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E-Justice Platforms: Challenges for Judicial Governance

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ABSTRACT

This article discusses e-justice platform development and its implications for judicial governance. Procedural decisions and court work processes can now be encoded into the digital court work environment. This may affect fundamental values such as fair procedure and judicial impartiality and independence.

The article compares three e-justice platforms (EJP): e-Curia (Court of Justice of the European Union), Civil Trial on Line (TOL) in Italy, and *Kwaliteit en Innovatie Rechtspraak* (KEI) in the Netherlands. In an innovative approach, it considers EJP's as enterprise information systems. It combines functional and managerial perspectives with those of procedural law and technology. The paper studies the impact of merging procedural law and technology for developing EJP's and for reconciling the requirements of both law and technology in the highly regulated context of courts and judiciaries.

The paper finds that, in EJP development and implementation, law and technology's combined effect may affect fair procedure. The article concludes with a discussion of the kind of governance needed to safeguard fair procedure and proper functioning of IT in courts. This need becomes even more pressing with the advent of artificial intelligence (AI). The article finds that resolving these issues is part of the judiciary's responsibility for fair procedures and cannot be left to IT experts. It offers some standards and principles for judicial governance to fulfill judicial responsibility for fair procedures as laid down in the human rights conventions.

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1. INTRODUCTION

This article explores implications of information technology (IT) development for judicial governance. Judicial procedures are increasingly supported by information technologies such as e-filing and integrated justice platforms. The COVID-pandemic boosted the use of IT in judicial proceedings and the discovery of the advantages it provides.[1] E-filing and integrated e-justice platforms exchanging data and documents, and electronically managed judicial procedures are increasingly becoming the way to handle cases.

Therefore, it is timely to explore what developing and implementing present-day IT for courts may mean for fair procedure, a key judicial value, and consequently for judicial governance. Studying the implications of e-justice platforms goes beyond the functional perspective, because the platforms have profound consequences for fair procedure and judicial governance.[2]

Most of what we know about court IT development comes from evaluations of failed projects, usually focusing on project management of internal systems.[3] As a consequence, most of the available literature focuses on the promise and capabilities of technology,[4] on project successes and, in some cases, project failures. However, current technological developments raise new issues, and we think safeguarding fair procedure in digital processes is the most important concern. This presents judicial governance with new challenges. We think it is timely to address judicial governance in the light of the responsibility for fair procedure in those digital processes. Technology can increasingly support the courts' primary processes: interaction with external parties and digital case management. Case handling itself goes digital. Procedures need to be fair, and so should digital procedures. To safeguard fair digital procedure, IT development needs constant alignment and re-alignment of IT, procedural law, and its interpretation. This requirement involves the judicial governance structure as a whole, not just IT governance. Alignment and governance are new issues in the court IT debate, raised by the development of e-justice platforms. The alignment problem applies to judiciaries everywhere. However, since judicial governance varies widely, this problem affects judiciaries differently. The ways in which this issue can be addressed are also different, depending on the situation. This is why this work considers e-justice platforms deployed in judiciaries with different governance systems.

Justice systems have, over the last twenty years, attempted to implement e-justice platforms (EJP) enabling the digital handling of judicial procedures, with mixed results. The platforms are meant to establish digital workflows with court users and other organizations, and within the court. The administration of justice moves from paper to digital. The platforms are also expected to increase efficiency and effectiveness and improve consistency and transparency in case handling, and thereby improve equality in case handling and proceedings. This article tries to understand how digitalization and digital innovation in courts unfold and how they may affect the

1 A. Wallace et al., "Courts in Victoria, Australia, during COVID: Will digital innovation stick?," *IACA Journal* 12(2), Art. 9 1–19, *https://doi.org/10.36745/ijca.389*.

2 F. Contini et al., "Double normalization: When procedural law is made digital," *Oñati Socio-legal Series*, Special Issue: Technologies of normalization (2022 forthcoming). A. Wallace et al., see note 2, supra.

3 D. Reiling, *Technology for Justice. How Information Technology Can Support Judicial Reform*, Leiden University Press, 2009. Available at *http://home.hccnet.nl/a.d.reiling/html/dissertation%20texts/Reiling%20Technology%20for%20Justice.pdf*.

4 R. Susskind, *Online courts and the future of justice*, Oxford University Press, 2019.

courts' core business: fair procedure. It concludes with some suggestions for adapting judicial governance to safeguard fair procedure when developing and implementing digital innovation. The subject of judicial governance of IT has received little attention until now. This article intends to help judiciaries understand and resolve some of the difficulties they encounter when e-justice platforms are or have to be put in place.

This article explores these difficulties by considering e-justice platforms as enterprise information systems (or enterprise IT). Enterprise IT is usually a suite of integrated applications used to collect and manage data and business processes. It tracks resources, structure, automates workflows, and supports information flows between all business functions, providers, and clients. Many innovation dynamics in private companies are similar to those in justice systems, even though both may have different missions, organizational arrangements, and institutional constraints. Features common to both are Enterprise IT's standardizing properties and the high degree of control on business processes and users.[5] Once Enterprise IT is in place, organizations and organizational actors are enclosed in a work environment that strictly governs what can and cannot be done.[6] E-justice platforms and the digital working environment of Enterprise IT are similar enough to provide a sound analytical framework to discuss the main topic of this article: the impact of procedural digitization on fair procedure and its consequences for judicial governance.[7]

These impacts manifest themselves in the development and deployment of e-justice platforms in three European jurisdictions: e-Curia (EU Court of Justice), Civil Trial on Line (TOL) in Italy and Quality and Innovation (KEI) in The Netherlands. The European Court of Justice (CJEU), and the Italian and Dutch judiciaries are institutions in which a full set of safeguards protects judicial independence. They provide a suitable data set to study the innovation dynamics and their impact and consequences for judicial governance. The three judiciaries also each have their own distinct institutional arrangements. This enables analyzing how different IT development and institutional and governance arrangements impact the way in which development and deployment of IT differently. It also allows for assessing whether IT development and deployment may put fair procedure at risk in the given institutional setting. The article then provides some suggestions for solutions for ways in which judicial governance can align IT and case handling requirements, in order to safeguard fair procedure as prescribed in the human rights conventions.

2. REGULATING COURTS: LAW AND IT

This chapter explains how law and technology both regulate human activities.

Formal regulation and IT both guide how humans can act, but they can conflict in the way they guide actions. Courts and judiciaries are comprehensively regulated by formal rules. The regulation has many layers, from the fair procedure principles

5 C. Ciborra, ed., *From Control to Drift*, Oxford University Press, 2000.

6 S. Gosain, "Enterprise Information Systems as Objects and Carriers of Institutional Forces: The New Iron Cage?," *Journal of the Association for Information Systems* 5(4), pp. 151–182.

7 The phenomenon emerges by looking at the number of programs implemented by international organizations to support e-justice development. At the same time, the academic debate focuses on potentials of e-justice rather than on failures, innovation dynamics and consequences of digitalization. D. Reiling, *Technology for Justice* focuses on failures as well, making it one of the few exceptions.

established in the human rights conventions, via procedural legislation, to court rules detailing work processes and mandating the use of a given form. Safeguarding fair procedure, the many layers of regulation serve to make procedures predictable, and create a level playing field for case parties.

Digital technologies such as EJP's introduce an additional layer of regulation on judicial proceedings and court operations. IT has a more compelling and apparently more objective normativity than the one laid down in the formal rules.[8]

Digital systems for, for instance, e-filing a claim or setting a hearing, present more rigid constraints than those established solely by the law.[9] Legal and digital regulation may well conflict with each other. The tension resulting from these two competing forms of regulation is not just a functional issue but also an issue of governance. Who owns the IT and/or the work processes, and who can take decisions to resolve this tension? The requirements and regulating nature of IR have changed over the years. Its governance needs have changed with it, as will be discussed in the next chapter.

3. FROM STAND-ALONE TO E-JUSTICE PLATFORMS

This chapter introduces the general historical development of IT and the challenges that come with it. Those challenges will be discussed in the empirical analysis of the case studies.

Information technology developed from stand-alone tools to a complete digital environment, and its governance needs have grown with it. This development can be seen in three main stages.[10] In each of these stages, IT enables activities, but it can only work with appropriate governance. As IT gradually enables more of human activities, it makes increasingly heavier demands on the governance of the implementing organization.

Function IT is the world we know from the 1980s. It works stand-alone, it supports the execution of specific tasks. In courts, function IT supports registering cases in a database, or document production. This is the world we know from the 1980s. It is relatively easy to implement because it needs neither standardizing work processes nor security.

Network IT emerged in the 1990s. It enables collaboration but does not enforce a specific working method. Courts in the Network IT stage use the paper case file

8 G. F. Lanzara, "The Circulation of Agency in Judicial Proceedings: Designing for Interoperability and Complexity," in *The Circulation of Agency in E-Justice*, in F. Contini and G. F. Lanzara (eds.), Springer, 2014; G. F. Lanzara, "Building digital institutions: ICT and the rise of assemblages in government" in *ICT and innovation in the public sector. European studies in the making of e-government*, in F. Contini and G. F. Lanzara (eds.), Palgrave Mcmillan, 2009; M. Hildebrandt. "Algorithmic Regulation and the Rule of Law." *Phil. Trans. R. Soc. A.*, no. 376 (2018): 11. DOI: *https://doi.org/10.1098/rsta.2017.0355*; ———. "The Circulation of Agency in Judicial Proceedings: Designing for Interoperability and Complexity." Chap. 1 In *The Circulation of Agency in E-Justice*, edited by F. Contini and G. F. Lanzara. Law, Governance and Technology Series, 3–32. Dordrecht: Springer Netherlands, 2014. DOI: *https://doi.org/10.1007/978-94-007-7525-1_1*.

9 An easy-to-understand example that emerged in TOL (see below) relates to the kind (just pdf) and dimension (30MB) of files accepted by the e-filing platform. Such limits are not established by the law and that affects the possibility of lawyers to upload evidence (such as videos or big files in general). In KEI (see below) similar limits were regulated in the practice rules, which made them legal.

10 A. McAfee, "Mastering the Three Worlds of Information Technology," *Harvard Business Review*, 2006 November (11), Available at *https://hbr.org/archive-toc/BR0611*.

as the main carrier of information, and some procedural data is collected in case management systems. The user can use data from the case management system to compose a document and store the document in the network system. Users can share documents, but the system does not require a standardized way of doing it. Courts may also use e-mail, case law databases or digital files. These functions all need a network. They also require some standardization. However, the IT does not affect the primary work processes. It does not guide procedural actions and decisions to be taken by case parties, lawyers or judges. This world also brought the Internet for everyone. In this stage, its simplest form is a website that provides information to the reader. Website technology evolved from static information to full digital transactions. By that time, technology has reached the next stage.

Enterprise IT. The stage of Enterprise IT arrived in the early 2000s. Here, organizations interact digitally with external users. In a fully digital primary process, IT is no longer a tool, it has become an environment. For courts, it includes platforms like the e-justice platforms studied in this article. Here, lawyers, clerks and to some extent judges, can only perform their tasks within this environment. Workflows are managed digitally. This form of IT requires that work processes be predetermined and **standardized**. Here, the rules, organizational regulations or formal laws, and the process merge. The procedural rules are coded into the digital work process. **Regulation and code are merged into one**. Organizations moving from Network IT to Enterprise IT need to take measures about the process and about changes to the system, in advance. They need to decide who is authorized to decide about what. For courts and judiciaries, this may involve reexamining the governance structure of the justice system. That makes it the most difficult transition there is.[11]

Looking into the future, technology forecasting outcomes and making automated decisions using what is now called artificial intelligence (AI) may well be on the rise. This technology may take over even more of human activity than Enterprise IT. In courts, forms of AI may take over some of the judicial decision-making process. To ensure fair procedure and correct workings of the AI, human control over the IT is needed in all phases.[12] This requires continuous human oversight.[13] This will be an even bigger challenge for judicial governance. The study of EJP and fair trial can help to address this challenge too.

The literature associates several challenges with Enterprise IT implementation in general. Looking at those challenges will help to understand what this can mean for EJP development, implementation, management and governance.

Enterprise IT systems in general develop their digital workflow along the value chain, with suppliers and consumers.

The *primary critical issue* is in various areas of potential **tension between technology and organization**. These include:

11 Ibid.

12 CEPEJ. *European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and Their Environment*. Council of Europe, (Strasburg: Council of Europe, Adopted at the 31st plenary meeting of the CEPEJ Strasbourg, 3–4 December 2018).

13 Contini, F. (2020). Artificial Intelligence and the Transformation of Humans, Law and Technology Interactions in Judicial Proceedings. *Law, Technology and Humans*, 2(1), 4–18. DOI: *https://doi.org/10.5204/lthj.v2i1.1478*; Pentland, A. (2020). A Perspective on Legal Algorithms. *MIT Computational Law Report*, 4–6 Retrieved from *https://law.mit.edu/pub/aperspectiveonlegalalgorithms/release/3*; Reiling, D. (2020). Courts and Artificial Intelligence. *International Journal For Court Administration*, 11(2), 8. DOI: *http://doi.org/10.36745/ijca.343*.

- **procedural standardization:** making procedures more uniform so they can be managed by the system.[14]
- **workflow digitalization:** adapting the work processes to the benefits and requirements of the technology, also known as re-engineering[15] court procedures that work well in a paper-based environment, like serving a document by registered post, are meaningless when procedures go digital.
- **user involvement, internally and externally,** which means at least awareness of the impact of digitalization on all the users[16] and ideally actively involving users in development and deployment of the technology. An e-justice platform ignored by lawyers that prefer to exchange petiotions by traditional means is valueless.

The *secondary critical issue* is in managing these potential tensions between technology and organization effectively. It requires strong managerial capacity. Literature has identified managerial weakness as a significant reason for Enterprise IT implementation failure.[17] This makes management and governance a particular challenge.

Justice systems need to manage these tensions by deciding in advance who is authorized to decide about procedural law, practice rules, internal work processes and technology-enabled decision making.

Justice systems and judiciaries have very specific institutional features and complex governance structures, set up in order to safeguard judicial independence. These structures are particularly complex in civil justice systems. They are usually the outcome of a political compromise. Therefore, **the features of judicial governance** are crucial for the way in which the new digital platforms affect the application of procedural law. This article studies how this complex governance may manage development and deployment of e-justice platforms effectively. It does so by comparing three e-justice platform with similar functions but developed in judiciaries with different judicial governance models.

4. E-JUSTICE CASE STUDIES

This chapter describes the functions of the systems in the case studies and the different governance systems in which they were developed. The case studies cover three e-justice platform development projects. The functions of the systems are similar, but they are worth studying because they have been developed by judiciaries with different governance systems: e-Curia in the Court of Justice of the European Union, Civil Trial Online (TOL) in Italy and Quality and Innovation (KEI) in the Netherlands. TOL and e-Curia both took 13 years from the moment of their inception to the moment when system use became compulsory. KEI started in 2013, and became compulsory in 2017, but only in two pilot courts.

14 A. Momoh et al., "Challenges in enterprise resource planning implementation: state-of-the-art," *Business Process Management Journal* 16(4), pp. 537–565, *https://doi.org/10.1108/14637151011065919*.

15 P. Bing et al., "Critical Issues Affecting an ERP Implementation," *Information Systems Management* 16(3), pp. 7–14 *https://doi.org/10.1201/1078/43197.16.3.19990601/31310.2*.

16 J. Nandhakumar et al., "The dynamics of contextual forces of ERP implementation," *Journal of Strategic Information Systems* 14(2005), pp. 221–242, *https://doi.org/10.1016/j.jsis.2005.04.002*.

17 A. Momoh et al., supra, note 14.

The Court of Justice of the European Union is an autonomous self-governing apex court. In Italy, court IT is the responsibility of the Ministry of Justice (MoJ). In the Netherlands, the Judicial Council is the governing body of the entire judiciary except the apex courts. The Council has its own IT organization.

The **functionality** of all three projects included e-filing and access to case documents for lawyers. In e-Curia, court staff can also perform identity checks, document verification and document production. The e-Curia project did not include functionality for the judges. In TOL, court staff can check all the data and documents uploaded into the CMS and DMS and trigger the relevant workflows. The judges have a non-compulsory interface (digital work desk) that supports their work. In KEI, the filings are uploaded into the CMS directly. The system triggers the workflow. The judges are required to use the functionality designed for them, supporting active judicial case management: a task manager, a digital case file, hearing planning, word processing, and search capabilities.

The three e-Justice platforms provide lawyers, clerks, and judges with various functionalities for handling proceedings such as digital identification, e-filing, electronic handling of procedures and documents, electronic signature, and e-summoning. They provide the environment the different actors in the civil procedure must work in. The three cases enable comparing the development trajectories in the light of the different governance features and in the light of the Enterprise IT factors discussed in chapter 3.

4.1 E-CURIA

E-Curia is the EJP of the Court of Justice of the European Union. It was launched in 2011 and provides court users with an e-filing facility to enable digital communication with the Court. Since its launch, e-Curia has been adopted by a growing number of users, and its use is mandatory at the General Court[18] since 2018.

In e-Curia, users, a party, or their representative, can request an account. The court registry sets up an account.[19] The user can then log in and lodge procedural documents and annexes in pdf format. The user drafts the documents with a standard word processor or a tailored law firm platform. The court system time stamps each document, tags it with a hash code to guarantee its authenticity and non-repudiability and a clerk uploads it into an electronic case file. Case parties can access the case file via e-Curia, and when needed download documents. The user interface displays the list of the documents uploaded and their status: awaiting acceptance, accepted and acceptance presumed.

4.2 TOL

Civil Trial Online (TOL), or the Processo Civile Telematico, is the digital procedure for civil cases in the Italian judiciary. Its development started in 2001, and its use became compulsory in 2014. Users can e-file documents in civil cases using TOL. E-filing requires a registered e-mail address (REM), a digital identity (requiring a digital certificate in a smart card), a digital signature (a second digital certificate) and standard e-mail and internet access. Digital identification of lawyers and other subjects works through

18 *https://curia.europa.eu/jcms/upload/docs/application/pdf/2020-05/rapport_gestion_2019_en_final.pdf* [accessed date, 21 March, 2022].

19 In CJEU, party representatives can be lawyers, but also agents of member states, law professors and other professionals.

dedicated access points, certified applications made available by bar associations, public bodies (municipalities, the national welfare institute etc.) and private companies to identify and authenticate users. Users can upload files using the MoJ e-justice portal, or an access point interoperable with law firm applications**.** Data (XML) and documents (pdf) are uploaded into the Courts' case management system (CMS) and document management system (DMS). The registry checks all the data and documents uploaded into the CMS and DMS and triggers the relevant workflow. The clerks have an interface for checking and accepting procedural documents and monitoring communication flows. The judges' interface, their digital work desk, supports calendaring, case management, reading and annotating the procedural documents, and drafting and digitally signing decisions and other documents. Case data from the CMS are inserted into the draft automatically. Documents are saved in the digital case file. The system sends messages to keep the parties updated about case progress.[20]

4.3 KEI

KEI was the Quality and Innovation Program of the Netherlands judiciary from 2013 to 2018. It was intended to digitalize the entire court system. The Council ended the KEI program in 2018 due to a lack of support from Court presidents and the decision of the Ministry of Justice to stop financing the program.[21] When the KEI program was terminated in 2018, the civil commercial claims procedure was working in two pilot courts, it was not implemented in the other nine first instance courts. For effective comparison with the other projects, this description focuses on the development of the digital commercial claims procedure. Lawyers, using their lawyer ID smart card, can e-file cases either through the web portal or the systems interface. They can file their case or defense using a smart submission form that will feed into the court case management system. Digital case management, the backbone of the process, balances strict process control with flexibility in case management. The system assigns tasks that are required, either by law or by the practice rules. The system has options for exceptional situations. Since not all courts have the same team structure, each court can designate roles determining who can perform which tasks and activities. Lawyers, the judge, the registry and other parties involved in the case can communicate using message traffic and notifications.[22]

5. COMPARING THE THREE PROJECTS

This chapter analyses the cases in the light of the key issues from the theoretical framework of enterprise IT: standardization and workflow digitization, development and user involvement, and judicial governance affecting decisions to be taken and emerging tensions.

20 G. Borsari, "Processo civile telematico "online civil trial"", Conferenza internazionale – e-Justice and e-Law conference, Rome, 2014.

21 For more information on what happened in the Netherlands, see F. van den Borne et al., *Het stopzettenvan KEI-civiel nader bezien. Een gordiaanse knoop?*, Maastricht Law Series, Boom juridisch, 2021; TRConsult, *Quick scan Review KEI. Review op risicobeheersing en basis succescondities voor grote ICT-trajecten*, Rechtspraak, Den Haag, 2018; Available at *https://www.rechtspraak.nl/SiteCollectionDocuments/2018-rapport-review-commissie.pdf*. and D. Reiling, "Hypes, Hopes and Dreams," in X. Kramer et al. (eds.), New Pathways to Civil Justice in Europe, Challenges of Access to Justice, Springer, 2021, pp. 43–60.

22 D. Reiling, "Digital Justice, nice to have but hard to achieve," in *Technology, Innovation and access to justice*, in S. P. de Souza and M. Spohr (eds.), Edinburgh University Press, 2021. D. Reiling, "Hypes, Hopes and Dreams."

Developing e-justice platforms with the functions just described required judicial administration to face the challenges described in chapter 3. Here, the paper compares the three projects in the light of those issues and the judicial governance models. These issues emerge in several areas of potential tension between technology and organization, such as procedural standardization, workflow digitalization and involvement of internal and external users. Effectively managing these potential tensions between technology and organization requires strong managerial capacity. This makes management and governance a particular challenge.

5.1 PROCEDURAL STANDARDIZATION AND WORK PROCESS DIGITALIZATION

The **interaction** between law and technology and the need to reconcile the requirements of both law and technology was an element in which the projects differed. One element of this interaction is **procedural standardization:** making procedures more uniform so they can be managed by the system.[23]

All three projects started out by designing the technology based on the regulation. KEI had to conform the technology to the new procedural law as it was developing in the legislative process. This involved some **work process reengineering** in order to improve case disposition with active judicial case management, a business sector best practice.[24]

In the three cases, we see a similar process. Formal rules establish technical and procedural standards that must be followed by the technology to work in legal proceedings. Those standards are then encoded into the EJP's software. The EJP, once deployed in the court system, has a standardizing impact on judicial procedures. This has some advantages: more accurate data support more effective monitoring of cases, case management, and court management. Workflow systems provide pre-established sets of tasks and actions for clerks, lawyers and to some extent judges. Consequently, the discretion of clerks, lawyers and – in some cases – judges diminishes. Simple streamlined procedures such as those for some administrative cases in KEI, injunctive orders, and simplified procedures in TOL already exist. In such cases, the system provides a pre-established work process including all the components required to complete the procedure.[25] Such processes require little or no judicial activity in individual cases.

The e-justice platforms increasingly cover activities involving judicial discretion, either explicitly or implicitly: they guide judges and lawyers in conducting procedures by providing pre-established pathways of action. Software developers have designed these pathways by interpreting procedural rules, and interpreting procedural rules is no longer a matter of judicial discretion only. As digital procedures are becoming the normal way of handling proceedings, judiciaries need to ascertain regulation and coding, put together, ensure fair procedure. As technology gets smarter and can

23 A. Momoh et al. see note 14.

24 D. C. Steelman et al., *Caseflow management: The heart of court management in the new millennium*, Third edition with reviews, National Center for State Courts, 2004. *http://cdm16501.contentdm.oclc.org/cdm/ref/collection/ctadmin/id/1498* [accessed March 19, 2022]; M. Fabri, "Policies to enhance the quality of justice in Europe," in *L'administration de la justice en Europe et l'évaluation de sa qualité*, ed. M. Fabri, H. Pauliat, and P. Langbroek (Paris: Montchrestien, 2005).

25 D. Reiling, see note 3, supra.

take over more of human activity, this question becomes even more pressing with the advent of AI supported decision making, also advertised as artificial intelligence. Reconciling the requirements of fair procedure and those of the technology raises questions about development and user involvement in order to safeguard fair procedure as well as accommodate the new needs IT engenders.

5.2 DEVELOPMENT AND USER INVOLVEMENT

Development methodologies and user involvement differed between the projects. User involvement, in IT projects, generally means at least awareness of the impact of digitalization on all the system users,[26] and at best actively involving system users in development and deployment of the technology.

Both e-Curia and TOL used classic **waterfall methodologies** for development. Waterfall was the standard methodology at the time both projects started, in 2001 and 2005, respectively. In Waterfall, system requirements are mapped out completely before a project starts developing software.[27] The waterfall model is a breakdown of project activities into linear sequential phases, where each phase depends on the deliverables of the previous one and corresponds to a specialization of tasks: conception, initiation, analysis, design, construction, testing, deployment, and maintenance. In Waterfall, user involvement is strictly required only for setting requirements and for testing. In e-Curia, the project was initiated and led by the registry, one of the most important user groups of the e-Curia system. In TOL, there was a judge in charge, but then as part of the MoJ.

KEI, starting in 2013, used what was then becoming the methodology of choice: **agile development.** Agile software development advocates adaptive planning, evolutionary development, early delivery, and continual improvement, and it encourages flexible responses to change.[28] In **Agile**, users are actively involved in the development from the start of the project. Agile development needs active involvement of system users in all phases of development and deployment. In KEI, the product owner, part of the design and development project lead team, was a judge. The work process development team consisted of a judge and a number of court staff, both legal and administrative. The workings of the system during its development were tested by this team and by a group of lawyers. In this case, new versions of the procedural legislation were going through Parliament, and the system needed continuous redesign to adapt to the legislation. This repeatedly involved decisions about the workings of the system at various levels, such as court regulations and work processes. Who was authorized to take those decisions was not always clear.

5.3 JUDICIAL GOVERNANCE, OR WHO DECIDES?

If fair procedure needs to be safeguarded, and if this task is in the judicial domain, we need to ask and answer some relevant questions in relation to each of these three projects:

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26 J. Nandhakumar et al., see note 16, supra.

27 T. E. Bell et al., "Software requirements: are they really a problem?", paper presented at the ICSE '76 Proceedings of the 2nd international conference on Software engineering, 1976.

28 R. Pichler, *Agile Product Management with Scrum*, Addison-Wesley Professional, 2010. *https://agilemanifesto.org/* [accessed 12 March 2022].

- who took the initiative,
- who decided about requirements, testing, and accepting the system for use,
- who controlled the budget, and
- who decided about implementation?

In e-Curia, all this was done by the court registry, and the court board approved the initiative. The CJEU has the authority to establish its own rules of procedure and its own budget which includes IT development. The European Parliament provides the budget. The IT department of the Court is in charge of software development. E-Curia and other systems were developed in-house, following the classic waterfall model.

In TOL on the other hand, the MoJ took all decisions. In Italy, the Ministry manages and funds court services. The Judicial Council's involvement is limited to monitoring the system's functioning and its impact on judges' work and courts' organization. The MoJ's IT Directorate establishes the requirements in a dialogue with the legislative office, and in some cases with the national Bar Association. The Minister makes the high-level requirements official with a Decree. In the MoJ, the head of the IT directorate and the project development team leaders are almost always judges or prosecutors.[29] Judges and prosecutors bring and share expertise in working groups.[30] The development approach followed the waterfall model. For TOL, the Ministry also approved technical regulations establishing requirements similar to the paper procedures and contracted the software development. TOL was developed by a private company contracted by the MoJ. The MoJ can direct clerks – civil servants – to use the system, but not the judges. The uptake of the system remained low for many years. The interplay between the code of procedure and the technical rules gave rise to several issues. The Court of Cassation ruled many times to fine tune details.[31] So far, this has only required changes in procedures and actions by humans, not in the software code.

Since 2002, the Council for the Judiciary in the Netherlands administers the courts (but not the Supreme Court or the Council of State), including their information technology. IT development and system management are done by the judiciary's own IT organization. KEI was a cooperation between the Council for the Judiciary and the MoJ. They initiated the project together, but the MoJ had the final say about the budget. The MoJ drafted the new procedural legislation, the Council decided about requirements, accepting the system, and about implementation. The legislative process ran in parallel with the IT development. The project teams developing the new software used agile product development methodology. The product owners in those teams were all judges with experience in project management and IT.[32] Judiciary teams within the KEI program's components developed new practice rules

29 *D. Carnevali, ed., Soggetti Smarriti. Perchè innovazione e giustizia non si incontrano quasi mai. FrancoAngeli, 2011; M. Fabri, "The Italian Style of E-Justice in a Comparative Perspective," in A. Cerrillo and P. Fabra (eds.)* Information and Communication Technologies in the Court System, *IGI Global, 2009, pp. 1–19*.

30 The Directorate establishes the requirements (in a dialogue with the legislative office, and in some cases with the national bar), but it is the Minister, with a Decree, who makes official the high-level requirements.

31 I. Fedele, *Processo Civile Telematico. Rassegna tematica della giurisprudenza di legittimità aggiornata con le decisioni pubblicate al 31 dicembre 2019*, Corte di Cassazione, Ufficio del Massimario e Ruolo, 2020.

32 A. Wallace, "Ten Questions for Dory Reiling – Developing IT for Courts," *International Journal for Court Administration* 10(1) pp. 1–3, *https://doi.org/10.18352/ijca.293*.

and designed new work processes and technical practice rules. The digital procedure was piloted in two first instance courts.

These three case studies illustrate three different judicial governance models and different project management approaches. They can provide an illustration of (1) the deployment of e-justice platforms and its potential as a source of pressure on judicial discretion, and (2) whether the reduction of judicial discretion associated with the deployment of e-justice affects fair procedure.

In the Italian Ministerial model, TOL was developed by a private company recruited by the MoJ, and the role of the Council in development was small. However, there were safeguards embedded at various levels:

- A project team staffed by various judges established the functional requirements of the application. The final decision was by the MoJ, but strongly informed and influenced by the judges in the team.
- The system was rolled out to the courts slowly and gradually. For a long time, courts and judges were free to adopt the system or stay with the old paper-based procedures.
- Judges can always criticize the concrete functioning of the system or resist its use.
- The Judicial Council, as a guardian, is always keen to oppose initiatives that may hinder judicial independence. the Council's green light and support are always necessary conditions for any reform initiative.
- The Ministry owns the software code that can be checked by experts in or outside the system.

These safeguards are both complex and weak. From a governance perspective, this is a case where an outside institution can affect judicial discretion. In the Netherlands, KEI was developed by a program unit within the Council. The Council appointed judges to head the design units. Other judges identified functional requirements and tested the system as it developed. Court Information Service staff and specialists hired by the Program coded the software. If the e-justice platform reduced judicial discretion in some areas, it was decided by the judiciary itself. However, KEI depended on the Ministry of Justice for the new procedural legislation and for its financing. The Ministry made the use of the system mandatory from its launch. When – for reasons that are not relevant here – the Ministry decided to stop the financing, KEI had to stop.

E-Curia, like KEI, was developed within the Court, with registry staff, and internal IT specialists in charge. E-Curia brings the case file from the lawyers to the registry and from the registry to the assistants in the judges' chambers. It did not affect the judges. The project's budget was secured by the Court itself as well. This is similar to a Supreme Court governance model. In this "supreme court model", the governance of the judiciary and the project governance are in one hand, and thus suitably tailored to support digital innovation while protecting both the judiciary's discretion and the project from undesired external influence.

This comparison raises the question how safeguarding fair procedure in IT development, deployment and management can be included in judicial governance. It also illustrates that the strengths or weaknesses of particular governance model may impact on their ability to carry out this task, so that there is not necessarily a 'one size fits all' approach. In the following section we consider this in more detail, and

offer some suggestions, based on our observations of the approaches that have been successful in some of the projects we have discussed.

6. JUDICIAL DISCRETION, JUDICIAL GOVERNANCE, AND THE USE OF NEW TECHNOLOGIES

This chapter explores how the function of safeguarding fair procedure in IT development can be incorporated in judicial governance. The preceding analysis makes clear that developing and managing EJP's needs a governance function that safeguards fair procedure in software codes applying procedural law. Since deciding about how to apply procedural law is a judicial task, this function needs to be incorporated into the judicial governance. This section explores how this can be done.

6.1 STANDARDIZATION AND FAIR PROCEDURE: WHO DECIDES?

The three case studies have different judicial governance models and different project management approaches. They can provide an illustration of (1) the deployment of e-justice platforms and its potential as a source of pressure on judicial discretion, and (2) whether the reduction of judicial discretion associated with the deployment of e-justice affects fair procedure.

Of the three, the Italian Ministerial model seems to be the most vulnerable of the three to an undesired or improper reduction of judicial discretion via IT. The Ministry, in charge of the project, is in a position where it can exploit the system to reduce judicial discretion against the will of the judges. The safeguards are both complex and weak. From a governance perspective, this is a case where an outside institution can affect judicial discretion. In the Netherlands, these vulnerabilities of the Italian governance model are not in evidence. In the E-curia "supreme court model", the governance of the judiciary and the project governance are in one hand, and thus suitably tailored to support digital innovation while protecting both the judiciary's discretion and the project from undesired external influence.

This makes digital court innovation, its governance and development not just a technical or project management issue, but also a constitutional one. As digital procedures are becoming the normal way of handling proceedings, judiciaries need to ascertain that regulation and coding, put together, ensure fundamental rights values, and fair procedure in particular. In the following discussion, we suggest ways of achieving this, and in conclusion, suggesting some common standards and principles that can be applied in assisting a judiciary devising a solution to suit their individual circumstances.

6.2 FROM INDIVIDUAL DISCRETION TO ORGANIZED GOVERNANCE: RECONCILING TENSION

With the deployment of EJP's, both technology and judicial independence (hence discretion) are constitutive components of the administration of justice. Any tensions between the discretion and the technology must be resolved. There are diverse ways to do this. Some may preserve elements of individual discretion, while others may require a more collective approach. Plus, each judiciary needs to find a solution that fits their institutional setting.

At the individual level, technology has a solution of its own to resolve this tension. An example: digital case management will offer the user options on what to do next. With each list of tasks or options, it can offer the user an open option to do "something else".

This something else can be – for instance – to send a message asking for information, assigning a task to someone, or drafting a document containing a decision. Such an open option gives the user a degree of discretion for exceptional situations. This resolves the tension by reducing the strictness of the system and safeguards judicial discretion.

Some traditional ways of reconciling discretion and consistency also offer a resolution to the tension. Discretion of a single judge is not an absolute. Multi-judge panels and chambers are institutions designed to allow a discussion between different interpretations of facts and law to find agreed decisions. Some judiciaries use grand chambers or the plenum of the full court to decide particularly relevant and/or potentially controversial cases and set common jurisprudential orientations. In this way, judicial discretion is reduced in a manner compatible with the principle of judicial independence. Many judiciaries also have other ways of ensuring consistency in judicial decision making such as committees setting guidelines for sanctions in criminal law, standard ways of calculating alimony and forms of compensation. Most of those committees create guidelines: indications or soft standards, but not binding instructions. Encoding judicial procedure in software, with the standardizing effects discussed above, can be similar to the standard setting procedure of a guidelines committee or a grand chamber. Such a procedure applied to EJP development allows judicial supervision on critical decisions affecting judicial discretion. This keeps the features and functioning of the system under judicial control. Since the system will prescribe a single, standard way in which work needs to be done, a body like a committee or working group charged with setting those standards and prescribing the work processes for the EJP will need to have a stronger authority than a committee just framing guidelines.[33] Some judiciaries also have systems like preliminary rulings, where judges can ask a higher court how they should interpret certain clauses in the law. Such preliminary understanding of the meaning of the law can also be a way to resolve the tension between regulation and technology. Uzelac suggests this could become a new task for Supreme Courts, as supervisors of the work of the lower courts, in safeguarding the uniformity of their work.[34] Courts and judiciaries, to safeguard their impartiality and independence as meant in the human rights conventions, need to ensure that they also safeguard the workings of their e-justice platforms to avoid external undesired influence. However, this should not exclude external users of the platform such as lawyers and other litigants from involvement in the project. Judiciaries need to be in charge of taking the initiative, deciding about requirements, testing, and accepting the system for use, controlling the budget, and deciding about implementation, while also factoring in the interests and needs of its other users. Lawyers and stakeholders should be able to contribute to the definition of the digital procedure making requests and proposals, particularly in areas in which their action is required: document and information interchange with the courts, summoning, and any other procedural activity in which lawyers are called to guarantee the fair trial. It is not just a functional issue; it is a way to set – at EJP development level – the method through which lawyers and judges interact to establish the procedure to be applied to a specific case and more generally, to build the level playing field. How that can be done is discussed in the next section.

33 The Netherlands judicial council has, in the aftermath of KEI, set up decision-making boards for software development, and it has delegated its decision-making authority to those boards. It is too early to know whether this solution is going to have the intended effect.

34 A. Uzelac, "Supreme Courts in the 21st Century: should organisation follow the function?," *Studia Iuridica* LXXXI, pp. 125–138; T. Bunjevac. *Judicial Self-Governance in the New Millennium. An Institutional and Policy Framework*. Singapore: Springer, 2020. DOI: *https://doi.org/10.1007/978-981-33-6506-3*.

6.3 DESIGNING JUDICIAL GOVERNANCE IN IT – PRINCIPLES AND STANDARDS

Governance of judiciaries is, by design, complex because it needs to safeguard judicial independence. This means that judiciaries each need to find solutions that fit their particular situation. EJP development, and the transformative effects of digital technologies require a systematic reassessment of judicial governance and the identification of new institutional arrangements in order to safeguard the values of fair procedure laid down in the human rights conventions. Essential questions should be decided before EJP development starts: which body or bodies are needed to perform the new function effectively, which authority should make the body's appointment, which judges should be appointed, and how the body should work.

The solutions chosen need to take these minimum standards and good practices into account:

- Identify the body institutionally in charge to ascertain that the coding of the system is a correct application of the law, similar to a preliminary rulings system. This can be the apex court, a body within the apex court, a committee composed of members of the judiciary, the ministry or the council, each solution as required by the given situation.
- Decide who should be members of the body or bodies involved, and whether to include IT and stakeholders like the lawyers and other users.
- Ensure that the judiciary – not the MoJ – appoints the majority of the members of the bodies involved in order to guarantee the judicial supervision of the project.
- Ensure the members of the body are sufficiently knowledgeable about technology.
- Guarantee the involvement of stakeholders because their inputs and opinions are essential in establishing the level playing field.
- Involve users in the development of the system throughout the life of the project, by including users and stakeholders in the testing process and in decision making.
- Enable the judiciary and the other stakeholders to signal improper coding of the rules of procedure.
- Guarantee resources for continuous realignment of legal and software code, during a long testing phase, and regularly during the lifespan of the project and the system.

Assure access and accountability of the software code so that third parties can check its functioning against the command of the law.

These essential standards and practices will support the development of e-justice platforms that conform to procedural law, offer a level playing field and thereby fair procedures. This way, they serve to ensure fair procedure as prescribed in the human rights conventions.[35]

35 CEPEJ, *Guidelines on how to drive change towards Cyberjustice, Stock-taking of tools deployed and summary of good practices*, European Commission for the Efficiency of Justice, 2016. Available at *https://edoc.coe.int/en/efficiency-of-justice/7501-guidelines-on-how-to-drive-change-towards-cyberjustice-stock-taking-of-tools-deployed-and-summary-of-good-practices.html#*.

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The authors have no competing interests to declare.

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