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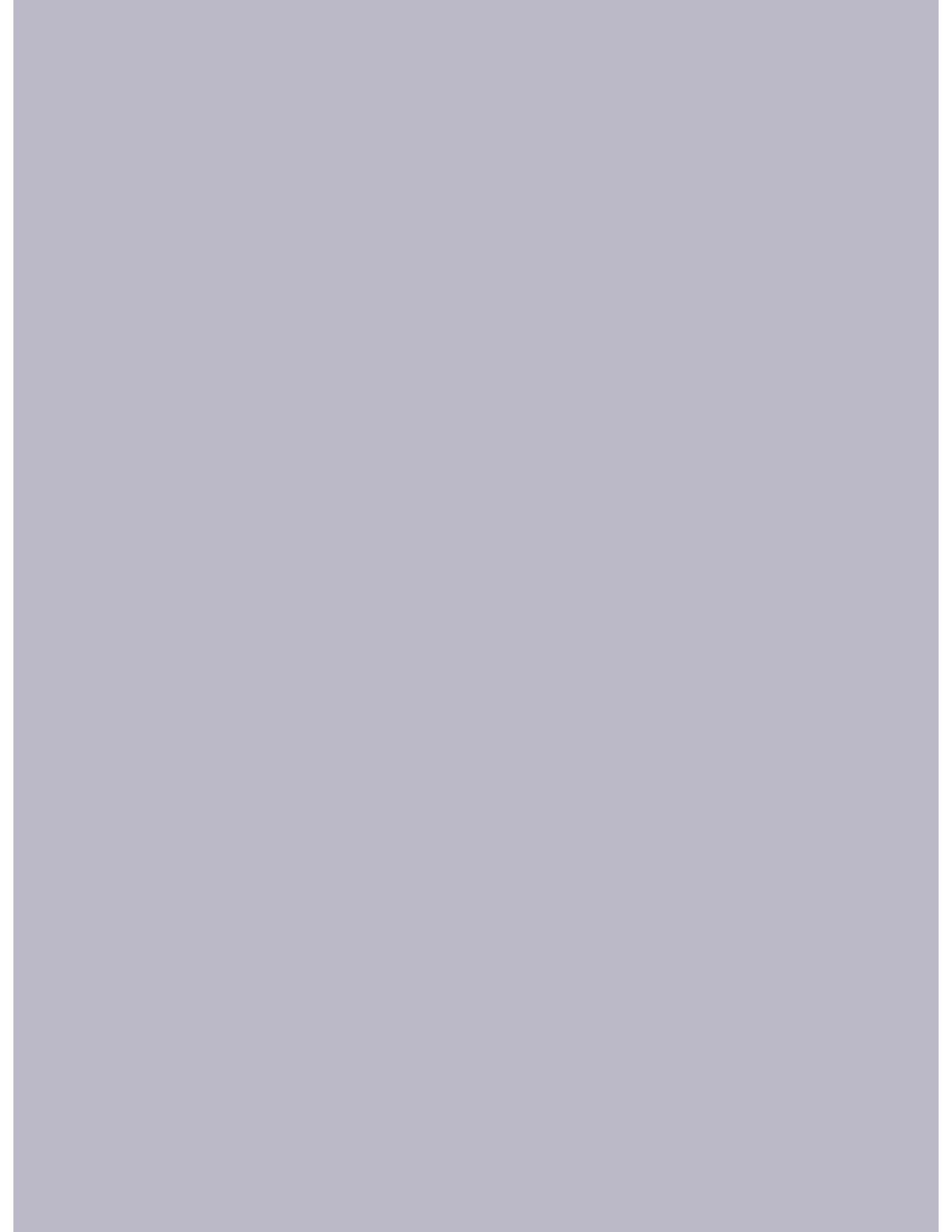
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FACULDADE DE DIREITO
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Digital Transformation and Governance in the Judiciary

COORDENAÇÃO:

Fabício Castagna Lunardi
Pedro Miguel Alves Ribeiro Correia
Lorenzo-Mateo Bujosa Vadell





Ficha Técnica

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Fabrício Castagna Lunardi
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Editors

**Digital Transformation and Governance
in the Judiciary**

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INSTITUTO JURÍDICO
FACULDADE DE DIREITO
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University Of Coimbra
National School For Training And Improvement Of Judges (Enfam)

**ACADEMIC AND SCIENTIFIC COOPERATION BETWEEN THE FACULTY OF LAW OF
THE UNIVERSITY OF COIMBRA (FDUC) AND THE BRAZILIAN NATIONAL SCHOOL
FOR TRAINING AND IMPROVEMENT OF JUDGES (ENFAM)**

On August 31, 2022, FDUC (Portugal) and ENFAM (Brazil) signed, through their top representatives, an Academic and Scientific Cooperation Agreement aimed at implementing joint and effective actions that would ensure the performance of academic activities related to teaching and research, by of their Research Centers and Institutes. The cooperation has involved the implementation of projects, research groups, international seminars, scientific publications, data sharing and exchange of experiences, among other products.

This book is another important product of the Scientific and Academic Cooperation Agreement between the two renowned higher education institutions, of the partnership between research groups, as well as of the collaboration of professors and researchers from the University of Salamanca.

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Have a great read!

Brasília/Coimbra/Salamanca, March 2025.

Fabrício Castagna Lunardi
Pedro Miguel Alves Ribeiro Correia
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Editors

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CHAPTER 2 – JUDICIAL EVOLUTIONS: FROM PAPER TO DIGITAL WORKING ENVIRONMENT IN THE ITALIAN ADMINISTRATION OF JUSTICE

(DOI: 10.47907/DigitalTransformationAndGovernance/02)

Francesco Contini*

Summary: Introduction. 1. The Italian justice system; 2. The governance of e-government; 4. E-justice in Italy: an overview; 5. E-Justice for civil proceedings; 6. E-Justice for criminal proceedings; 7. Law and technology: entanglements and alignment; 8. Concluding remarks: the impact on values and judicial governance. References.

Abstract: E-justice platforms are becoming the primary operational environment for judicial institutions. Their development presents challenges, including failures and incomplete deployments, with implications extending beyond functionality to impact legal, governance, and constitutional dimensions. This paper explores Italy's two e-justice platforms: Trial onLine (ToL), fully operational for civil proceedings, and 'Criminal Proceedings Online', a similar but less developed platform for handling criminal cases. Analysing the case histories unveils different outcomes, common challenges, and functional and institutional implications. While an incomplete implementation feeds up workarounds and ad hoc solutions and increases uncertainty, the full deployment of the e-justice platform improves procedural standardisation and equal treatment. At the same time, the digitisation of the working environment results in a new set of constraints on the working practices of judges and lawyers, including their interpretation of procedural law, that must be reconciled with judicial independence and fair trial.

Keywords: Judicial governance; e-government; e-justice; civil procedure; criminal procedure.

1. Introduction

Italy's civil and criminal e-justice platform development is a case of enduring commitment to digitalising justice administration that reached mixed results. The implementations of the first components of these platforms date back to the 1990s (Rolleri, 1993) and, despite the efforts, followed a slow development path. Results are mixed: a complete e-justice platform enables civil proceedings, while the systems developed to handle criminal cases are poorly integrated (Italia, 2021). The paper employs a longitudinal approach (Miller and Friesen, 1982; Scott, 1995) that considers path dependencies and long-term dynamics to gain insight into the current state of

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digitisation and the dynamics of e-justice platforms. This methodology examines the interaction between law and technology and considers their impact on two fundamental values of justice administration: equal treatment and independence.

By comparing the two e-justice platforms for civil and criminal proceedings, the paper identifies a link between the system development and adoption levels and their ability to apply procedural law consistently. However, using e-justice platforms can also diminish the role of individual judges in interpreting procedural law, potentially compromising judicial independence. As justice administration becomes increasingly digital, governance solutions must be developed to address this issue.

2. The Italian Justice System

The governance of the Italian judicial system is shared between the Ministry of Justice (MoJ) and the Judicial Council.¹

The Ministry is in charge of the management of judicial services, including human resources for administrative staff and IT development. The Judicial Council manages the status of judges and prosecutors and, more recently, the organisation of courts and prosecutors' offices (Fabri, 2016). The 241.000 practising lawyers² – are organised in local bar associations (one in each local court) supervised by the National Bar Council. Consequently, developing large-scale e-justice infrastructures requires long-term collaboration between the Ministry and the Council and the capacity to involve a critical mass of users (Hanseth and Lyytinen, 2010).³

For Italian Constitutions, art. 110 (Costituzione, 1947), the “Ministry of Justice e the Minister of Justice has responsibility for the organisation and functioning of those services involved with justice”. At the inception of court digitalisation and for many years, IT development was a matter of automating court registries and administrative activity. Consequently, the understanding that system development was a matter of organising the services supporting the jurisdiction allowed the Ministry to take IT development and governance functions (see section 8). However, the IT directorate's chiefs and project leaders are almost regularly magistrates (i.e. judges or prosecutors). Hence, the involvement of magistrates starts from the projects' inception and goes on with working groups in which judges bring their expertise and business knowledge (Carnevali, 2010b; Fabri, 2009b). These groups, sometimes supported by contracted companies, identify the functional requirements of the systems. Systems' development and maintenance are outsourced to private companies, but the Ministry owns systems and software codes. Judges and prosecutors then test the applications before the system's deployment. Hence, magistrates are involved at

¹ Administrative, fiscal, and military jurisdictions are separate institutions and are not dealt with by this paper.

² Source: Cassa Forense, <<https://www.cassaforense.it/riviste-cassa/la-previdenza-forense/previdenza/i-numeri-dell-avvocatura-al-2021/#:~:text=La%20Tabella%203%20mostra%20che,con%20113.255%20donne%20e%20114.672>>.

³ From an IT development perspective, the number of lawyers marks a difference between Italy and countries in which the number of lawyers is more limited.

different stages of system development, even if the Ministry controls the function. However, in the last few years, the Council has claimed a role in this field, as previously done in other areas such as court and prosecutor's office organisation. The rationale of this request is based on the understanding that the development and use of IT affect the activity of judges and prosecutors and ultimately impact the level of judicial independence and autonomy granted by the Constitution (Italia, 2019a, 2021).

3. The governance of e-government

The IT Directorate of the Ministry of Justice works within the framework provided by the national e-government system. The Agency for Digital Italy (AgID)⁴ is the technical body of the Presidency of the Council of Ministers coordinating e-government initiatives and, more broadly, the national digital innovation strategy. It establishes the technical standards and components of the national e-government platform (Cordella and Paletti, 2019). Three components are the fundamental building blocks of the national e-government infrastructure and e-justice platforms. The qualified electronic signature is the first component and must be used to sign e-documents. The registered e-mail (REM) is an e-mail sent via trusted service providers with the same legal value as a registered letter with acknowledgement of receipt. REM is used as an official system to exchange electronic documents. The Public Digital Identity System (SPID) guarantees all citizens and businesses single, secure, and protected access to the digital services of the Public Administration (Ziccardi, 2020). More recently, the Electronic Identity Card can also be used for the same purposes.

4. E-justice in Italy: an overview

As anticipated, the current state of e-justice in Italy is quite diversified, with a significant difference between civil and criminal proceedings.

In civil cases, the procedure is primarily digital. The official case file is digital, while paper documents are support tools to ease operations such as reading complex pleads. The picture is reversed in criminal cases, where the procedure is primarily paper-based. The official case file is the paper one, while digital tools support the tasks of all those handling the case. The pandemic pushed towards the digitisation of criminal justice, but the journey is far from complete (Osservatorio Processo Penale Telematico, 2021).

Civil and criminal hearings are supported by various technological means. Videoconferencing enables online hearings, while audio and video recordings allow record-keeping in civil and criminal proceedings. In civil cases, judges are expected to use speech-to-text to draft court reports without the clerks' support.

⁴ See the different e-government technological and legal components at <<https://www.agid.gov.it/en>>.

5. E-justice for civil proceedings

The *Processo Civile Telematico*, or Civil Trial Online (TOL), is the e-justice platform for civil proceedings. It must be used for filing petitions in first instance and appeal courts and has been made available at the Court of Cassation, the highest court in the country, as of 2021 (Gargano, Sileni and Vitrani, 2021).

To enable e-filing, law firm applications can use the registered e-mail or the civil e-justice portal provided by the Ministry of Justice. The Ministry has developed two case management systems, SICID (labour, contentious, guardianship cases) and SIECIC (bankruptcy and executions), while judges use an integrated digital work desk called Console (Borsari, 2014).

To start a new case, lawyers must submit the required procedural documents via REM, typically supported by their law firm application and via the access point. Procedural documents must be electronically signed. Court fees are paid electronically, and the data and documents are uploaded into the appropriate case management system (SICID or SIECIC, depending on the type of case) and validated first by computer routines and then by clerks. Cases are assigned to competent judges based on automatic routines implementing pre-established criteria (Italia, 2016a).

The judges manage the proceedings on their electronic work desk, called “Consolle”, where they can schedule hearings, monitor deadlines, plan events, and draft procedural documents. Dedicated digital interfaces allow clerks and judicial assistants to work with case data and documents. REM is used for electronic notifications and the exchange of procedural documents. The different components provide an electronic working environment for all those managing judicial proceedings within courts. At the same time, the law firms’ applications give a similar working environment for lawyers (Carnevali and Resca, 2014). Pro-se litigation is minimal. The services for the public are limited to the consultation of case data collected on court registries and payment of court fees and expenses. In these cases, the identification is made via SPID or an electronic identity card. The system is sometimes criticised for malfunctioning⁵, complexity, and misalignment between functions and workflows enabled by the system and the normative framework. Nevertheless, it has been working for years. Furthermore, being the first fully operational implementation in the country, it has been and still is the reference point for the e-justice platforms developed in other Italian jurisdictions (administrative, tax and criminal).

The development of TOL is tightly coupled with the legal changes required to establish the system’s architecture and technical features. The first piece of legislation dates back to 2001 when a decree of the President of the Republic n. 123 (Italia, 2001) implements the provision of law 59/1997 (art. 15) and gives legal value to digital documents and their transmissions based on electronic means (Liccardo, 2004). The law provides the green light for the project’s inception, and the decree establishes the technical specifications of e-documents, e-signatures, and other technical components. The idea was to make a plain translation of the code of civil procedure

⁵ A list of planned and unplanned service stops or limitation is available here: <<https://servicematica.com/anomalie-servizi-pct-consultazione-4-5-23/>>.

into a digital process, simply transforming the media from paper into digital, under the tenets of the paperless court. Since then, the project's trajectory changed several times due to legislative changes aimed at digitising the broader public sector. Hence, the technical specifications established by the 2001 decree had to adjust to respect the rising national e-government standards (Fabri, 2009a). The project trajectory that at that stage was pointing to a failure had a U-turn when – taking advantage of the new code of digital administration (DAC) – the Ministry changed the exchange platform. The Ministry introduced the REM and identified the National Bar Council as the key central service provider regarding the e-identity of lawyers (Carnevali and Resca, 2014). The shift in the techno-legal architecture made possible by the legal changes eased the adoption of the system that, since 2014, became mandatory for lawyers.

The same legal changes obliged the lawyers to purchase a registered e-mail address as the official address for procedural communication (with courts and other lawyers) and the use of the fiscal code in each procedural document as the primary identification key. Other legal changes detailed the features of digital signatures and documents, clarified how to use the registered e-mail as the official summoning system and gave lawyers the power to authenticate documents (Borsari, 2014). Later, other changes made electronic payment of court fees possible. However, the changes did not influence the features of civil procedures that remain those already established by the pre-existing code of procedure.

One of the reasons for the slow system development and uptake is the multitude of working practices adopted by local courts. A comparison of 13 courts carried out in (2007/8) to support the implementation of the system observed the proliferation of local practices and local IT systems, from spread-sheets gathering essential data to proprietary systems developed by banks and adapted to the court's needs (Verzelloni, 2009; Xilo, 2004). Also, court procedures showed differences even if compliant with the existing legislation. Therefore, software developers had to decide which local procedure had to be made available by the system. The mismatch between the pre-existing routines and those enabled by the new system can raise dissatisfaction with the innovation process.

In this case, developers implemented a coherent subset of functional requirements that did not fit users' expectations in several courts. The mismatch between the pre-existing routines and those enabled by the new system raised dissatisfaction with the innovation process and slowed the adoption. This challenge required increased procedural standardisation, making it compliant with the constraints of the digital platform. It delayed the system's deployment (Cordella and Contini, 2009) from 2007 (first implementation) to 2015.

In 2016 and 2017, the Italian Parliament approved two legislative decrees to modernise the DAC – 179/2016 (Italia, 2016b) and 217/2017 (Italia, 2017) –. The two acts mandated the Government to draft delegated decrees, i.e., the new DAC's technical regulations, to be validated by parliamentary commissions. For the Ministry of Justice, the legal changes envisaged would have required substantive modifications to the e-justice platform just after the first complete implementation at the level of first-instance courts. Hence, the Ministry started to lobby to exclude TOL from new rules and requirements. The lobbying was successful, and a special regime was granted to TOL (Gualdi and Cordella, 2022).

On the one hand, the goal of the DAC was to have a homogeneous national e-government. On the other, the new standard was putting at risk a system, like TOL, deployed after years of tremendous efforts. While the first DAC approved in 2005 made available the techno-legal arrangements required to implement TOL, the 2016 update would have trashed the results achieved so far. Technology and legal frameworks are intrinsically bounded. If they do not co-evolute, legal changes can make technological arrangements non-compliant. At the same time, technological evolution can be hampered by obsolete legal constraints (Velicogna, 2023).

Despite the delays and slow deployment of the system, when in March 2020, the pandemic forced a prolonged national lockdown, a complete e-justice infrastructure was in place. This condition made it possible for judges and lawyers to conduct cases based exclusively on exchanging electronic documents. Indeed, judges were already equipped to work from home with laptops provided by the Ministry and a VPN set-up to secure the connection with judiciary systems. At the same time, clerks and administrative staff were not equipped with laptops. Clerks willing to use their own computers to work from home experienced problems with the VPN set-up required to access the case management system. The Ministry bought 12.000 laptop computers to face the issue, but their delivery took a long time. For months, judges could handle cases from home, while clerks were not (Velicogna, 2021). This state of affairs caused further delays and piled up court backlog during the lockdown, but it also shows how even the lack of trivial technological components, such as a VPN, can block the system (Contini, 2021).

Another innovation introduced during the pandemic was the adoption of video hearings and proceedings based exclusively on exchanging pleads. A government decree authorised video technology to hold hearings and approved proceedings based exclusively on the exchange of deeds (i.e., without any hearing) (Velicogna, 2021). From a technological point of view, video hearings are enabled thanks to the MS Office package used by Italian courts for years. Since the suite includes MS Teams, it has been unquestioned that the application can be used for video-conferencing. The switch to video hearings was not problem-free, but in most cases, it allowed us to conduct distance hearings without any training or preparation. It has also been extensively used to hold close sessions at the Court of Cassation while keeping the panel of judges working from home. Also, this experience shows the techno-legal nature of e-justice platforms. The technological components and legal frameworks must be coherent, effective, and aligned to conduct online judicial proceedings.

6. E-justice for criminal proceedings

In criminal proceedings, e-justice is less developed and much more fragmented than in civil cases since it includes a variety of applications to manage proceedings and systems used to conduct and support investigations and to tackle organised crime and terrorism. The section focuses exclusively on the most relevant systems used to handle proceedings and does not consider those used for investigations. This choice eases the comparison between civil and criminal e-justice platforms.

The general picture includes an e-filing system for police officers (NDR), a primary case management system (SICP), a digital work desk for criminal judges and prosecutors composed of several applications and systems which allow the exchange of data and documents with lawyers and other professionals engaged in criminal proceedings.

Police forces, through the NDR portal, transmit crime reports to prosecutors. Since 2023, using NDR is mandatory for selected prosecutors' offices. In other cases, the filing is made through old-fashioned crime reports. The receiving office validates the package delivered via NDR. Data are then uploaded into SICP, while the crime report is lodged into the case files digital repository (Document@). The case is assigned to the prosecutor in charge via the prosecutor's Consolle, an application similar to the one used by judges but much less developed. During the investigation stage, prosecutors and clerks can use Atti&Documenti to draft procedural documents, which will be digitally signed and saved in the electronic case file repository (Document@). Consolle may also help with checking deadlines or scheduling hearings or other events. When the case file must be transmitted to the preliminary investigation judge (for events like wiretapping, seizures, or pre-trial detention) or to the trial judge, SICP assures data exchange. At the same time, Document@ grants access to the relevant case file documents⁶.

Once filed with the courts, cases are assigned to a competent judge by GIADA2. Judges can draft digitally native documents with Atti&Documenti, save them in Document@, and use Consolle to schedule events or check deadlines. These systems are the same applications designed for prosecutors but with interfaces and functionalities designed for the judge's needs.

Lawyers are preferably summoned via a dedicated telematic notification system (SNT) and can use the Lawyers Portal to lodge procedural documents to prosecutors and courts. Ideally, they can access the electronic case file via Document@ during the discovery and hearing phases. All this, however, is just an ideal workflow, and real life is more complex. First, the official case file is still a paper-based one. Hence, the documents exchanged via digital channels must be printed out. Second, not all the documents of the case files are digitally native. Some are on paper and must be scanned and uploaded into Document@. Having two different files to work with injects further complexity into the system.

As seen, e-justice in the criminal sector is much less developed than in the civil one. The reasons can be traced first in a path dependency from the systems of the first generation adopted in the nineties.

REGE, the first basic case tracking system for Italian Courts and PPOs, has been in service for almost 25 years (1990-2015). During that period, the Ministry undertook several attempts to develop a fully functional CMS without success, first due to technical failures of several projects and later due to budget cuts (Carnevali *et al.*, 2007). In the meantime, courts and PPO created their system to perform the functions not provided by REGE: calendaring, the management of deadlines, and mostly the drafting and management of procedural documents (from crime

⁶ A description of the different components of the platform is available at <<https://www.csm.it/web/csm-internet/il-processo-penale-telematico>> (Accessed May 12, 2023).

reports to indictments to judicial decisions). Such systems, developed with a did-it-by-yourself approach, sometimes totally in-house, some other times with the support of software houses, were not necessarily robust or secure. They were local solutions to problems the Ministry of Justice could not address, primarily the reuse of the data collected in the old case tracking system for office automation and case management purposes (Carnevali, 2011).

In 2005, when SICP was selected to become the integrated national case management system, the systems used by courts and prosecutors' offices were heterogeneous and critical regarding performance and security. SICP was designed to overcome the problems of the pre-existing case tracking systems, provide an updated set of functionalities and improve the efficiency and security of data management. Furthermore, SICP architecture is centralised (servers in each judicial district), while REGE, now dismissed, was a client-server, with servers in each court and prosecutor's office. Judicial circles criticised the new centralised architecture of SICP because legislation stated that information collected at the PPO level had to be kept within each PPO office (Davide Carnevali, 2011a).⁷ In technological terms, it allows the use of local area networks, with servers placed within each office, but not with a centralised architecture in which servers are placed in dedicated data centres outside the office's premises. Hence, the SICP centralised architecture was not compatible with the legal framework. Once more, law and technology must be correctly aligned to be performative. It took until 2009 to solve the issue, with the approval of a new ministerial decree⁸ and the move from pilot projects to the full deployment of SICP at the national level in 2015. SICP is just a case management system; other applications must be used to draft documents and manage case files electronically. For many years, the Ministry of Justice could not move from the variety of document management systems developed locally, and to some extent in competition, and adopt a single national system (De Ruggeriis, 2012). The applications of the current portfolio of systems can be traced back to the pre-existing locally developed systems selected by the Ministry as national applications. Once a decision was taken, several offices had to terminate their applications and adopt the national one. This circumstance required changes in working practices that further delayed the deployment.

Despite almost 30 years of enduring efforts, the applications to handle criminal cases are still too many, poorly integrated and with several functional flaws (Italia, 2019b, 2021). Going from this state of affairs to an integrated e-justice platform will take years.

When the pandemic hit the country in 2020, the digital infrastructure for criminal proceedings was largely incomplete, and digital communication between courts and lawyers (Lawyers' portal)

⁷ DM 334 1998 Regolamento per l'esecuzione del codice di procedura penale, art. 2.1. "Gli uffici giudiziari tengono, nella materia penale, i registri obbligatori [...] art. 2.3 I registri sono tenuti in luogo non accessibile al pubblico [...]. Judicial offices keep, in criminal matters, the mandatory registers [...] (art. 2.1) in a place not accessible to the public (art. 2.3). Being the paper registries, data protection was essentially a matter of physical protection.

⁸ DM 27-4-2009 Nuove regole procedurali relative alla tenuta dei registri informatizzati dell'amministrazione della giustizia. The decree establishes a new framework for data management and data protection coherent with the requirements of ICT infrastructures.

was just at the test stage. As in any other judiciary, the lockdown forced the establishment of new digital communication channels.

The first government step was to extend the use of Registered Electronic E-mail (PEC), enabling lawyers to e-file some procedural documents to courts. Then, as soon as the Lawyers' portal became available, the Ministry established a dual communication channel. During the investigation phase, all the communications between defence lawyers, prosecutors' offices and preliminary investigation judges must be handled via registered electronic mail. Once the investigations are officially closed – and the prosecutor's office discloses the file to defence lawyers – the communication must be done using the new Lawyers' portal. The lawyers can download the case file from the portal and upload petitions and other requests. The dual-channel created severe practical problems (Angius and Zorloni, 2021). The law pre-established the types of documents that must be sent by each channel (REM or Platform)⁹. If the wrong channel was used, the filing was not accepted. By establishing the dual communication channel and the types of documents to be filed in each, the Ministry implicitly created a new rule that makes some filings ineffective, taking functions the Constitution assigns to other organs (Galgani, 2021). Furthermore, the Lawyers' portal was at the piloting stage when the pandemic forced its national deployment. Too often, the platform was not functioning, hindering the lawyers from filing petitions (Machina Grifeo, 2021).

In some cases, files were too big to be uploaded, and old files were inaccessible via Lawyers' portal. In a field like criminal law, these malfunctions impact human rights: if the system does not accept the request for release, the accused remains in detention. Therefore, the general malfunctioning of the systems forced several offices to find local solutions to problems created at the national level. Judicial offices and local bar associations, aware of the issue, developed ad hoc procedures to bypass technical flaws. For instance, despite the decree that makes the use of digital communications mandatory, courts and prosecutors' offices accepted paper filing or the use of USB sticks to guarantee the right to a fair trial that the poor functioning of the platform was putting at risk. At the same time, this long list of workarounds resulted in poor standardisation and predictability of judicial proceedings unfolding. The Judicial Council monitors the difficulties encountered and suggests improvements (Italia, 2021). The Ministry is working to solve the issues. However, the way towards an integrated and fully functional e-justice platform is still long.

7. Law and technology: entanglements and alignment

The two case histories illustrate several dynamics affecting e-justice development and individual and organisational behaviour. Some phenomena observed at the design and development stage are considered below.

Legal endorsement is crucial for technological adoption. The pandemic's stress test on court organisations highlighted several aspects of court digitisation processes. First, infrastructural components must be available evenly throughout the entire system. If a single component is

⁹ The kind of documents to be exchanged with the two systems (or in paper) changed over time.

unavailable or not easily accessible, the whole process can halt. For example, since MS Teams was already on judges' work desks and easily accessible to lawyers, online hearings could be conducted from the day the Government issued the urgent decree authorising videoconference systems to conduct hearings. At the same time, the lack of a secure connection (VPN) and laptops for clerks resulted in civil procedures coming to a standstill, even when all other hardware and software components were in place. At the same time, the massive use of digital technologies triggered by the pandemic reveals how technologies already available were not being used due to the lack of a legal endorsement required to make their use performative in judicial proceedings. Since this phenomenon was widespread, a critical question for research and judicial leaders is identifying which technological components are already available but not used effectively for legal issues or other reasons.

The pandemic also resulted in the deployment of untested technologies, as seen in the case of the Lawyers' portal in criminal procedures. The Ministry and the contracted software company had to deploy the system before completing testing and debugging. Making such a system mandatory created a wide range of practical and technical issues for everyone involved in criminal proceedings. The COVID lockdown may explain and justify the decisions taken. However, the multitude of problems resulting from these decisions underscores how formal regulations that mandate the use of a technical device can be applied just when there is reasonable certainty of the proper functioning of the entire procedure (from a technical and legal perspective). In this case, technical malfunctions led to procedural exceptions managed at the local level to permit the conduct of proceedings. Furthermore, exceptions and ad hoc procedures created additional workload and stress for the entire system. In the case discussed, the impact of technological malfunctioning on the rights of all those involved in criminal highlights the need to implement only proven technologies to maintain the certainty of procedures, as already emphasised by Reiling (2009).

The two e-justice platforms, spanning nearly 20 years, illustrate evolutions at both the technical and normative levels. Platform evolutions can be triggered by technological innovations (the availability of new components like videoconferencing), legal changes (as amendments to the code of procedure to enable video hearings), or the new code of digital administration. As evidenced, new technologies in judicial proceedings must be legally recognised to be effective, and legal provisions may require changes – not always straightforward to implement – on IT systems. Law and technology evolve in tandem. This entanglement has various implications, particularly the need to guarantee their coevolution.

Both technology and formal regulation can hinder the evolution of platforms – While coordinated legal and technological changes are necessary to drive digital innovation, they can also impede innovation. This phenomenon is particularly evident considering the constraints imposed by the fragmented technical installed base on the evolution of the digital platform for criminal proceedings. In this case, technological fragmentation necessitated a lengthy, ongoing process to reduce the number of applications and ideally move towards a single integrated platform. Similarly, the legal framework can impede technological deployment. The 2001 legal framework

for online civil trials required an architecture too complex to develop. Only with the introduction of the first Code of Digital Administration did the Ministry manage to implement and deploy the system. Finally, the changes to the code of Digital Administration implemented in 2016 threatened the architecture of the Civil Trial Online. An exception had to be raised to ensure the platform's functioning. Technology and law can either impede or support the evolution of platforms."

8. Concluding remarks: the impact on values and judicial governance

The different degrees of deployment of the two platforms allow an exploration of their effects on the values underpinning the judicial function and outline some reflections on judicial governance.

The e-justice platform for civil proceedings is fully and coherently adopted nationally. It automates or guides judicial operations homogeneously: data collection, procedural document production, and procedural options available are homogeneous across the country. The official case file is digital; paper case files are replicas of digital ones. Procedural complexity is functionally simplified and absorbed by technology. Statistical data are reliable and extracted when needed.

With this configuration and performance, the platform compellingly guides case-related operations. Users follow the pathways of actions pre-established by the machine. This adoption impacts judicial values by increasing data and procedural standardisation, hence the homogeneous application of procedural law. The dynamic, however, affects how the law is interpreted and ultimately impacts judicial independence. As already pointed out in previous works, this requires care in system development since, in this case, it is not just a matter of implementing functional specifications. Case management and workflow technologies are cogent and prepacked interpretations of procedural law. In this case, the push towards equal treatment resulting from ICT deployment must be reconciled with the principle of judges' subject to the law, hence with judicial independence (Contini and Reiling, 2022).

The e-justice platform for criminal cases is less developed, and its deployment is incomplete. Just the case management system is coherently adopted at the national level. The digital work desk for judges and prosecutors is a set of various poorly integrated applications and is unevenly adopted nationwide. Hence, procedures adopted locally and sometimes within the same office are different. The digital communication channels between judicial officers and lawyers have flaws and malfunctions. Courts and prosecutors' offices adopt various practices to face the issues that result in additional procedural variations (Italia, 2021).

As a consequence, the principle of equal treatment can be undermined. The impact of the e-justice platforms on judicial values differs from the one observed with civil proceedings. As currently developed, the platform does not absorb procedural complexity: ad hoc procedures and exceptions are frequent. The variety of solutions adopted shows how the e-justice platform has not increased procedural standardisation, hence equal treatment of court users. The need to find local fixes increased procedures' unpredictability, undermining the principle of equal treatment.

At the same time, some system features, such as how documents are (or ought to be) drafted or some procedural steps compelled by the system, affect how the law is interpreted, impacting

judicial independence. Discussing these constraints, the Judicial Council observes how these systems influence judicial and prosecutorial activity, force the adoption of new practices, and can trigger adverse reactions by those forced to change routines (Italia, 2021). The Council argues that the impact on the preparation of procedural documents affects the jurisdiction at the level of procedure and content. Hence, the deployment and operation of the technical structure (hardware and software) is not just a matter of “organisation and functioning of the services relating to justice” the Constitution (Italia, 1947) assigns to the Ministry of Justice (art. 110). On the contrary, e-justice platforms are increasingly affecting judicial activity and, therefore, ultimately, the autonomy and independence of the judiciary. Based on this assessment, the Council claim a new role in e-justice development, with full involvement from design and development to day-by-day operation. Otherwise, the risks are, on the one hand, the adoption of software which, perhaps due to even unconscious design choices, conditions the same interpretation of the procedural rules and the functioning of the criminal trial; on the other hand, to structure the same software in a non-functional and helpful way for its concrete use in judicial offices.

The awareness of e-justice platforms’ implications on the separation of powers designed by the Constitution is new for the Council. It emerges, understandably, when e-justice platforms affect the work of judges (and prosecutors) and their role as ultimate interpreters of the law. In Italy, this influence on judicial activity is just at the inception in the criminal justice sector. It is more developed in civil e-justice platforms where a broader set of activities is automated and performed within the affordances and constraints of algorithms and computer interfaces.

This paper clearly shows how implementing and adopting e-justice platforms is not solely a matter of organising “services relating to justice”. Still, it is variously and profoundly affecting the judicial function and the values underpinning the administration of justice. The more the working environment of judges, prosecutors, and lawyers becomes digital, the more IT systems automate, direct, enable and regulate judicial behaviours and procedures.

Working environments in which all judicial activities are performed through digital platforms, in which what can or cannot be done – including how to draft a procedural document, when a hearing can be scheduled, or how much time should be spent on a given task – is not visionary. It is just the next step of an innovation track that has been going on for more than 30 years. The trend cannot be stopped. To many extents, it is desirable since it can improve justice delivery from many perspectives, particularly equal treatment at the procedural level. At the same time, the more technology and judicial action are entangled, the more urgent it is to avoid that technology could undermine the principles that make judicial decision-making valuable.

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