLS ENCOMPASS EQUIPMENT AND SOFTWARE, WHILE DIGITAL PROCESSES AND SERVICES ARE THE CAPABILITIES THAT USERS CAN EXPLOIT IN THE DIGITAL ENVIRONMENT.**

SOMETIMES, A TECHNOLOGICAL PLATFORM ALONE IS SUFFICIENT TO CREATE A DIGITAL SERVICE; IN OTHER CASES, ADDITIONAL INFRASTRUCTURE AND TOOLS ARE REQUIRED. AN EXAMPLE OF THE ABOVE IS THE ELECTRONIC COURT FILE ACCESS SERVICE, WHICH REQUIRES UNDERLYING TECHNOLOGICAL INFRASTRUCTURE AND TOOLS TO OPERATE, EVEN THOUGH THE USER ONLY INTERACTS WITH THE SERVICE INTERFACE AND ITS FUNCTIONALITIES.

The following image explains in more detail the example presented:

INFRASTRUCTURE AND TECHNOLOGICAL TOOLS

NEW PROCESSES AND DIGITAL SERVICES
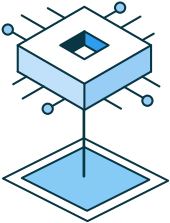
For users to access the electronic court file service, the case management system must be interoperable with the file viewer. The interoperability hub infrastructure is in place to facilitate the connection between the two systems.
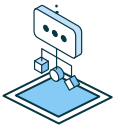
Case management system

This system includes the platforms that enable the electronic processing of electronic court files.

Interoperability hub

Technological infrastructure that enables system interoperability, allowing strategic technological services within these systems to be shared and accessed by the entire Administration of Justice.

Electronic file viewer

It is the technological system that allows users to access electronic files and retrieve detailed information about their contents, structure, and documents.

A digital service that allows professionals and citizens to access the electronic court file

This service enables professionals and citizens to access the electronic court records of legal proceedings in which they are involved, online.

4.1
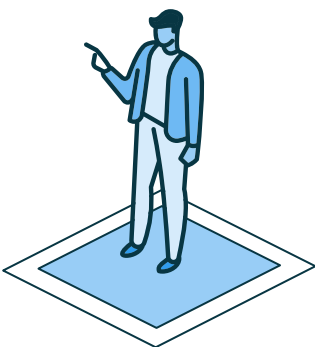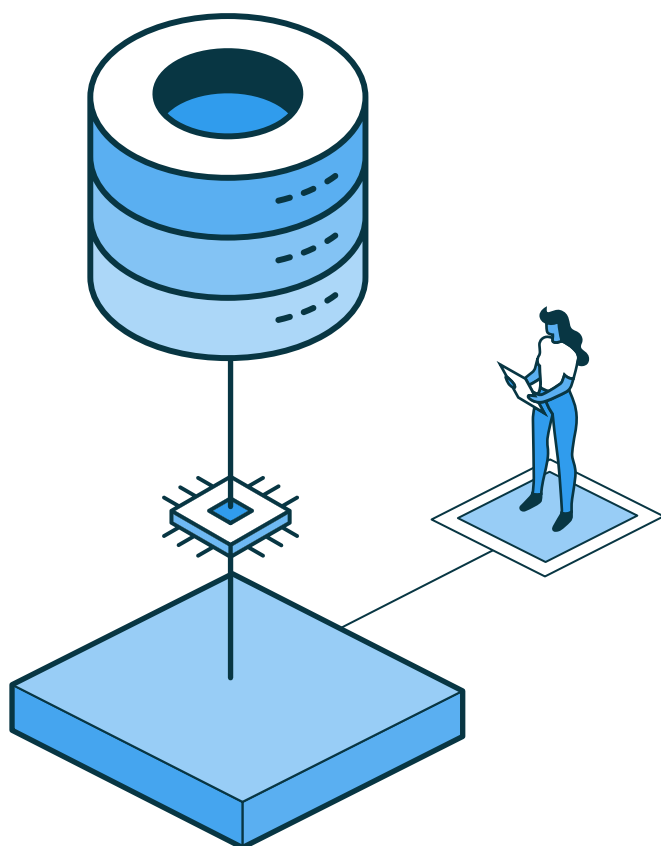
Technological infrastructure

Technological infrastructure refers to the group of components necessary for the effective operation of information systems, communication networks and any other digital solution or service. This infrastructure provides essential support to the Administration of Justice to operate effectively through digital means.

The technological infrastructure of the justice system has a high strategic value, so special attention should be paid to its maintenance to avoid disruptions in the service or vulnerabilities that could compromise the security of the information.

AS STATED ABOVE WHEN DISCUSSING TECHNOLOGICAL NEUTRALITY, **THE CHOICE OF ADEQUATE TECHNOLOGICAL INFRASTRUCTURE DEPENDS ON THE NEEDS AND OBJECTIVES OF THE ENTITY. THEREFORE, THE INFRASTRUCTURE AND ITS CAPACITY MUST BE TAILORED TO THE ADMINISTRATION OF JUSTICE WHERE IT IS TO BE IMPLEMENTED.**
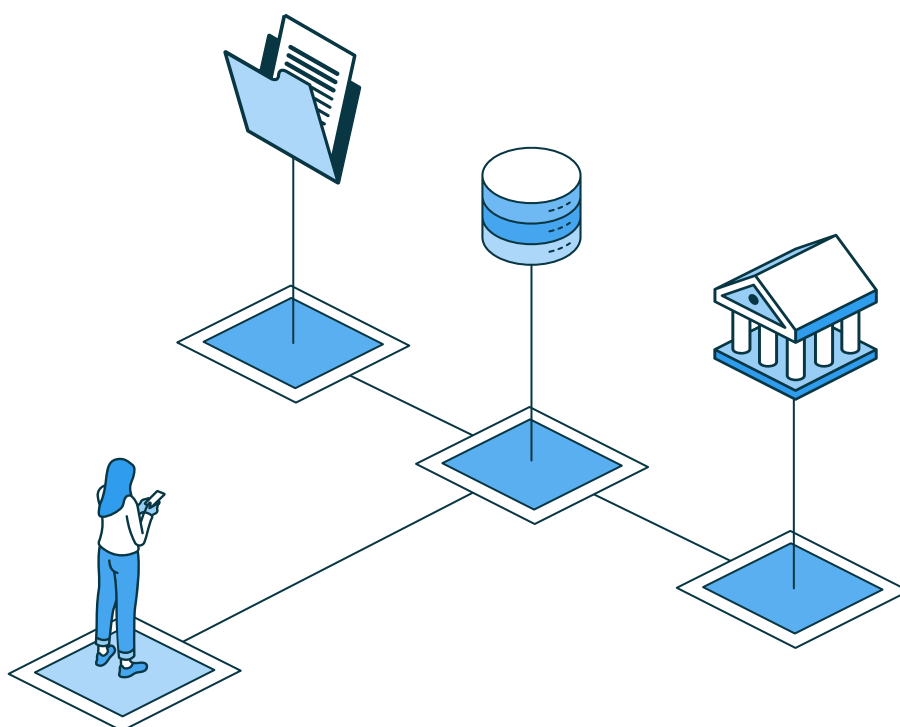
To attain adequate infrastructure, it is advisable to perform a **prior analysis of the key aspects,** such as the number of users who will receive the digital services, the volume of information managed and stored by the Administration, the digital services offered, the number of courts in which the electronic judicial file is to be implemented. For example, the Administration of Justice in a small country, with a limited number of courts, does not require a technological infrastructure with as much storage capacity as an Administration of Justice of a large country, where digital services are provided to a much higher number of users.

The technological infrastructure model presented in this section is characterized by its flexibility and adaptability to the different contexts of each respective Administration of Justice. The infrastructure has been divided into four main components:

❯ **Central or cross-cutting infrastructure**: an infrastructure that provides service to the entire Administration of Justice, assuming most of the storage of data, communications and that supports digital services and technological tools implemented for the entire Administration.

❯ **Infrastructure of judicial quarters**: includes all equipment and technological components installed at the judicial quarters. For example, the wiring network, communication systems, access security installations, fire prevention measures, screens, kiosks, and more.

❯ **Courtroom infrastructure:** the technological infrastructure that allows to record the hearing in its entirety by digital means and allows its automatic incorporation into the electronic judicial file, as well as holding virtual hearings, live retransmission of the courtroom signal, among others.

❯ **Infrastructure provided by the governing body of Digital Government:** infrastructure that is already implemented in the General State Administration and that can be reused by the Administration of Justice in the context of Digital Justice. For example, if the governing body of Digital Government has already implemented a digital identity system, it could be used by the courts to provide online services to professionals and citizens.

4.1.1 CENTRAL OR CROSS-CUTTING INFRASTRUCTURE

CENTRAL OR CROSS-CUTTING INFRASTRUCTURE PROVIDES ESSENTIAL TECHNOLOGICAL SERVICES ACROSS THE ENTIRE ORGANIZATION AND SUPPORTS THE MAIN TECHNOLOGICAL SERVICES OF THE ADMINISTRATION OF JUSTICE, BOTH INTERNAL AND EXTERNAL. THIS INFRASTRUCTURE IS **HIGHLY CRITICAL,** AS IT SUPPORTS THE OPERATION OF THE MOST CRUCIAL DAILY OPERATIONS FOR THE ADMINISTRATION OF JUSTICE, SUCH AS ELECTRONIC JUDICIAL PROCEDURES. THEREFORE, IT IS ESSENTIAL THAT IT IS RELIABLE, SCALABLE AND SECURE. EACH OF THESE CHARACTERISTICS IS EXPLAINED BELOW:

❯ **Reliability:** central or cross-cutting infrastructure will provide most digital services, in addition to enabling electronic judicial processing and operation of digital tools. Given the high volume of tasks it handles, it is essential for the infrastructure to have adequate **capacity to support them, guaranteeing near 100 percent availability of services and prompt functioning of the services and digital tools.**

❯ **Scalability:** infrastructure is **designed to grow and adapt efficiently as resource demands or the size of the Administration of Justice increase** gradually without negatively affecting its performance, availability, or costs.

❯ **Security:** central or cross-cutting infrastructure stores a large amount of sensitive information that needs to be protected against potential cyber threats. To achieve infrastructure security, different initiatives can be implemented such as firewalls, intrusion detection systems (IDS), intrusion prevention systems (IPS), and authentication and encryption systems, among others.

The central or cross-cutting infrastructure can adopt various modalities that each Administration of Justice can adapt based on its preferences depending on information security, maintenance cost, digital obsolescence, among other factors. The most common modalities are:

❯ **Local infrastructure or also known as on-premises infrastructure:** in this modality, **all components of said infrastructure,** such as servers, storage and communications **are located within the facilities of the Administration of Justice,** and it is this administration that assumes the responsibilities of acquisition, maintenance, and replacement. In this modality, it is guaranteed that all information stored in the infrastructure is physically located in the facilities of the Administration of Justice.

The **main component of the on-premises infrastructure is the Data Center.** This technological facility centralizes ICT equipment for justice, operations and technical equipment in order to store, process, and disseminate data, information, applications, and digital services across the entire Administration of Justice. **To ensure that there is no loss of information stored in the Data Center, it is recommended to set up a second Data Center in a different location. This setup will allow for data replication between the two, ensuring that if one is damaged, the information remains intact and accessible.**

❯ **Cloud infrastructure: all components of infrastructure,** such as servers, storage, and communications, **are located in third-party facilities,** also known as technology service providers. These providers deliver services to the Administration of Justice, supplying the necessary infrastructure on an outsourced basis whenever needed. With this modality, **the Administration of Justice can access IT resources virtually and scalably, eliminating the need to physically own and manage its own infrastructure.**

One important action when opting for this modality is to prepare a **Data return plan for when the contractual relationship with the technology service provider ends. This plan should outline all the steps required to ensure the return of all information** to the Administration of Justice.
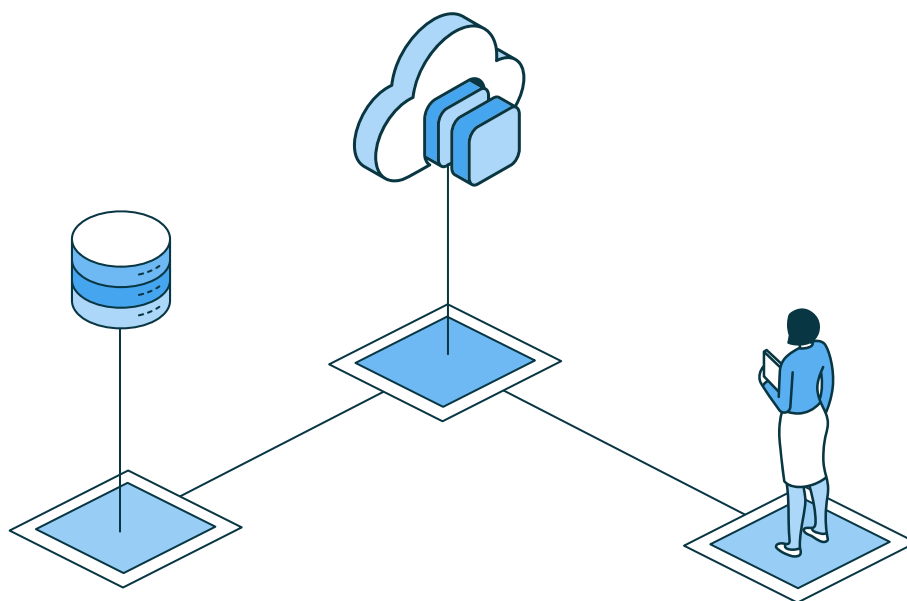
❯ **Mixed infrastructure:** this model **combines both on-premises infrastructure resources and cloud infrastructure resources to meet the Administration of Justice's ICT needs.** In this model, equipment resources and technological solutions are combined with cloud services, allowing this Administration to leverage the benefits of both approaches. This modality is typically applied in administrations of justice that keep certain essential information and services within their local infrastructure, while less critical services are stored in the cloud.

This modality has the following characteristics:

- **Coexistence of local and cloud resources:** the Administration of Justice maintains its own local infrastructure, such as servers and storage systems, while also using cloud services provided by technology providers.

- **Flexibility and scalability:** the mixed infrastructure allows the Administration of Justice to adapt to evolving demands. They can scale cloud resources as needed, which is especially useful for managing spikes in demand.

- **Centralized management:** using administration tools, the Administration of Justice can manage both its local resources and cloud resources in a centralized manner.

- **Business continuity and backup:** the Administration of Justice can use the cloud to back up critical data and applications, enhancing disaster recovery and business continuity.

- **Cost reduction:** A mixed infrastructure can help the Administration of Justice reduce costs by using the cloud for temporary needs, avoiding costly investments associated with implementing local infrastructure.
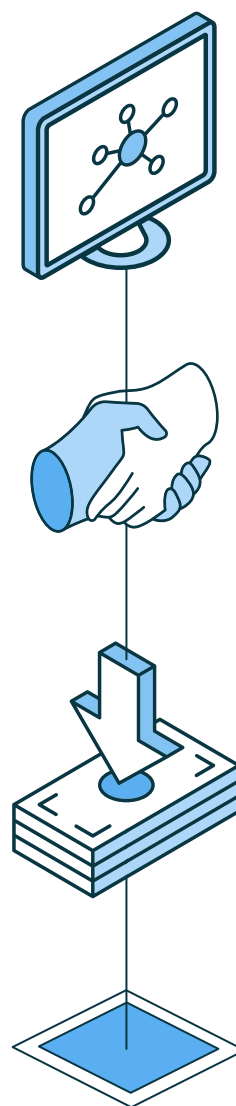
4.1.2 HEADQUARTERS INFRASTRUCTURE

Courts and tribunals have their own technological infrastructure to support public employees working in these judicial bodies, as well as professionals and citizens who come in person to perform procedural acts or tasks. On the one hand, they can provide information services and manage face-to-face appointments at the courthouse. On the other hand, they provide services related to holding hearings, statements, interviews, and other procedural acts. Additionally, the headquarters infrastructure includes systems that enable communications and connectivity, supply of electricity in case of emergencies, and ensure the security of the facilities.

❭ Information services and management of in-person appointments:

- To provide as much information as possible to citizens and professionals when carrying out procedures, **installing digital information screens is highly beneficial. These screens can indicate the locations where each procedure must be carried out and display the hearings** scheduled for the day, along with other relevant information. These digital information screens are of great help so that citizens and professionals can promptly find the exact location for their procedures or hearings.

- Another essential component of the infrastructure at many headquarters is the installation of **digital information totems.** Through a digital screen, these digital totems **display relevant information on various aspects of justice for citizens and professionals, including the introduction of new digital services.** This infrastructure primarily supports change management by facilitating communication about ongoing digital transformation projects. It aims to inform and raise awareness among professionals and citizens about these initiatives.

- There is another aspect of the judicial quarters' infrastructure focused on **managing the order of attention for citizens and professionals who come to carry out procedures without an appointment. These kiosks are used to assign turns for face-to-face attention at the headquarters.** They allow people to view the different procedures that can be completed without an appointment and select the one they need. The system automatically assigns an order number to each person and specifies the location within the court where they need to go to complete the procedure.

❯ Services related to holding hearings, depositions, interviews, and other procedural acts:

- **Technological equipment in multipurpose rooms:** these rooms fulfil different functions. On the one hand, they are used to hold meetings between the parties' lawyers to discuss out-of-court settlements. They are also used to interview victims of crime, take statements from individuals arrested or investigated within the context of criminal proceedings, and conduct other procedural actions. These rooms are equipped with **high-definition image and sound recording system, primarily composed of cameras, microphones, and computers.**

- **Courtroom equipment:** due to its critical importance during hearings, the infrastructure of courtrooms is addressed in greater detail in the **Courtroom infrastructure** section of the document. It mainly consists of a comprehensive **courtroom recording system.** This system allows recording the entire hearing, whether it is conducted entirely face-to-face in the courtroom or in a hybrid format, where some attendees are physically present in the room, while others participate remotely. In addition, courtrooms are equipped with other technological devices, such as **screens** to view evidence and statements from third parties who interact with the room by videoconference. There is also a command post where all recordings are managed through a computer.

❯ **Judicial quarters cross-cutting services:** it is necessary to have an adequate wiring system that allows users to connect different devices at their workstation. Additionally, buildings must have digital infrastructure to ensure reliable mobile coverage and internet connection. This is crucial to guarantee effective ICT communications and connectivity. Another relevant aspect is equipping the buildings with auxiliary energy generators, which will ensure continuous operation in case of a general power outage. Additionally, it is vital to have technological infrastructure for building access control and fire prevention systems. It is important to remember that these strategic facilities house sensitive information that must be safeguarded.

4.1.3 COURTROOM INFRASTRUCTURE

COURTROOMS SERVE AS THE PHYSICAL SPACE WITHIN THE COURTS AND TRIBUNALS, IN WHICH ORAL HEARINGS ARE CONDUCTED. DURING THESE PROCEDURAL ACTS, THE INVOLVED PARTIES PRESENT THEIR DISPUTES, INTRODUCE AND PRACTICE EVIDENCE TO SUPPORT THEIR POSITIONS, AND THE JUDGE EXAMINES THE FACTS AND EVIDENCE BEFORE ISSUING A SENTENCE. THEREFORE, **HEARING IS A KEY PART OF THE JUDICIAL PROCESS THAT REQUIRES COMPLETE TRANSPARENCY AND LEGAL GUARANTEES FOR ALL PARTIES INVOLVED. THE TECHNOLOGICAL INFRASTRUCTURE IN THE COURTROOMS REINFORCES THESE AREAS, SINCE THE ENTIRE HEARING IS RECORDED WITH BOTH IMAGE AND SOUND AND IS STORED WITHIN EACH ELECTRONIC COURT FILE.**

The digital transformation of the justice system has also brought a **paradigm shift in the way hearings are held.** Traditionally, all court hearings took place in person at the courthouse. However, advancements in technology currently enable holding virtual hearings. These virtual hearings allow some or all participants to join remotely. This shift means that courtrooms have also had to adapt to this new model. To accommodate this change, **they require technological infrastructure that connects physical and virtual spaces.**

The following are the main components of the courtroom technological infrastructure:

❭ **Video cameras:** the courtroom recording system features high-resolution video cameras strategically placed around the courtroom. These cameras capture images of judges, attorneys, witnesses, jurors, and all parties involved in the proceeding. They can be either fixed or mobile and are essential for capturing visual evidence.

❭ **Microphones and audio recording:** the recording system features high-quality microphones that capture all conversations, statements, and discussions in the courtroom. This is essential for documenting the statements and arguments presented during the proceedings.

❭ **Videoconferencing system:** enables parties or other participants in the hearing to participate live online. The videoconferencing system is managed by the judge so that, at the appropriate time for one of the parties to speak, the judge can initiate the videoconference, which is displayed on a high-definition screen installed in the courtroom. In this way, the judge, lawyers and other individuals present in the room can view the image and hear the remote participant clearly.

❯ **High-definition screens and projectors:** these are used to broadcast interventions via videoconference and to show visual evidence, digital evidence, and presentations to all parties involved, including judges, lawyers, witnesses, and jurors.

❯ **Recording of visual evidence:** the recording system allows presenting visual evidence, such as documents, screen presentations, and charts. It captures these elements in sync with the audio and video recording.

❯ **Control of the recording:** technical assistance or court personnel have a control computer that allows them to manage and supervise the recording. This system enables them to start and stop recording as needed during the proceedings. Data related to the hearing, including details on the participants, statuses, management marks within the recording are also entered. This system encompasses document management and ensures that the electronic signature of the hearing is captured and incorporated into the electronic judicial file.

❯ **Storage and archiving:** Records are securely stored in protected media and archived for future reference. These records are essential for reviewing procedures and resolving legal disputes.

❯ **Simultaneous translation system:** in hearings where one of the parties does not speak the official language of the country, a simultaneous translation system is essential. This system ensures that, when the party needs to intervene or make a statement in a foreign language, their words are immediately translated into the official language. To facilitate this task, an ICT machine translation system can be employed. This ensures that all parties, including the judge, accurately understand the exact meaning of what the foreign participant is expressing in another language.

❯ **Speech-to-text system:** this digital solution allows indexing recording contents, enabling judges to search for keywords within the hearing recording. Therefore, it is not necessary to transcribe the content of the hearing in a physical document. Instead, this solution allows for a quick and efficient examination of the recording. It enables the judge to pinpoint and view the specific moment of interest without having to conduct a tedious search throughout the entire video.

> IN ADDITION TO CREATING A COMPREHENSIVE DIGITAL RECORD OF ALL EVENTS, ENSURING THE NORMAL FUNCTIONING OF THIS PUBLIC SERVICE, DIGITIZATION OF COURTROOMS ALSO **SIGNIFICANTLY ENHANCES THE EFFICIENCY AND AGILITY OF THE JUSTICE SYSTEM. THIS IS BECAUSE THE OPTION TO PARTICIPATE REMOTELY ELIMINATES THE NEED FOR RECESSES IN HEARINGS,** WHICH WERE PREVIOUSLY REQUIRED IF, FOR EXAMPLE, A WITNESS COULD NOT ATTEND THE COURTHOUSE IN PERSON.

4.1.4 INFRASTRUCTURE PROVIDED BY THE GOVERNING BODY OF DIGITAL GOVERNMENT

One of the key aspects in the digital transformation of justice is the efficient allocation of resources, ensuring both budgetary and environmental sustainability. This implies reusing existing technological resources to avoid duplicating platforms, infrastructures, and technological tools.

> IN THIS REGARD, IT IS CRUCIAL FOR THE GOVERNING BODY OF DIGITAL TRANSFORMATION TO **CONDUCT A THOROUGH STUDY BEFORE DEVELOPING AND IMPLEMENTING ITS OWN PLATFORMS, INFRASTRUCTURES, AND TECHNOLOGICAL TOOLS. THIS STUDY SHOULD IDENTIFY EXISTING RESOURCES THAT HAVE ALREADY BEEN DEVELOPED BY THE GOVERNING BODY OF DIGITAL GOVERNMENT. BY DOING SO, THESE RESOURCES CAN BE** SHARED AND UTILIZED ACROSS ALL ADMINISTRATIONS.

The main platforms and technological tools that could be provided by the governing body of Digital Government are the following:

❯ **The electronic communications system.** When an electronic communications system is implemented across the entire Public Administration, **it must be adapted to the specific needs of the justice system.** This adaptation should consider the actors involved and the unique requirements of judicial communication acts.

❯ Electronic file viewer.

❯ Entry/exit registration platform.

❯ Electronic archiving platform.

❯ Digital identity and electronic signature system.

❯ Interoperability Hub.

❯ Security Operations Center (SOC).
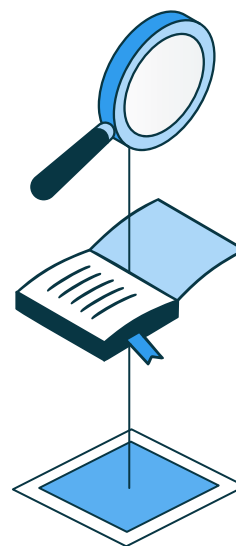
❯ Money management.

❯ **Platform to access digital public services:** integrates citizen justice-related information with existing administrative data, providing a unified solution for public services.

❯ Management of prior and in-person appointments.

❯ Management of procedural flows and document templates.

> HOWEVER, **IF THESE DIGITAL PLATFORMS AND TOOLS ARE NOT PROVIDED IN A CROSS-CUTTING MANNER BY THE GOVERNING BODY OF DIGITAL GOVERNMENT, THE ADMINISTRATION OF JUSTICE WILL TAKE THE INITIATIVE TO IMPLEMENT THEM AS PART OF ITS DIGITAL TRANSFORMATION PROCESS.**
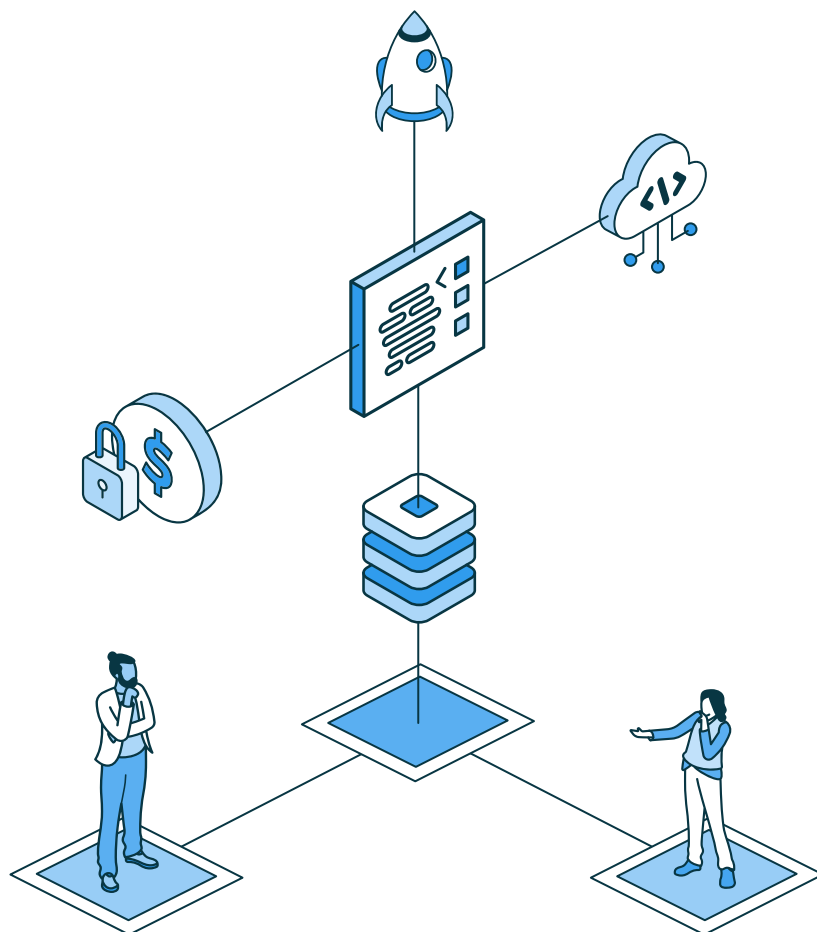
Some of the important benefits of reusing and sharing technology infrastructure are:

❯ **Improvement in managing and allocating budgetary resources:** efficient management of the public budget is achieved by avoiding the allocation of budget items to develop and implement systems that have already been created. In addition, **there is a consistent economy of scale at play. As the governing body of Digital Government implements more infrastructures and services, the average cost per unit decreases. This results in lower overall public spending.**

❯ **Increased infrastructure security:** as technological infrastructure is used by a greater number of users, a wider array of use cases and potential failures or incidents can be detected and corrected as a result of a large-scale use of said infrastructure.

❯ **Greater ease of sharing information across administrations:** leads to greater efficiency and agility within the Administration. By creating a technological ecosystem of shared platforms and tools, immediate access to information stored in a unified system becomes possible. However, assessing the type of information being shared is crucial, particularly when it comes to sensitive data from the Administration of Justice. In such cases, it is best to ensure this information remains accessible exclusively to this Administration to maintain confidentiality and security.

❯ **Greater environmental sustainability:** there is no need to spend resources developing and implementing systems that duplicate the existing ones, especially if the current systems can already fulfill the same function.

INTERNATIONAL REFERENCE FOR INFRASTRUCTURE AND TECHNOLOGICAL TOOLS PROVIDED BY THE GOVERNING BODY OF DIGITAL GOVERNMENT:

Chile: the Digital Government Division[94], acting as the governing body of Chile, oversees the implementation of cross-cutting platforms related to digital identity, digitalization, interoperability, communications, data management, and project evaluation. These platforms are used by all public administrations.

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94. Plataformas transversales/División de Gobierno Digital de Chile.

4.2
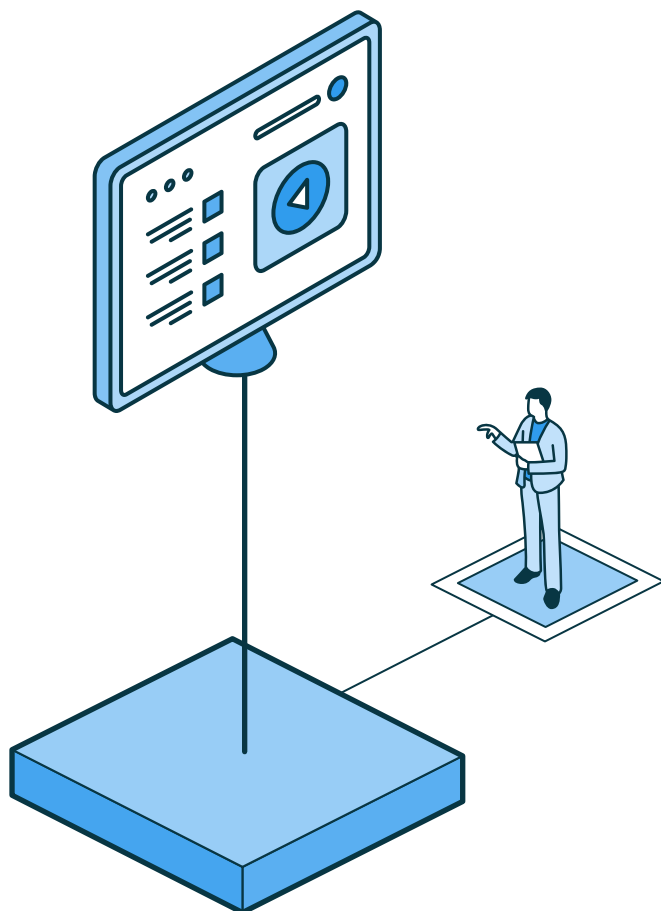
Digital workplace

The digital workplace includes the equipment and technological tools that public employees of the Administration of Justice need to work in digital format. This setup mainly consists of a computer, its essential equipment accessories such as the dual monitor, and the necessary digital tools to facilitate their work. These tools range from office automation solutions to systems that facilitate management of the electronic judicial file and other auxiliary actions related to electronic judicial processing.
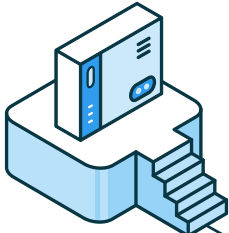
The digital transformation of justice has also brought about a **paradigm shift in the workplace for its users.** Traditionally, this workplace was confined to a specific physical space within the court. This setup is known as **a fixed workstation, which involves a desktop computer stationed in a specific location within the court, requiring users to travel there to perform their duties.** This approach is rooted in the traditional model of in-person work, where all public employees operate within the same building and handle tasks exclusively for the court to which they are assigned.

TECHNOLOGICAL PROGRESS HAS ENABLED THE DEVELOPMENT OF LIGHTWEIGHT LAPTOPS WITH HIGH PROCESSING CAPACITY, WHICH HAS FACILITATED REMOTE WORK. THIS HAS GIVEN RISE TO THE CONCEPT OF A **MOBILE WORKSTATION, PROVIDING PUBLIC EMPLOYEES OF THE ADMINISTRATION OF JUSTICE WITH ULTRALIGHT COMPUTERS, WHICH ALLOW THEM TO WORK SECURELY FROM ANY LOCATION WITH AN INTERNET CONNECTION.** SAID DELOCALIZATION OF THE WORKPLACE FACILITATES THE ALLOCATION OF HUMAN RESOURCES IN ACCORDANCE WITH THE COURTS' NEEDS AND IMPROVES WORKING CONDITIONS BY ENABLING REMOTE WORK.

Another benefit of the mobile workplace is its ability to address challenges beyond the realm of justice, such as depopulation in many countries. Small towns and cities are facing depopulation as people migrate to large cities in search of better opportunities. This shift has created demographic and economic imbalances between major cities and other regions. **The mobile workplace offers a solution by allowing public employees who prefer not to live in the cities, where they reside only due to their workplace, to have the flexibility to live elsewhere. This contributes to a more balanced territorial distribution of the population, encouraging geographical mobility toward less populated areas.**

On-site workstations

The fixed workstation allows users of the administration of justice to perform their duties digitally from the judicial headquarters at their designated workstation:

Remote workstations

The mobile workstation enables users of the Administration of Justice to work digitally from any location with Internet access.

Types of work arrangements

- ▸ Desktop computer
- ▸ Dual monitors
- ▸ Headset and microphone
- ▸ Card reader keyboard and mouse
- ▸ Wiring/cables
- ▸ Webcam

This allows for the flexibility to work on the go without the need for users to physically travel to the office. The remote workstations includes:

- ▸ Portable detachable laptop with 4G connectivity
- ▸ Portable cryptographic card reader
- ▸ Wireless keyboard and mouse with rechargeable battery
- ▸ Headset and microphone
- ▸ Docking station to connect the
- ▸ laptop and other components

One possible option is to adopt a **hybrid model** in which public employees of the Administration of Justice have laptops and accessories that allow them to perform their duties both from home and in person at the courthouse when their physical presence is required.

INTERNATIONAL REFERENCE FOR THE IMPLEMENTATION OF MOBILE WORKPLACES IN THE ADMINISTRATION OF JUSTICE:

Spain: the Ministry of Justice launched a project called the **delocalized workplace**[95] that allows users of the Administration of Justice to securely access the applications they need for their daily work from any device and any location.

Regardless of the chosen work model within each Administration of Justice, it is advisable **to minimize the availability of paper printers in courts.** This reduction helps to move away from a paper-based work model. Instead, it is important to **prioritize the provision of scanners that enable the transfer of files from paper to digital format.** Printers should be gradually phased out in the courts, retaining only those that are essential for specific tasks.

Apart from the basic equipment of the workstation, it also includes digital tools that allow users to work in digital format. The tools can be broadly categorized into two types:

❯ **Common tools:** these primarily include corporate email, office automation solutions, corporate videoconferencing solutions, and cybersecurity tools, such as antivirus software.

❯ **Specific tools:** these facilitate electronic judicial processing and related auxiliary activities. Key tools in this category are the case management system, the electronic communications system, electronic signature and digital identity solutions, as well as the electronic file viewer, among others.

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95. Job delocalization/Ministry of Justice of Spain.

To implement these tools, two main models can be employed, depending on the specific needs of each Administration of Justice:

❯ **Software as a Service (SaaS):** is a distribution model for technological tools and applications, where they are hosted in the cloud and are accessible over the internet. Rather than acquiring and installing the software locally on computers or servers, users access the applications through a web browser from any device with an internet connection.

❯ **Acquisition of software locally:** in this model, tools and applications are installed and run on local devices or servers within the Administration of Justice rather than being hosted in the cloud and accessed via the internet.

4.3
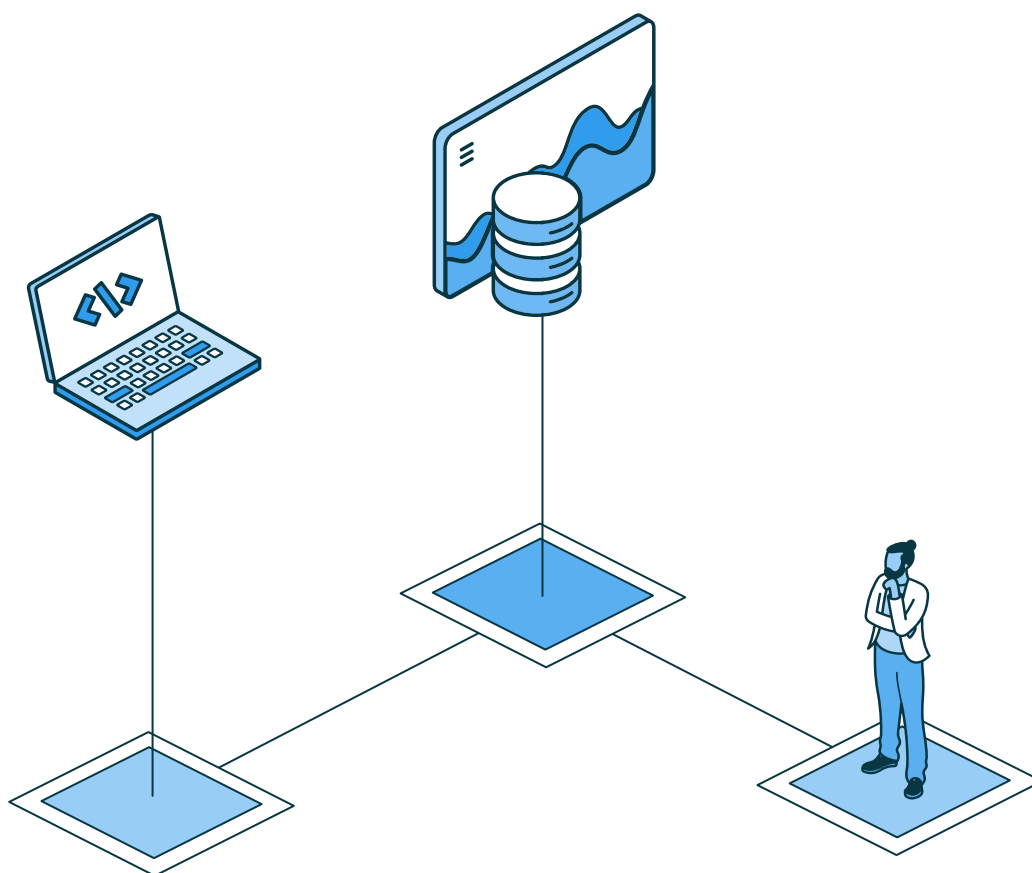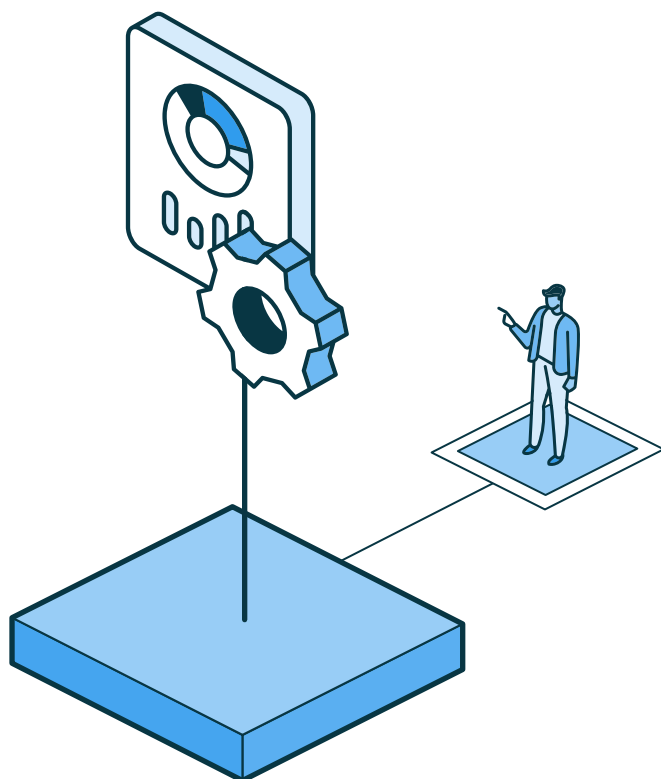
Case management system

THE CASE MANAGEMENT SYSTEM IS A **TECHNOLOGICAL TOOL THAT ENCOMPASSES AN ECOSYSTEM OF MODULES AND DIGITAL FUNCTIONALITIES, ENABLING THE ELECTRONIC JUDICIAL PROCESSING OF FILES FROM THE START TO THE CONCLUSION OF THE CASE.** THIS SYSTEM SERVES AS A **REPOSITORY OF INTEROPERABLE APPLICATIONS.** FOR EXAMPLE, THE ELECTRONIC FILE VIEWER, WHICH CAN BE INTEGRATED INTO THE CASE MANAGEMENT SYSTEM, INTERACTS SEAMLESSLY WITH THE ELECTRONIC SIGNATURE SYSTEM. THIS INTEGRATION ALLOWS JUDGES TO DIGITALLY SIGN JUDGMENTS.

The containerization used in the case management system enables the deployment of complex applications by breaking them down into simpler execution components, known as decoupled and interoperable elements, that fully support electronic court processing. The main **benefits of said module ecosystem** are:

❱ **Portability:** platforms package the application along with all its dependencies, ensuring consistent functionality across any environment, whether it is on an on-premises server, in the cloud, or on a development machine. This simplifies application portability and eliminates the discrepancies between development, testing, and production environments.

❱ **Environment-independent:** containers are independent of the underlying operating system. This allows applications to run on heterogeneous systems, reducing dependency on a specific platform and making it easier to migrate between systems.

❱ **Scalability:** containers are ideal for scaling out, as additional instances of a container can be created to handle larger workloads.

❱ **Rapid deployment:** containers can be created and deployed quickly. This accelerates the continuous delivery of applications and updates, enabling a more agile response to business needs and security issues.

❱ **Dependency management:** containers encapsulate all dependencies of an application, preventing conflicts between different library versions and ensuring consistent application performance.

❱ **Isolation and security:** containers use operating system isolation technologies to ensure that applications do not interfere with each other. This improves security by limiting access to critical resources and preventing the spread of threats.

❯ **Cost reduction:** containerization lowers operational costs by improving application management efficiency and optimizing resource utilization.

Each case management system will have the necessary modules to address the phases of the judicial procedure in each country. As the Administration of Justice identifies the need for new functionalities, it will integrate additional technological components into the case management system.

As a general rule, the case management system can include the **following components, which can be implemented as standalone modules, without being contained within a case management system, or without being part of a unified system.** This approach allows users to access all modules and their respective functionalities through a single case management system:

❯ **Entry/exit registration platform:** this platform logs everything submitted electronically to the Administration of Justice, as well as all documents that the Administration issues to related users.

❯ **Electronic archiving platform:** a digital repository for the secure storage of electronic court files, which become part of the electronic archive at the end of the judicial process.

❯ **Electronic communications system:** this system enables internal two-way electronic communication within the Administration of Justice, connecting different courts and tribunals. This communication facilitates virtual transfers of judicial files from one court to another for appeals and promotes communication between the Administration of Justice and the rest of related entities. For example, the electronic communications system allows the exchange of notifications and briefs with lawyers. **Additionally, it facilitates interconnection between the Administrations of Justice in different countries, promoting transnational data exchange.** This capability would be invaluable for coordinated efforts to combat organized crime within the region.

❯ **Electronic file viewer:** allows users to view electronic records and access detailed information on their status, structure, and associated documents.

❯ **Electronic signature:** enables users to electronically sign judicial documents, ensuring security, authenticity, and non-repudiation.

The case management system leverages interoperability infrastructure to enable automated interconnection between different modules:

❯ **The Interoperability Hub:** this infrastructure facilitates communication and data exchange between systems that may have different standards, protocols, or data formats.

❯ **Master directory of judicial data** allows all systems and applications to work with uniform data catalogs, leading to data homogenization. It stores **data tables** containing common data within the Administration of Justice, as well as data for information exchange with citizens and other administrations. The directory also includes associated definitions and codifications[96].

❯ **Processing and classification flows:** are a series of procedures and operations that reflect different procedural acts as provided by law for processing within the court of a given judicial procedure.

❯ **Document models** are templates of standardized documents integrated into the case management system, that allow judicial bodies to automatically collect data already recorded in the system.
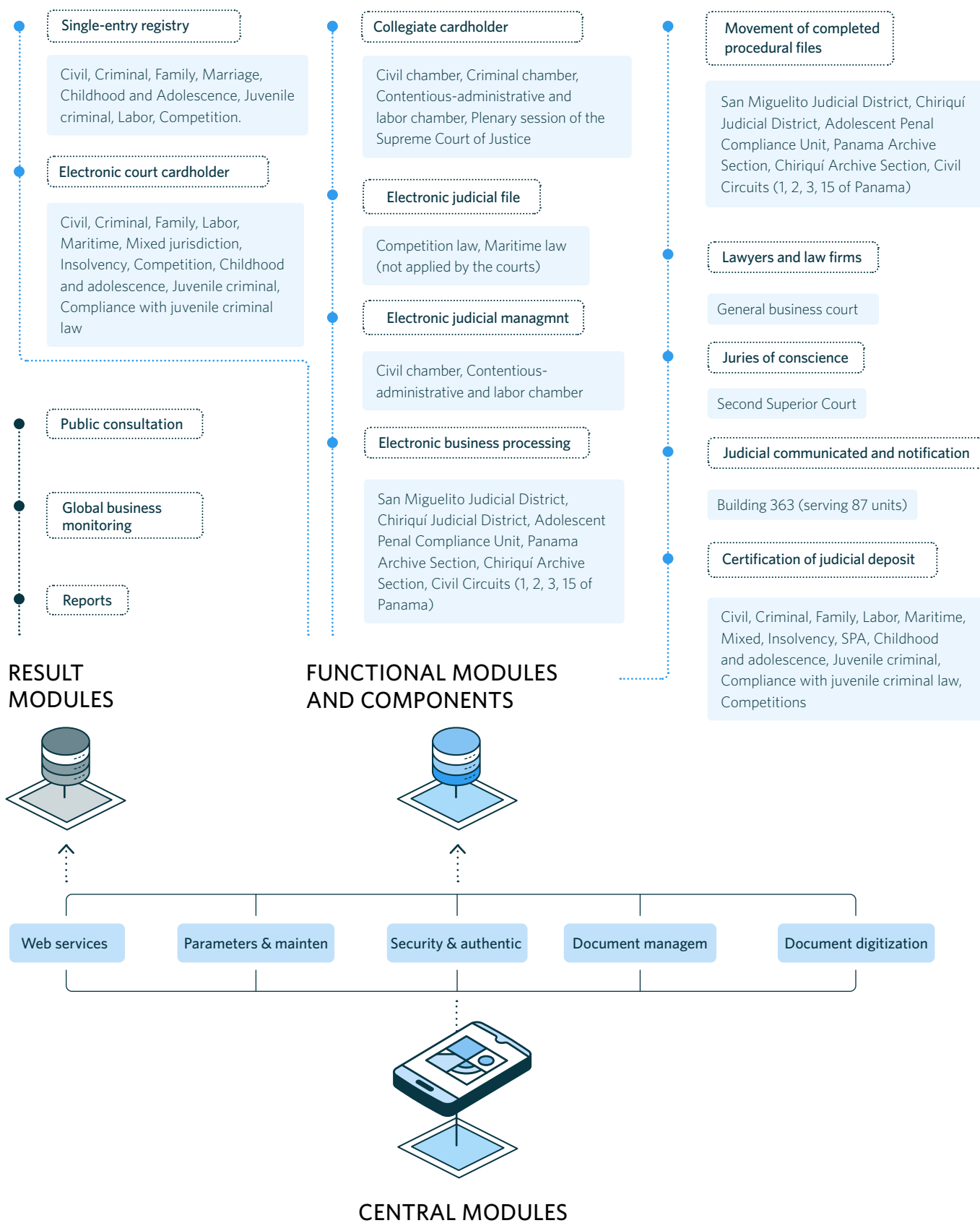
INTERNATIONAL REFERENCE FOR MODULES AND TECHNOLOGICAL COMPONENTS OF A CASE MANAGEMENT SYSTEM:

Panama: the Judicial Branch of Panama has implemented the Automated System of Judicial Management, "Ileana Bryden de Tejada". This technological tool facilitates the entry and management of files being processed in various courts of the Judicial Branch of the Republic of Panama.[97]

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96. CTEAJE website/Technical regulations/Master data table.

97. SAGJ/Judicial Branch of Panama.

RESULT MODULES

Single-entry registry

Civil, Criminal, Family, Marriage, Childhood and Adolescence, Juvenile criminal, Labor, Competition.

Electronic court cardholder

Civil, Criminal, Family, Labor, Maritime, Mixed jurisdiction, Insolvency, Competition, Childhood and adolescence, Juvenile criminal, Compliance with juvenile criminal law

Public consultation

Global business monitoring

Reports

FUNCTIONAL MODULES AND COMPONENTS

Collegiate cardholder

Civil chamber, Criminal chamber, Contentious-administrative and labor chamber, Plenary session of the Supreme Court of Justice

Electronic judicial file

Competition law, Maritime law (not applied by the courts)

Electronic judicial managmnt

Civil chamber, Contentious-administrative and labor chamber

Electronic business processing

San Miguelito Judicial District, Chiriquí Judicial District, Adolescent Penal Compliance Unit, Panama Archive Section, Chiriquí Archive Section, Civil Circuits (1, 2, 3, 15 of Panama)

Movement of completed procedural files

San Miguelito Judicial District, Chiriquí Judicial District, Adolescent Penal Compliance Unit, Panama Archive Section, Chiriquí Archive Section, Civil Circuits (1, 2, 3, 15 of Panama)

Lawyers and law firms

General business court

Juries of conscience

Second Superior Court

Judicial communicated and notification

Building 363 (serving 87 units)

Certification of judicial deposit

Civil, Criminal, Family, Labor, Maritime, Mixed, Insolvency, SPA, Childhood and adolescence, Juvenile criminal, Compliance with juvenile criminal law, Competitions

| Web services | Parameters & mainten | Security & authentic | Document managem | Document digitization |

CENTRAL MODULES

4.4

Entry/exit platform

The entry/exit registration platform **logs everything that is submitted electronically to the Administration of Justice, as well as all documents the Administration makes accessible** to related users.

> **AS MENTIONED EARLIER, THIS DIGITAL PLATFORM CAN BE IMPLEMENTED EITHER INDEPENDENTLY OR AS PART OF A CASE MANAGEMENT SYSTEM.** IN THE LATTER CASE, USERS WILL HAVE UNIFIED ACCESS TO ALL FUNCTIONALITIES OF THIS PLATFORM, ALONG WITH OTHERS THAT ARE INTEGRATED INTO THE SYSTEM. THIS STREAMLINED APPROACH FACILITATES WORK, AS USERS WON'T NEED TO SWITCH BETWEEN DIFFERENT PLATFORMS TO CARRY OUT VARIOUS PARTS OF THE JUDICIAL PROCEDURE.

This platform can be transversal across the entire Administration, provided by the governing body of Digital Government. However, if such a platform does not exist, a specific one can be created for electronic judicial processing and integrated as a module within the case management system.

> THE **ENTRY/EXIT REGISTRATION PLATFORM ENSURES LEGAL CERTAINTY FOR ALL ELECTRONIC INTERACTIONS CONDUCTED BY THE ADMINISTRATION OF JUSTICE WITH VARIOUS ACTORS.** IT DIGITALLY RECORDS EVERY DATA TRANSACTION, WHETHER IT IS A NOTIFICATION, DOCUMENT SUBMISSION, OR ANY OTHER TYPE OF COMMUNICATION, REGARDLESS OF THE FORMAT.
>
> ON THE ENTRY/EXIT REGISTRATION PLATFORM, **THE DIGITAL RECORDS ARE MADE FOR ANY DOCUMENT PRESENTED TO OR RECEIVED BY THE ADMINISTRATION OF JUSTICE, AS WELL AS FOR THOSE DOCUMENTS ADDRESSED FROM THE ADMINISTRATION** TO RELATED ACTORS.

To ensure information traceability, registry entries are recorded according to the chronological order of document entry and exit. As a minimum, these entries should contain the following information:

❯ Unique identification number.

❯ A clear description of its nature.

❯ Date and time of submission.

❯ Identification of the interested party.

❯ Reference to the content of the judicial proceedings.

On the other hand, the sender of a document to court receives an automatically issued, digitally signed acknowledgement of receipt. This acknowledgement contains, at a minimum, the following information:

❯ Individual registration number or code.

❯ Date and time of submission.

❯ A copy of the document, communication, or application submitted; or, if applicable, a literal reproduction of the data included in the submission form.

❯ If applicable, the list number and name of documents attached to the file or submitted document, along with the electronic fingerprint (hash code) of each. This ensures their integrity and non-repudiation.

❯ If applicable, details about the deadlines for document distribution, filing an appeal, etc.

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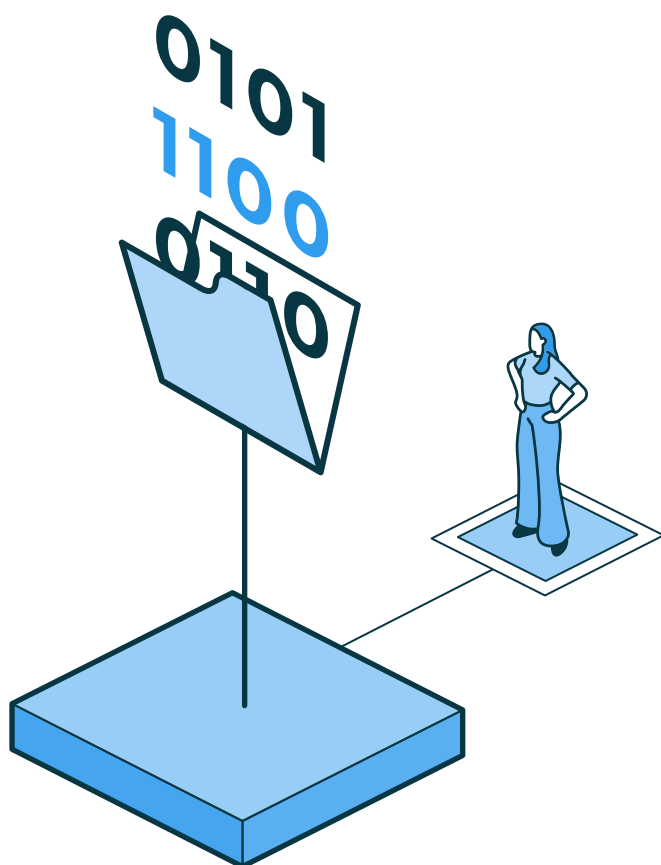
Electronic archiving platform

The electronic archiving platform serves as a **digital repository for all electronic court files and their associated documents once the judicial process has concluded and the file is considered closed. This platform ensures management, custody, and retrieval of the complete information contained in the file,** while maintaining its authenticity, integrity, and accessibility by authorized users for the duration specified by law.

> **AS MENTIONED EARLIER, THIS DIGITAL PLATFORM CAN BE IMPLEMENTED INDEPENDENTLY OR CAN BE INTEGRATED WITHIN A CASE MANAGEMENT SYSTEM.** IN THE LATTER SCENARIO, USERS WILL HAVE UNIFIED ACCESS TO ALL FUNCTIONALITIES OF THIS PLATFORM, ALONG WITH OTHER INTEGRATED SYSTEMS. THIS STREAMLINED ACCESS WILL MAKE IT EASIER FOR USERS TO CARRY OUT THEIR JUDICIAL PROCESSES WITHOUT NEEDING TO SWITCH BETWEEN DIFFERENT PLATFORMS FOR VARIOUS TASKS.

This platform allows the secure digital storage of vast amounts of data, ensuring the safety of electronic judicial files across the entire Administration of Justice. **As a result, courts no longer need to allocate extensive physical space for storing paper files.** Traditionally, the Administration of Justice in many countries has struggled with a lack of physical storage in their headquarters, which is necessary to maintain files during the legally mandated time. This digital platform solves the problem by securely storing judicial files electronically, eliminating the need for physical storage space.

The electronic archive allows quick location of court files by entering the information in the search fields of the file. Previously, court employees had to spend considerable time and effort searching through extensive documentation, often stored across numerous files, making the search process tedious.

This electronic archive features the following technical characteristics: precise identification of each electronic document stored, association of metadata to the electronic file and its documents, making its management viable, inclusion of a digitally signed electronic index that guarantees the integrity and recovery of said file, immediate visualization of documents in a legible format, preservation of the probative value of files, stored documents and evidence, and the deletion of information in accordance with legal deadlines, following a regulated procedure that allows the deletion to be recorded.

The electronic archiving platform has the following components:

❯ **Document management policy:** this document defines different procedures for the management, transfer, and elimination of documents.

❯ **Metadata scheme:** standardizes document management among all electronic archiving platforms, ensuring their interoperability for the exchange of information.

❯ **Interoperability system across electronic files:** when there is a unified file, interoperability is not necessary. However, if there are multiple files, interoperability among them is required. This involves using standard technical specifications for electronic documents and files, as well as considering the metadata scheme for document management.

❯ **Interoperability with the case management system:** this platform is responsible for storing archived electronic court files and returning them when requested by the case management system. Note that the case management system must have implemented interoperability services to send and retrieve electronic court files from the electronic archive.

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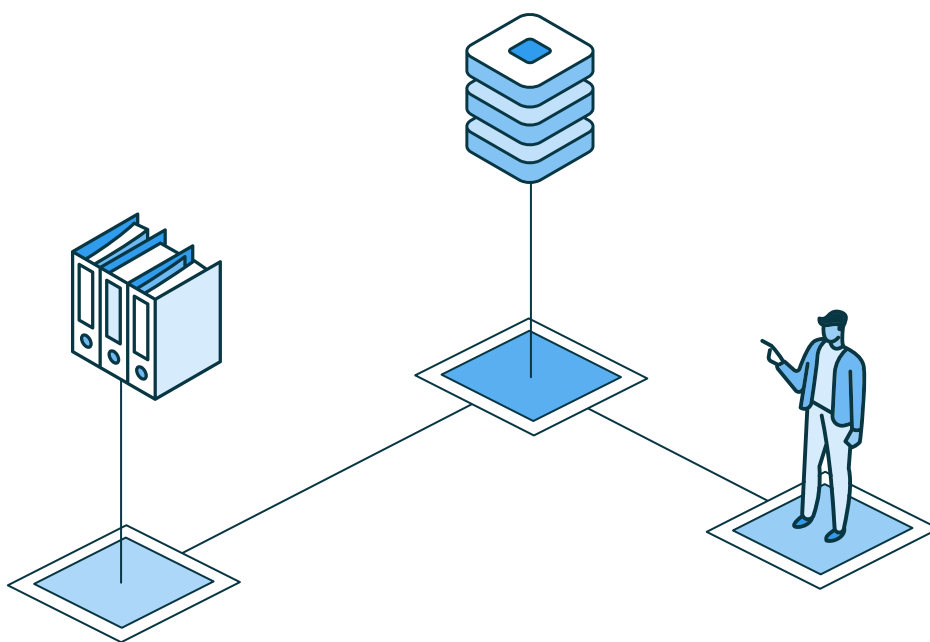
Court records platform

The court records platform enables the interconnection between different registries that store relevant information on individuals' judicial and criminal situations. This integration consolidates all information distributed across different existing databases into a single comprehensive database. Through this restricted access platform, the Administration of Justice, the Public Prosecutor's Office, police forces, and other authorized administrations can quickly ascertain an individual's situation regarding the following information, with the potential for additional information to be included:

❯ Information relating to **final judgments**, which allows authorized users to consult, at any time, the status of a person with respect to the enforcement of a judgment.

❯ Information on **precautionary measures**, which makes it possible to consult, at any time, whether measures have been taken against a person, such as pre-trial detention, prohibition of leaving a territory, etc.

❯ Information relating to the **protection of victims of gender and/or domestic violence**, which allows authorized users to consult in real time whether the established protection measures are being complied with.

❯ Information relating to **injunctions and non-final judgments**, offering updated information on individuals who are wanted by the Administration of Justice or who have been convicted, even if an appeal has been filed.

❯ Information related to **individuals in civil contempt**, allowing the identification of individuals who are in this status.

❯ Information on the criminal responsibility of **minors.**

❯ Information relating to **sex offenders**, providing another source of information to strengthen protection against this type of crime.

This platform uses the **Interoperability Hub** to establish technical connections with other registries. In addition, it requires the definition of consistent data structures supported by common **data tables**, ensuring semantic interoperability so that the information is uniformly understood by all parties involved. It is advisable to establish an **international framework for full interoperability** between competent authorities of different countries. This ensures that authorities can access a person's information, even if the judicial or criminal data is stored in the registry of a third state.

In addition, since it is a restricted access platform, it is advisable to implement **measures to ensure the security and privacy of the information.** This can be achieved by automatically auditing the system with each access, recording the identity of the person accessing, the information consulted, the date of the consultation, and whether the access was authorized or denied. The right to personal data protection is guaranteed by allowing access only to information that is strictly necessary to fulfill the purpose of the consultation.

INTERNATIONAL COURT RECORDS PLATFORM REFERENCE:

Spain: the Ministry of Justice has implemented the **System of Administrative Records to Support the Administration of Justice (SIRAJ)**. This is a unified, non-public information system that facilitates the connection across different registries.[98]

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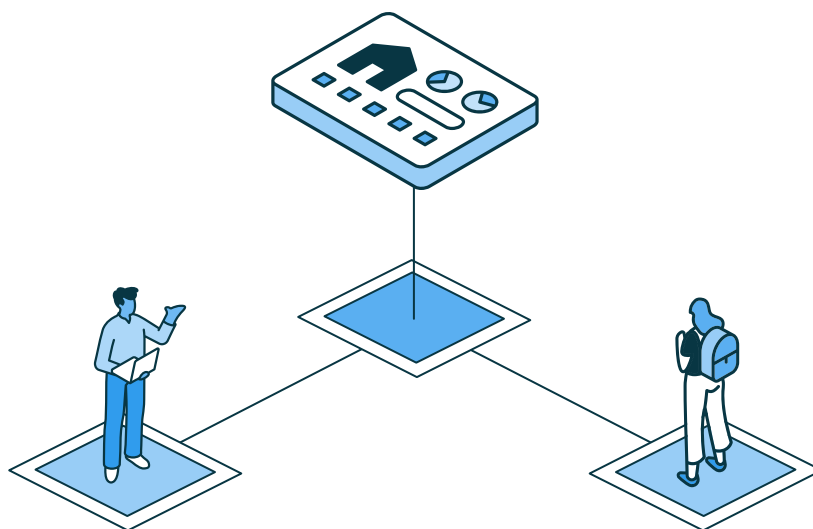
98. SIRAJ / Ministry of Justice of Spain.

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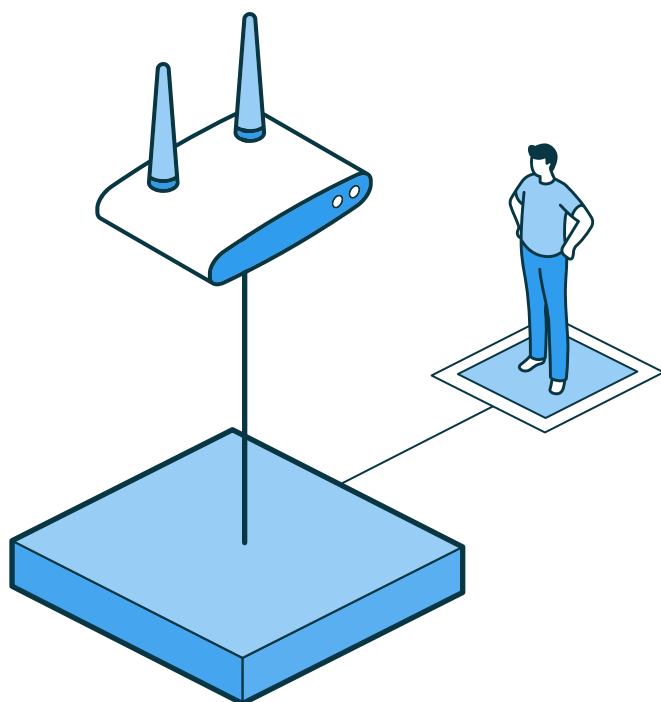
Electronic communications system

> THE ELECTRONIC COMMUNICATIONS SYSTEM **ENABLES INTERNAL TWO-WAY ELECTRONIC COMMUNICATION BETWEEN DIFFERENT COURTS AND TRIBUNALS WITHIN THE ADMINISTRATION OF JUSTICE.** THIS ALLOWS FOR TASKS SUCH AS THE VIRTUAL TRANSFER OF FILES FROM ONE COURT TO ANOTHER. IN ADDITION, **IT ENABLES THE ADMINISTRATION OF JUSTICE TO COMMUNICATE EXTERNALLY WITH OTHER ACTORS IT INTERACTS WITH,** SUCH AS LAWYERS, ALLOWING THEM TO SEND NOTIFICATIONS AND RECEIVE DOCUMENTS.

This system **can be provided by the governing body of Digital Government as a transversal tool for the entire Public Administration.** However, **in the field of justice, electronic communications have specific characteristics.** Most communications occur between the Administration of Justice and professionals, generally lawyers. In addition, due to the reinforced guarantees provided by the judicial process, the requirements for electronic communication, such as ensuring effective access to notification, are stricter than those in other public administrations. It is therefore advisable to tailor the electronic communications system to the specific needs of the Administration of Justice. If it is not feasible, developing a dedicated electronic communications system for justice would be beneficial.

This system facilitates electronic communication between judicial bodies and other actors at any point during the process, including the initial notification to the parties involved or the professionals assisting them, as well as throughout the ongoing proceedings. This is because professionals and other administrations have their own messaging mailboxes where they receive the first notification from the judicial body. Citizens also have their own notification boxes that they can access through the **judicial services portal** that supports the **communication management service.**

The electronic communications system includes various functionalities that **allow visualization of sent and received communications, alerts for communications pending reading, and the ability of sending documents and notifications through standardized forms, with the option to attach additional documents.**

This system logs **the exact date and time of when communications are sent, as well as when users open and read them.** This is crucial when calculating procedural time limits, since they start from the date the communication is received.

IMPORTANTLY, **THE ELECTRONIC COMMUNICATIONS SYSTEM CANNOT BE REPLACED BY OTHER MESSAGING SYSTEMS, SUCH AS CONVENTIONAL E-MAILS, WHICH DO NOT OFFER THE SAME GUARANTEES OF AUTHENTICITY AND CONTENT INTEGRITY.**

INTERNATIONAL REFERENCES OF ELECTRONIC COMMUNICATIONS SYSTEMS IMPLEMENTED IN THE ADMINISTRATION OF JUSTICE:

Spain: the Administration of Justice has an **electronic communications system called LexNET.** This platform facilitates the secure exchange of information between judicial entities and professionals associated to the Administration of Justice, with full legal effects.[99]

Peru: the Judiciary of Peru has the Electronic Notification System (SINOE)[100] that facilitates communication with lawyers and other actors related to justice.

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99. LexNET/Ministry of Justice of Spain.

100. SINOE/ Judicial Power of Peru.

4.8

Electronic file viewer

THE ELECTRONIC FILE VIEWER IS A TECHNOLOGICAL SYSTEM THAT **ALLOWS USERS TO CONSULT ELECTRONIC FILES AND ACCESS DETAILED INFORMATION ON THEIR STATUS, STRUCTURE, AND DOCUMENTS.** THIS VIEWER OPERATES BOTH INTERNALLY AND EXTERNALLY. PUBLIC EMPLOYEES OF THE ADMINISTRATION OF JUSTICE CAN USE IT TO VIEW ELECTRONIC COURT FILES, WHILE LAWYERS AND CITIZENS CAN ACCESS FILES RELATED TO PROCEEDINGS IN WHICH THEY ARE INVOLVED.

This system offers significant benefits. For one, **it reduces paper consumption**, since electronic court documents can be viewed digitally, eliminating the need for physical photocopies. On the other hand, **it enhances accessibility to justice for lawyers and citizens** by eliminating the need to travel to courts to check the status of their judicial proceedings or access related documentation.

This system can be **provided by the governing body of Digital Government as a transversal platform for the entire Public Administration**, allowing any administrative entity to view different administrative files. Alternatively, if this system is not available to all administrations, it is advisable to implement a specific electronic court file viewer for the Administration of Justice.

Once the user has authenticated the system through a digital identity system, preferably using a cryptographic digital certificate, they can proceed with the following actions:

❯ **Electronic file search:** users can search for electronic records already created in the system. The viewer features a "Search" field where users can input the identification data of the file or apply more generic filters, such as the date. Once the search is performed, the viewer displays the results based on the entered filters.

❯ **Access to details of electronic files:** users who are interested parties in the electronic file can access the electronic documents contained within it. In this case, the viewer displays data related to the electronic document, such as the reference number, the document name, issuing body, date of issuance, interested parties, and other relevant information. It also displays the electronic document in a readable format.

> › **Downloading documents incorporated into the electronic files:** users who are interested parties in the electronic file can download electronic documents contained within it. The viewer provides an option to download these documents in a printable authentic copy format, ensuring their validity if presented in physical form.
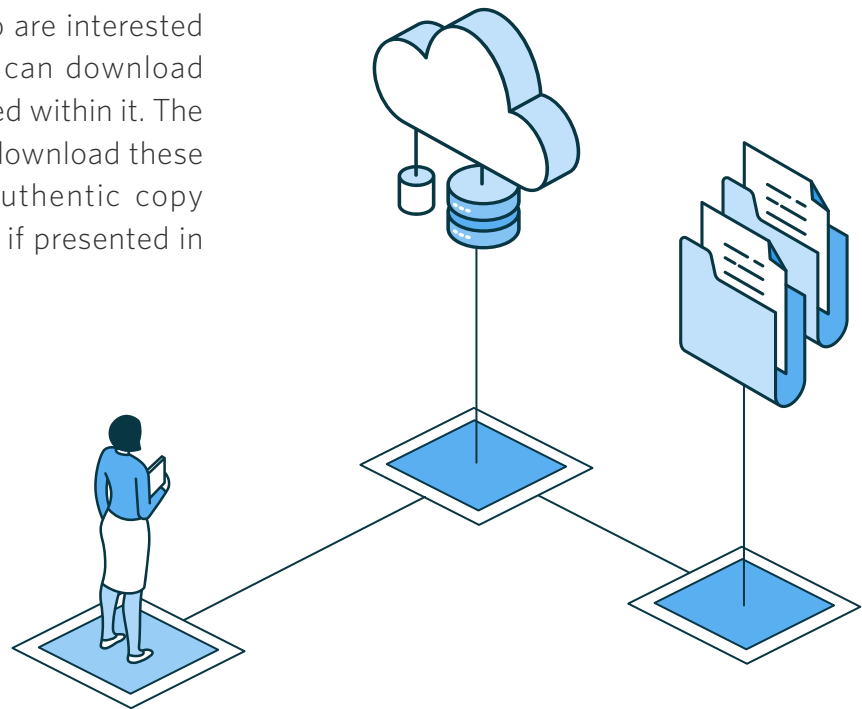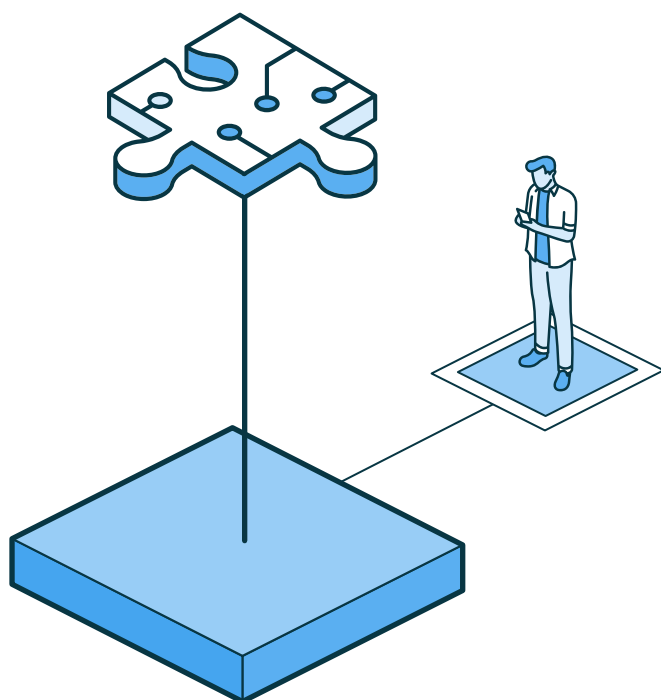
INTERNATIONAL REFERENCE FOR THE OPERATION OF ELECTRONIC FILE VIEWERS:

Spain: the Administration of Justice has an electronic file viewer[101] that allows the visualization of the entire file, including its index and court documents, among other functionalities.

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101. Viewer of electronic judicial files/Electronic Judicial Headquarters of Spain.

4.9

Evidence management platform

The evidence management platform enables the management and handling of **evidence that, due to its physical characteristics, cannot be digitized and preserved electronically.** For example, items such as knives or blunt objects cannot be physically incorporated into the electronic court file.

The evidence platform allows court public employees to register evidence in the system, by filling in a series of metadata, including its physical description, date of incorporation, type of evidence, identification number of the associated file, place of storage, and other elements, such as photographs and attached documentation. In addition, the electronic signature of the public employee is required to ensure the authenticity and integrity of the information. Finally, a unique identifier is assigned to evidence for easy retrieval.

Among the **benefits** of this platform is that it enhances the efficiency and security of evidence management. It ensures the traceability of the chain of custody and improves the agility of judicial processes, by providing faster and easier access to evidence presented in judicial proceedings.

The main features of the evidence platform are the following:

❯ **Documenting the characteristics of evidence:** the platform allows documenting the characteristics of evidence, assigning a unique identification number and storing it in a secure place for future retrieval through this unique identifier. It maintains a direct relationship between the piece of evidence and the associated electronic judicial file.

❯ **Indexing and categorization:** the platform allows tagging, indexing, and categorizing pieces of evidence to facilitate easy retrieval.

❯ **Access control:** the platform manages access permissions to ensure that only authorized parties can view or modify evidence.

❯ **Advanced search:** the platform offers advanced search features that allow users to quickly locate relevant pieces of evidence using keywords, dates, names of the parties involved, and other criteria.

❯ **Auditing and action logging:** the platform maintains a comprehensive record of actions taken within the system, which is useful for auditing and tracking purposes.

❯ **Expiry management:** the platform includes features to manage the disposal or retention of evidence according to legal deadlines.

❯ **Reporting:** the platform simplifies the generation of reports on the evidence presented, its status, and location.
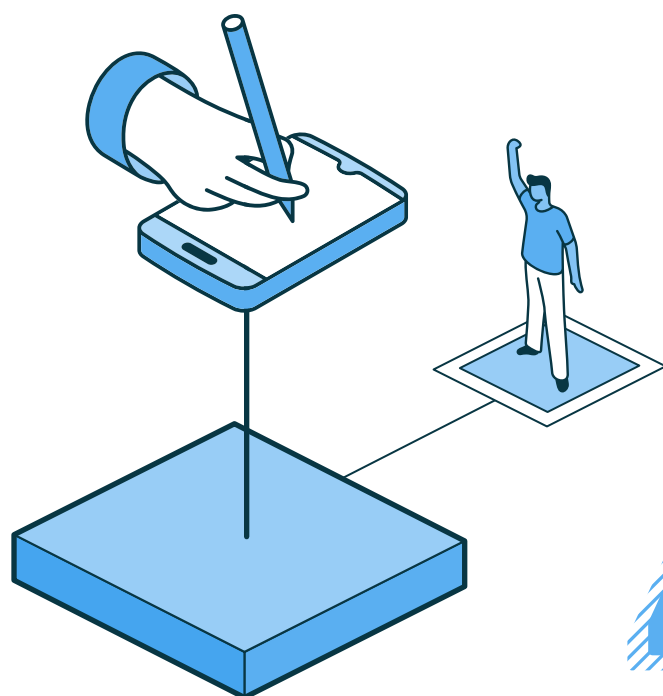
4.10

# Digital identity platform and electronic signature system

Digital identity and electronic signature systems are cross-functional platforms used throughout the entire Public Administration. They enable public employees, including those of the Administration of Justice, such as judges and court personnel, professionals, such as lawyers, and citizens to identify themselves electronically in an unequivocal and secure manner. These systems allow individuals to express their declarations of intent digitally in any administrative procedure.

Both platforms could be provided by the governing body of Digital Government, since they serve the entire Administration. This means that the Administration of Justice would use the same digital identity and electronic signature system as other public entities. This would imply greater public efficiency through resource sharing. Similarly, it would be more sustainable from a budgetary perspective, as there would be no need for an economic investment to set up a platform that already exists within the Administration. However, if the Digital Government does not provide a common digital identity and electronic signature platform, it would be necessary to implement specific systems for use within the Administration of Justice.

In the field of Electronic Judicial Administration, it is necessary to implement a **digital identity system and an electronic signature system. These systems would allow public employees of the Administration of Justice, professionals, and citizens to perform any electronic judicial procedure.** They would authenticate their identity through a digital identity system and unequivocally express their intent through an electronic signature system.

Digital identity and electronic signatures must be regulated under the **Electronic Trust Services Law** as outlined above. This regulation establishes a legal framework governing the use of digital identity and electronic signature systems. It specifies the public institutions authorized to issue digital identity credentials and outlines the rights and obligations of all involved parties. In addition, it is necessary to consider **legislation on personal data protection**, since the digital identification system necessarily entails processing of personal data, including names, last names, addresses, biometric recognition, and other details.
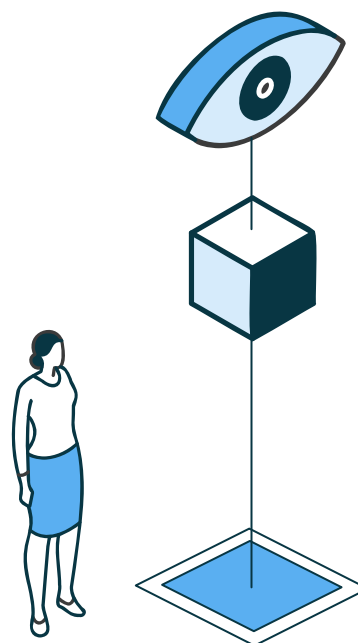
4.10.1 DIGITAL IDENTITY

FROM A TECHNOLOGICAL PERSPECTIVE, IT IS ADVISABLE TO IMPLEMENT A SOLUTION THAT OFFERS A **COMMON IDENTIFICATION SERVICE AT A NATIONAL LEVEL. THIS APPROACH WOULD ENABLE SECURE, UNIVERSAL ACCESS TO DIGITAL JUSTICE FOR ALL USERS.** THIS ENSURES THAT USERS POSSESS A UNIQUE DIGITAL IDENTITY WITH FULL VALIDITY BEFORE ANY NATIONAL OR INTERNATIONAL ADMINISTRATION, DEPENDING ON THE RECOGNITION SCOPE OF SAID IDENTITY. **THE HOMOGENIZATION OF DIGITAL IDENTITY ENHANCES** THE USE OF DIGITAL SERVICES, AS THEY CAN BE EASILY ACCESSED WITH A SINGLE MEANS OF IDENTIFICATION. IT ALSO POSITIVELY IMPACTS THE **EFFICIENCY OF THE ADMINISTRATION OF JUSTICE BY PREVENTING THE DUPLICATION OF DIGITAL IDENTIFICATION SYSTEMS.**

The digital identity platform can take different forms, each offering different levels of security. It is important to note that **all identity systems mentioned below can coexist,** and the required system will depend on the level of security needed for the specific digital services users want to access:

❯ The most basic system is identification by means of **a username and a password**. In this system, the user inputs previously provided credentials and a password. For example, the username can be an email address, and the password can be a set of alphanumeric characters.

❯ The next level of security is **two-factor authentication**, in which the user proves their identity twice. First, the user enters their username and password into the system. Before logging in, the system sends a numerical code to a mobile device associated with the person or their email account. This code must be entered into the system and can be an OTP (One Time Pass) key or a unique key for each access.

❯ The most robust and reliable system is the digital certificate issued by any of the certification service providers authorized in the country, or even the international ones, to enhance cross-border processing. The digital certificate enables the unequivocal and secure identification of public employees of the Administration of Justice, professionals, and citizens. The certificate's validity is verified, and this information, along with the necessary metadata, such as first and last names, is provided to the service provider to identify users in digital interactions.

❯ However, to make identification via an electronic certificate viable, the country must have a functional and legal identification system for each citizen. This system would securely and unambiguously verify their identity by assigning a unique numerical code. **This system is feasible in countries that have a trusted universal digital identity, issued by the Civil Registry, police, or the relevant Public Administration.** In the absence of a national identification system, the creation of digital identities for citizens can be adjusted to the principles and best practices of well-formed universal identities.

From a technical standpoint, the identification modalities must be compatible with various operating systems used in mobile devices. Similarly, they should include "single sign-on" technology, which allows users to access multiple services without needing to re-enter their credentials once they are logged in.

Although the most reliable digital identification system is through an electronic certificate, many countries either do not have a digital identity system or have not developed certificate technology architecture compatible with all mobile devices. In this case, one option would be to use either the username and password systems or the two-factor authentication system. Another viable option would be to focus digital identity on emerging systems such as **Self-Sovereign Identity (SSI).** This approach to digital identity management allows individuals to have full, sovereign control over their online identities, rather than relying on third parties, such as businesses or institutions, to verify and authenticate their identity. At its core, SSI empowers individuals to be the custodians of their own identity information, allowing them to selectively share this information with the parties they choose, based on their needs and preferences.
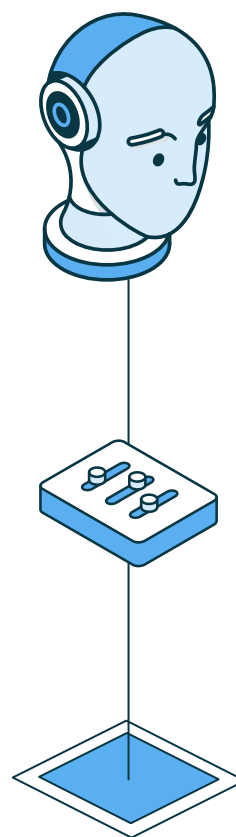
4.10.2 ELECTRONIC SIGNATURE

An electronic signature is a **method used for the authentication and validation of documents and online procedures. It confirms a person's identity, consent, or the integrity of an electronic document.** There are several levels and types of electronic signatures, ranging from basic forms of authentication to more advanced signatures that provide a high degree of security. Some features of electronic signatures include:

❱ **Identification and authentication:** the electronic signature allows to identify and authenticate a person. This is achieved by associating the electronic signature with a person's identity through a verification process.

❱ **Consent and approval:** the electronic signature represents a person's consent or approval of a procedure or the content of an electronic judicial document. By electronically signing such a document, the person indicates their agreement with its contents.

❱ **Document integrity:** the electronic signature ensures the integrity of an electronic document, meaning that the document has not been altered since it was electronically signed.
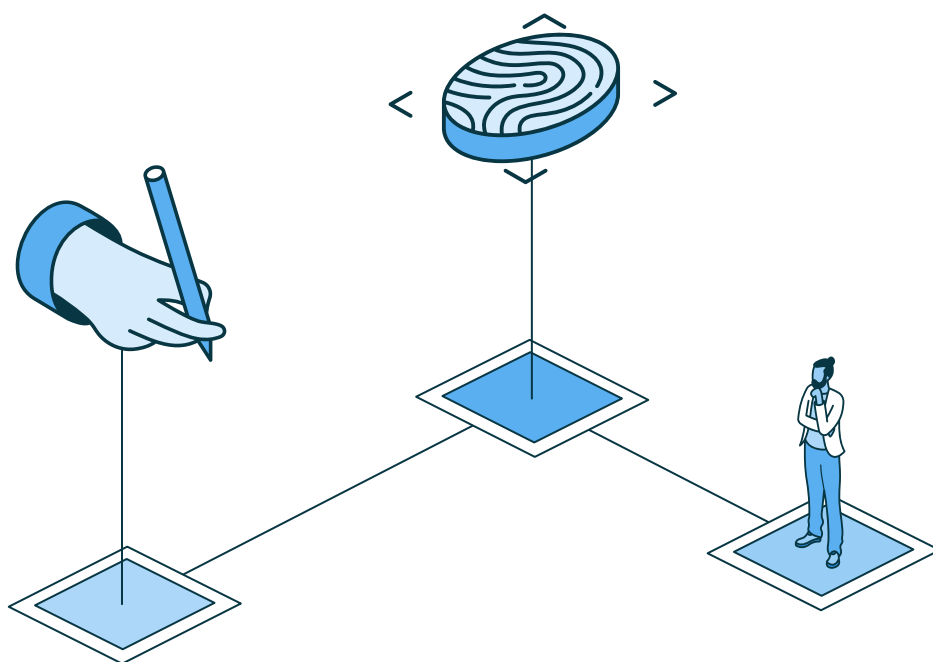
❯ Types of electronic signatures:

- **Simple Electronic Signature (SES):** this is the most basic type of electronic signature. It can include a variety of methods, such as a scanned image of a handwritten signature, clicking an accept button, or an electronic signature generated by a system. **This type of signature does not meet the security and reliability standards required for Digital Justice.**

- **Advanced Electronic Signature (AES):** This more secure type of electronic signature employs cryptographic techniques to verify both the authenticity and integrity of the signed document. **It requires the signer to have a digital certificate issued by a trusted certificate authority.**

- **Qualified Electronic Signature (QES):** this is an advanced signature that **adheres to specific European Union regulations, making it legally equivalent to a handwritten signature. It requires a qualified digital certificate and must be issued by a qualified certificate authority.**

- **Biometric signature:** this type of signature uses unique human characteristics, such as a handwritten signature, fingerprint, facial or voice recognition, to authenticate the signer. These signatures offer a high level of security and authenticity.

> IN THE FIELD OF DIGITAL JUSTICE, **THE QUALIFIED ELECTRONIC SIGNATURE (QES), IMPLEMENTED THROUGH A CRYPTOGRAPHIC DIGITAL CERTIFICATE ON A PUBLIC KEY INFRASTRUCTURE OR A BIOMETRIC SIGNATURE, IS THE MOST RECOMMENDED** AS IT OFFERS THE HIGHEST STANDARDS OF SECURITY, RELIABILITY, AND NON-REPUDIATION.

4.11
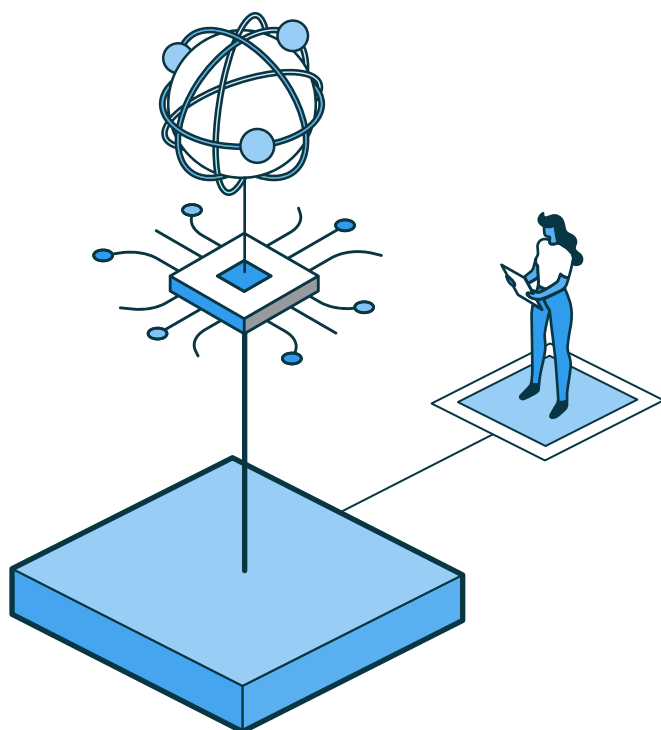
Interoperability hub

The Interoperability Hub is a **technological infrastructure that enables the interoperability of systems and facilitates the sharing and consumption of strategic technological services across the entire Administration of Justice.** In this way, interoperability is achieved through access to the necessary services concentrated in one space. This ICT interoperability infrastructure improves the availability and security of information, as well as the provision of digital services. It increases efficiency by offering a common, more sustainable service through the reuse of services.

> AS MENTIONED, WHEN DEALING WITH THE **CASE MANAGEMENT SYSTEM**, **WE ARE NAVIGATING AN ECOSYSTEM OF MODULES, DIGITAL FUNCTIONALITIES, PLATFORMS, AND PORTALS THAT CONSTITUTE DIGITAL JUSTICE. THESE COMPONENTS NEED TO BE INTERCONNECTED IN AN AUTOMATED MANNER, THROUGH THE INTEROPERABILITY HUB.** FOR EXAMPLE, THE JUDICIAL SERVICES PORTAL NEEDS TO BE INTEROPERABLE WITH THE ELECTRONIC FILE VIEWER. THIS INTEROPERABILITY ENSURES THAT PROFESSIONALS AND CITIZENS CAN VIEW ELECTRONIC JUDICIAL FILES BY ACCESSING THE PORTAL.

This infrastructure enables electronic judicial processing by interconnecting all modules and functionalities of the case management system, ensuring interoperability in its four dimensions:

❯ **Organizational:** facilitates the alignment and documenting of all business processes within organizations whose technological services are integrated into the Interoperability Hub.

❯ **Legal:** by concentrating all services in the same virtual space, it allows the interoperability of organizations that are subject to different legal frameworks.

❯ **Semantics:** ensures that the format and meaning of the information exchanged are uniform and jointly agreed upon by all organizations whose services are integrated into the Interoperability Hub.

❯ **Technical:** the Interoperability Hub provides the technological infrastructure necessary for ICT interoperability from a technical perspective.

Considering **the above, the Interoperability Hub is the infrastructure where semantic interoperability** is applied; it is composed of the following elements:

› The **master directory of judicial data** allows all systems and applications to use the same data catalogs, resulting in their homogenization. This **directory stores data tables** that collect common data in the Administration of Justice and those related to the exchange of information with citizens and other administrations, along with the associated definitions and codifications.[103]

› **Processing and classification flows** are a series of procedures and operations that represent the various procedural acts outlined by legislation for the court processing of judicial proceedings.

› **Document templates** are standardized templates incorporated into the case management system and that allow judicial bodies to automatically collect data that is already registered in the system.

In addition, the Interoperability Hub must comply with the regulations outlined in the **Interoperability and security scheme**, as well as the **technical regulations on interoperability and security.**

Esta infraestructura tecnológica contiene las siguientes características:

› **Standardizes the consumption of information through** common and standardized interfaces for all users.

› **Manages service versions,** making it possible to offer different versions based on a specific parameterization.

› **Offers flexibility,** abstracting users from changes in service implementation.

› **Enables the governance of services** by invoking one service over another or by composing certain services by aggregating others.

› **Offers standardized and quality data.**

---

102. Master Data/CTEAGE Table.

❯ **Grants full-service availability,** 24/7 availability.

❯ **Guarantees traceability of information,** recording which entity requests the data and for what procedure.

❯ **Offers security,** by requiring users to register on the platform before accessing the services contained therein.

❯ **Enriches services,** as it enhances published services by allowing the aggregation of information at runtime.

❯ **Provides routing capabilities,** enabling redirection to other interoperability platforms or to services provided by other providers.

4.12
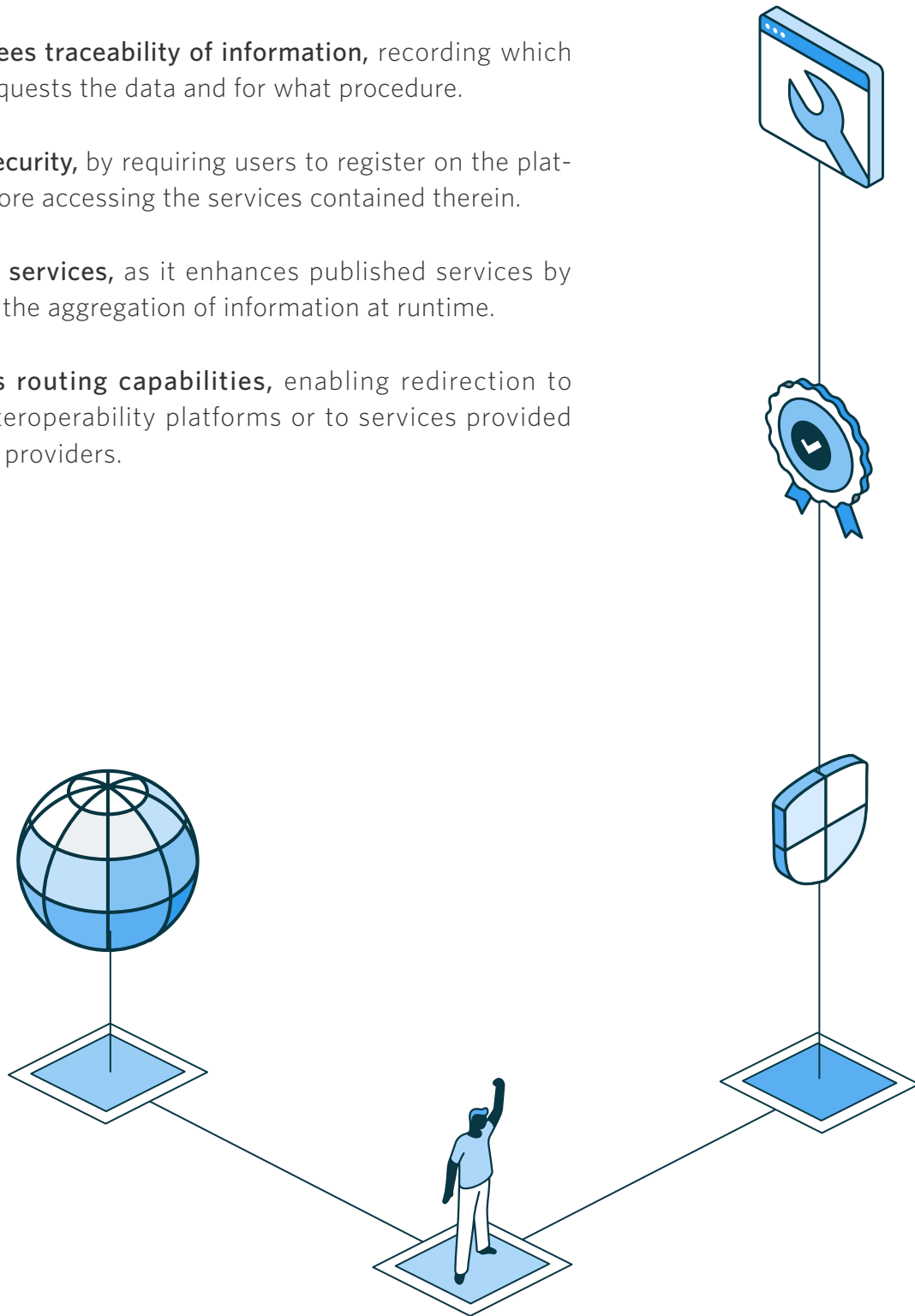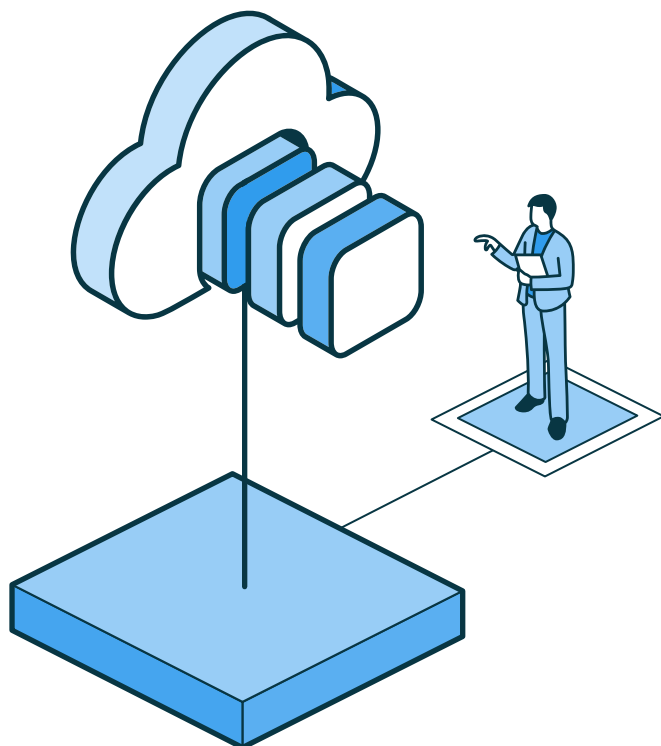
Judicial data lake

> THE DATA LAKE IS A **DIGITAL REPOSITORY THAT CONSOLIDATES RAW DATA FROM THE ADMINISTRATION OF JUSTICE, BOTH PHYSICALLY AND VIRTUALLY, REGARDLESS OF FORMAT OR CONTENT, IN ORDER TO EXTRACT AND PROCESS IT AS NEEDED.** TO ACHIEVE THIS, BIG DATA AND AI TECHNIQUES ARE USED. THE DATA LAKE **DOES NOT STORE DATA IN A STRUCTURED WAY** BUT RATHER EMPLOYS A FLAT ARCHITECTURE, ALLOWING IT TO STORE DATA IN STRUCTURED, SEMI-STRUCTURED, AND UNSTRUCTURED FORMATS. THIS DATA CAN INCLUDE INFORMATION FROM DATABASES, TEXT FILES, IMAGES, VIDEOS, SYSTEM LOGS, APPLICATION LOGS, AND MORE.

Below are the characteristics of the data lake:

❯ **Unstructured storage:** unlike traditional databases, the data lake does not require data to be organized or rigidly structured before being stored. Data is saved as generated.

❯ **Scalability:** the data lake is highly scalable and can handle large volumes of data. Storage capacity can be added as more data is generated without complications.

❯ **Data diversity:** the data lake can store data from different sources and in various formats, making it easy to consolidate information from various sources.

❯ **Advanced analysis:** the data lake is used for advanced analysis, uncovering hidden patterns, trends, and insights within the data.

❯ **User access and tools:** data stored in the data lake is available to authorized users and applications, allowing analysts and data scientists to use analysis tools to explore the data and gain valuable insights.

❯ **Machine learning:** the data lake is a critical data source for training machine learning models and developing AI applications.

❯ **Economies of scale:** the data lake is often a cost-effective option for storing large volumes of data, as it uses distributed storage technologies.

From a technological point of view, the main components of the data lake are:

❯ **Distributed storage system:** this forms the basis of the data lake and is responsible for storing data in its original format.

❯ **Data processing system:** distributed processing systems are used to analyze data stored in the data lake, allowing for scalable data processing and transformation operations.

❯ **Orchestration tools:** these tools are used to manage complex workflows and automate data extraction, transformation, and loading tasks into the data lake.

❯ **Data cataloging services:** these services help organize and catalog the data stored in the data lake, keeping track of the data, its location, and associated metadata.

❯ **Real-time data provisioning:** streaming processing systems can be used for real-time data ingestion and processing, which allow continuous data processing as it is generated.

❯ **Metadata management:** it is essential for keeping track of the structure and content of data in the data lake. This helps users find and understand the data.

From an information security perspective, the data lake is a critical infrastructure that requires proper protection due to the large volume of data it holds, including sensitive information. Therefore, it is advisable to establish an **Information security policy that specifies which users can access specific information.** However, it should be noted that, while access to the information is possible, access to the source of the original content is not allowed. Additionally, **the data lake must comply with the requirements of the **Personal Data Protection Law**, as it includes highly sensitive personal data, such as individuals' criminal records.

The data lake plays a **crucial role in data governance**, as outlined in the **Data governance plan**, mentioned earlier. Through dashboards, **which are data analysis tools** that extract information from the data lake, those responsible for the Administration of Justice can visualize the state of the justice system in an easily understandable manner using graphic parameters. These dashboards enable decision-makers to base their choices on objective, up-to-date, and reliable data.

Additionally, this infrastructure **enhances the transparency of the justice system.** The data lake allows the extraction of relevant data, such as judicial statistics, which allows to measure the level of performance of justice.
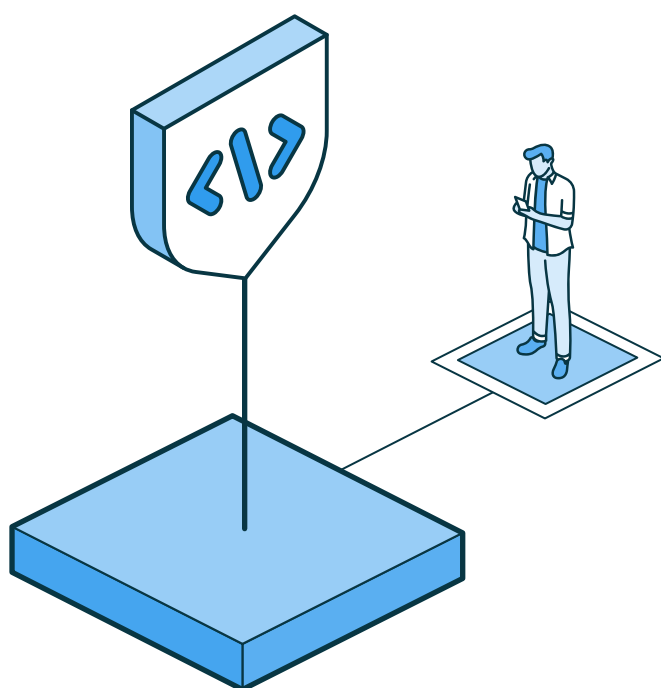
4.13
Semantic infrastructure

One of the dimensions of interoperability is semantics, which is defined as the ability of computer systems to exchange information with clear and unambiguous meaning. Therefore, having an appropriate semantic infrastructure is crucial.

> THIS **INFRASTRUCTURE SERVES AS THE INSTRUMENT FOR PUBLISHING DATA MODELS OF INTEROPERABILITY ELEMENTS, ENABLING THE EXCHANGE OF INFORMATION** BETWEEN DIFFERENT ENTITIES WITHIN THE JUDICIAL WORLD, AS WELL AS BETWEEN THESE ENTITIES, PROFESSIONALS AND CITIZENS. IN THIS REGARD, **THE INTEROPERABILITY HUB IS THE TECHNICAL INFRASTRUCTURE WHERE SEMANTIC INTEROPERABILITY IS APPLIED.**
>
> THE **DATA MODEL** COMPRISES A SET OF DEFINITIONS (CONCEPTUAL LEVEL), INTERRELATIONS (LOGICAL LEVEL), RULES AND CONVENTIONS (PHYSICAL LEVEL), WHICH ALLOW DATA TO BE DESCRIBED TO BE EXCHANGED, WHICH CONSTITUTES THE BASIS OF THE SEMANTIC DIMENSION OF INTEROPERABILITY.

An adequate semantic infrastructure allows the following:

› Identify common data models.

› Provide a repository for data exchange models that allow them to be collected, classified, published, located, and disseminated.

› Facilitate interoperability by publishing data models of information exchange services through web forms, standardized forms, coding, and associated documentation. Having an adequate document map is especially relevant in this case.

› Ensure the information exchanged can be automatically interpreted by applications that were not involved in its creation.

It is important for **this infrastructure to consider the models and standards established by judicial statistics entities and centers.** This ensures the implementation of standardized systems of concepts, definitions, statistical units, classifications, nomenclatures, and codes, making it possible to compare, integrate, and analyze the collected data and the results obtained.

4.13.1 MASTER DIRECTORY OF JUDICIAL DATA

The **Master directory of judicial data** allows all systems and applications to work with the same data catalogs, leading to their homogenization. It is a crucial tool that facilitates interoperability, ensuring that all systems "speak the same language".

The Directory can take different forms:

❯ **Web portals:** data can be stored in web portals specifically designed for this purpose, usually to offer access to users who need to work with the information provided by the data.

❯ **Shared databases:** these shared databases provide access to the information contained in the master data directories, allowing its direct incorporation into the system that uses them.

❯ **Web services:** enable access to master data through web services, automating the download of information to the system that will use it.

❯ **Libraries:** using libraries that contain master data information.

This directory stores the **data tables that collect common data in the Administration of Justice, as well as data related to the exchange of information with citizens and other administrations, including the associated definitions and codifications.**
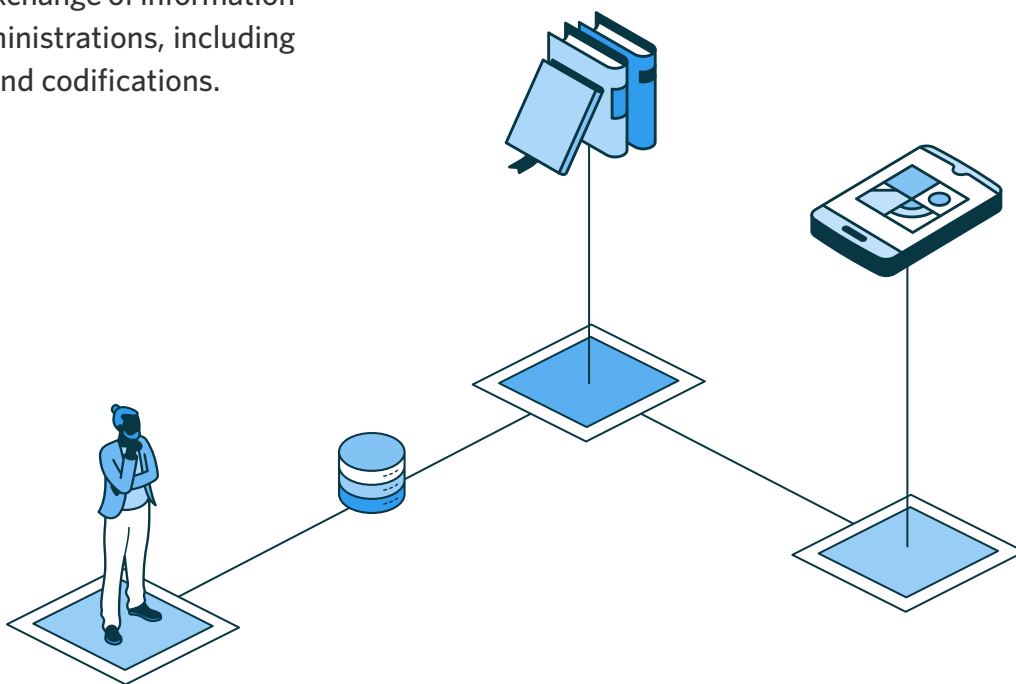
INTERNATIONAL DATA TABLE REFERENCE:

Spain: the CTEAJE has consolidated various data tables within its technical regulations.[103] The following image **shows the document classification data table**. The coding used is hierarchical. The first digit indicates the family of documents or simply the first level, and subsequent groups of two digits represent different levels or subfamilies.

Code	Description	Jurisdictions	From	Until	State	Date of registry
A	Annex	(3)Administrative litigation jurisdiction			V	09/10/2018
A	Annex	(1)Civil			V	09/10/2018
A	Annex	(4)Social			V	09/10/2018
A01	Documentation subject to intellectual and industrial property laws	(1)Civil			V	09/10/2018
A01	Documentation subject to intellectual and industrial property laws.	(3)Administrative litigation jurisdiction			V	09/10/2018
A01	Documentation subject to intellectual and industrial property laws.	(4)Social			V	09/10/2018

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103. Table of Master Data/CTEAJE.

The directory also includes the **document map,** which is a **collection of representative document types in the Administration of Justice, grouped into thematic families, which serve to classify various documents of a judicial procedure or file based on their content.**[104] This map provides a clear view of the documentation submitted as part of the file, aiding public employees of the Administration of Justice in managing the procedure. Additionally, it facilitates the statistical analysis of information.

The preparation of a document map for the Administration of Justice aims to record the various documents that are part of the electronic judicial file. It includes the characteristics or key data that must be recorded for their subsequent identification, the information that will be presented during document retrieval in the document exploitation system, and the conditions or characteristics that must be met by the elements or metadata recorded in the system.

The document map aims to establish the relationship between different types of documents used in judicial procedures, creating a common documentary catalogue for all judicial bodies and offices. The catalogue must meet criteria of generality. Given the complexity and variety of existing documents in judicial proceedings, and to optimize the registration and retrieval of documentation, it is advisable to create a catalogue of document types that is as general as possible. Similarly, it is recommended to specify only cases of special interest or need, such as the specific requirements of a particular jurisdiction (criminal, family, etc.)

4.13.2 PROCESSING AND CLASSIFICATION FLOWS AND DOCUMENT TEMPLATES

Processing and classification flows are a series of procedures and operations that reflect the various procedural acts provided by legislation for court processing of a given judicial procedure. These flows **reflect standardized processes and document and file classification systems that allow judicial bodies to manage and organize information efficiently and consistently.** These processing and classification flows are essential for managing electronic court files and facilitating electronic communication among courts.

The main characteristics of processing and classification flows are:

❯ **Document classification:** processing and classification flows allow the proper categorization of documents and court files. Each document is tagged with metadata describing its nature, origin, date, subject, and other relevant details, making it easier to find, retrieve, and organize them.

---

104. Presentation of Modernization of the Administration of Justice/Section 3.3 Document map.

❯ **Court case management:** processing flows are essential in managing court cases. Documents and proceedings related to a case are followed throughout a structured process, allowing for consistent and efficient follow-up of each case.

❯ **Process automation:** processing flows can also involve automating judicial processes. The systems can automatically route documents and files to correct stakeholders, saving time and reducing human error.

❯ **Electronic data interchange:** semantic interoperability means that processing and classification flows enable the electronic exchange of data between judicial entities, even if they use different systems and standards. This ensures efficient information sharing and maintains semantic consistency.

❯ **Consistency and compliance:** standardizing processing and classification flows ensures alignment and compliance with legal and regulatory procedures. This standardization of workflows helps prevent errors and ensures that correct protocols are followed.

❯ **Security and controlled access:** classification and processing systems must also ensure safe and controlled access to information, especially when it comes to sensitive and confidential data related to court cases.
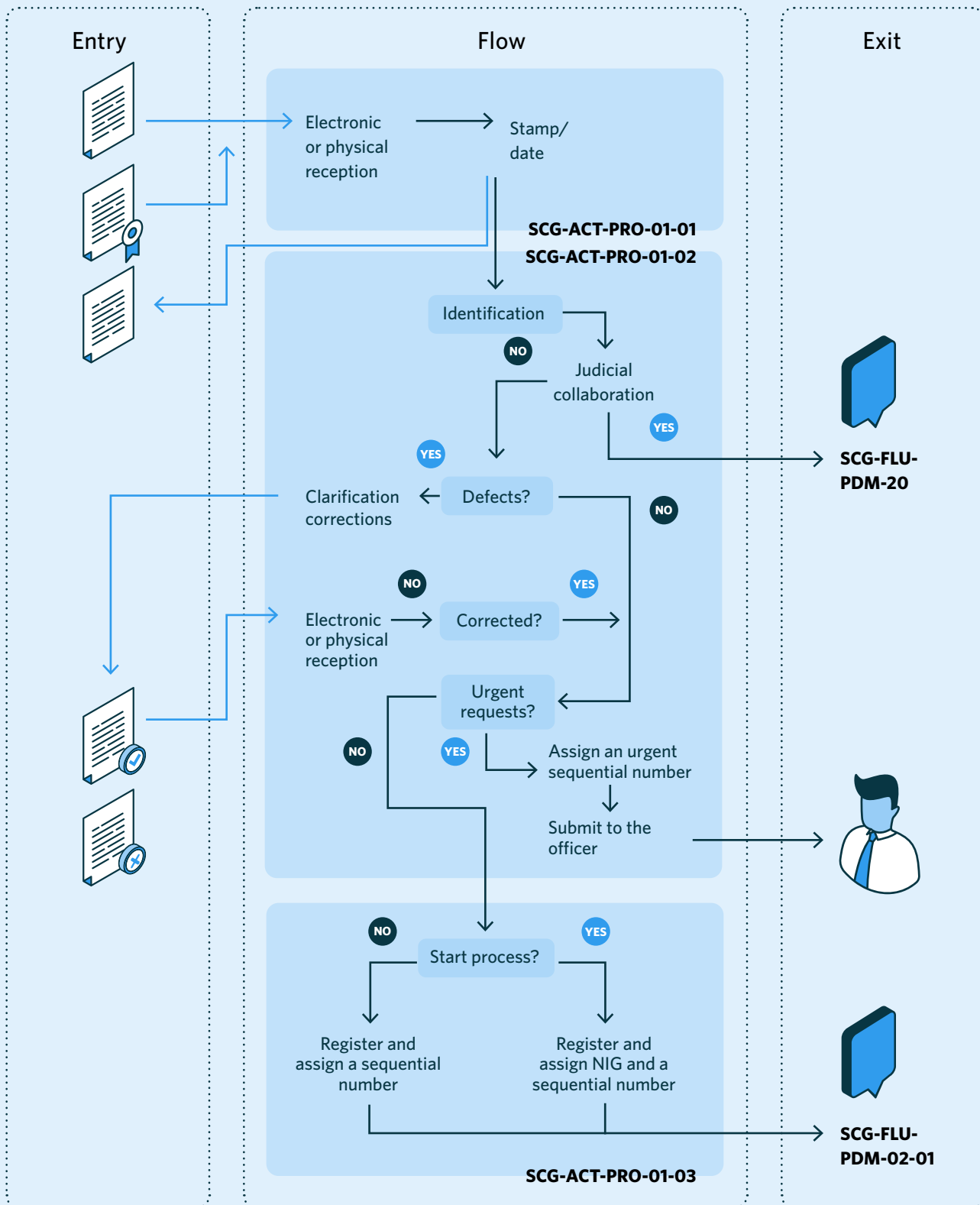

INTERNATIONAL REFERENCE OF PROCESSING AND CLASSIFICATION FLOWS:

Spain: the judicial office's procedure manual is presented.[105]

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105. Document map of the judicial office of the Administration of Justice in Spain.

SCG-PR0-01 – CASE RECEPTION AND REGISTRATION

Entry

Flow

Electronic or physical reception → Stamp/date

SCG-ACT-PRO-01-01
SCG-ACT-PRO-01-02

Identification

NO

Judicial collaboration

YES

Defects? → Clarification corrections

NO

Corrected?

NO   YES

Electronic or physical reception

Urgent requests?

NO   YES

Assign an urgent sequential number

Submit to the officer

Start process?

NO   YES

Register and assign a sequential number

Register and assign NIG and a sequential number

SCG-ACT-PRO-01-03

Exit

SCG-FLU-PDM-20

SCG-FLU-PDM-02-01

Document **templates are standardized forms that are integrated into the case management system, enabling judicial bodies to automatically retrieve data already recorded in the system.** These templates include structures and standards used to define the presentation and format of electronic court documents, as well as related information within judicial proceedings and electronic communications in the Administration of Justice. These document models are essential to **ensure that information is effectively understood and shared among different judicial bodies.**

The main characteristics of document models are:

❯ **Placeholders:** these are customizable elements within the document that can be filled in manually or automatically with case-specific information. Examples include the lawyer's full name, judicial body, type of offense, address of an intervenor, free-text sections to justify a resolution or sentence.

❯ **Document structure:** document templates define the structure and organization of court-related documents, including specified sections, fields, metadata, and content.

❯ **Semantic standards:** semantic standards ensure that data and information in documents are described consistently and are easily understood across all related court systems.

❯ **Types of documents:** document models can define various types of court documents, such as judgments, orders, lawsuits, summonses, notifications, evidence, among others. Each type of document has its own structure and specific content.

❯ **Metadata:** additional information about the documents, such as the author, date of creation, file number, parties involved, and other relevant details.

❯ **Technical formats and standards:** document models can also address technical aspects, such as file formats, character encoding, and standards for electronic document exchange.

> **Coding standards:** document models can define coding standards for representing special characters and accents in multiple languages.

> **Validation and compliance:** document models can incorporate regulations and validations to ensure compliance with legal and procedural regulations during the creation and exchange of court documents.

> **Interoperability:** document models are designed to ensure interoperability between judicial systems, allowing for compatibility across different applications and technologies.

> **Information access and retrieval:** document models can also facilitate the indexing and efficient search of documents and their contents, which is essential in information retrieval.

4.14
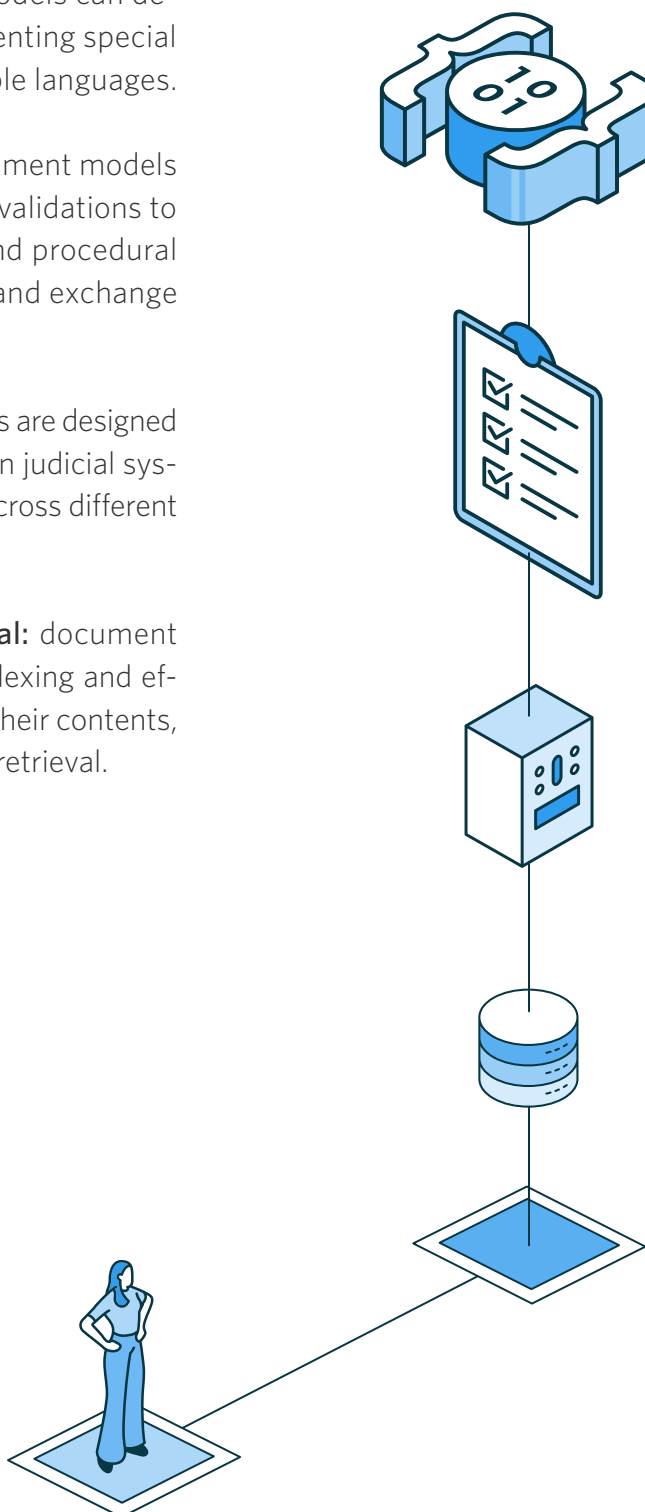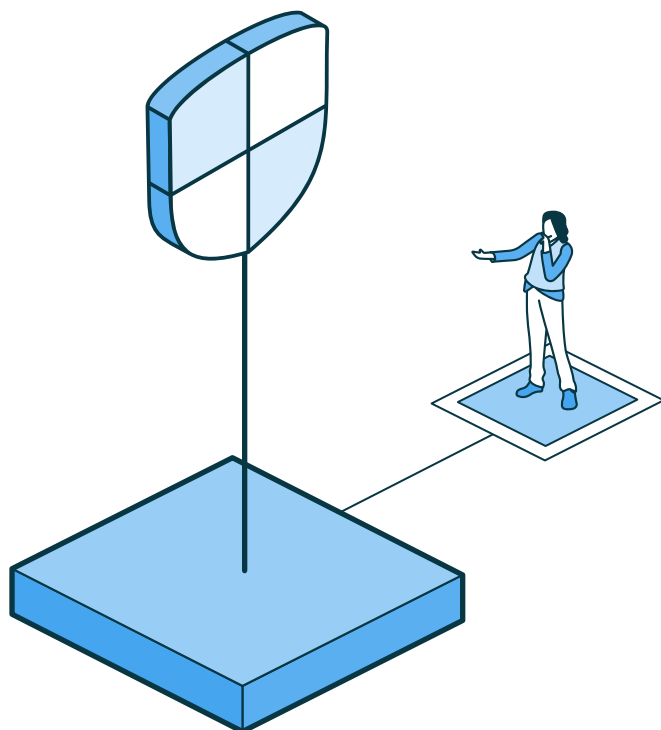
Security Operations Center (SOC)

The SOC is an information security command center focused on real-time monitoring, detection, response, and mitigation of cybersecurity threats. The SOC is designed to safeguard an organization's technology infrastructure and data, operating 24/7, 365 days a year.

The SOC is a critical component of Digital Justice, as it provides essential transversal services, such as cybersecurity of ICT in the justice system. The **Cybersecurity plan** includes the creation of the SOC as one of its strategic pillars. **This infrastructure provides both a preventive response,** which involves monitoring ICT before security incidents materialize, **and a reactive response** to security incidents to minimize their impact.

The SOC has three main objectives:

❯ **Protect:** effective technical measures are implemented to safeguard justice ICT from cyber threats. Key actions include managing external and internal security elements, creating firewalls, implementing solutions for secure internet browsing, protecting the security of e-mail accounts of the Administration of Justice, preventing information leaks, and managing system access.

❯ **Detect:** the goal is to detect cyber threats before they escalate into security incidents. This involves cyber surveillance, system monitoring, periodic technical inspections of applications and systems, and security testing.

❯ **Respond**: in the event of a security incident, a proportionate and appropriate response is necessary to mitigate its negative effects and prevent future occurrences. To achieve this goal, the SOC's main activities include managing security incidents, conducting forensic analyses, investigating cyber threats, managing vulnerabilities and alerts, and handling harmful code.

The SOC can adopt different modalities depending on the size and type of public entity that administers it, as well as on the specific circumstances and needs of each country. Options include **implementing a SOC that oversees the cybersecurity of all ICT systems within Electronic Administration, managed by the governing body of Digital Government, or establishing a SOC dedicated specifically to the Electronic Judicial Administration.** In addition, it is crucial to have institutions with extensive cybersecurity expertise to operate the SOC effectively. Therefore, if there is a Public Administration with this expertise, establishing a collaborative framework with them for SOC management is highly recommended.

INTERNATIONAL SOC IMPLEMENTATION REFERENCES:

Uruguay: a SOC has been implemented at the level of Public Administration and is managed by the Agency for Electronic Government and the Information and Knowledge Society.[106]
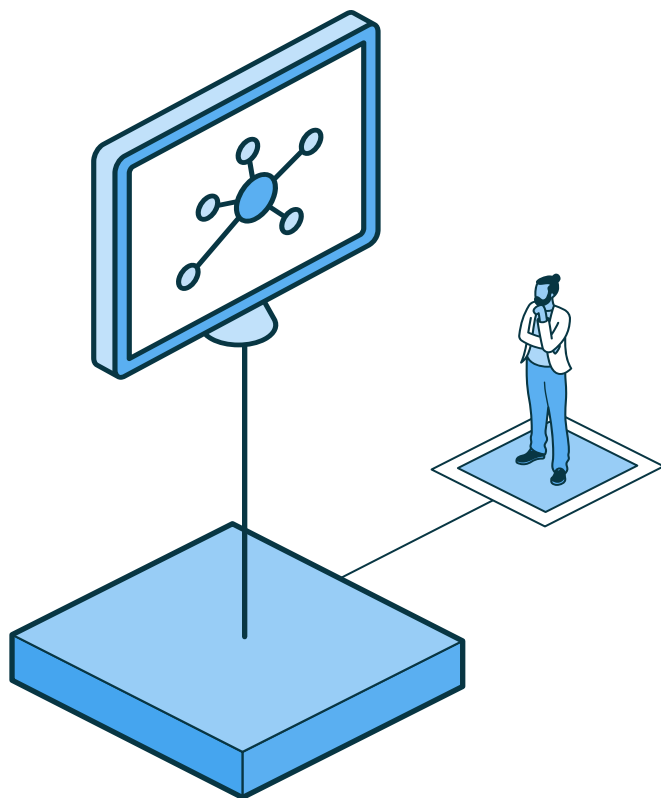
Spain: the Ministry of Justice and the National Intelligence Centre signed an agreement on cybersecurity, which included the implementation and operation of a SOC for the Administration of Justice.[107]

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106. SOC/Agency for Electronic Government and the Information and Knowledge Society of Uruguay.

107. National Cryptologic Center of Spain.

4.15

Judicial services portal

THE JUDICIAL SERVICES PORTAL **CONSOLIDATES DIGITAL JUSTICE SERVICES OFFERED TO PROFESSIONALS AND CITIZENS INTO A SINGLE ACCESS POINT,** ENABLING CONVENIENT ACCESS WITHOUT HAVING TO NAVIGATE MULTIPLE PORTALS DEPENDING ON THE TYPE OF SERVICE. THIS PORTAL IS ONE OF THE **MOST SIGNIFICANT TECHNOLOGICAL ADVANCEMENTS IN TERMS OF JUSTICE ACCESSIBILITY, AS IT ALLOWS PROFESSIONALS AND CITIZENS TO INTERACT WITH THE JUSTICE SYSTEM DIGITALLY UNINTERRUPTEDLY 24/7.**

The portal offers electronic services from all public administrations and is managed by the governing body of Digital Government. It includes an exclusive digital folder for justice procedures. Alternatively, a dedicated portal for digital justice services could be created if a general portal is unavailable.

IT IS ESSENTIAL TO GUARANTEE ACCESS TO THE PORTAL FOR ALL CITIZENS, INCLUDING INDIVIDUALS WITH PHYSICAL OR INTELLECTUAL DISABILITIES. UNIVERSAL ACCESS TO JUSTICE MEANS THAT ALL PEOPLE SHOULD BE ABLE TO ACCESS THIS PUBLIC SERVICE INDEPENDENTLY AND ON EQUAL TERMS.[108] **TO ENHANCE ACCESSIBILITY OF THE JUDICIAL SERVICES PORTAL, THE INTERNATIONAL ACCESSIBILITY GUIDELINES SET BY THE W3C (WORLD WIDE WEB CONSORTIUM) WAI (WEB ACCESSIBILITY INITIATIVE) CAN SERVE AS A REFERENCE.[109]**

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108. Accessible Justice for Persons with Disabilities/Spanish Ministry of Justice.

109. Web Accessibility Initiative.

Some of the main recommendations to consider for implementation of the judicial services portal are:[110]

❯ **Structured content of the portal:** the content must be correctly structured so that users can easily and intuitively access the information of interest.

❯ **Navigation menu functionalities:** menus must have a clear structure and be correctly labeled. In addition, design patterns should be widely recognized to distinguish between menus and the status of menu items. Also, drop-down menus should function properly, and in application menus, specific markings should be added to ensure that keyboard behavior mimics that of desktop application menus.

❯ **Images displayed on the portal:** images must include alternative texts that describe the information or function they represent. This ensures accessibility for individuals with various disabilities.

❯ **Web forms:** web forms for procedures to be filled out on the portal should be simple and concise, avoiding requests for irrelevant information, which would make the form unnecessarily lengthy.

INTERNATIONAL REFERENCE OF ACTIONS FOR JUSTICE ACCESSIBILITY:

Spain: the Ministry of Justice of Spain has implemented technical, regulatory, and organizational measures to ensure universal access to justice for people with disabilities. These measures include actions to be implemented on the judicial services portal, such as easy reading and the use of simple language, technology that enhances accessibility, disability regulations, and accessible venues.[111]

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110. Web Accessibility Initiative/Web Accessibility Tutorials.

111. Accessible Justice for Persons with Disabilities/Spanish Ministry of Justice.

The digital services portal centralizes access to information that is stored in the ICT systems of third-party providers. To share this information, different modalities can be used:

❯ **The judicial services portal can contain links to different systems that provide information.** In this case, **there is no interoperability,** only centralized access to the systems.

❯ **The judicial services portal can offer a unified identification and access service** through Single Sign-On (SSO) technologies. **This technology allows users to access other systems that provide information without having to log in again. In this case, interoperability would be limited to the identification system.**

❯ **The judicial services portal can show information from the provider systems.** It begins with user identification on the portal, but instead of users accessing the provider systems directly, **the portal itself displays the information received from the providers. This setup ensures high interoperability between the portal and the information provider.**

❯ In this modality, the portal requires access to information contained in other digital solutions, registries, and platforms to retrieve and offer it to professionals or citizens. For this reason, **the portal is interoperable with other justice ICT systems from which it retrieves information, using the Interoperability Hub, which serves as the technical infrastructure that interconnects all ICT in an automated manner.**

> REGARDLESS OF THE MODALITY USED, **THE JUDICIAL SERVICES PORTAL PROVIDES INFORMATION IN REAL TIME, AS IT SERVES AS AN ACCESS POINT TO OTHER SYSTEMS. THEREFORE, THE PORTAL DOES NOT STORE ANY INFORMATION, BUT RATHER RETRIEVES IT FROM THE SYSTEMS WHERE IT IS STORED** AT THE TIME OF ACCESS.

Another important consideration in the development of the portal is that it must cater for all types of users, including legal professionals and citizens, who may have varying levels of digital proficiency. Hence, **it is recommended that the portal's navigation be intuitive and its functionalities easy to use,** ensuring accessibility for anyone with basic computer skills.

In addition, as a publicly accessible portal, it is **recommended that it be accessible from any device, whether a computer or a mobile phone.**

INTERNATIONAL REFERENCES OF JUDICIAL SERVICES PORTALS:

Mexico: the Judicial Branch has an online service portal[112] where different judicial procedures can be carried out online.

Spain: the Administration of Justice, through the Electronic Judicial Office[113] offers the possibility of conducting different judicial procedures online.

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112. Online Services Portal/Judicial Branch of Mexico.

113. Electronic Judicial Headquarters of Spain.
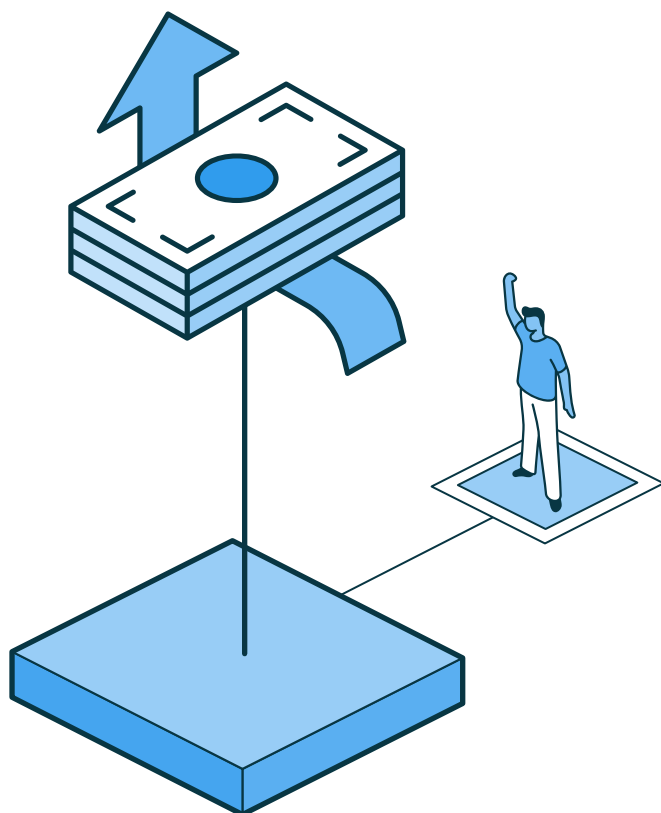
4.16

Payment systems

Payment systems is the technological infrastructure that **allows the parties involved in judicial processes to make online payments to the Administration of Justice. These payments can cover different concepts,** such as compliance with court judgments, court fees, fines, or other charges related to legal proceedings.

This infrastructure allows the Administration of Justice to **manage financial resources in an efficient and controlled manner,** as all operations are registered in the payment gateway. In addition, it supports the overall functioning of the justice system overall by **streamlining judicial procedures, many of which rely on timely payments for completion and processing.** For example, this can occur when paying court fees is required to initiate the procedure, or when a judgment mandates the payment of a sum of money in a proceeding, which does not conclude until the debtor makes the corresponding payment.

The main features of payments systems are:

❯ **Electronic payments:** users can make different court-related payments online, including fees for filing legal documents, fines for violations, hearing costs, and other expenses associated with legal proceedings.

❯ **Variety of payment methods:** payment systems typically support multiple payment options, such as credit cards, debit cards, and bank transfers, offering users greater flexibility.

❯ **Payment security:** security is a key priority in online judicial payment systems. These systems are designed to meet strict security standards, including data encryption and protection of users' financial information.
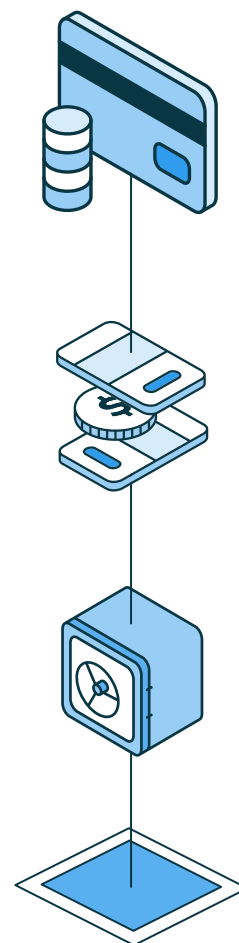
❯ **Integration with the judicial system:** the payment system is integrated with the **judicial services portal**, allowing users to make payments anytime, year-round, through a centralized platform that consolidates all online judicial services for both professionals and citizens. It is also important for the system to be interoperable with the **case management system**, ensuring that payments are accurately recorded and linked to the correct electronic court file.

❯ **Payment notifications:** users typically receive payment confirmations via email or real-time notifications, providing a record of the transaction and making it easier to track payments.

❯ **Due reminders:** the payment system can include a feature that sends reminders to users about the due dates for pending payments.

❯ **Transaction logging:** the payment system maintains a full record of all transactions, which can be useful for auditing and financial reporting.

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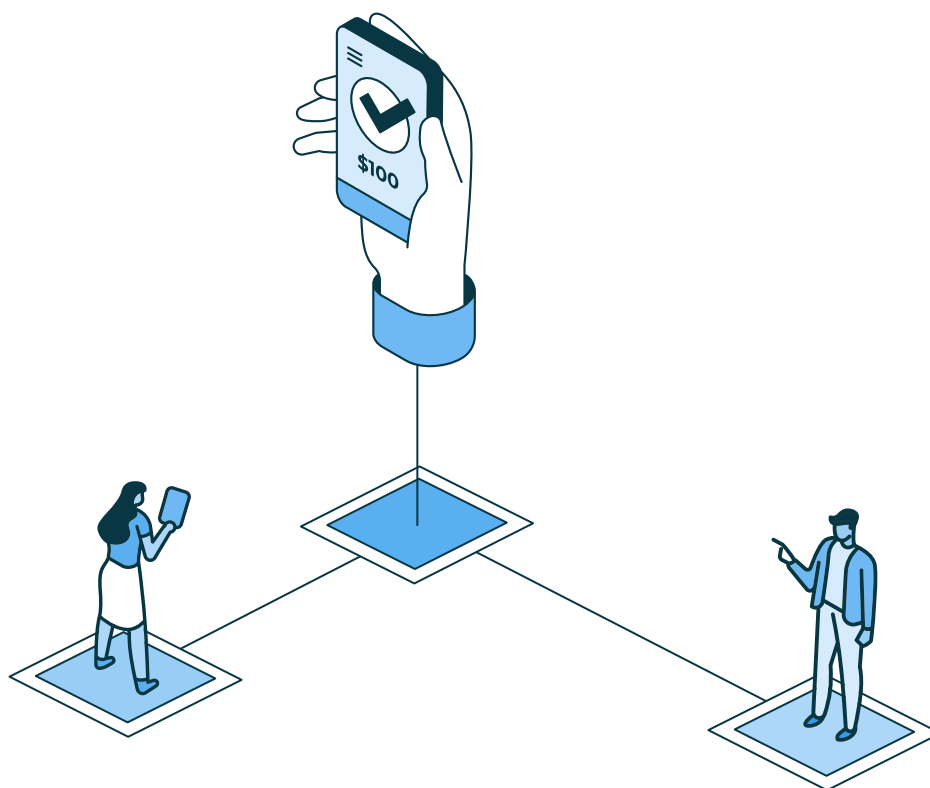
Digital Immediacy Virtual Desktop (EVID)

The EVID is a digital tool that **enables real-time digital participation, including the presence of judges in virtual hearings and other judicial proceedings. It also allows public employees within the Administration of Justice to handle procedures via videoconference and streamline the scheduling and management of appointments.** This system connects the judge with all parties and participants in a virtual hearing via videoconference. It also facilitates communication between public employees and citizens for online procedures.

This tool improves **the efficiency of the justice system** by digitizing procedures, **reinforcing legal certainty in all virtual hearings and procedures**, and ensuring that all digital evidence is properly recorded. It saves both **time and costs**, especially for professionals and citizens who no longer need to travel to courts for in-person proceedings. **Accessibility to justice is also reinforced,** as the EVID can be accessed from any mobile device. Similarly, **security and confidentiality of information are guaranteed** because access to the EVID is protected by a digital identity system based on a digital certificate within a public key infrastructure.

The EVID has numerous **functionalities**, including the management of waiting rooms for virtual hearings, exchange of documentation during videoconferences and the use of electronic signatures. It also enables the storage of all provided documentation, records and verifies the meetings held, and generates cryptographic evidence of the interactions conducted.
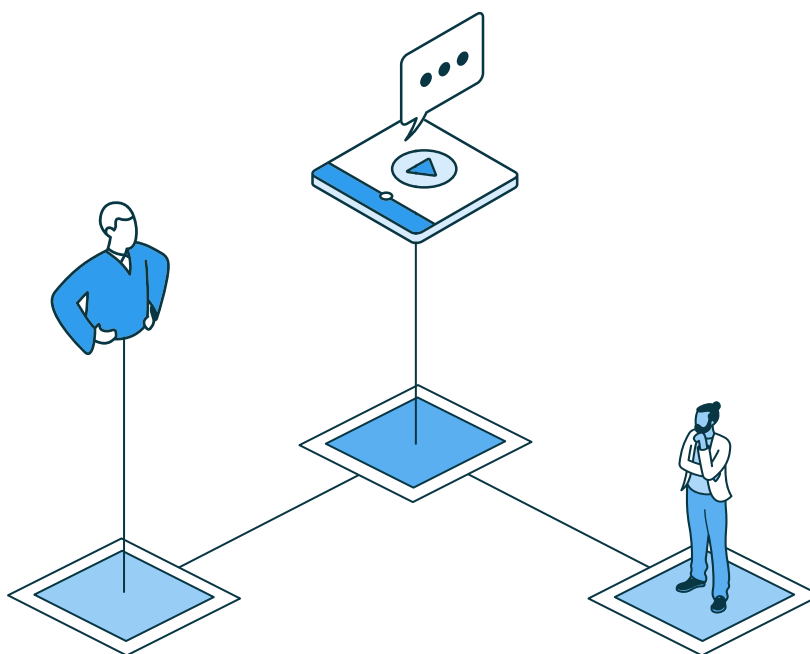
❯ It is important to note that the EVID can be integrated into **courtroom infrastructure**, as all the previously mentioned functionalities are perfectly usable, valid ,and beneficial in the hearing recording system. Consequently, the EVID could also be used for other procedures, such as taking statements, conducting confrontations, obtaining expert opinions, among others.

The EVID is used for various procedures within the Public Administration and **can be implemented by the governing body of Digital Government. If not already developed, a specific version of the EVID can be created for the Electronic Judicial Administration.**

**INTERNATIONAL REFERENCES FOR THE OPERATION OF THE EVID:**

Colombia: the Judicial Branch offers a Virtual Hearing System[114] in which scheduling, hearings, videoconferences, or streaming services, among others, can be carried out.

Spain: the Administration of Justice has an EVID[115] that allows procedures to be carried out with this Administration via videoconference.

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114. Hearing System/Judicial Branch of Colombia.

115. Digital Immediacy and Remote Services/Ministry of Justice of Spain.

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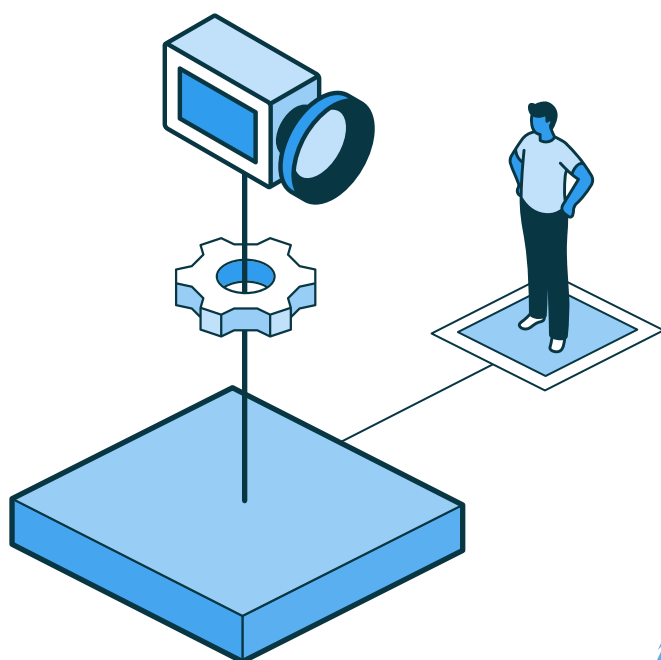
Digital justice monitoring system

The digital transformation of justice encompasses a wide range of processes, services, systems and infrastructures, whose operations must be monitored through **digital tools that allow real-time control of the Electronic Judicial Administration,** using various parameters and indicators.

This monitoring provides a comprehensive overview and covers all aspects of Digital Justice. For example, it is necessary to monitor the electronic communications system to ensure there are no service interruptions or that messages are fully received by the intended recipients. Similarly, it is essential to monitor the technological infrastructure, ensuring its correct performance and maintenance.

The main technological monitoring tools include:

❯ **Dashboard:** this tool provides real-time reports on **key KPIs that monitor the operation of digital services, processes, and technological infrastructure.** The dashboards are updated with information from the **judicial data lake**. To achieve this, dashboards must interoperate with the data lake through the **Interoperability Hub**, which is the technical infrastructure that enables sharing of data from different systems.

❯ **Report generation and reporting systems:** these systems facilitate the creation of customized reports that display data and statistics related to Digital Justice, providing valuable insights for decision-makers.

❯ **Data analysis:** data analysis tools allow the processing and analysis of large datasets related to Digital Justice. This can provide valuable insights into patterns and trends.

❯ **Business Intelligence (BI) systems:** BI solutions are used to collect, process, and visualize data that can aid in making informed decisions about Digital Justice.

❯ **Automation tools:** these are used to track and record data in real time, allowing for continuous monitoring of processes and detection of potential issues.

❯ **Process analysis tools:** these tools help evaluate and optimize workflows and processes within the Electronic Judicial Administration to identify bottlenecks and areas for improvement.

❯ **User feedback and survey systems:** user feedback is essential to assess the satisfaction and effectiveness of digital justice. Surveys and feedback systems provide valuable insights.

❯ **Project tracking tools:** when implementing projects related to Digital Justice, project tracking tools help assess progress, manage deadlines, and ensure goals are met.

❯ **Security and auditing tools:** security monitoring is vital in Digital Justice, and security and auditing tools help ensure the protection of data and systems.

❯ **Transparency and open data platforms**: these promote transparency in Digital Justice, by providing public access to data and court documents.

**INTERNATIONAL REFERENCES FOR DIGITAL JUSTICE MONITORING TOOLS:**

Argentina: the Ministry of Justice and Human Rights has implemented an open data system for the justice system that publicly displays key justice indicators that allow its performance to be monitored.[116]

Chile: the Ministry of Justice and Human Rights has launched the **ConectaJusticia**[117] solution, which enables citizen participation in key aspects of the justice system through online surveys. This initiative was designed to collect useful data on the judicial system during the Covid-19 pandemic.

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116. Justice Data Portal/Ministry of Justice and Human Rights of Argentina.

117. ConectaJusticia/Ministry of Justice and Human Rights of Chile.

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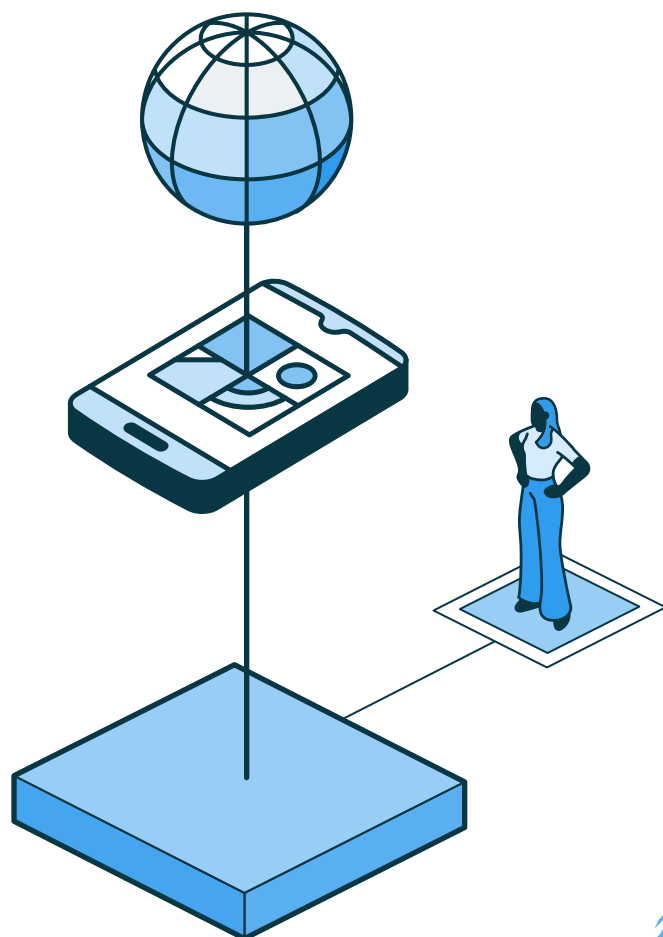
ODR platform (Online Dispute Resolution)

The ODR platform is a technological solution that **facilitates the resolution of conflicts and disputes digitally, generally through the internet.** These platforms leverage technological tools and resources to enhance communication, negotiation, and decision making in legal or commercial disputes that do not have a high level of legal complexity.

Some of the main technological components of the ODR platform are:

❯ **Access portal:** offers users an online gateway to the ODR platform, where they can create accounts, file disputes, and access resources related to dispute resolution.

❯ **Dispute submission system:** allows users to submit disputes online, providing details about the conflict, the parties involved, and any relevant documents.

❯ **Online communication:** offers real-time communication tools, such as live chat, email, or direct messaging, which allow parties and mediators to interact and negotiate efficiently.

❯ **Assisted negotiation system:** provides a platform for technology-assisted negotiation, offering suggestions and solutions based on data and algorithms.

❯ **Dispute resolution system:** includes options for parties to resolve their disputes collaboratively with the assistance of mediators, or through algorithm-based decision making.

❯ **Security and privacy:** ensures the protection and privacy of information and documents related to the dispute, typically through encryption and advanced security measures.

❯ **Activity log and documentation:** tracks all interactions and transactions made on the platform, which can be useful in case the dispute resolution process needs to be documented.
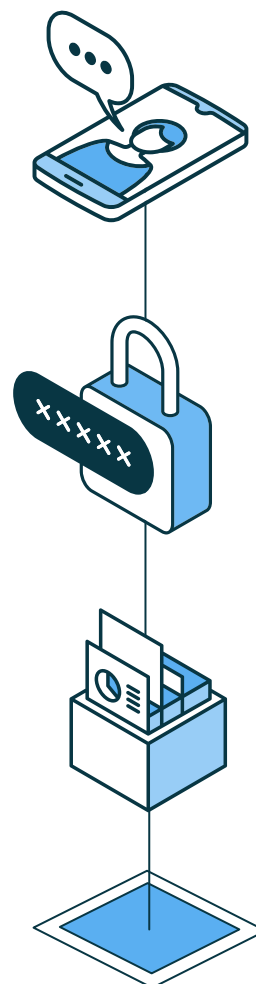
❯ **Administration panel:** gives platform administrators the tools needed to monitor performance, manage users, mediate disputes when needed, and provide support.

❯ **Databases and data analytics:** stores and manages dispute-related data, enabling analysis and reporting on trends and outcomes.

❯ **Notifications and reminders:** sends alerts and reminders to the parties involved about deadlines, events, and upcoming actions in the dispute resolution process.

❯ **Digital documentation and agreements:** enables the creation and digital signing of agreements and legal documents, simplifying the process of finalizing a dispute.

**INTERNATIONAL ODR PLATFORM REFERENCES:**

European Union: The European Commission has launched a new platform to help consumers and merchants resolve disputes related to online purchases.[118]

Argentina: Argentina's Ministry of Justice and Human Rights launched a pilot test of an online community mediation system.[119]

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118. Online Dispute Resolution/European Commission.

119. Online Community Mediation/Government of Argentina.

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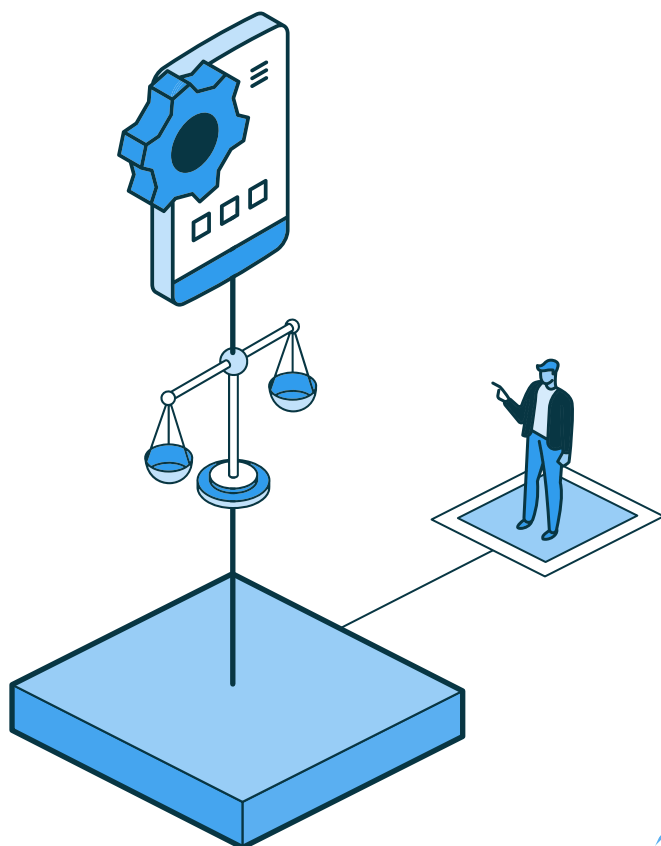
Jurisprudence platform

The Jurisprudence platform consists of a set of **technological tools that assist judges and magistrates in searching for and identifying previously issued court rulings related to the case being tried.** These systems can adopt two strategies:

❯ **Proactive strategy:** the system operates proactively and autonomously, identifying relevant case law that could be applicable based on the information available from the ongoing judicial process. Once identified, this case law is made accessible to users to determine its relevance.

❯ **Reactive strategy:** the user performs a search for applicable case law, using technological tools that allow to carry out intelligent searches that facilitate the task.

Case law can be stored in a single repository of information or distributed among several, so it is necessary to identify **reliable sources of data** such as the **judicial data lake** that stores all raw data of the Administration of Justice, or the **electronic archiving platform**, which is the digital repository in which all electronic court files and their associated documents are stored once the judicial process has concluded.

Once the jurisprudence repositories have been identified, they must be organized with metadata structures that facilitate the search by identifying, classifying, and contextualizing the information associated with each document. Furthermore, it is crucial for the jurisprudence platform to be interoperable with data repositories. To this end, the **Interoperability Hub** serves as a technological infrastructure that enables the shared use of services.

Subsequently, it is necessary to identify the technological tools that will allow efficient search for information. One such tool is **predictive search,** a tool associated with a reactive strategy. It activates **once the user begins the search** and, based on the keywords entered, provides suggestions for relevant case law related to the query.

Another alternative is **intelligent search,** which is also linked to a reactive strategy. This modality **allows users to search using natural language,** and once the query is analyzed, the system suggests related results based on the information already known to the search engine.

Finally, an **AI system could independently suggest applicable case law to the user** based on data from the judicial proceedings. This system would align with a proactive strategy. However, it is important to note that AI is continually evolving, constantly introducing new functionalities and possibilities that could also be integrated into this platform.

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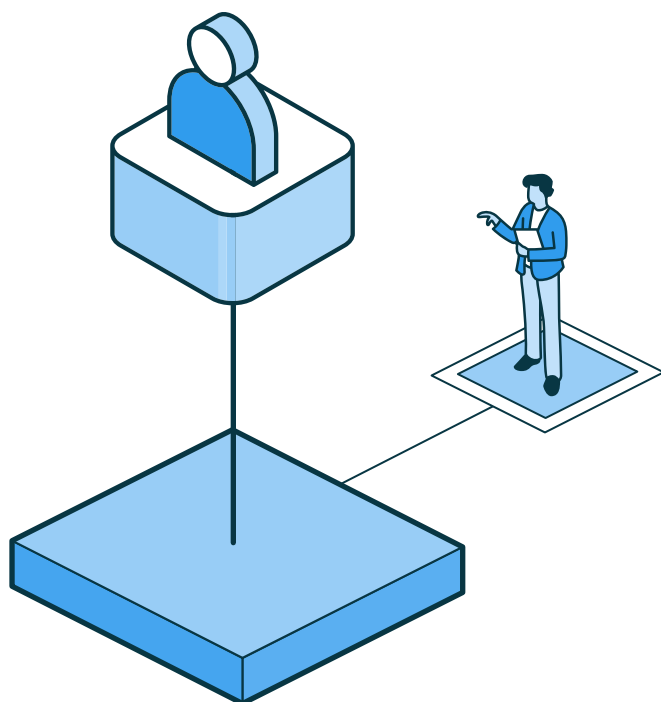
Human and material resource management system

THE HUMAN AND MATERIAL RESOURCE MANAGEMENT SYSTEM OF THE ADMINISTRATION OF JUSTICE INCLUDES A **SET OF TOOLS DESIGNED TO ENSURE THE EFFICIENT MANAGEMENT OF HUMAN RESOURCES. THIS PRIMARILY INCLUDES THE PUBLIC EMPLOYEES OF THE ADMINISTRATION OF JUSTICE AND THE MATERIAL RESOURCES, WHICH REFER TO THE PROPERTY AND ASSETS OF THIS ADMINISTRATION WITHIN THE JUDICIAL SYSTEM. THE GOAL OF THIS SYSTEM IS TO ENSURE THE AVAILABILITY AND EFFECTIVE USE OF RESOURCES TO SUPPORT JUDICIAL SYSTEM OPERATIONS AND TO DELIVER HIGH-QUALITY JUDICIAL SERVICES.**

The main technological components of this system include the following:

❯ **Personnel database:** a human resource management system typically includes a centralized database that stores personal and employment information for all employees, including details such as their name, address, contact information, employment history, and qualifications.

❯ **Payroll management system:** a key component for salary and benefits administration. This module calculates and generates payroll, including deductions and tax withholdings.

❯ **Schedule and shift management:** allows the scheduling and tracking of employees' shifts and work hours. This can include registering hours worked and assigning shifts.

❯ **Absence and vacation management:** allows employees to request and manage their absences, vacations, and leaves, while allowing supervisors to approve or deny these requests.

❯ **Performance management:** facilitates the evaluation and monitoring of employee performance, including goal setting, performance reviews, and continuous feedback.

❯ **Employee self-service portal:** gives employees online access to update personal information, submit leave requests, view payroll, and access important documents.

❯ **Goods and asset management:** this module tracks and manages physical assets, such as office equipment, vehicles, and buildings. It can include features for preventive maintenance and replacement scheduling.

❯ **Inventory and supplies:** keeps a record of supplies, materials, and equipment essential for the operation of the Administration of Justice and facilitates the replenishment of stock.

❯ **Systems integration:** it must be integrated with other systems used in the Administration of Justice, such as case management systems, file tracking systems, and communication systems, among others.

It would be highly beneficial for the human and material resources management system to integrate with the internal systems of the Administration of Justice, using master data such as user metadata, specifically the name, affiliated entity, department, among others. This integration would ensure that updates to employment data for users of the Administration of Justice will be automatically reflected across all applications, eliminating the need for manual permission management in different systems.

❯ **Analysis and report generation:** enables generation of reports and analysis of human resources and material data to support data-driven decision making and performance evaluation.

❯ **Supply and procurement management:** facilitates procurement processes, from purchase requisition and approvals to delivery tracking and invoicing.

❯ **Human resource planning:** includes tools for long-term personnel forecasting, helping to ensure that the Administration of Justice has sufficient personnel to meet its needs.

❯ **Management of financial resources and budgets:** includes functionalities for financial planning within the Administration of Justice, allowing for budget design and real-like tracking of budget execution.

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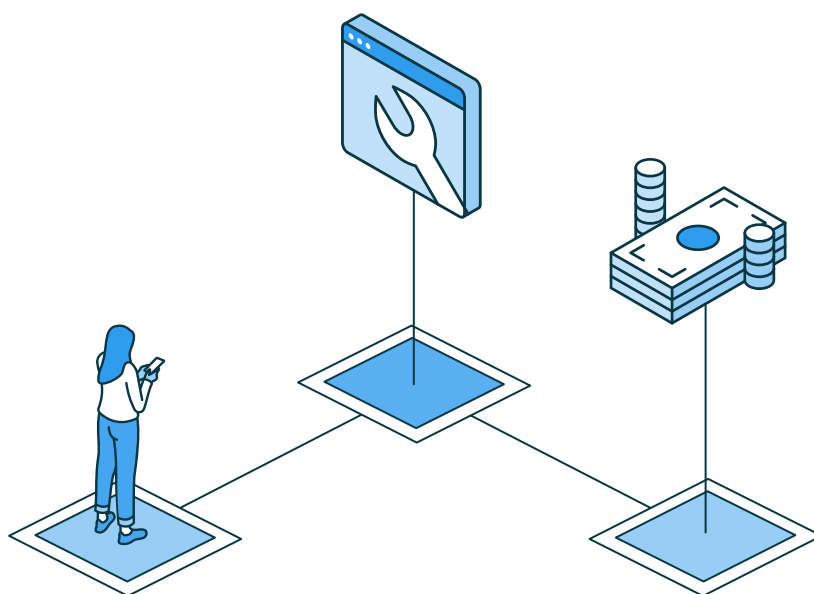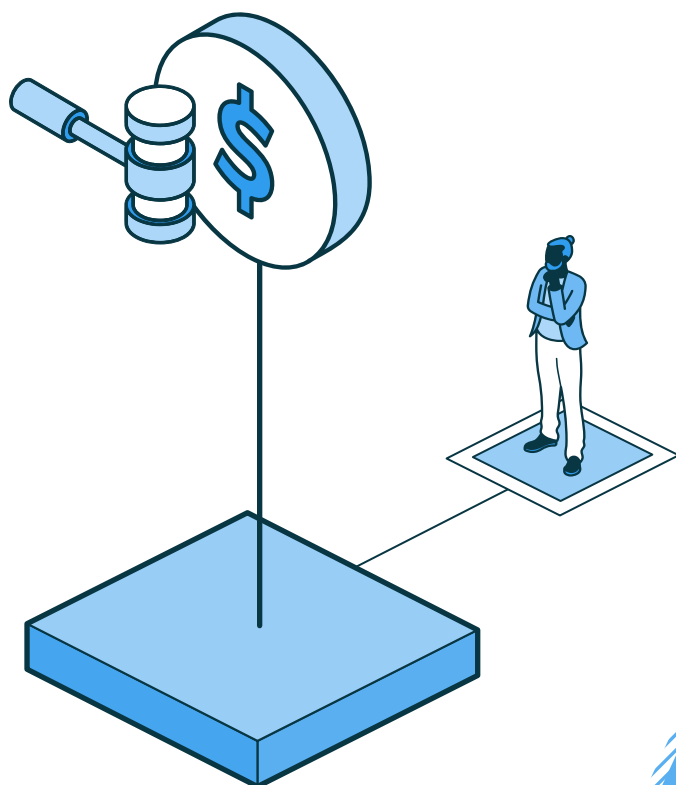
System of judicial auctions

The online system of judicial auctions is a digital platform that **facilitates the electronic sales of movable and immovable property.** These portals allow courts, judicial authorities, and interested parties to participate in auctions efficiently, transparently, and securely.

The judicial auction system **improves auctions' transparency and accessibility,** allowing citizens to participate without having to attend courts in person. In addition, it creates positive synergies for the Administration of Justice by attracting more participants, leading to a higher number of bids and, consequently, higher auction prices, thereby improving the economic outcomes of the auctioned assets.

Common technological components of an online judicial auction platform include:

❭ **Public access portal:** a public website that allows users to search, view, and access information about upcoming judicial auctions. It allows users to browse scheduled auctions, view detailed descriptions of assets for sale, and learn about auction procedures.

❭ **Registration portal:** users interested in participating in auctions must first register through this portal. This platform handles the registration process and verifies user identities. A digital identity system, preferably based on certificates within a public key infrastructure, is recommended.

❭ **Auction catalog:** offers a comprehensive list of available judicial auctions, including details about the items for sale, auction dates and times, and other pertinent information.

❭ **Search tools:** allow users to search for specific auctions based on criteria, such as location, asset type, date, and other relevant filters.

❭ **Bidding system:** allows interested bidders to place bids online in real time during the auction.

❭ **Payment method integration:** allows bidders to make online payments to secure their bids, as well as manage auction-related deposits and fees. **The payment system** can be integrated with the judicial auction system.

❭ **Integration with the case management system:** facilitates the transmission of data, metadata, and documents related to the auction and the associated court case.

❭ **Data security and protection:** implements robust security measures to safeguard the integrity of auctions and ensure the privacy of user data.

❭ **Activity and documentation logs:** track all interactions and transactions on the portal, providing a useful record of disputes or audits.

❭ **Ongoing auction management:** facilitates real-time management of active auctions, including bid monitoring, deadline tracking, and the option to extend the auction if necessary.

❭ **Reports and statistics:** generate reports and analytics on auction performance, bidder behavior, and the outcomes of past auctions.

INTERNATIONAL REFERENCE OF THE JUDICIAL AUCTION SYSTEM:

Spain: the Administration of Justice operates a unified auction platform that allows citizen participation, with a single deposit process applicable to both judicial and administrative auctions.[120]

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120. Electronic Auctions/Ministry of Justice of Spain.
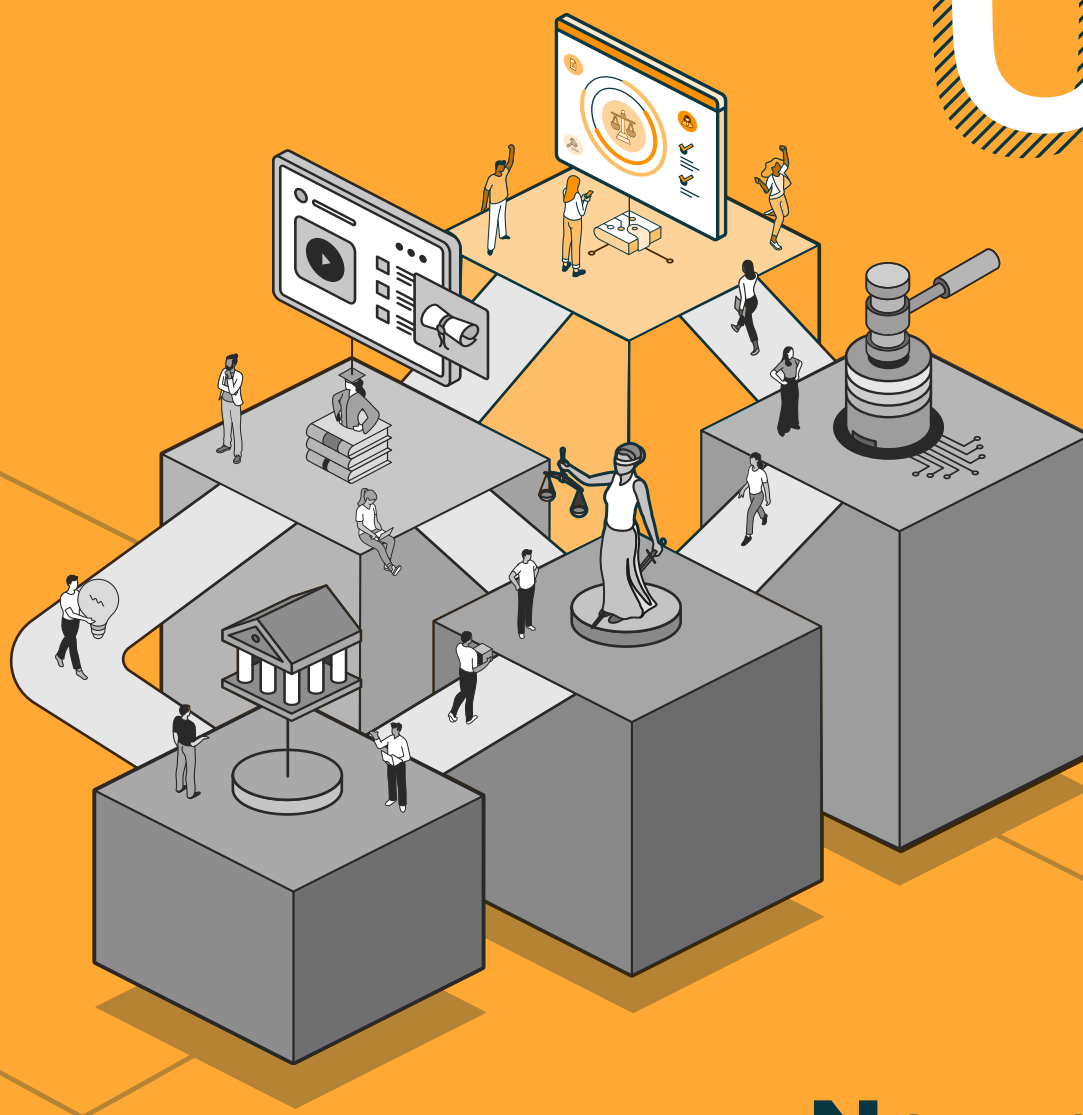
New digital processes and services

5.1 Services for the Administration of Justice

5.2 Services oriented to professionals and citizens

DIGITAL TRANSFORMATION OF JUSTICE INVOLVES MODERNIZING THE ADMINISTRATION OF JUSTICE THROUGH TECHNOLOGY.

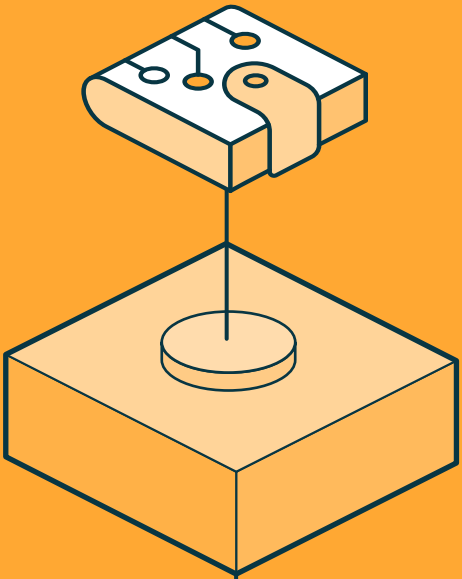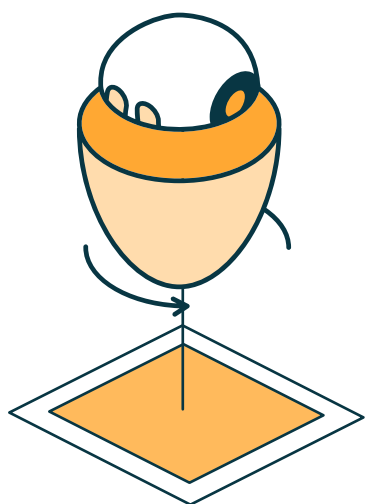Leading to a paradigm shift in its operations, in the judicial process, and in its interactions with legal professionals and citizens. The Administration of Justice used to rely on paper-based processes, analog methods, and in-person interactions. However, the **technological infrastructures and tools** mentioned **above have introduced a new way of working,** both internally within this system and externally in its interactions with various stakeholders. In this context, **it is necessary to adapt the processes and services provided by the Administration of Justice to meet the needs of its users, professionals, and citizens in the digital age.**

This shift from working in analog to digital operations will require designing new processes and services powered by technology. At this point, it is important to emphasize that the implementation of technological infrastructures and tools represents a new way of working that enhances the agility, efficiency, effectiveness, transparency, and accessibility of the justice system.

DESIGNING NEW DIGITAL PROCESSES AND SERVICES REQUIRES CAREFUL CONSIDERATION OF THE FUNCTIONALITIES NEEDED BY PUBLIC EMPLOYEES WITHIN THE ADMINISTRATION OF JUSTICE, AS WELL AS BY RELATED PROFESSIONALS AND CITIZENS. IT IS CRUCIAL TO UNDERSTAND HOW THESE EMPLOYEES WILL OPERATE WITHIN THE SYSTEM. FOR EXAMPLE, IN THE TRADITIONAL JUDICIAL PROCESS, A PUBLIC EMPLOYEE OF THE ADMINISTRATION OF JUSTICE USED TO BE RESPONSIBLE FOR PHYSICALLY TRANSFERRING THE PAPER DOCUMENTATION FROM THE COURT ARCHIVE TO THE COURTROOM IN PREPARATION FOR A HEARING. WITH ELECTRONIC CASE PROCESSING, THIS TASK IS NO LONGER NECESSARY. THEREFORE, IT IS IMPORTANT TO CONSIDER HOW WORK WILL BE ORGANIZED WITHIN THE FRAMEWORK OF ELECTRONIC PROCESSING, AND WHAT NEW ROLES PUBLIC EMPLOYEES, WHO ONCE HANDLED PAPER DOCUMENTATION, WILL TAKE ON, FOCUSING ON TASKS WITH GREATER ADDED VALUE.

This aspect of the digital transformation of justice involves **reassessing the digital services** provided to public employees. These services will support the electronic judicial process and other related functions, benefiting both professionals and citizens. As a result, they will be able to interact with the Administration of Justice from anywhere, using any mobile device, at any time of the year.
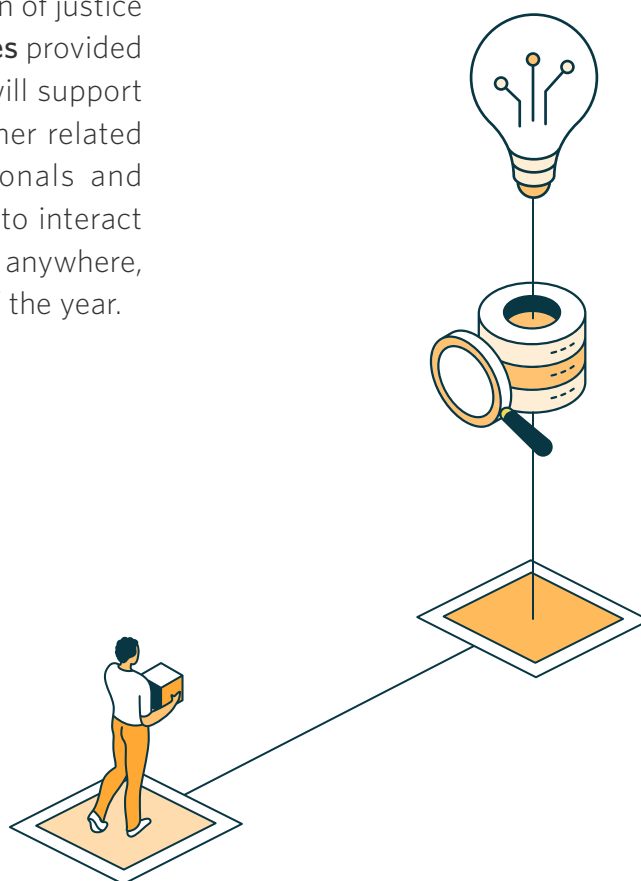
USER STORIES RELATED TO NEW DIGITAL PROCESSES AND SERVICES

Lucia:
Citizen

Francisco:
Registry officer

Antonio:
Lawyer

Justo:
Judge

Laura:
Lawyer of the Administration of Justice.

HISTORIA: WE HAVE A PROBLEM AND WE GO TO COURT

Lucia has rented an apartment to a company that manufactures t-shirts. Thanks to this income, she supplements her retirement pension, which allows her to lead a dignified life. The problems began when the company stopped making monthly payments and, more concerning, ceased responding to her calls and emails. Worried, Lucia called Antonio, her trusted lawyer of many

years. She explained the situation, and his professional advice was to file a **civil lawsuit for non-payment**. Lucia was willing to proceed, but she was very worried to learn that Antonio would be out of the country for two months. She could not wait that long to initiate the legal claim. After expressing her concern, **Antonio reassured her and explained that they could handle the entire process digitally, without him needing to be in the country.** He then outlined the steps to be taken:

› The first step Lucia must take is to grant Antonio the **necessary powers** to represent her before the courts. To do this, Antonio explained that she would need to complete a **process through a website,** similar to those she is already familiar with, such as checking medical test results, accessing online banking, etc. On that page, she will need to complete the **electronic judicial power of attorney**. During this process, she will identify Antonio as her representative and provide a number of additional details.

› Secondly, Antonio will gather all evidence (contracts, email, etc.) that Lucia has sent him digitally and prepare the lawsuit. Once all documentation is ready, Antonio **will file the lawsuit electronically.**

Lucia is surprised by what Antonio has just proposed. "This is the future, Antonio," she says. Now noticeably calmer, she agrees to follow all of Antonio's instructions, and together they begin taking the necessary steps to file the lawsuit.

Antonio, Lucia's lawyer, has filed a lawsuit for non-payment of rent on an apartment. A**lthough Antonio is currently out of the country, Lucia has asked him to represent her in this case**. Thanks to online legal services, Antonio has been able to file the lawsuit digitally and manage the case remotely.

During a follow-up call about the lawsuit, Antonio informs Lucia that she must pay **a fee related to the case they have filed.** Lucia feels overwhelmed, as she has never been to court and does not know how to navigate these legal procedures. As the conversation progresses, Lucia's nerves start to show. However, Antonio reassures her, explaining that making the payment is similar to shopping online, something she is familiar with. **All she needs to do is access the electronic court portal using her digital certificate and go to "My claims" section. Once there, she will select the only case listed, which will show the status "pending payment**

of court fee". After clicking "Pay", she will be prompted to enter her credit card details to complete the transaction.

After this explanation, Lucia feels calmer and more confident about being able to complete the process. During the follow-up meeting, however, she expresses concern about the timeline for resolving the issue. The lawyer reassures Lucia that the proceedings are moving quickly and that the next step will be for her to be summoned for the court hearing. He is waiting for **the electronic notification, but Lucía can check the published judicial calendar, which lists hearings scheduled for the next sixty days.**

Two weeks have passed since their last meeting. Lucia checks the judicial calendar and sees that the hearing is scheduled for a month from now. She quickly calls her lawyer to inform him about that. He is unable to speak with her at that moment because he is in a meeting, but he sends a text message reassuring her that the process is progressing smoothly and that he has **received the electronic notification.** He promises to call her in a few hours. Lucia waits patiently for his call. Finally, he arranges a video call to update Lucia. He confirms that he has received the notification for the court hearing, which is indeed scheduled for a month from now. During the call, he shows her the response filed by the delinquent tenants in the case. **Through the electronic court file viewer, the lawyer opens the response to the lawsuit** and shows Lucia its contents.

According to the response, the non-payment is attributed to the company's solvency problems. To prepare for the upcoming court hearing, they use this opportunity to review the submitted documentation, including the contract and outstanding rent receipts.

One day before the hearing, Lucia calls Antonio to ask where they will meet at the courthouse. Antonio tells her that she does not need to attend in person. Frustrated, Lucia responds that it is very important for her to be present in the courtroom to hear what is being said. Antonio reassures her, explaining that they do not need to attend in person, but they must participate remotely. He tells her about **a link in the court calendar that will allow her to see and hear everything happening during the hearing. "Like YouTube?"** Lucia asks, incredulously. "Exactly the same," Antonio replies. He adds that, although he is still out of the

country, he will attend the hearing remotely. "This sounds like science fiction, Antonio," Lucia says, "Does it really work like that?" Antonio laughs and reassures her, saying that it does.

The day of the hearing arrives. **Lucia connects using the link in the hearings calendar on her mobile phone.** "How easy," she murmurs. At first, the screen is black, but after a moment, all participants in the hearing appear, and to her relief, Antonio is also there. Antonio's calm demeanor gives her confidence. The hearing begins, and after forty-five minutes, it concludes, with the decision now pending the judge's deliberation.

Ten days have passed since the court hearing. Lucia, feeling somewhat nervous, calls Antonio. He is back in the country and suggests she stop by his office. Once there, Antonio shows her the **judicial statistics portal.** On the portal, they can see the average resolution time for each type of judicial action. Antonio pulls out a calendar and, based on the information from the portal, tells Lucia they should have a verdict in a couple of days. Then they continue discussing the details of the court hearing. Lucia is outraged by the evidence presented by the other party, telling Antonio that it was both false and absurd. After a few minutes, as they prepare to say goodbye, Antonio receives an **electronic notification from the court.** The sentence has just arrived. Antonio begins to read it and, after what feels like an eternity to Lucia, he looks up from the screen and breaks into a wide smile. "We won, Lucia!", he exclaims. They celebrate the news.

After a few minutes of euphoria, Antonio tells her that she will need to wait a few hours to **download the certificate of judicial debt recognition. Using this certificate, she can demand payment from creditors or, if they fail to pay, their assets will be seized.** However, they will not be able to take action right away, as their creditors must first be notified of the judgment. Lucia's face falls: "But Antonio, if these people don't answer their phones or read the emails, how will they be notified? Especially after the court hearing went so badly for them?" Antonio reassures Lucia once again, explaining that the creditors' attorney has a few days to collect the notice. If he does not pick it up in time, the notification will be posted on the court's public bulletin board. Once it is published there, they will be considered officially notified ten days later, and Lucia will be able to proceed with the debt recovery process.

A few days later, Antonio sends Lucia an invoice for his fees to date, which includes the advice, lawsuit preparation, and representation. Lucia calls him, concerned that the bill seems a bit high, especially considering the court fees they have already paid. Antonio explains to Lucia the procedures involved and the work he has done, highlighting the savings from not having to travel in person. During their conversation, Antonio explains to Lucia that this type of procedure is typically handled through mediation or alternative dispute resolution, provided both parties are willing to participate. While these methods are more efficient and cost-effective, they require cooperation from both sides. Given the belligerent nature of the situation, this case was not suitable for conciliation.

STORY: A NEW PERSON IN COURT

Laura, a lawyer from the Administration of Justice, has just arrived at the court. **She comes from a system where all processes were paper based, but she has been informed that here everything is now managed digitally.** A positive sign is that the first thing she received was a **cryptographic card with a digital certificate, allowing her to sign everything electronically,** she may never need to use a pen again.

She needs to complete the administrative formality for her new position, so she heads to the court's administration office. There, she is informed that **to carry out all the procedures, such as requesting vacations or checking her payroll,** she must access the **human resources and materials management system using her digital certificate.**

Lucia informs them that, with her change of position, she has also moved to a new address. They instruct her to update her personal information, which she can do through a single, unified platform. Once updated, her new address will be automatically registered across all relevant systems.

The office coordinator completes a series of steps to formalize Lucia's new position and enters the information into the system. Curious, Lucia asks him why so much data is being collected. The official explains that the **system provides real-time information on the structure of each court, including vacancies, medical leaves**

or staff vacations. This allows the system to trigger alerts or take proactive measures to address potential issues, such as overlapping vacations among court staff or the absence of a judge due to medical leave. "This is impressive," says Laura, to which the official replies that they hope to integrate this data into each court's statistics to identify areas where reinforcements may be needed, etc.

It is Monday, her first day, and Laura is talking to the registry staff. Noticing the minimal amount of paper around, she asks, somewhat confused: "How do you manage this?" **Francisco**, a seasoned public worker who has been involved in the transformation process, explains: "We used to rely on large carts to transport boxes of paper from one place to another. Now, almost everything is processed digitally, and paper usage has become almost negligible." Lucia takes the opportunity to glance around the registration desk and is surprised to see no one waiting in line, not even in the room itself. Noticing her surprised expression, Francisco says: "Yes, that is one downside of digitalization, we hardly see anyone anymore. **Most people submit their documentation online** and, when someone does come in person, it is almost a competition to help them."

"Look," Francisco says to Laura, "the other day, we received a lawsuit for non-payment of rent. **It was filed digitally, and the registration system automatically assigned the lawyer a reference number, along with the date and time of the filing.** This lawsuit was sent directly to distribution and assigned to Court No. 4 for processing". Francisco then shows Laura a **screen displaying the status of the case at each stage, along with the date and time it passed through each phase.** In a matter of minutes, the lawsuit went from registration to processing. Laura rubs her eyes in disbelief and exclaims: "But how is this possible, Francisco? In my previous court, it could take days for the paperwork to even reach the judge." "Well, Laura, there are aspects of this system that do not always make everything so fast. For example, in the response to this case, we can see that they submitted their reply on paper. This added a bit more time to the process," Francisco explains, pointing to the screen. Then he adds: "At that point, we **had to register the paper submission, then digitize and catalog all the documents**

it contained. These steps take more time and generate more paper that we have to file in the physical archive. Thankfully, these cases are becoming rarer, and we are seeing fewer of them all the time."

Laura asks Francisco to explain how the process works. He responds that **the goal is for everything entered into the system to be either digital or digitized right away, so that all processing could be handled electronically.** That way, everything moves through the case management system. Each type of case has a series of procedural milestones. As the case progresses, it is possible to track which milestones are pending and identify the phases that require the most work. This allows additional colleagues to be assigned to areas with the highest workload, helping to prevent backlogs. "Look, the procedure we just saw in the registry is right here," Francisco says, showing her a **view of the file with all the documents listed.** Laura exclaims: "It is great that each document can be identified, it is so clear!" They click on each document to view it on the side. Even documents that were originally submitted on paper have been digitized, **and because they have been processed with a text layer rather than as images, the text can be selected and copied.** Seeing Laura's surprise, Francisco smiles and says: "You haven't seen anything yet. Watch this, I am currently processing a case, and now I need to notify the parties about a judicial hearing. Let me show you how it's done. One has been submitted electronically, and it is pretty straightforward. **I create the notification using a pre-defined template, pulling the details from the schedule that Justo, the judge of the court, has updated.** Then, we just click on "Generate" and "Send". And that's it. Quick and easy." Laura, still surprised, asks: "But what about the parts that were submitted on paper?" Francisco replies that this is a bit more tedious. Although they are working on an upgrade to the system so that everything can be printed and sent centrally, for now, they still have to generate the document and send the notification on paper. "But this is an exception now, and before it was the norm," he adds.

Laura tells Francisco that in her previous court everything was sent by mail, and that it was often difficult to locate the postal addresses of the parties since they were sometimes missing or incomplete. "How do you handle that here?" she asks. "Very easy, we rely on the **judicial case management system.** It offers a lot of useful services. For example, for the issue you mentioned, if we have the name of the company, **we can use this platform to retrieve its tax identification number. Using that number, the system automatically cross-references various agencies, like the traffic department, the tax office, health services,** and more, to retrieve the addresses linked to this tax identification number," Francisco explains.

"This is wonderful!" comes a voice from behind. It's **Justo**, the judge of the court. Laura, still in awe of what she is seeing, expresses her amazement to him. Justo replies: "Before, it was a chaos of paper, people, calls... But now, everything is streamlined. The work is organized, even court hearings run more smoothly. Laura, come with me to the hearing room, I have one in five minutes." They enter the room, and Laura is surprised to find it empty. The only person there is a technician, setting up a **screen and a microphone.**

"Justo," Laura says to him, "There's no one for the hearing." Justo smiles and replies, pointing to the screen: "On the contrary, they're all here." He holds the hearing using the equipment that the technician has prepared. He gives the floor to each party, reviewing the documentation they present while taking notes on his laptop. Once the hearing concludes, Justo turns to Laura and asks: "What do you think?" Laura nods in approval. "This lawsuit comes from a very common cause of action these days: non-payment of rent. If you give me a few minutes, I'll outline the answer and show you the formidable **case law search engine,**" he says. "Look," Francisco exclaims as he shows her the screen. "Here, we can search for similar rulings by subjects, keywords, jurisdiction, and more. For this case, you just need to look at the sentences that come up and this, I believe, is very similar to the issue at hand." Justo saves the judgment on his laptop and continues talking to Laura.

The lawyer is impressed by what she sees. She asks Justo: "With all of this, are you more productive?" Justo replies that he works hard but **thanks to the organization and digitization of everything, he works very comfortably and efficiently.** He tells her: "Look, let me show you **the judicial statistics data.** It shows that we're four times more efficient in processing cases since implementing this new system. Now, we can track the stage of every legal process we are working on, and the system automatically updates the data for statistical analysis. This lets us monitor our progress, identify trends, and take proactive measures before any issues arise."
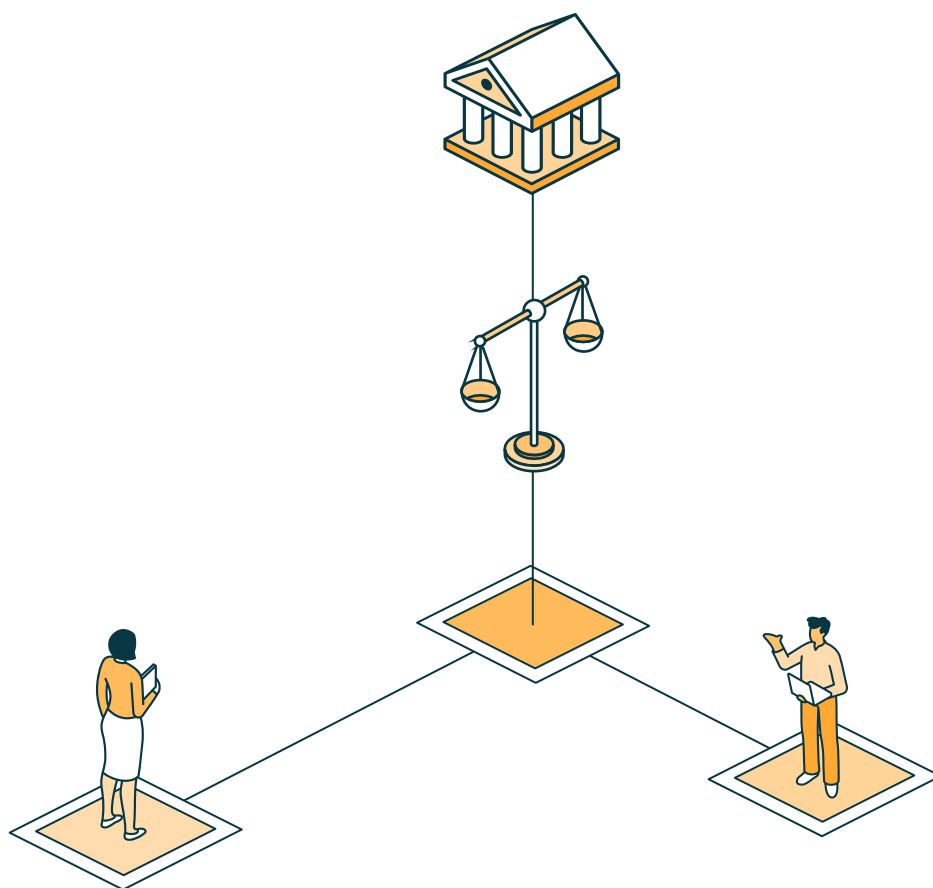
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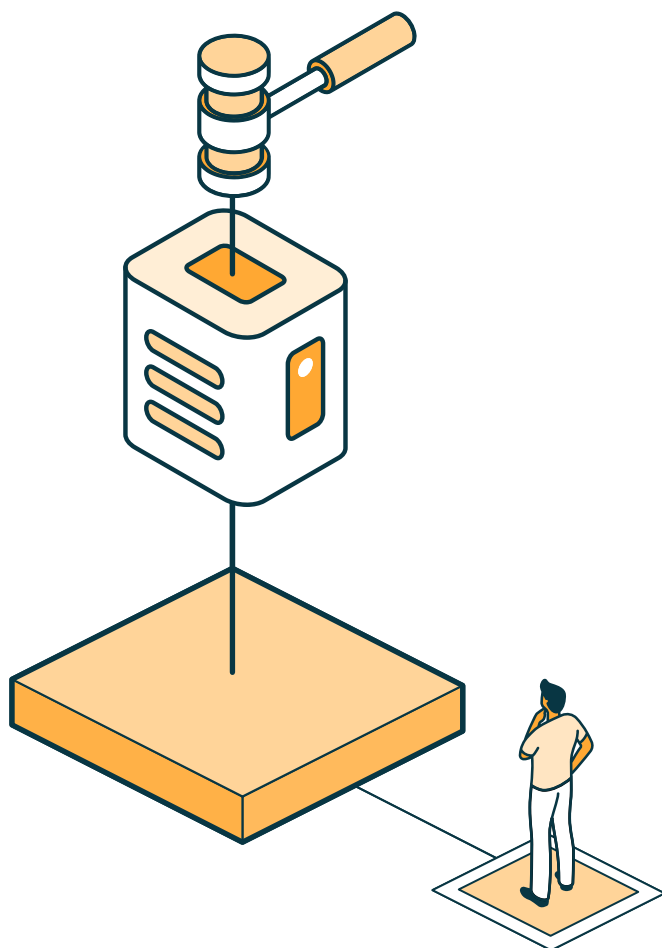
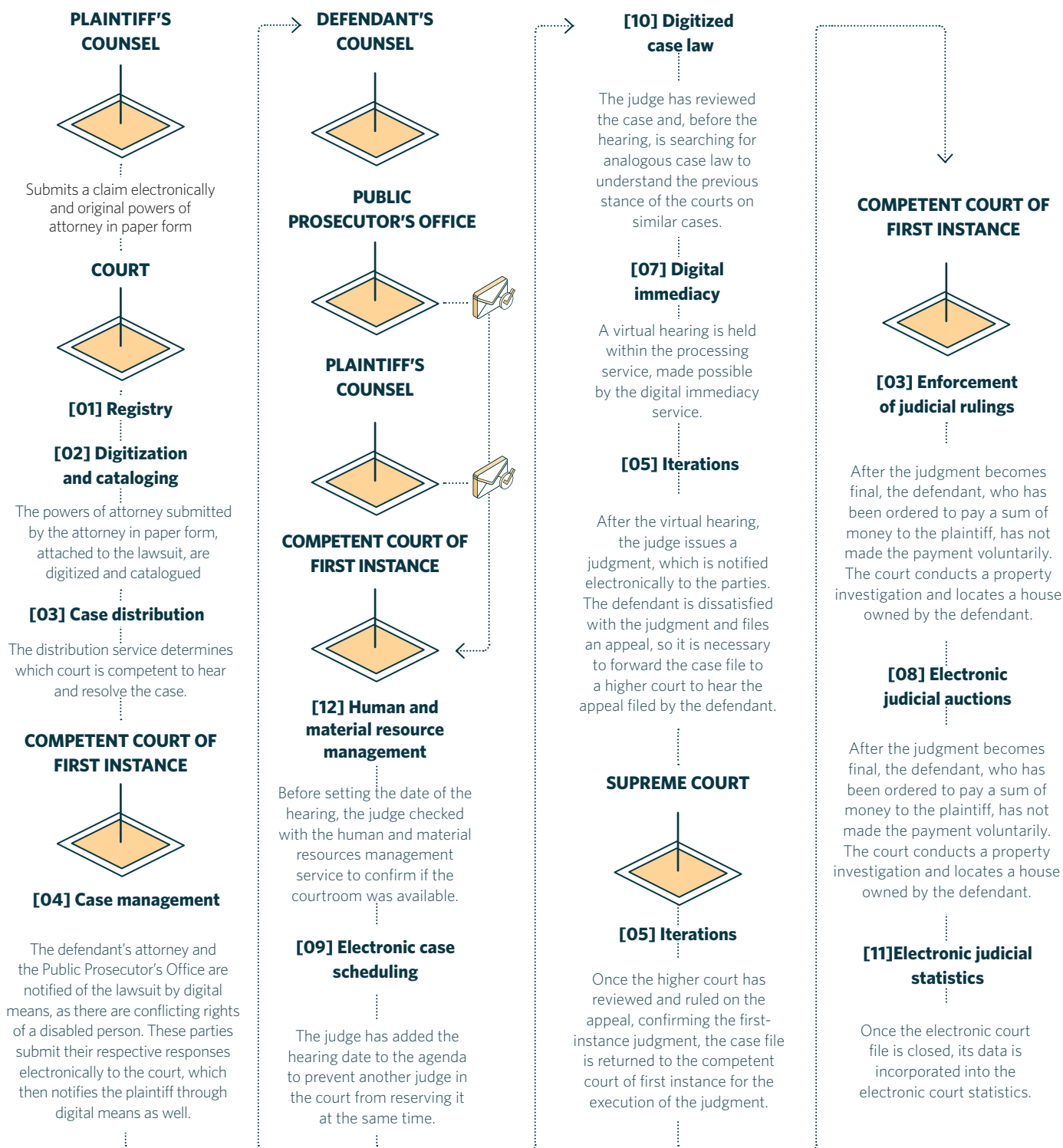# Services for the Administration of Justice

This section includes all the services provided to public employees in the Administration of Justice that facilitate the electronic judicial process. This process involves the complete judicial procedure completed entirely through digital means, from start to finish. In addition, it includes other digital services that complement the electronic judicial process, offering users extra functionalities to ensure that all their tasks can be handled electronically.

It is important to note **that the implementation of new digital services will also impact each country's procedural rules that govern the judicial process.** These regulations are originally designed on a concept of justice based on analogue methods. Therefore, **a regulatory framework for the ICT of justice** is necessary to govern their use, along with a thorough **analysis of the procedural rules to adapt their language to the use of digital technologies.** For example, if digital immediacy services and virtual hearings are implemented in the Administration of Justice, but the Code of Civil Procedure requires the parties to appear in court on the day of the hearing, a conflict arises between the digital service and the existing regulations.

The following image illustrates how services for the Administration of Justice can be applied to a civil case. The circles represent the various actors involved, while the boxes depict the services offered by the Administration of Justice, based on the map from the **Justice Digital Transformation Guide:**

PLAINTIFF'S COUNSEL

Submits a claim electronically and original powers of attorney in paper form

COURT

[01] Registry

[02] Digitization and cataloging

The powers of attorney submitted by the attorney in paper form, attached to the lawsuit, are digitized and catalogued

[03] Case distribution

The distribution service determines which court is competent to hear and resolve the case.

COMPETENT COURT OF FIRST INSTANCE

[04] Case management

The defendant's attorney and the Public Prosecutor's Office are notified of the lawsuit by digital means, as there are conflicting rights of a disabled person. These parties submit their respective responses electronically to the court, which then notifies the plaintiff through digital means as well.

DEFENDANT'S COUNSEL

PUBLIC PROSECUTOR'S OFFICE

PLAINTIFF'S COUNSEL

COMPETENT COURT OF FIRST INSTANCE

[12] Human and material resource management

Before setting the date of the hearing, the judge checked with the human and material resources management service to confirm if the courtroom was available.

[09] Electronic case scheduling

The judge has added the hearing date to the agenda to prevent another judge in the court from reserving it at the same time.

[10] Digitized case law

The judge has reviewed the case and, before the hearing, is searching for analogous case law to understand the previous stance of the courts on similar cases.

[07] Digital immediacy

A virtual hearing is held within the processing service, made possible by the digital immediacy service.

[05] Iterations

After the virtual hearing, the judge issues a judgment, which is notified electronically to the parties. The defendant is dissatisfied with the judgment and files an appeal, so it is necessary to forward the case file to a higher court to hear the appeal filed by the defendant.

SUPREME COURT

[05] Iterations

Once the higher court has reviewed and ruled on the appeal, confirming the first-instance judgment, the case file is returned to the competent court of first instance for the execution of the judgment.

COMPETENT COURT OF FIRST INSTANCE

[03] Enforcement of judicial rulings

After the judgment becomes final, the defendant, who has been ordered to pay a sum of money to the plaintiff, has not made the payment voluntarily. The court conducts a property investigation and locates a house owned by the defendant.

[08] Electronic judicial auctions

After the judgment becomes final, the defendant, who has been ordered to pay a sum of money to the plaintiff, has not made the payment voluntarily. The court conducts a property investigation and locates a house owned by the defendant.

[11]Electronic judicial statistics

Once the electronic court file is closed, its data is incorporated into the electronic court statistics.

5.1.1 REGISTRY

THE REGISTRY ENABLES COURT EMPLOYEES TO DIGITALLY RECORD ALL DOCUMENTS DELIVERED IN BOTH ELECTRONIC AND PHYSICAL FORMATS, AS WELL AS THOSE SENT TO PROFESSIONALS, CITIZENS, AND OTHER STAKEHOLDERS. THIS SERVICE PROVIDES A COMPREHENSIVE RECORD OF THE ENTRY AND EXIT OF DOCUMENTS AND INFORMATION, ENHANCING THE LEGAL SECURITY OF THE PROCESS BY PERMANENTLY RECORDING THE DATE AND CONTENT OF EACH DOCUMENT, ENSURING COMPLIANCE WITH PROCEDURAL RULES.

When discussing this service, it is important to note that, **depending on the country, there are laws regulating the ICT of justice that require legal professionals and other public actors related to this Administration to submit all documents electronically. In contrast, other legislations allow professionals and public actors to submit documentation either electronically or in paper form, with the same flexibility granted to citizens.** To bridge the digital divide and ensure access to the Administration of Justice, citizens are given the option to submit their documentation to the courts either electronically or on paper.

This service offers public employees of the Administration of Justice the following options:

› **Record the receipt and dispatch of electronically filed information:** public employees of the Administration of Justice can log the time of receipt and dispatch, along with the content of legal documents, briefs, evidence, and any other materials related to a case, whether filed electronically or on paper. In addition, it can also log the dispatch of any information sent from the court to the related parties. **Thanks to this registry, it is possible to verify that the documentation submitted and leaving the court complies with the timing and form requirements set by procedural rules.**

› **Record electronic evidence**: electronic evidence refers to materials presented to the judicial body, that are digital in nature and, due to their volume, size, format, and complexity, require special handling compared to a "standard" or "standardized" document. In the current context, it is becoming increasingly important to manage access to digital evidence— such as hard drives, wiretaps, mobile phone data dumps, among others —in an organized manner through an information system.

❯ **Classify electronically submitted information:** public employees can categorize and index electronic information documents submitted to the court based on their content and relevance to the case, **making it easier to search for and retrieve them later.** This functionality is highly relevant in the Administration of Justice, which processes the receipt and dispatch of a massive volume of documents on a daily basis. This service allows users to **locate recorded information quickly and efficiently.**

❯ **Audit information entering and leaving the courts and tribunals**: this service allows the Administration of Justice to audit any document or information submitted electronically. This functionality is crucial when, for example, one of the parties in a judicial process claims to have submitted a document on time, but the court rejects it for failing to meet the formal requirements set by procedural rules. To support its decision and **ensure compliance with procedural law, the court can audit the receipt record of the document to verify whether it was submitted on time.**

❯ **Monitor the status of court workloads:** by tracking the number of documents and the volume of information submitted to each court through the registration service, the Administration of Justice can **assess what the workload of each court. This information enables a better allocation of personnel and resources based on current workload demands.**

5.1.2 DIGITIZATION AND CATALOGUING

AS EXPLAINED WHEN DISCUSSING THE REGISTRATION SERVICE, PROFESSIONALS, OTHER PUBLIC ACTORS INVOLVED IN JUSTICE, AND ESPECIALLY CITIZENS CAN SUBMIT DOCUMENTATION IN PAPER FORMAT FOR REGISTRATION IN COURT. WHETHER SUBMITTING INFORMATION IN PHYSICAL FORMAT IS PERMITTED FOR REGISTRATION WILL DEPEND ON THE LEGISLATION OF EACH COUNTRY. IN ADDITION, THERE IS A HISTORICAL RECORD OF JUDICIAL FILES THAT WERE REGISTERED AND PROCESSED ON PAPER WHEN THE ADMINISTRATION OF JUSTICE OPERATED ANALOGICALLY. **THIS SERVICE ADDRESSES THE NEED TO CONVERT AND CATALOG ALL DOCUMENTATION SUBMITTED IN PHYSICAL FORMAT TO THE COURTS AND TRIBUNALS, AND TO INCORPORATE THIS DIGITIZED INFORMATION INTO THE ELECTRONIC JUDICIAL FILE.**

❯ **Digitize documents submitted on paper**: this service enables court employees to convert physical documents into digital format by scanning them. This ensures that all **information presented on paper is transferred to the digital realm, safeguarding the data** and minimizing the risks of loss, destruction, or deterioration associated with paper records.

❯ **Catalog documents submitted on paper**: after digitizing the paper documentation, it is necessary to catalog the documents, that is, **identify the content of each document, such as a complaint, power of attorney,** etc. This allows court employees to track and classify the digitized documents to be included in the electronic judicial file.

❯ In this process, it is essential **to establish consistent cataloging criteria by creating standardized document templates**, tailored to the procedural stages of cases. This ensures proper legal classification of briefs, documents, and judicial decisions, guaranteeing the traceability, integrity, and authenticity of the electronic judicial file.

❯ **Digitize judicial files initiated in analogue formats**: this service allows courts and tribunals to digitize and properly catalog documents from judicial files of cases that were initiated in analog formats, prior to the advent of Digital Justice, but which are still inactive today. It ensures that these older files are digitized and integrated into the electronic judicial system.

It is important to highlight the complexity involved in this process. To facilitate its implementation, **four main methods for digitizing old court files are outlined:** the first approach would be to not digitize old court files at all; the second would involve digitizing old files that are active, but only upon the user's request; the third approach would be to digitize all active court files; and the fourth one would entail digitizing all court files, including the closed ones, for research and development purposes, particularly to feed AI systems with real data. **Regardless of the approach chosen, it is crucial to assess the associated costs to ensure the most appropriate option is selected.**

5.1.3 DISTRIBUTION

After registering the initiating court documents that start a judicial process, it is necessary to assign the case to the appropriate court or tribunal, in accordance with the case distribution rules that ensure impartial allocation to available judges or courts. These rules are designed to ensure the fair and equitable allocation of cases, preventing any favoritism or bias.

> TO ENSURE DUE PROCESS, **THE DISTRIBUTION SERVICE AUTOMATICALLY AND RANDOMLY ASSIGNS A CASE TO THE SPECIFIC COURT OR TRIBUNAL, IN ACCORDANCE WITH THE DISTRIBUTION RULES OF EACH COUNTRY OR BASED ON OTHER CRITERIA, SUCH AS SUBJECT MATTER OR SPECIALIZATION.** THEREFORE, IT IS IMPORTANT TO CONSIDER THAT THIS SERVICE MUST BE TAILORED TO THE APPLICABLE LEGISLATION OF EACH COUNTRY.

This service **ensures that justice functions efficiently and transparently**. If the distribution rules are not properly followed, a court may receive a judicial file and begin to process it, but if the distribution is later challenged and found to be incorrect, processing of that file will be delayed. This is because the document must be reassigned to the correct court in accordance with the distribution rules.

This service offers the following functionalities to public employees of the Administration of Justice:

❯ **Automatically distribute judicial documents to the appropriate courts and tribunals**: through this service, public employees of the Administration of Justice can quickly determine which court or tribunal is competent to handle the case and send them the judicial file for acceptance and initiation.

❯ **Audit the proper distribution of court documents**: this service digitally records the allocation of a case to one court or another, in line with the distribution rules. This digital distribution trace provides a reliable means of verification and transparency. This is especially useful if there are questions about whether the correct court has received the case.

❯ **Parameterization**: configure the distribution algorithms for judicial bodies, allowing authorized users of the judicial body to define the desired distribution criteria. This can be done without the need for ICT personnel to intervene in the process.

5.1.4 PROCESSING

ONCE THE ELECTRONIC COURT FILE HAS BEEN ASSIGNED TO THE LEGALLY CORRESPONDING COURT IN ACCORDANCE WITH THE DISTRIBUTION RULES, THE COMPETENT COURT WILL PROCEED TO HEAR AND RESOLVE THE CASE. TO THIS END, IT MUST **CONDUCT THE ENTIRE ELECTRONIC JUDICIAL PROCESS, FROM START TO FINISH. THIS SERVICE COVERS ALL ACTIONS THAT COURT EMPLOYEES HANDLING CASES MUST TAKE TO MANAGE, TRACK, AND ADVANCE CASE THROUGH DIGITAL MEANS.**

This service offers the following functionalities to public employees of the Administration of Justice:

❭ **Accept and initiate the electronic judicial file**: once the file has been assigned to the appropriate court, court employees responsible for its processing can accept and initiate the judicial procedure. Conversely, this service also allows users to return a file if they determine that it does not belong to their court for further handling.

❭ **Manage electronic court documents**: court employees can manage electronic court documents by performing precise actions for their processing, such as adding them to the appropriate case file, classifying them according to the relevant phase of the judicial process, among other actions.

❭ **Make communications and receive pleadings**: public employees of the court can communicate electronically with the parties involved in the judicial process, including lawyers, the Public Prosecutor's Office, and citizens who are entitled to take legal action without a lawyer, among others. This service allows court users to send judicial notifications to the parties of the case, receive judicial documents through the registration module mentioned above, and incorporate them immediately into the electronic judicial file.

❭ **Manage procedural deadlines for court proceedings**: court employees can automatically manage procedural deadlines, including scheduling hearings, deadlines for filing pleadings, and performing other procedural actions. This service allows to set reminders to process tasks that must be performed in relation to a document or case to prevent procedural deadlines from expiring.

❯ **Track the process**: public employees of the court can monitor the progress of a case, including scheduling hearings, reviewing pleadings, and issuing resolutions.

❯ **Have controlled access to court documents**: the system provides controlled access to case-related documents and information. Judges, lawyers, the Public Prosecutor's Office, parties, and other authorized users can digitally access the electronic court file.

❯ **Manage physical evidence and non-digitizable items**: court employees can track and manage physical evidence presented during a judicial process, including items that cannot be digitized, such as a knife. This evidence is stored in a physical warehouse, but it is necessary for court employees handling the case to be able to access this reference and characteristics. This ensures they can quickly identify the evidence and make it available to the parties or the judge for examination when needed.

❯ **Analyze the contents of the case file and issue the corresponding judicial resolution**: this service enables judges to promptly access the case file, review documents, evidence, and hearing recordings, ensuring they have the necessary information to issue a judgement. In addition, it allows judges to draft the judgement and sign it digitally to guarantee its authenticity.

❯ **Perform the audit of the judicial process**: a comprehensive audit trail is maintained, tracking all actions taken in the system, ensuring both traceability and transparency throughout the judicial process.

5.1.5 VIRTUAL TRANSFER OF COURT FILES

The virtual transfer of electronic judicial files involves the digital transmission of the electronic case file between different judicial bodies and between these and the Public Prosecutor's Office. The virtual transfer of judicial files occurs when an electronic case file is sent to a higher body to hear an appeal or to another judicial body due to issues of jurisdiction or responsibility for executing the corresponding judicial decision. The virtual transfer of the case file to the Public Prosecutor's Office also occurs in cases where its intervention is required.

It is important to highlight **the relevance of ICT interoperability in this service.** If a case file is transferred between judicial bodies or between them and the Public Prosecutor's Office, manual tasks will be required for the transfer, if the systems used are not interoperable with each other.

THE VIRTUAL FILE TRANSFER SERVICE **ALLOWS COURT EMPLOYEES TO DIGITALLY SEND THE ELECTRONIC JUDICIAL CASE FILE TO ANOTHER COURT OR TRIBUNAL FOR PROCEDURAL ACTION, OR TO THE PUBLIC PROSECUTOR'S OFFICE WHEN THEIR INTERVENTION IS REQUIRED. THIS SERVICE PROVIDES FULL TRACEABILITY OF THE PROCESS,** CONTINUOUSLY RECORDING THE JUDICIAL BODY HANDLING THE CASE WHEN IT IS TRANSFERRED TO ANOTHER COURT OR TRIBUNAL, AND ALSO WHEN IT IS REFERRED TO THE PUBLIC PROSECUTOR'S OFFICE.

In addition, it enables **the entire judicial process to be conducted electronically from start to finish.** For example, without this service, the case file could be processed electronically only while the court of first instance is handling the case. However, if an appeal were filed, the case file would need to be transferred to a higher court and, without this service, such transfer would not be possible electronically, requiring the case file to be sent in paper format.
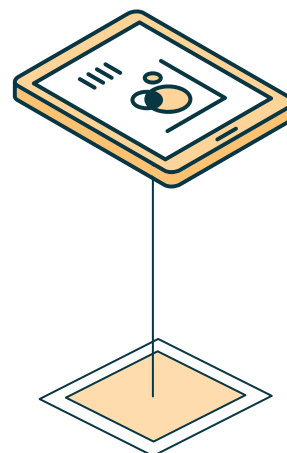
Another benefit is that this service **will increase the agility and efficiency of the Administration of Justice, as the virtual transfer of electronic case files allows the entire lifecycle of the judicial process to be conducted electronically.** This eliminates delays in the judicial process that previously occurred when files were on paper, requiring all documentation to be physically transferred between courts, which often resulted in time loss.

The main functionalities offered by this service to users of the Administration of Justice are the following:

❯ **Intrajudicial transfer of the electronic case file and transfer from the Administration of Justice to the Public Prosecutor's Office**: the primary functionality of this service allows the court handling a case with an associated electronic file to transfer the entire file, digitally, to another court, tribunal, or to the Public Prosecutor's Office for further action. In addition, this service also allows the court or the Public Prosecutor's Office receiving the file to return it to the originating court when legally appropriate.

❯ **Monitoring of the electronic case file after it has been transferred to another entity or to the Public Prosecutor's Office**: the originating court that sends the file to a third judicial body or to the Public Prosecutor's Office can track the transferred file in real time.

❯ **Incorporation of new documents to the electronic case file by the judicial body or the Public Prosecutor's Office upon receiving the file**: the court or the Public Prosecutor's Office receiving the file can add new electronic judicial documents to it. For example, if the case file is submitted to a higher court due to an appeal of the first-instance judgement, the court handling the appeal must be able to incorporate the appeal documents into the electronic case file.

5.1.6 ENFORCEMENT OF COURT DECISIONS

In the context of a judicial process, there may be situations where it is necessary to **enforce judicial decisions even before the judge issues a final sentence.** For instance, when the judge orders a provisional measure, such as the preventive attachment of assets from one of the parties, and the party fails to comply voluntarily, **or, when, after the judgment has been issued, the party obliged** to take a specific action under the ruling refuses to do so voluntarily.

The judicial decision enforcement service **will allow the Administration of Justice to ensure effective implementation of judicial decisions issued by courts and tribunals.** This service strengthens the effectiveness of justice, which is necessary both in the internal processing of the case file and in ensuring that external third parties comply with judicial mandates. Therefore, having an efficient judicial process up until the judgment is of little value if the Administration of Justice cannot execute the resolution with the same level of efficiency afterwards.

Moreover, this service has a broader positive impact beyond the Administration of Justice itself. **The judicial decision enforcement service provides legal certainty to citizens and businesses, assuring them that the country in which they live and operate has the means to effectively enforce court rulings.** This occurs in an environment of trust and security, which, in turn, encourages investment and drives economic and social development.
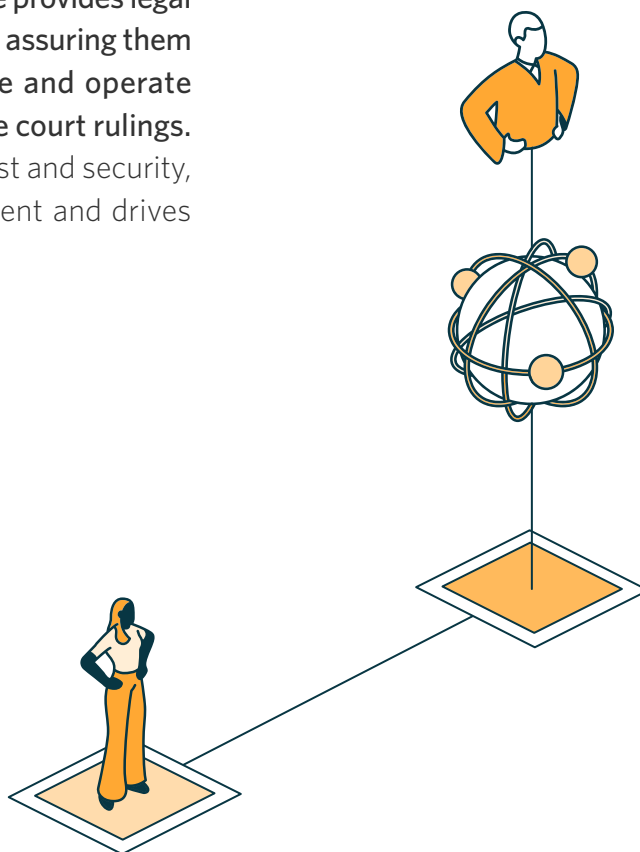
THIS SERVICE ALLOWS COURT AND TRIBUNAL EMPLOYEES **TO ACCESS REAL-TIME, UP-TO-DATE DIGITAL INFORMATION ABOUT A PERSON'S MOVABLE AND IMMOVABLE ASSETS, RIGHTS, SOURCES OF FINANCING, AND OTHER RELEVANT ASSET DETAILS.** ADDITIONALLY, IT FACILITATES COMMUNICATION **WITH INSTITUTIONS AND STAKEHOLDERS THAT CAN SEIZE** A PERSON'S ASSETS, MAKING THEM AVAILABLE FOR JUDICIAL PURPOSES.

BEYOND ITS IMPACT ON ENFORCING JUDGEMENTS THAT REQUIRE DEBT REPAYMENT, THIS SERVICE ALSO PLAYS A SIGNIFICANT ROLE IN THE FIELD OF **CRIMINAL LAW. THE EXECUTION OF CUSTODIAL SENTENCES IS ALSO HIGHLY RELEVANT, AS IT ENABLES MONITORING OF PRISONERS, MANAGEMENT OF THEIR SENTENCE PROGRESS, SENTENCE REDUCTIONS, THE FACILITIES WHERE THEY ARE INCARCERATED, PRISON FURLOUGH, ETC.** ALL THIS REQUIRES INTEROPERABILITY WITH CORRECTIONAL FACILITIES.

The main functionalities offered by this service to court employees are:

❯ **Inquiry of individuals' home addresses**: courts can access the address registered in official records for a natural person. This feature is primarily used when a judicial notification needs to be served to an individual, but their address is unknown. It can also be used to determine the address of individuals who have intentionally evaded justice, in cases where a resolution is issued ordering their location and apprehension.

❯ **Asset investigation of individuals and businesses**: when it is necessary to determine the assets of a person or a business within the context of a judicial process, this service enables the extraction of relevant information from official records, such as the Land Registry and the Vehicle Registry, providing the court with detailed asset information.

❯ **Seizure of assets**: when a court ruling orders the seizure of an asset, this service enables the court to carry out the necessary actions to execute the seizure. To this end, the service facilitates communication of the court and third parties with the authority to execute the asset seizure and make it available to the court. For example, when a court orders a bank to seize funds from a checking account and transfer them to the court.

❯ **Management of seized assets**: this service also allows for the management of assets that have been seized. For instance, when a checking account is seized and placed under the court's control, the court can order the transfer of the funds to the creditor specified in the judgment.

❯ **Execution of custodial sentences, monitoring prison benefits and permits**: this service allows the Administration of Justice to oversee and monitor the execution of custodial sentences for individuals sentenced to prison or those in pre-trial detention awaiting trial, as mandated by court order. This service allows the monitoring of prisoners, overseeing the execution of their sentences, any sentence reductions, prison benefit, the facilities where they are serving their sentences, and management of prison permits, along with other aspects related to the enforcement of sentences.

5.1.7 DIGITAL IMMEDIACY

DIGITAL IMMEDIACY IS A **SERVICE THAT ENABLES A JUDGE TO PARTICIPATE REMOTELY IN EVIDENTIARY PROCEEDINGS, HEARINGS, AND APPEARANCES OF THE PARTIES REMOTELY.** DIGITAL IMMEDIACY IS ACHIEVED THROUGH **VIRTUAL HEARINGS, WHICH ALLOW A COURT SESSION TO BE CONDUCTED DIGITALLY. DURING THESE HEARINGS, ALL OR SOME PARTICIPANTS COMMUNICATE AND ENGAGE IN REAL TIME VIA TELECOMMUNICATION,** AFTER VERIFYING THEIR IDENTITY.

When providing this digital service, it is crucial that **virtual hearings uphold the same procedural guarantees for the parties as those offered in in-person court hearings**. Additionally, it is essential for the regulatory framework governing the ICT of justice in each country to recognize virtual hearings as a valid modality. Otherwise, there is a risk that they could be deemed invalid. In this regard, the development of a guide to conduct virtual hearings is highly beneficial.

**INTERNATIONAL REFERENCES FOR THE GUIDE
TO HOLDING VIRTUAL HEARINGS:**

Spain: the Administration of Justice has a **guide for holding telematic judicial proceedings.**[121]

Jamaica: the Administration of Justice of Jamaica has developed the *Remote hearings guidelines*[122] that also establish a line of action for conducting virtual hearings.

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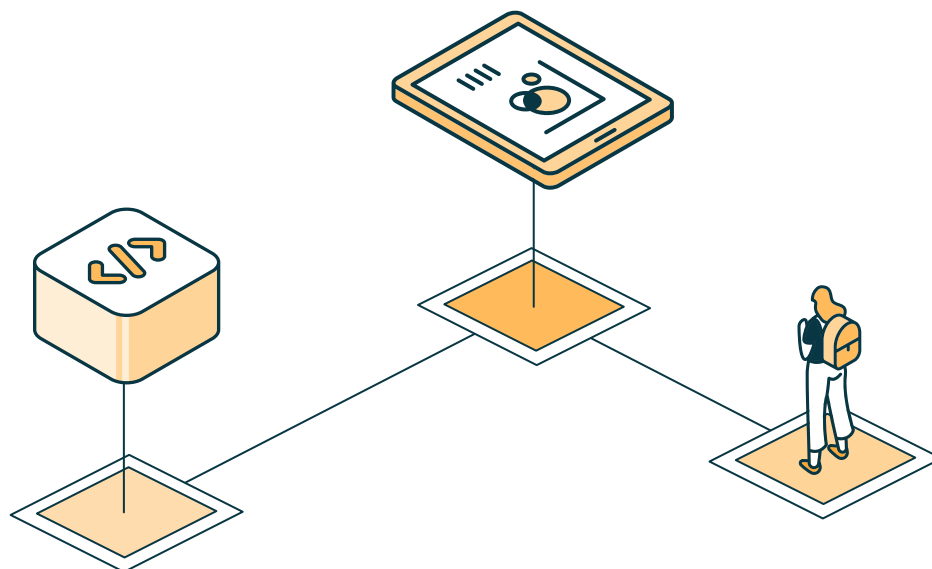
121. Guide for holding telematic judicial proceedings/ General Council of the Judiciary of Spain.

122. Remote hearings guidelines/Court of appeal of Jamaica.

Thanks to digital immediacy, physical and digital worlds are seamlessly connected. This integration requires that all participants in the judicial process, including judges, the Public Prosecutor's Office, lawyers, parties involved in the case, and experts, be located in physical spaces, such as courtrooms, offices, or their homes. At the same time, these participants can be connected through a virtual space where the judicial hearing is conducted in real time. Therefore, **when designing virtual audiences, it is necessary to consider how the physical space interacts with the digital environment.**

The two main modalities of virtual hearings are outlined below:

› **Hybrid court hearings**: in a hybrid virtual hearing, **both online and in-person participation are integrated.** Some participants, witnesses, attorneys, or judges may be physically present in the courtroom, while others join the proceedings remotely via video conferencing or other digital technologies. As an example, a courthouse may allow attorneys and witnesses to be physically present in the courtroom, while parties involved in the case who are unable to attend in person participate remotely through digital means.

› **Holding fully virtual court hearings**: in a fully virtual hearing, **all parties involved,** including the judge, attorneys, witnesses, and interested parties, **participate exclusively online, using digital tools that connect them in a virtual courtroom.** Therefore, there is no physical presence of any participants in the courtroom, and all court interactions and proceedings are conducted electronically. For example, during the Covid-19 pandemic, many courts implemented fully virtual hearings in which all parties participated via video conferences from their remote locations, with the judge conducting the hearing remotely.

In virtual hearings, the judge can perform the following functions:

› **Manage participants' entry into the virtual courtroom and expel them when required by law**: the judge has the authority to control the access and exit of participants, ensuring they join at the appropriate time and leave when necessary. To facilitate this, the judge can place participants who are not yet required to join in a virtual waiting room. Ideally, this system should include a solution for digitally authenticating participants who enter the virtual courtroom.

› **Manage participants' engagement in the virtual courtroom**: the judge can mute participants when necessary and control the order of interventions by assigning speaking turns.

› **Allow parties to submit documents and evidence virtually**: the judge can permit the parties involved in the case to submit and share electronic documents presented as evidence through the virtual courtroom.

❯ **Remote examination of witnesses and declarants**: judges can ask questions and receive answers in real time. At this point, it is important to mention the concept of **secure connection spaces**. The idea is that, at the discretion of the judge or competent authority, **the connection can be virtual, but from a secure location, such as a prison, a police station, another judicial body, hospitals, public offices, among others.** It serves multiple purposes: to avoid the need for transfers, to ensure optimal connection conditions, and to guarantee that the intervention occurs in a controlled environment, free from any external influence on the statement or intervention during the hearing.

❯ **Record the hearing and incorporate it into the electronic court file**: the judge can record the entire virtual hearing, sign it digitally to validate its authenticity, and incorporate it into the electronic court file.
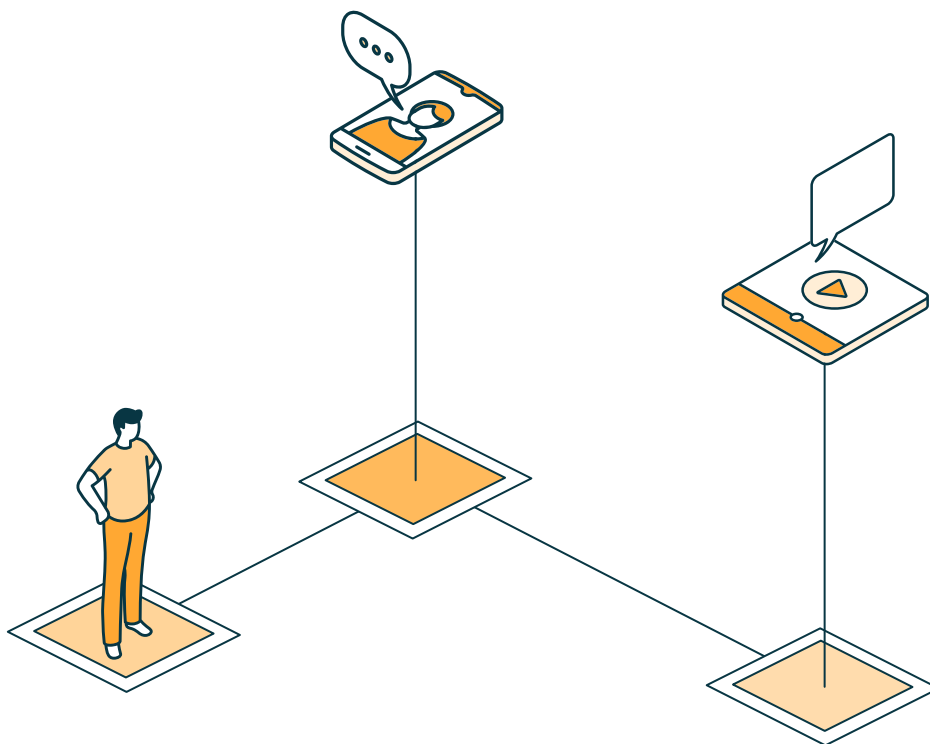
5.1.8 ELECTRONIC JUDICIAL AUCTIONS

Within the framework of a judicial process, the Administration of Justice is responsible for converting movable or immovable property into money to enforce a judicial decision. For example, in a case involving the non-payment of a monetary debt, the judgment orders the debtor to pay the amount owed. However, if the debtor does not have the money to pay the debt, but owns real estate, the court can order the auction of the property in a judicial sale. The proceeds from the auction can then be used to pay the debtor's monetary obligation.

IN THIS CONTEXT, THE ADMINISTRATION OF JUSTICE OFFERS **THE ELECTRONIC JUDICIAL AUCTION SERVICE, WHICH FACILITATES VIRTUAL PUBLIC AUCTIONS OF DIFFERENT ASSETS, ENABLING THE ENFORCEMENT OF JUDICIAL DECISIONS.** THIS SERVICE CONTRIBUTES TO **IMPROVING THE TRANSPARENCY OF THE JUSTICE SYSTEM,** AS THE ENTIRE AUCTION PROCESS IS OPEN TO THE PUBLIC, ALLOWING ANY CITIZEN WHO MAKES THE CORRESPONDING DEPOSIT TO PARTICIPATE. IN ADDITION, **ACCESSIBILITY IS IMPROVED** SINCE ANY CITIZEN CAN ATTEND IT REMOTELY VIA A MOBILE DEVICE. IN TURN, IT IS EFFECTIVE, SINCE BY ALLOWING ONLINE PARTICIPATION IN THE AUCTIONS, OVERALL ATTENDANCE IS ENCOURAGED, INCREASING THE AUCTION'S CHANCES OF SUCCESS.

This service offers the following possibilities to public employees of the court conducting the electronic judicial auction:

❯ **Announce the auction and establish the participation criteria**: court employees can publish the details of judicial auctions to make them known to the public, as well as outline the criteria that citizens must follow to participate.

❯ **Verify that participants have paid the deposit required to participate**: in judicial auctions, participants must make a deposit as a guarantee of payment if they win the auction. The court can confirm that the necessary deposits have been made and can authorize the participation of those individuals who have properly submitted their deposit.

❯ **Recording the auction**: to ensure transparency while holding the auction, it can be recorded, providing an audiovisual record of its proper development and safeguarding the integrity of the process.

❯ **Manage bids of the attendees and award the auctioned property**: once the auction begins, court employees in charge of moderating it can oversee the different bids and award the asset to the highest bidder. During the award process, court employees issue the digitally signed electronic document, certifying the winning bidder, the awarded amount, and the property assigned.

❯ **Manage the funds obtained from the auction**: once the auction price has been paid, court employees can manage these funds and make them available to the person designated by the court.

INTERNATIONAL REFERENCES FOR ELECTRONIC JUDICIAL AUCTIONS:

European Union: status of electronic auction systems in member states.[123]

United States: New York Court.[124] A remote auction pilot project has been launched in Queens, Monroe, and Niagara counties. While the auctions will continue to be held live and in person in the counties where the properties are located, individuals will also have the option to bid on certain foreclosed properties via third-party auction platforms.

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123. Judicial auctions/European Union.
124. Remote Bidding in Foreclosure Auctions/New York Courts.

5.1.9 ELECTRONIC SCHEDULING SYSTEM

THE ELECTRONIC SCHEDULING SYSTEM IS THE DIGITAL SERVICE THAT **ALLOWS COURTS TO SCHEDULE HEARINGS BASED ON COURTROOM AVAILABILITY, WORKING DAYS, CASE TYPE PRIORITIES, AND OTHER PROCEDURAL CRITERIA.** IN THIS WAY, COURT EMPLOYEES CAN VIEW AVAILABLE DATES IN THE DIGITAL AGENDA AND SELECT ONE, AUTOMATICALLY SCHEDULING THE HEARING FOR THAT DATE.

The electronic scheduling system enhances the **efficiency of Administration of Justice operations,** by enabling a more effective scheduling of hearings and judicial events. This system helps to avoid scheduling conflicts and optimizes the use of resources, such as courtrooms and personnel. It also **helps prevent scheduling errors,** as automation ensures that errors such as booking the same courtroom for two proceedings at the same time are avoided.

Interoperability is crucial for this service, since the scheduling system must integrate with the **judicial services portal**, allowing citizens to view their judicial appointments online. In addition, it should integrate with other calendars (those of judges, lawyers, and other participants) to prevent delays or non-shows, which could result in case suspensions. **Achieving full interoperability with these agendas would help avoid numerous delays and case suspensions, which significantly impact procedural deadlines.**
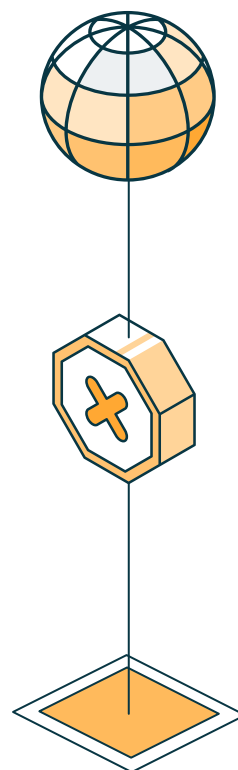
The main functionalities offered by this service to court employees are:

❯ **Event scheduling**: the electronic agenda allows courts and tribunals to schedule and register judicial events, such as hearings, trials, appearances, meetings, and more. Each event is logged with its respective date, time, location, and related details. Furthermore, the system can integrate with the personal electronic agendas of public employees involved in the hearing, ensuring that the judicial event is automatically added to their personal calendars.

❯ **Access to agenda content and scheduled events**: the electronic agenda is available online and accessible to public employees of the Administration of Justice.

❯ **Event reservations**: authorized users can book dates and times for court events through this service, preventing scheduling conflicts and ensuring that judicial resources are available as needed.

❯ **Receiving automated notifications**: the electronic agenda can send automated digital notifications to the parties involved, reminding them of the dates and times of court events. This helps ensure that everyone is informed and prepared to attend.

❯ **Judicial resource management**: courts can use the electronic agenda to manage judicial resources, such as courtrooms, recording equipment, interpreters, and other resources required for court events.

❯ **Data backup**: this service keeps a historical record of scheduled court events, which is useful for future reference and auditing purposes.
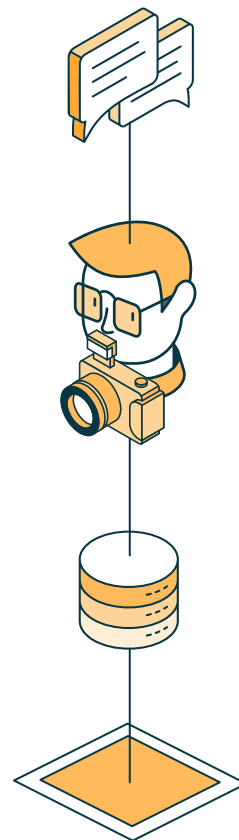
5.1.10 DIGITAL JURISPRUDENCE

DIGITAL JURISPRUDENCE REFERS **TO THE AVAILABILITY OF CASE LAW IN DIGITAL FORMAT, INCLUDING COURT DECISIONS AND PRECEDENTS ESTABLISHED BY COURTS OVER TIME.** THESE DECISIONS ARE ESSENTIAL FOR THE INTERPRETATION AND APPLICATION OF THE LAW. **THEREFORE, THE DIGITIZATION OF CASE LAW ALLOWS JUDGES TO ACCESS AND CONSULT** IT THROUGH THIS SERVICE, AND CONSIDER PRECEDENTS ESTABLISHED BY THE COURTS IN ANALOGOUS OR SIMILAR CASES.

This service enhances **the efficiency of justice** by enabling judges to issue rulings more swiftly. They no longer need to spend time on a manual task of searching for relevant case law, as they can quickly access applicable precedents for the case they are reviewing. Another key benefit of **this service is that it enhances legal certainty,** since, by automatically providing judges with relevant rulings for the case at hand, it prevents contradictory decisions in similar cases.

The main functionalities offered by this service to judges are:

❯ **Advanced case law search**: judges can perform an advanced search within the digital case law database using different criteria, including keywords, legal topics, case numbers, judges' names, dates, and other more specific parameters.

❯ **Filtering and sorting**: digital case law allows judges to filter and sort search results to find relevant court decisions more efficiently. The results can be sorted by relevance, date, or legal significance.

❯ **Decision records**: judges can access a complete history of court decisions of a particular case. This feature helps them understand the progression of the case and how a certain ruling was reached.

❯ **Notifications and alerts**: this service allows judges to set up notifications and alerts to remain informed about new court decisions relevant to their areas of interest.

❯ **Bookmarks and notes**: judges can bookmark important court decisions and add personal notes to cases for future reference. This feature helps them keep track of key rulings and research insights.

INTERNATIONAL REFERENCES OF DIGITAL JURISPRUDENCE:

Spain: the Judicial Documentation Centre (CENDOJ) is the technical body of the General Council of the Judiciary (CGPJ) that is responsible for the official publication of case law, as well as other tasks related to documentation and information management services. **It also offers support and information services to members of the judicial, facilitating access to various documentary sources used in the conduct of judicial activities.**[125]

Court of Justice of the European Union: the Rules of Procedure of the Court of Justice and the General Court stipulate the publication of a case law compilation in the official languages of the European Union.[126] Such compilation serves as the official publication of the case law from the courts that make up the Court of Justice of the European Union.

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125. Judicial Documentation Centre (CENDOJ)/CGPJ.

126. Court of Justice of the European Union.

European Court of Human Rights: the HUDOC database[127] provides access to the case law of the Court (including rulings and decisions from the Grand Chamber, Chambers and Committees, cases communicated, advisory opinions, and legal summaries). It also includes decisions and reports from the European Commission of Human Rights and resolutions from the Committee of Ministers.

In addition, the European Court of Human Rights has an ECHR Knowledge-Sharing platform (ECHR-KS).[128] Its goal is to facilitate sharing of knowledge on the case law of the Convention, complementing existing information tools such as HUDOC.

5.1.11 ELECTRONIC JUDICIAL STATISTICS

ELECTRONIC JUDICIAL STATISTICS IS A DIGITAL SERVICE THAT **ALLOWS THE COLLECTION, ANALYSIS, AND PRESENTATION OF STATISTICAL DATA RELATED TO THE JUDICIAL SYSTEM AND THE PERFORMANCE OF THE ADMINISTRATION OF JUSTICE THROUGH DIGITAL MEANS.** THE GOAL OF THIS TOOL IS TO PROVIDE RELEVANT AND UP-TO-DATE INFORMATION ON VARIOUS ASPECTS OF THE LEGAL SYSTEM, THEREBY FACILITATING DECISION MAKING, MANAGEMENT, AND THE EVALUATION OF JUDICIAL POLICIES.

This service automates the extraction of statistical data, **reducing the workload of public employees in judicial bodies by eliminating the need for manual extraction of judicial statistics. Additionally, this service improves the quality of statistical information** by processing larger volumes of data and providing real-time access to this information.

This service offers the following functionalities to public employees of the Administration of Justice:

❯ **Data collection**: allows gathering data from multiple sources within the judicial system, including courts, tribunals, and other related institutions. The collected data can include statistics on cases, resolution times, workloads, trial outcomes, and other key metrics.

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127. European Court of Human Rights.

128. European Court of Human Rights.

❯ **Data analysis**: the electronic court statistics tool enables efficient analysis and processing of data. Public employees can generate reports, charts, and tables that effectively summarize and visualize information.

❯ **Real-time information**: provides access to up-to-date information in real time, which is valuable for tracking cases, monitoring workloads, and assessing other key indicators.

❯ **Performance monitoring**: public employees can use electronic court statistics to track the performance of courts, judges, and other judicial officials. This helps identify areas for improvement and enables timely interventions to address any issues.

❯ **Strategic planning**: data collected and analyzed through electronic court statistics are essential for strategic planning within the justice system, as it helps identify trends, needs, and priorities.

❯ **Policy evaluation**: electronic judicial statistics are useful for assessing the impact of implemented judicial policies and making informed decisions regarding future policies.

❯ **Transparency and accountability**: presenting statistical data in a transparent and publicly accessible manner fosters accountability and strengthens trust in the judicial system.

❯ **Report automation**: automating the generation of reports and documents saves time and reduces the administrative workload.

❯ **Support during decision making**: provides public employees with key information to make informed and strategic decisions within the judicial system.

❯ **Identification of inefficiencies**: electronic court statistics can help identify inefficiencies in case and resource management, allowing the adoption of steps to improve the system's efficiency.

INTERNATIONAL REFERENCES FOR ELECTRONIC JUDICIAL STATISTICS:

Spain: the Statistics section is responsible for designing and maintaining the computer system for capturing quarterly bulletins, as well as for monitoring and validating these bulletins. It also manages the system of consultations and statistical reports for the CGPJ Intranet and the Judicial Neutral Point and prepares a wide range of quarterly and annual reports. Similarly, it is responsible for the statistics section on the CGPJ website.[129]

Quarterly bulletins compiled by judicial bodies are stored in the judicial statistics database, which generates specific reports and queries for the Inspection Service of the CGPJ and for the presidents of the High Courts of Justice in their inspection work. They also provide a summary of the workload of each judicial body and their share by different territorial levels. They aim to facilitate the self-assessment of judicial bodies and provide information to administrations responsible for resources that support the Administration of Justice. This database is also used to compile statistics on judicial activity, which are included in the National Statistical Plan and in the Inventory of Statistical Operations.

United States: statistical data and analysis of Federal Judiciary activity.[130] Specific publications address the work of appellate, district, and bankruptcy courts, probation and pretrial services systems, as well as other components of US courts.

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129. Statistics by subject/Judiciary of Spain.

130. Statistics & Reports/United States courts.

United Kingdom: annual official statistics on judicial diversity in England and Wales, covering the current judiciary, judicial appointments, and the legal professions.[131]

5.1.12 HUMAN AND MATERIAL RESOURCE MANAGEMENT

THE DIGITAL SERVICE FOR MANAGING HUMAN AND MATERIAL RESOURCES WITHIN THE ADMINISTRATION OF JUSTICE **ALLOWS RESPONSIBLE AUTHORITIES TO OVERSEE AND SUPERVISE RESOURCES WITHIN THE JUDICIAL SYSTEM. THESE RESOURCES INCLUDE PERSONNEL, FACILITIES, EQUIPMENT, AND OTHER ASSETS RELATED TO THE ADMINISTRATION OF JUSTICE.**

One of the benefits this service offers to the Administration of Justice is **more efficient management of human and material resources, enabling optimal allocation of personnel and assets for judicial tasks.** This reduces downtime and unnecessary costs. Additionally, **it improves strategic management by providing** the relevant authorities with the information needed for effective planning. This allows the identification of areas for improvement, optimization of resource scheduling, and establishment of long-term goals.

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131.   Annual official statistics on judicial diversity in England and Wales.

This service not only fosters positive synergies within the Administration of Justice, but also among its public employees. **By streamlining administrative processes, it allows court staff to concentrate on their core responsibilities, potentially increasing job satisfaction.**

The main functionalities offered by this service to the Administration of Justice are:

❯ **Managing the Administration of Justice personnel**: provides a comprehensive registry of public employees of the Administration of Justice, including information on profiles, roles, schedules, performance evaluations, and leaves. **Public employees can perform job-related tasks, such as payroll management, vacation requests, position changes, medical leave requests, and take other related actions.**

❯ **Trainings management**: streamlines the scheduling and monitoring of training and development programs for judicial staff, allowing **public employees to easily apply for participation in these opportunities.**

❯ **Material resources management**: allows keeping an inventory of material resources essential for the operation of the judicial system, including furniture, equipment, office supplies, and technology.

❯ **Resource scheduling**: optimizes the booking of courtrooms, meeting rooms, and other court facilities. This prevents conflicts and ensures their efficient use.

❯ **Generating reports and resource analysis**: simplifies the creation of reports and analyses on the management of human and material resources, **providing decision-makers with the insights needed to make informed choices.**

❯ **Automation of human and material resources management**: enables the automation of key processes, including permit requests, task assignments, and performance evaluations.

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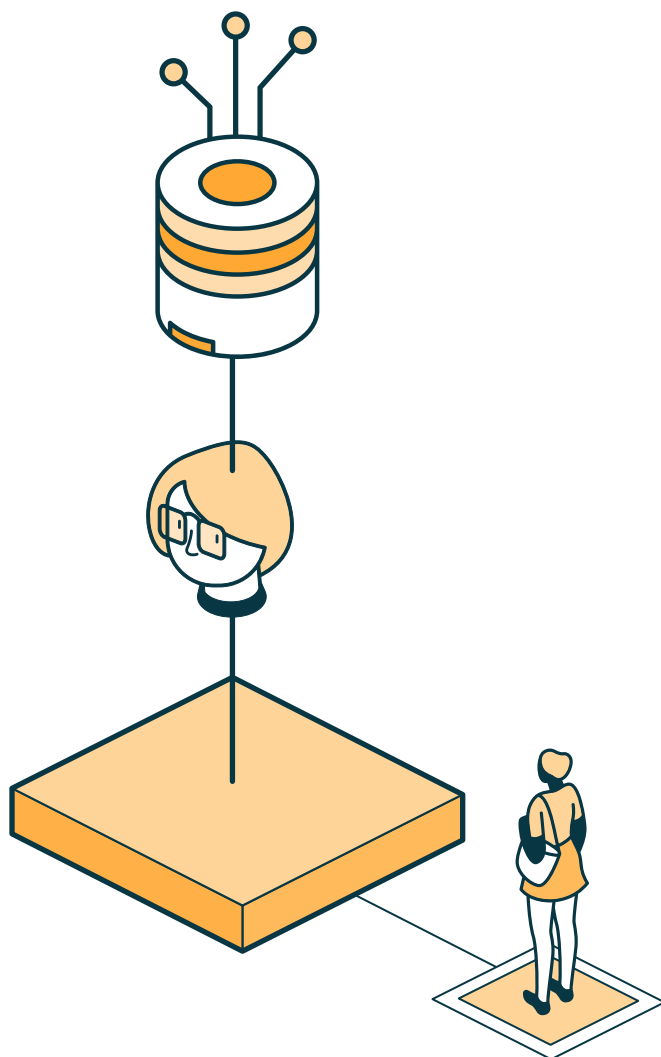
Services oriented to professionals and citizens

These services **allow professionals and citizens to interact with the Administration of Justice entirely online, 24/7, year-round, improving both accessibility and overall efficiency of the public service.** This allows citizens to carry out procedures from anywhere using a mobile device, while also promoting a **more sustainable justice system** by reducing travel and minimizing the environmental impact.

GIVEN THE UNIQUE NATURE OF JUSTICE SERVICES, IT IS IMPORTANT TO RECOGNIZE THAT THE ADMINISTRATION OF JUSTICE INTERACTS WITH CITIZENS DIFFERENTLY FROM OTHER PUBLIC ADMINISTRATIONS, AS **INDIVIDUALS TYPICALLY REQUIRE LEGAL ASSISTANCE TO NAVIGATE THE JUSTICE SYSTEM.** FOR INSTANCE, IN MOST COURT PROCEEDINGS, THE INVOLVEMENT OF A LAWYER IS MANDATORY. THEREFORE, **DIGITAL JUSTICE ALSO PROVIDES A RANGE OF DIGITAL SERVICES FOR LEGAL PROFESSIONALS, IMPROVING BOTH ACCESSIBILITY AND EFFICIENCY OF THE JUDICIAL SYSTEM.** A PRIME EXAMPLE IS THE SERVICE THAT ALLOWS LAWYERS TO ACCESS ELECTRONIC COURT FILES AND RELATED DOCUMENTS FOR THE PROCEEDINGS THEY ARE INVOLVED IN.

It is important to recognize that the quality of these digital services will significantly influence how citizens and legal professionals perceive the judicial system. Like any public service, the Administration of Justice must address the needs of the population, with one of the most pressing demands being improved accessibility and the removal of administrative barriers. **Thanks to digital services, the administrative barriers that once required in-person court visits for procedures are eliminated, thereby reducing the time and financial costs associated with these tasks.** Furthermore, digital services enhance accessibility to justice for professionals and citizens with disabilities by offering online support services, ensuring equal access to this essential public service.

Another key consideration is that the digital services provided to professionals and citizens must be intuitive and user-friendly. Since the population of a country may have varying levels of digital literacy, it is essential to design accessible services that accommodate both individuals with extensive digital knowledge and those with limited or no familiarity with technology. **The goal is to make these services inclusive, ensuring they are accessible to all citizens and preventing the emergence of a digital divide.**

To bridge the digital divide, it is essential that **these services be designed to allow citizens, their representatives, or authorized officials in citizen support offices to use them on their behalf.** This approach helps prevent or reduce the disparity in access to rights among citizens.

5.2.1 ACCESS TO THE EJE

This service allows **professionals and citizens to access the electronic court files of the judicial proceedings they are involved in.** Additionally, users can navigate the case file's index to review its contents, including the electronic judicial documents that form the case file, and perform different actions, as outlined below:

> **Search for electronic files:** allows searching electronic court files related to court proceedings in which lawyers and citizens are involved. The search results display a list of files, along with the corresponding procedure identification.

> **Access to electronic court documents:** allows lawyers and citizens to view electronic court documents within the court file, including any attachments. For example, if a document contains a video, lawyers and professionals can view it as well.

> **Download documents from electronic files:** lawyers and citizens can download the documents and files included in the electronic court file.

> **File customization features**: includes options for grouping document subsets, adding comments and notes, applying default filters, and managing favorites.

> **Notifications for new documents:** lawyers and professionals can receive real-time notifications when new documents or files are added, thus remaining up-to-date with the latest developments.

❯ **File activity log:** provides a complete record of actions and events related to the electronic court file, allowing users to easily track and review past events.

❯ **Secure access to the court file**: this service offers lawyers and citizens secure access to the electronic court file, requiring digital identity verification before granting access.

When implementing this service, it is important to consider that **certain case files are subject to confidentiality requirements. As a result, their contents cannot be accessed, even by the parties involved in the case.** In these cases, the file will not be available through this service.

Access to the electronic judicial file is one of the most important digital services, as it creates significant positive synergies for both citizens and professionals. On the one hand, it **enhances transparency within the judicial system** by providing interested parties with more direct access to information about their cases. It also **saves time and resources** for both professionals and citizens by eliminating the need for physical trips to courts to obtain information. Additionally, it **improves access to justice for both groups,** as they can use this service 24/7, year-round.
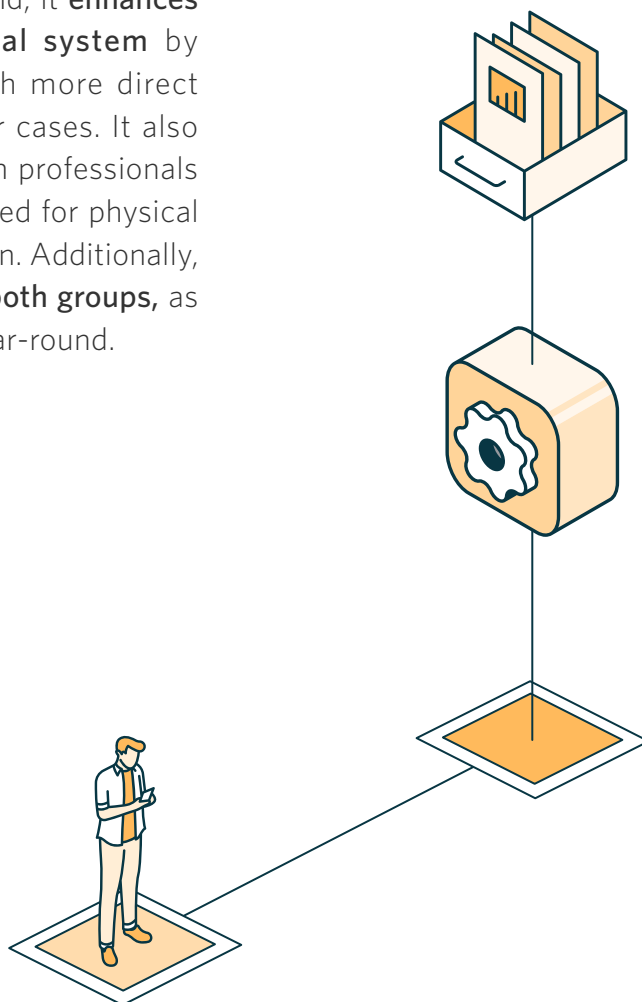
**INTERNATIONAL REFERENCES FOR ACCESS
TO ELECTRONIC COURT FILES:**

Spain: this service is available in the Electronic Judicial Administration of Spain, allowing lawyers to access electronic judicial files of the cases they are involved in.[132] The following image illustrates an example of how to access the file through this service:
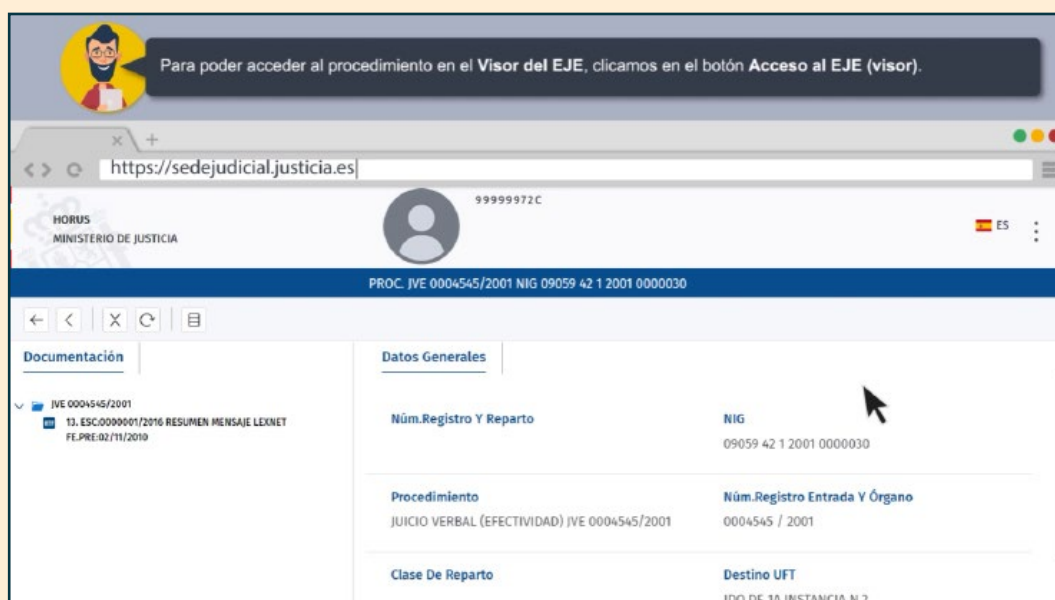
United States: the Public Access to Court Electronic Records (PACER) service[133] provides electronic public access to federal court records. PACER offers the public instant access to over one billion documents filed in all federal courts.

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132. Electronic Judicial Headquarters/Electronic Judicial File Viewer/Access to professionals of the Administration of Justice.

133. Public Access to Court Electronic Records/United States Government.

Panama: the judicial body of Panama has also enabled online access to the electronic judicial file:[134]

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134. Judicial Branch of Panama/ How to consult the file online?

5.2.2 MANAGEMENT OF COMMUNICATION EVENTS

This service allows justice professionals and citizens to communicate with the Administration of Justice electronically, allowing them to send judicial documents and receive notifications related to legal proceedings. This service saves time and money for professionals and citizens by eliminating the need for court visits to handle paper-based communications. Additionally, it grants greater transparency to the judicial process by providing real-time, direct access to judicial communications for all parties involved.

When implementing this service, it is important to take into account the **concept of mandatory use of electronic means and the digital divide** mentioned above. In some countries, professionals are required to use electronic means to communicate with the Administration of Justice, while in others, neither professionals nor citizens are obliged to use this digital service and, therefore, communications are still carried out on paper.

Some of the main functionalities offered by this service to professionals and citizens are:

❯ **Receipt of electronic notifications from courts**: professionals and citizens can receive electronic notifications from the court handling the case as part of a judicial process.

❯ **Filing of electronic court pleadings**: professionals and citizens can electronically submit legal briefs, documents, and evidence to the court. This streamlines the process and reduces the need for physical submissions.

❯ **Downloading electronic communications**: professionals and citizens can access and download legal documents sent to them, as well as notifications received through this service.

❯ **Notification system for new electronic messages**: this service may include a notification system that alerts lawyers and citizens when a new message is received. Additionally, alerts can be configured for other scenarios, such as when an electronic communication fails to send.

❯ **Storing electronic communications**: this feature ensures that messages sent and received by professionals and citizens are stored for a reasonable period, allowing them to access the content when needed.

❯ **Digital signature of electronic communications**: professionals and citizens must electronically sign the message before it is sent, providing reliable proof of their intent regarding the communication.

❯ **Secure access to the service**: professionals and citizens must verify their digital identity to access the service.

❯ **Auditing electronic communications**: the service includes a feature that allows for auditing the communications made.

5.2.3 VIRTUAL HEARINGS AND LIVE STREAMING OF HEARINGS

This service **allows professionals and citizens to participate in virtual hearings.** This format involves conducting a digital court hearing, where all or some participants engage in the hearing in real time, remotely, with their identity verified throughout the process.

THIS SERVICE **IMPROVES ACCESSIBILITY TO THE JUSTICE SYSTEM** BY ALLOWING PROFESSIONALS AND CITIZENS TO ATTEND COURT HEARINGS DIGITALLY. THIS IS PARTICULARLY BENEFICIAL FOR THOSE LIVING IN REMOTE AREAS OR INDIVIDUALS WITH MOBILITY CHALLENGES, AS IT ALLOWS THEM TO PARTICIPATE REMOTELY. IN ADDITION, **IT ELIMINATES THE TIME AND FINANCIAL COSTS ASSOCIATED WITH TRAVEL TO COURT.**

It is important that **this service upholds the same procedural and constitutional guarantees as an in-person court hearing**. This ensures the reliability and legal security necessary for a judicial proceeding.

Another important consideration is the regulation of cases in which a virtual court hearing is valid or, conversely, when it may need to be rescheduled. For example, if a professional or citizen experiences a connection failure that prevents them from joining the hearing remotely, it is crucial to determine whether this constitutes a non-appearance or if the hearing should be repeated. Therefore, it is recommended to assess potential scenarios and establish specific regulations to address each situation accordingly.

The main functionalities that this service offers to professionals and citizens are:

❯ **Digital participation in virtual hearings**: allows real-time visual and auditory communication with all parties involved. Attorneys and citizens participating in the hearing can see the judges, witnesses, other attorneys, and participants, ensuring smooth interaction and communication throughout the proceedings.

❯ **Sharing documents and evidence**: attorneys can electronically submit and share documents, evidence, and legal submissions during the hearing. This streamlines the process of presenting evidence, making legal arguments, and introducing relevant documents.

❯ **Messaging with other participants**: this service includes a messaging feature that allows lawyers to communicate in writing with other participants and the judge, facilitating requests to speak, clarifications, or inquiries during the hearing.

❯ **Recording of hearing content**: virtual hearings are recorded and archived, creating a complete record of all discussions and statements. This provides a valuable reference for future review and ensures an accurate account of the proceedings.

❯ **Screen sharing**: allows attorneys to share their screen to show documents or presentations to other parties involved in the hearing.

❯ **Filing legal arguments digitally**: attorneys can present their legal arguments and submissions electronically, replicating the process as they would in an in-person hearing.

❯ **Digital examination of witnesses and declarants**: lawyers can ask questions and receive answers in real time.

❯ **Secure access to virtual hearings**: this service implements security measures to safeguard the confidentiality of hearings and the documents presented during them.

Another service included in this section is the **live broadcast of court hearings, which provides all citizens with access to view proceedings in real time.** This involves transmitting the audiovisual feed from the courtroom, allowing citizens to observe the hearing as if they were physically present as part of the audience. Above all, this service reinforces the principle public hearings and enhances the legal certainty of judicial processes by ensuring public oversight. It is especially valuable for increasing transparency in high-profile cases with significant social impact.

INTERNATIONAL REFERENCES FOR LIVE BROADCAST OF HEARINGS:

United Kingdom: hearings in the courts and tribunals of England and Wales are generally open to the public.[135] This is in accordance with the principle of open justice, which asserts that judicial proceedings must be conducted openly, publicly, and transparently, provided it serves the interests of justice. However, the judge in each case determines how a hearing is conducted, including whether and how it can be made accessible to the public. If deemed necessary for the proper administration of justice, the judge may decide to hold a hearing in private, excluding observers.

Panama: the Judicial Branch of Panama livestreams certain judicial hearings of significant public interest. An example of this is the live broadcast of the hearing in the *'New business' case"*.[136]

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135. Observe a court or tribunal hearing/UK Government.

136. YouTube channel of the Judicial Branch of Panama.

5.2.4 ONLINE COURT PAYMENTS

ONLINE COURT PAYMENT SERVICES ALLOW CITIZENS TO MAKE PAYMENTS DUE AS PART OF A JUDICIAL PROCESS, AS WELL AS RECEIVE PAYMENTS WHEN THEY ARE ENTITLED TO THEM, AS DETERMINED BY THE COURT. THIS SERVICE **IMPROVES ACCESSIBILITY TO JUSTICE BY ALLOWING CITIZENS TO FULFILL THEIR FINANCIAL OBLIGATIONS UNDER A COURT ORDER AND RECEIVE PAYMENTS ELECTRONICALLY.**

Some of the main functionalities of this service for citizens are:

❯ **Payment of court fees**: allows citizens to pay court fees related to filing lawsuits, appeals, petitions, and other legal procedures.

❯ **Payment of judicially imposed fines or financial penalties**: offers the option of paying fines imposed by the court as a result of legal proceedings, such as traffic violations or other offenses.

❯ **Collateral deposit**: allows citizens to make deposits of collateral or bonds required by the court as part of a legal process.

❯ **Receive due funds**: this service allows citizens to receive the funds they are entitled to, as specified by a court order.

❯ **Custody of funds**: facilitates the secure holding of funds related to litigation, such as bond payments, escrow deposits, or disputed sums.

❯ **Selection of payment methods**: this service offers a variety of payment options, such as credit cards, bank transfers, cash payments at authorized service points, among others.

❯ **Payment notifications**: sends electronic notifications and receipts to confirm successful payments, simplifying verification and tracking.

❯ **Payment register**: records and stores payments made, allowing citizens to track their financial transactions related to legal proceedings.

❯ **Pending payment tracking**: allows citizens to monitor outstanding payments and deadlines, helping them meet their financial obligations in court proceedings.

5.2.5 ELECTRONIC POWER OF ATTORNEY

THE ELECTRONIC POWER OF ATTORNEY SERVICE **ALLOWS CITIZENS TO GRANT LEGAL AUTHORITY TO LAWYERS OR OTHER LEGAL PROFESSIONALS DIGITALLY, ENABLING THEM TO REPRESENT THE CITIZEN IN COURT PROCEEDINGS.** THIS SERVICE SIMPLIFIES THE PROCESS OF OBTAINING LEGAL REPRESENTATION AND HELPS CITIZENS MANAGE THEIR LEGAL AFFAIRS EFFICIENTLY, WITHOUT THE NEED FOR IN-PERSON PAPERWORK.

It is important to note that, depending on the judicial system, procedural representation may be handled by a lawyer or another professional. For example, in Spain, solicitors handle representation, while lawyers provide legal assistance. Therefore, this service would primarily target solicitors. **It is crucial to consider the legal nuances of each country to ensure proper adaptation of this digital service.**

Among the functionalities that this digital service provides to citizens are:

❱ **Granting power of attorney to a legal professional:** allows citizens to electronically grant power of attorney to their lawyers or legal representatives, bypassing the need for in-person procedures.

❱ **Proof of granting power of attorney**: once a citizen grants power of attorney to a professional, an electronic document is generated as proof, confirming the authorization.

❱ **Control and revocation of power of attorney**: allow citizens to retain control over their legal authority and revoke the power of attorney at any time.

5.2.6 COURT CALENDAR AND APPOINTMENTS

THROUGH THIS SERVICE, PROFESSIONALS AND CITIZENS CAN **ACCESS INFORMATION ON SCHEDULED PUBLIC HEARINGS, VIEW THE HEARINGS IN WHICH THEY ARE INVOLVED, AND SCHEDULE APPOINTMENTS WITH THE COURTS FOR IN-PERSON PROCEDURES.** THIS SERVICE **IMPROVES EFFICIENCY AND CONVENIENCE** BY ALLOWING INDIVIDUALS TO SCHEDULE AND MANAGE THEIR LEGAL APPOINTMENTS ONLINE. THIS **STREAMLINES INTERACTIONS WITH THE COURT SYSTEM** AND OPTIMIZES THE MANAGEMENT OF COURT SCHEDULES.

Some of the functionalities offered by this service for citizens are:

❯ **Access to the court calendar**: citizens can search and view the court hearing schedule, which includes details, such as the case number, parties involved, location, and the date and time of the hearing.

❯ **Scheduling an appointment for a procedure**: allows citizens to schedule appointments and court appearances electronically, eliminating long waits or bureaucratic hurdles by allowing advance scheduling.

❯ **Appointment rescheduling**: allows citizens to reschedule appointments in case of conflicts or changes in plans, offering greater flexibility.

❯ **Notifications and reminders**: sends electronic notifications and reminders to ensure citizens are informed of their scheduled appointments.

❯ **Registration and history**: logs and stores a record of appointments and court appearances, allowing citizens to track their legal obligations.
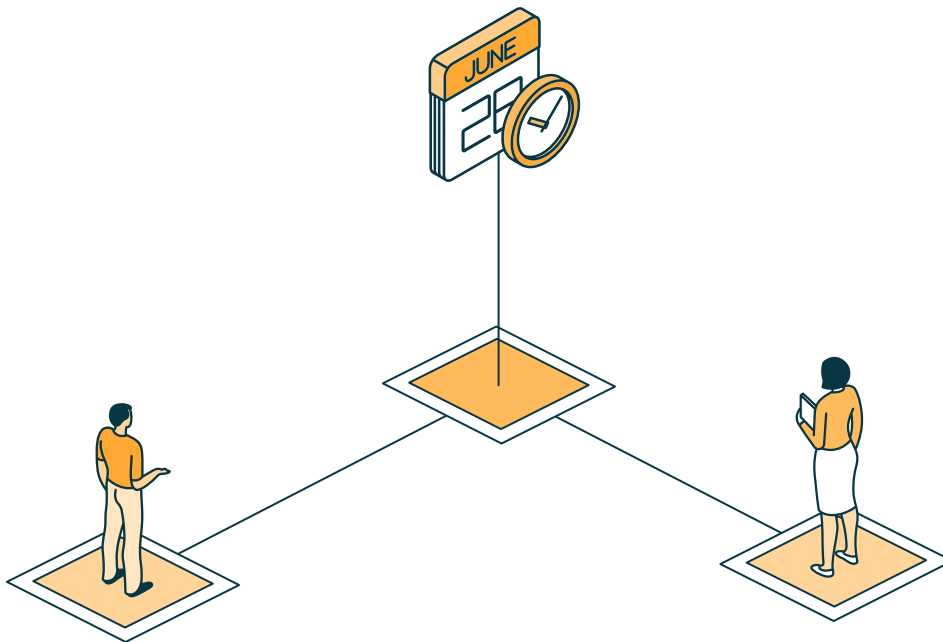
**INTERNATIONAL REFERENCES OF
THE JUDICIAL CALENDAR:**

Puerto Rico: the Judicial Branch of Puerto Rico has introduced a judicial calendar consultation service.[137]

Spain: Supreme Court Appointment Agenda.[138]

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137. Consulting the judicial calendar/Judicial Branch of Puerto Rico.

138. Agenda of Supreme Court Assignments, Spain.

5.2.7 ACCESS TO JUDICIAL STATISTICS

THE JUDICIAL STATISTICS ACCESS SERVICE **ALLOWS CITIZENS TO ACCESS STATISTICAL INFORMATION AND DATA RELATED TO JUDICIAL ACTIVITY AND LEGAL PROCEDURES.** THIS SERVICE **PROMOTES TRANSPARENCY AND ENHANCES CITIZENS' UNDERSTANDING OF COURT OPERATIONS AND THE JUSTICE SYSTEM**. ADDITIONALLY, TRANSPARENCY IN JUDICIAL STATISTICS HELPS **BUILD PUBLIC TRUST** IN THE JUDICIAL SYSTEM AND SUPPORTS INFORMED DECISION MAKING.

Some of the functionalities offered by this service for citizens are:

❯ **Access to judicial statistics**: provides access to judicial data and statistics, including information on the number of cases, types of proceedings, case durations, outcomes, and more.

❯ **Detailed information**: allows citizens to access specific details about court proceedings, statistics categorized by case type, court, region, time period, etc.

❯ **Data visualization**: offers the possibility to view statistical data through charts, tables, and other visual formats, making the information easier to comprehend.

❯ **Data comparison**: allows citizens to compare statistical data over time or across different courts or jurisdictions.

❯ **Historical information**: provides access to historical data, helping to identify trends over the years.

❯ **Reports download**: offers the option to download statistical reports in digital format for further analysis or reference.

❯ **Notifications of updates**: users can receive notifications about new updates and the availability of updated statistical data.

EXAMPLES OF THE JUDICIAL STATISTICS SERVICE:

Mexico: the Federal Judiciary Council publishes judicial statistics. An example can be seen in the image below[139]:

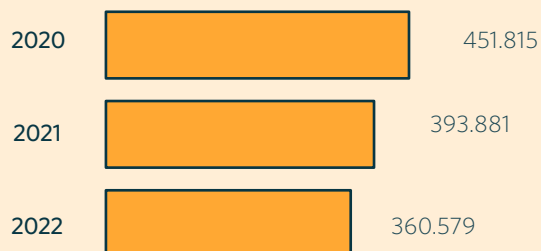## Home page of the jurisdictional bodies view

Filters, metrics, and categories

Counter

Summary table

Charts based on metrics and categories of interest

Interactive map displaying the geographical locations or addresses of the jurisdictional bodies

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139. The Federal Judiciary Council of Mexico.

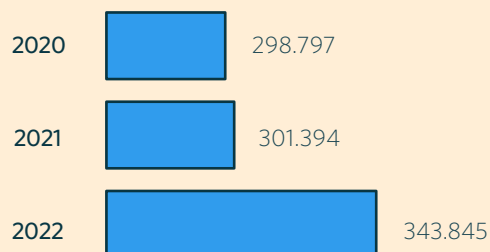**Portugal:** Portugal's Justice Administration publishes judicial statistics:[140]
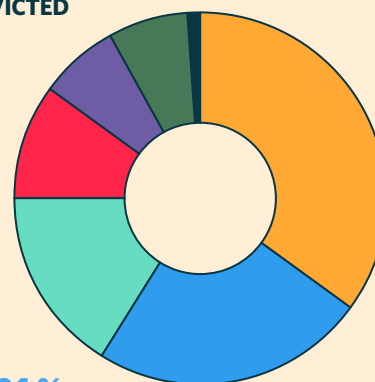
PENDING CIVIL ENFORCEMENT

2020   451.815

2021   393.881

2022   360.579

REGISTERED LAWYERS

2020   36.716

2021   37.888

2022   38.804

RECORDED CRIMES

2020   298.797

2021   301.394

2022   343.845
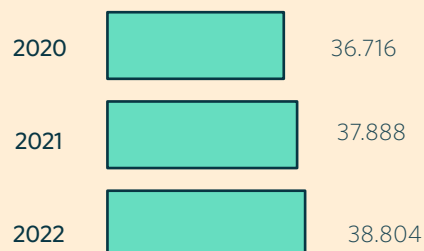
CONVICTED

1.623
Incoming crime investigations at the Criminal Police by corruption(*)

8 months
Average duration of completed criminal cases (trial phase)

35 %
Road crimes (except murder & bodily harm)

16 %
Boddily harm and crime against personal freedom

24 %
Other crimes

10 %
Thefts and robberies

7 %
Tax crimes

7 %
Crimes related to drugs

1 %
Manslaughter

* New cases, reopened cases, and cases starting an autonomous investigation.

140. Portugal judicial statistics.

5.2.8 DOWNLOADING CERTIFICATES

THE CERTIFICATE DOWNLOAD SERVICE ALLOWS CITIZENS TO ELECTRONICALLY OBTAIN **CERTIFICATES AND LEGAL DOCUMENTS ISSUED BY THE ADMINISTRATION OF JUSTICE.** THIS SERVICE **STREAMLINES THE PROCESS** OF ACQUIRING CERTIFICATES AND COURT DOCUMENT COPIES. IN ADDITION, **IT IS ESPECIALLY USEFUL FOR CITIZENS WHO NEED COURT DOCUMENT COPIES FOR VARIOUS PURPOSES, SUCH AS LEGAL PROCEDURES, PRESENTING EVIDENCE IN OTHER CASES, OR MEETING EMPLOYMENT REQUIREMENTS.** THE ONLINE AVAILABILITY OF CERTIFICATES AND COURT DOCUMENTS STREAMLINES THE PROCESS AND IMPROVES ACCESSIBILITY TO LEGAL DOCUMENTATION.

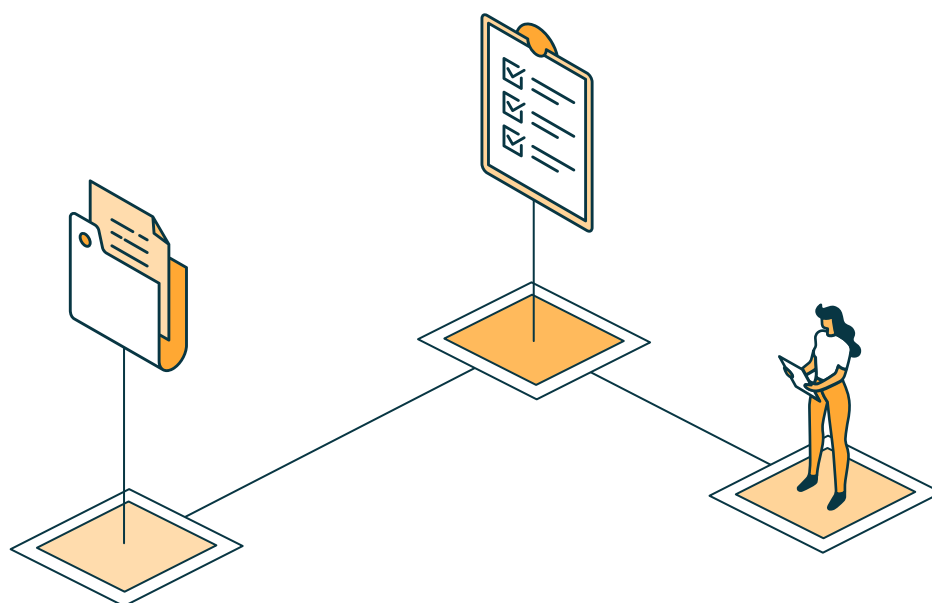The following are some of the functionalities offered by this service for citizens:

❯ Downloading certificates: allows citizens to download electronic copies of certificates and documents issued by the Administration of Justice, such as criminal record certificates, rulings, court decisions, etc.

❯ Document search: simplifies the process of searching for and locating specific documents within the court system.

❯ Document selection: citizens can choose and request the documents they wish to download.

❯ Notifications: sends electronic alerts when requested documents are ready for download.

❯ Document registration and archiving: records and stores downloaded documents, creating a history of their requests and providing citizens with copies for future references.

5.2.9 ELECTRONIC BULLETIN BOARD

THE ELECTRONIC BULLETIN BOARD IS A DIGITAL PLATFORM WHERE **JUDICIAL DOCUMENTS, SUCH AS RULINGS AND RESOLUTIONS, ARE MADE AVAILABLE FOR PUBLIC CONSULTATION. IT ALSO INCLUDES ACTS OF COMMUNICATION THAT, AFTER EXHAUSTING OTHER NOTIFICATION CHANNELS,** MUST BE PUBLISHED ON THIS VIRTUAL BULLETIN BOARD.

Depending on the structure of the unitary or federal state, a single bulletin board may be used for all judicial bodies of the country, or, in a federal system, each territory can have its own bulletin board. In the latter case, it is essential for the boards to be digitally interconnected, ensuring seamless access to information across all platforms.

Another key consideration is the legislation on **personal data protection, which upholds the principle of data minimization,** ensuring that only essential data necessary for providing the service with guarantees are published. The minimum set of data in a publication includes information about the judicial body and jurisdiction issuing the decision or act of communication, the judicial proceeding identification number, the year of the proceeding, and the identification number of the decision or act of judicial communication.

The following are some of the functionalities offered by this service to citizens:

❯ **Online access to the bulletin board**: citizens can access the electronic bulletin board from any location with an internet connection.

❯ **Consultation of rulings**: allows citizens to search for and review rulings published by the Administration of Justice.

❯ **Electronic notifications**: citizens can subscribe to receive alerts about newly published rulings that are relevant to them.

❯ **Advanced search**: offers advanced search options to locate specific rulings by date, issuing entity, topic, or geographic location.

❯ **Document viewing**: allows citizens to view rulings online, making it easier to read and access relevant information.

❯ **Download rulings**: allows citizens to download rulings and save copies on their personal devices.
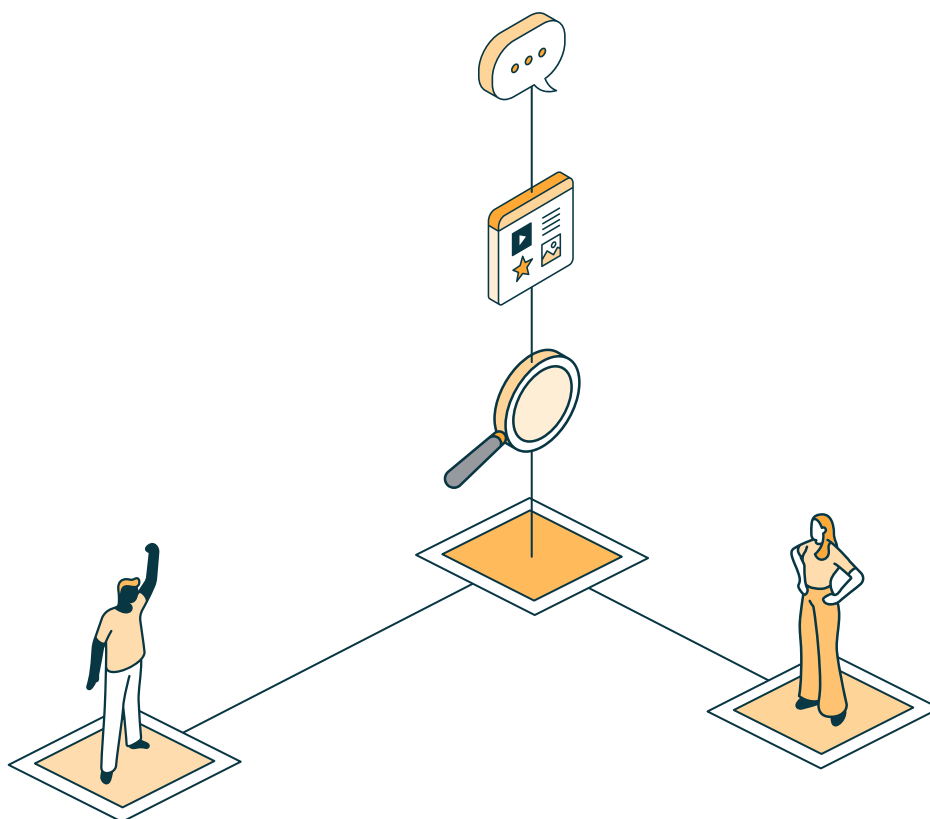
5.2.10 ALTERNATIVE DISPUTE RESOLUTION

THE DIGITAL ALTERNATIVE DISPUTE RESOLUTION SERVICE ALLOWS CITIZENS TO **RESOLVE DISPUTES AND CONFLICTS ELECTRONICALLY, OFFERING AN ALTERNATIVE TO THE JUDICIAL PROCESS.** THIS SERVICE PRIMARILY FOCUSES ON MEDIATION, ARBITRATION, AND OTHER FORMS OF OUT-OF-COURT DISPUTE RESOLUTION. IT IS TYPICALLY AVAILABLE TO CITIZENS TO **RESOLVE DISPUTES OF LOWER LEGAL COMPLEXITY.**

This service benefits citizens by **offering them an efficient and cost-effective way to resolve disputes without the need for lengthy and expensive court proceedings.** Alternative dispute resolution tends to be faster, more flexible, and can lead to more mutually satisfactory outcomes for all parties involved. Moreover, it helps reduce the judicial caseload by facilitating the resolution of certain disputes outside the courts.

Some of the functionalities offered by this service for citizens are:

❯ **Online access**: citizens can access alternative dispute resolution services from any location with an internet connection.

❯ **Request for mediation or arbitration**: allows citizens to submit requests to dispute resolution through mediation, arbitration, or other alternative methods.

❯ **Resolution selection**: users can choose the method of dispute resolution that best suits their case.

❯ **Search for mediators or arbitrators**: simplifies the process of finding and selecting qualified mediators or arbitrators registered on the platform.

❯ **Document exchange**: provides a secure platform for sharing dispute-related documents.

❯ **Online communication**: allows disputing parties to communicate directly through the platform, streamlining the resolution process.

❯ **Virtual mediation or arbitration sessions**: offers the option for disputing parties to conduct mediation or arbitration sessions online.

❯ **Alerts and reminders**: sends electronic notifications about key dates, deadlines, and events in the dispute resolution process.

❯ **Process tracking**: allows citizens to track the progress of their case and receive status updates.

❯ **Resolution and agreement**: supports negotiation and conflict resolution processes, enabling both parties to reach mutually agreeable agreements.

❯ **Documenting and archiving agreements**: records and stores the agreements reached, maintaining a clear record of dispute resolution outcomes.

INTERNATIONAL REFERENCES OF ALTERNATIVE DISPUTE RESOLUTION:

European Union: in the private sector, Regulation (EU) 524/2013[141] establishes the framework for online dispute resolution. Since September 1, 2016, all e-commerce businesses in the European Union are required to include a link to the online dispute resolution platform on their website, allowing European consumers to submit complaints electronically.
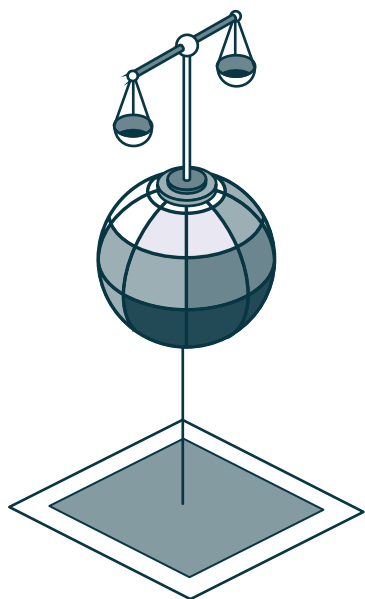
Singapore: parties involved in a Family Justice Court (TJF) case[142] can resolve their disputes through counseling and mediation within the Family Dispute Resolution Division.

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141. Regulation (EU) 524/2013/European Union.

142. Mediation and Counselling in the Family Justice Courts/Singapore Government.

Conclusions

THROUGHOUT THE JUSTICE DIGITAL TRANSFORMATION GUIDE, A REFERENCE FRAMEWORK HAS BEEN PRESENTED THAT COUNTRIES CAN ADOPT TO GUIDE THEIR OWN DIGITAL TRANSFORMATION OF THE JUSTICE SYSTEM.

In this document, the IDB has outlined a series of recommendations and best practices for countries. These recommendations are characterized by their flexibility and adaptability, making them applicable to any administration of justice, regardless of the judicial system in place.

The content of the Guide is based on successful international references, including initiatives from other countries, both within the region and beyond. It is further supported by research on digital transformation, the expertise of IDB specialists, along with contributions from other international experts who have collaborated on this document.

The goal of this Guide is to approach the transformation of justice from a holistic perspective, giving due attention to all aspects of this process, rather than focusing solely on the technological dimension.

For this reason, the proposed Guide covers five equally important dimensions:

First and foremost, Judicial Governance and Institutionality must be emphasized. As noted earlier, the digitalization of justice requires an administrative body or entity capable of leading the process and making independent decisions. Furthermore, this leadership must be built on consensus and active participation of all stakeholders. It is, therefore, recommended to establish a digital transformation governance body that brings together representatives of all parties involved, ensuring that decisions affecting all stakeholders are made collaboratively and with mutual agreement.
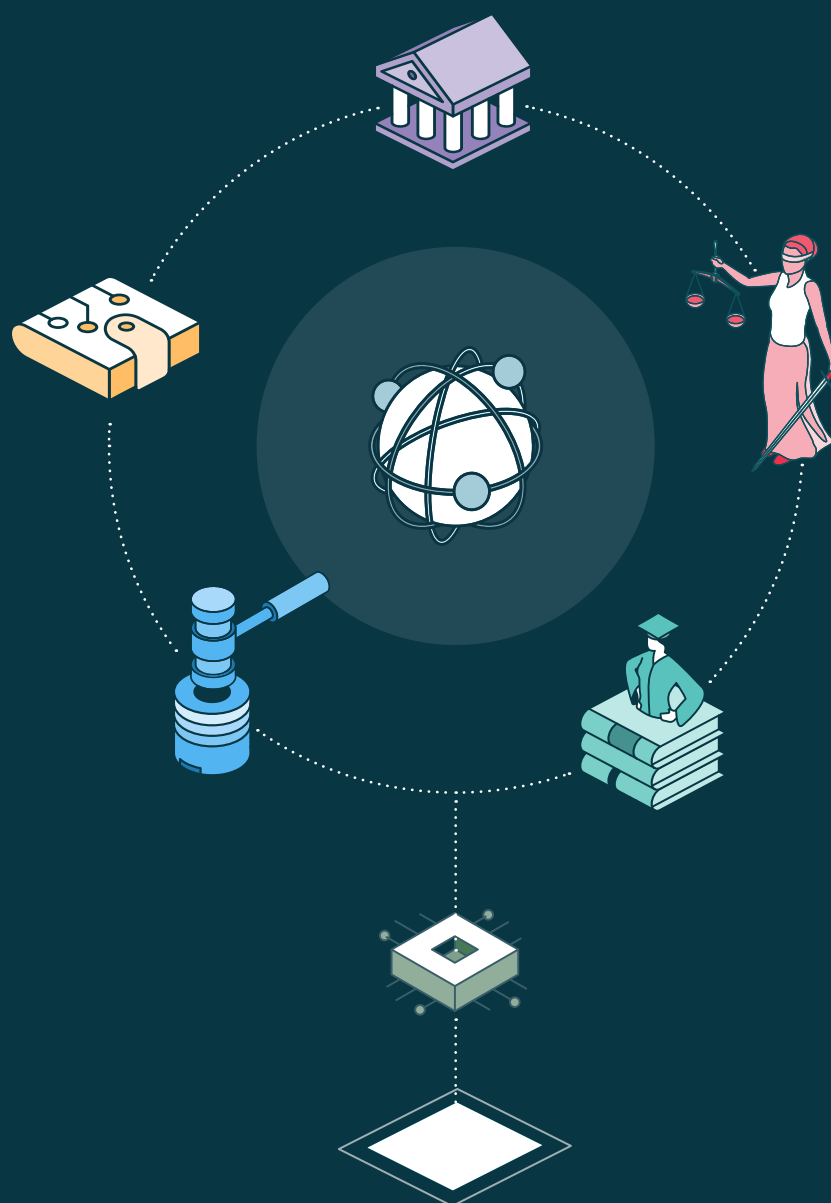
Secondly, the digital transformation of justice must be grounded in legal certainty by defining and implementing a robust regulatory framework that outlines the rights and obligations of all actors involved. Additionally, in this dimension, technical regulations that establish the necessary requirements to ensure the interoperability and security of ICT systems gain especial relevance. This regulatory framework is based on the principle of technological neutrality, while also setting minimum requirements that solutions and tools must meet to ensure they are robust, secure, and capable of seamless interoperability with other ICT systems. The essential ethical framework for the development and implementation of a technology that is increasingly impacting people's lives has also been considered. It is key to ensure that this digital evolution aligns with human rights, diversity, and inclusion, while preventing undesirable outcomes such as the digital divide.

The third pillar of this Guide is Digital Talent and Change Management. This section highlights the importance of ensuring that technology implementation is preceded by a step in which users understand the reasons behind the shift from analog to digital methods of working and engagement. Ultimately, it is crucial that participants of the digital transformation process embrace change and gain the necessary technical and practical knowledge required to effectively use the digital tools available to them. This dimension emphasizes the importance of communicating the digital transformation process effectively, training users in technology use through the development of digital talent, and offering support to address potential incidents, requests, and inquiries through user support.

The fourth dimension, Infrastructures and Technological Tools, focuses on the technological aspect of the digital transformation of justice, which is supported by the previously mentioned dimensions. This section focuses on concepts such as technological efficiency, aiming to promote the reuse of ICT infrastructures and solutions to minimize the environmental impact. In addition, the Guide places a strong emphasis on ICT interoperability, recognizing it as one of the key factors. This means that ICT systems must be capable of interconnecting and exchanging information automatically both within the country's Administration of Justice and with other relevant stakeholders it interacts with, as well as internationally with administrations in third countries. This interoperability is crucial for combating phenomena such as organized crime. This dimension also emphasizes the distinction between technological infrastructures and tools, and the fifth dimension, New Digital Processes and Services. ICT systems are solutions that support and enable the delivery of digital services, consisting of functionalities employed by end users.

The fifth dimension, New Digital Processes and Services, is divided into two sections. On the one hand, the services for the Administration of Justice focus on providing public employees of justice with the tools and functionalities needed to manage the judicial process entirely through digital means. In addition, they include complementary services that enhance and streamline workflows, such as electronic scheduling and digitized case law, among others. On the other hand, the services aimed at professionals and citizens are designed to ensure equal access to the justice system through digital services, as well as to enhance transparency of the justice system by making open data readily available.

While this document serves as the Justice Digital Transformation Guide, it is important to remember that digital transformation is merely one of the many levers in a broader process of the comprehensive reform of the administration of justice. This process also involves other actions, including the modernization and reform of judicial and prosecutorial careers, updating procedural regulations and norms, as well as the renovation of physical infrastructures, such as judicial buildings and court facilities, among others. Therefore, it is essential for countries to approach the reform of the public justice service comprehensively, giving due attention to each of these levers. To support this work from a comprehensive perspective, it is recommended to consult the Operational Guidelines for IDB Support for Innovation in the SAJ, which outline interventions designed to achieve a more effective, efficient, accessible, and transparent justice system.

Justice

**Digital
Transformation
Guide**