

# The Use of the Technology in Justice System

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**Abstract:** *This paper analyzes the potential of information technologies and Artificial Intelligence (AI) to improve access to justice, reduce costs, and enhance efficiency within the judicial system. It emphasizes the importance of thorough programming, dataset selection, and continuous oversight to mitigate biases and maintain fair trial rights, and it discusses the opportunities and challenges associated with AI's role as a decision-making assistant or autonomous decision-maker. Additionally, the paper examines the influence of the COVID-19 pandemic on the implementation of electronic filing systems and integrated justice platforms, as well as their effects on judicial procedures. It underscores the necessity of establishing strong legal and ethical frameworks to guarantee that technological advancements maintain the integrity of the decision-making process, impartiality, and judicial independence. The paper also examines international practices and the Albanian context, emphasizing the pressing necessity for an advanced case management system to improve data management and judicial efficiency.*

**Keywords:** Judicial system, Legal and Ethical Frameworks, digitalization, artificial intelligence

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## INTRODUCTION

The integration of Artificial Intelligence (AI) into the judicial system processes presents both opportunities and challenges. AI has the potential to significantly accelerate proceedings, reduce costs, and expand access to justice by assisting decision-making processes or acting as autonomous decision-makers in specific situations. The significance of thorough programming, dataset selection, and ongoing oversight to avoid the the extension of discriminatory practices is emphasized by the issue of bias in AI, which is a reflection of pre-existing prejudices in training data. The potential of AI to simulate legal reasoning in simple cases suggests a cautious yet optimistic approach to technology, advocating for its selective application in situations where public hearings are unnecessary<sup>1</sup>.

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<sup>1</sup> Stolper, I. (2024). Towards Automated Decision-Making at Court: The Use of Artificial Intelligence for Drafting and Rendering Court Decisions. *Teisė*.

Judicial procedures are being increasingly supported by information technologies, including integrated justice platforms and e-filing. The adoption of information technology (IT) in judicial proceedings was accelerated by the COVID-19 pandemic, which resulted in the recognition of its advantages. Integration of e-justice platforms and electronic filing, which enable the exchange of data and documents, as well as the electronic management of judicial procedures, are becoming increasingly common in case management<sup>2</sup>. The quality and speed of case handling in courts, as well as the efficiency and quality of justice, can be enhanced through the use of information technology. Information technology can also advance or facilitate these goals, despite being regarded as opposites or merging.

The judicial system can be more compliant with the requirements of fair hearing and reasonable delay by utilizing information technology<sup>3</sup>. AI has the potential to facilitate the access to justice objectives of courts, particularly by expediting proceedings that may require additional time if conducted in a conventional manner. Additionally, it can reduce costs by reducing the number of human resources required to perform repetitive tasks. However, when it comes to making more autonomous and creative decisions in legal proceedings, its capacity is uncertain. The complexities involved necessitate an adequate legal structure to prevent the infringement of the right to a fair trial.<sup>4</sup>

The issue of bias in AI and the prevention of the growth of discriminatory practices necessitate careful programming, dataset selection, and ongoing oversight<sup>5</sup>. There are three potential risks associated with the use of AI in the judiciary: algorithmic unfairness, liability issues, and a lack of transparency.<sup>6</sup> The judiciary has the potential to benefit from AI in a variety of ways, including the automation of legal information processing, the analysis of large data volumes, the prediction of court decisions, and the assistance of judges. Additionally, the ethical implications and admissibility of AI tools in the judiciary are significant factors to consider<sup>7</sup>. The implementation

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<sup>2</sup> Reiling, D., & Contini, F. (2022). E-Justice Platforms: Challenges for Judicial Governance. *International Journal for Court Administration*.

<sup>3</sup> Reiling, D. (2006). Doing justice with information technology. *Information & Communications Technology Law*, 15, 189 - 200

<sup>4</sup> Stolper, I. (2024). Automatizuotas sprendimų priėmimas teisme: dirbtinio intelekto naudojimas rengiant ir priimant teismo sprendimus. *Teisė*.

<sup>5</sup> Stolper, I. (2024). Automatizuotas sprendimų priėmimas teisme: dirbtinio intelekto naudojimas rengiant ir priimant teismo sprendimus. *Teisė*.

<sup>6</sup> Byelov, D., & Bielova, M. (2023). Artificial intelligence in judicial proceedings and court decisions, potential and risks. *Uzhhorod National University Herald. Series: Law*.

<sup>7</sup> Dymitruk, M. (2020). Artificial Intelligence as a Tool to Improve the Administration of Justice?

of AI in justice administrations has the potential to enhance efficiency and facilitate the delivery of services. Artificial intelligence algorithms are beginning to assist lawyers by means of AI search tools and justice administrations with predictive technologies and business analytics that are based on big data. By extracting precise information in a customized manner, AI-based legal knowledge tools may accelerate the delivery of legal services<sup>8</sup>. Nevertheless, the potential disruptive effects of AI deployment in the administration of justice and the necessity of new forms of accountability are also emphasized. The application of AI in the judicial system is being increasingly investigated, with a particular emphasis on the advantages, disadvantages, and limits of machine learning algorithms.

In the field of jurisprudence, legal professionals may employ machine learning methods to solve problems, assist specialists, or make autonomous decisions<sup>9</sup>. However, the optimal result is perceived as a result of the collaboration between human and AI-related factors. The principle of procedural fairness must be abandoned in order for AI to be directly implemented in judicial proceedings. Additionally, social rating systems, which are examples of big data solutions, pose a concern in that they have the potential to employ artificial intelligence to resolve disputes without regard for human rights.<sup>10</sup> It is imperative to ensure that the right to a fair trial is taken into account in the use of AI in the adjudicating process, as the impact of AI on this right is a critical factor. While maintaining the right to a fair trial, which necessitates a competent, independent, and impartial court, it is impossible to implement AI systems in all forms of court proceedings<sup>11</sup>. ICT refers to a specific type of hardware and software that generate, store, and transmit information in an electronic format. The justice system's adoption of ICT can be categorized into three stages, each of which represents a distinct level of technological advancement. The initial stage, which can be referred to as the electronic stage, commenced with the initial integration of electronic equipment into the working processes of courts and lawyers. The predominant feature of this phase was the utilization of computers as machines for the purpose of information generation and storage. The storage of information was made more efficient and cleaner by the introduction of computers, which also improved the availability of stored data for retrieval and search. The adoption of ICT in the justice system entered its second stage with the development of software that could actively

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<sup>8</sup> Abiodun, O.S., & Lekan, A.J. (2020). EXPLORING THE POTENTIALS OF ARTIFICIAL INTELLIGENCE IN THE JUDICIARY. *International Journal of Engineering Applied Sciences and Technology*.

<sup>9</sup> Milev, M., & Tretynk, V. (2023). Using of Artificial Intelligence Methods in Judicial Proceedings. *Cybernetics and Computer Technologies*.

<sup>10</sup> Székely, J. (2020). Lawyers and the Machine. *Contemplating the Future of Litigation in the Age of AI*.

<sup>11</sup> Nowotko, P.M. (2021). AI in judicial application of law and the right to a court. *International Conference on Knowledge-Based Intelligent Information & Engineering Systems*.

process data. This stage is characterized by the use of smart hardware and software that can actively process and deliver information. Smart applications are capable of exchanging and connecting data with one another, and they can also elaborate on this data at a more advanced level. AI is the third stage of ICT development in the justice system. These devices are capable of not only storing, organizing, and actively processing information, but also of generating new information based on user input. It is anticipated that this stage will serve as the subsequent progression in the development of justice.<sup>12</sup>

### Legal and ethical framework for use of technology

The subject of technology's use in the judiciary system is complex, evolving over time, and encourages jurists to consider a variety of legal and ethical issues. Kramer<sup>13</sup>, Reiling<sup>14</sup> and others have mentioned the potential for technology to improve efficiency and quality of justice, while stressing the challenges of implementation and potential risks. For example, Fest<sup>15</sup> and Stolper<sup>16</sup> emphasize the gap between legal and ethical frameworks and their practical application, particularly in the context of public sector data professionals and the use of AI. Henning<sup>17</sup> and Netten<sup>18</sup> discuss the role of legal frameworks in mediating collaboration and enabling the smart government vision, respectively. Sourdin<sup>19</sup> and Reiling<sup>20</sup> both underscore the need for ethical frameworks to guide the use of technology in the judiciary, particularly in the development of e-justice platforms and the integration of AI.

<sup>12</sup> Kramer, Xandra E. and Kramer, Xandra E. and van Gelder, Emma and Themeli, Eris, e-Justice in the Netherlands: the Rocky Road to Digitised Justice (May 15, 2018). in: M. Weller & M. Wendland (eds.), Digital Single Market: Bausteine eines Rechts in der Digitalen Welt, Tübingen: Mohr Siebeck 2018, p. 209-235, Available at SSRN: <https://ssrn.com/abstract=3167543> or <http://dx.doi.org/10.2139/ssrn.3167543>

<sup>13</sup> Kramer, X.E., Gelder, E.V., & Themeli, E. (2018). e-Justice in the Netherlands: the Rocky Road to Digitised Justice. *Social Science Research Network*.

<sup>14</sup> Reiling, D. (2006). Doing justice with information technology. *Information & Communications Technology Law*, 15, 189 - 200.

<sup>15</sup> Fest, I., Wieringa, M., & Wagner, B. (2022). Paper vs. practice: How legal and ethical frameworks influence public sector data professionals in the Netherlands. *Patterns*, 3.

<sup>16</sup> Stolper, I. (2024). Towards Automated Decision-Making at Court: The Use of Artificial Intelligence for Drafting and Rendering Court Decisions. *Teisè*.

<sup>17</sup> Henning, F., & Ng, G.Y. (2009). The Challenge of Collaboration – ICT Implementation Networks in Courts in The Netherlands. *Transylvanian review of administrative sciences*, 5, 27-44.

<sup>18</sup> Netten, N., Bargh, M.S., Braak, S.W., Choenni, S., & Leeuw, F. (2016). On Enabling Smart Government: A Legal Logistics Framework for Future Criminal Justice Systems. *Proceedings of the 17th International Digital Government Research Conference on Digital Government Research*.

<sup>19</sup> Sourdin, T. (2021). Ethical issues in Judge AI and judicial technology use.

<sup>20</sup> Reiling, D., & Contini, F. (2022). E-Justice Platforms: Challenges for Judicial Governance. *International Journal for Court Administration*.

The European Convention of Human Rights (ECHR) mandates an independent and impartial judiciary. The jurisprudence of the court (ECtHR) also confirms that the key principle governing the application of Article 6 is fairness (*Gregačević v. Croatia*, 2012, § 49), although what constitutes a fair trial but must depend on the circumstances of a particular case (*Ibrahim and Others v. the United Kingdom [GC]*, 2016, § 250)<sup>21</sup>. The case-by-case spirit of the norm puts all attempts to excessive use of IT under scrutiny.

An additional risk is that the executive, rather than the judicial governing bodies, is responsible for the implementation of technological reforms in several member states of the Council of Europe. This could potentially undermine judicial independence. The rule of law may be potentially violated and judicial autonomy in decision-making may be impacted by the design of technology, such as AI and data tools. An effective oversight of these technologies is essential; however, it is at risk if it is not conducted within the judiciary. AI's involvement in case management may result in the establishment of biases and the reduction of transparency, which is crucial for the maintenance of judicial independence and accountability. Additionally, the utilization of technology might weaken judges' abilities to evaluate evidence and make decisions, which could result in a dependence on technological tools and a reduction in their ability to independently evaluate the facts and circumstances of the cases.

By potentially introducing biases in case allocation and influencing the judiciary's control over the cases, technology presents obstacles to the right to a fair trial. For instance, hybrid hearings raise concerns regarding the integrity of trial processes and the equality of arms. The Consultative Council of European Judges (CCJE) is an advocate of a transparent legal and ethical framework that governs the judiciary's utilization of technology in order to guarantee judicial impartiality and independence. This framework should adhere to the ECHR's requirements, with a particular emphasis on the rights to a fair trial, privacy, and freedom of expression, as well as judicial independence and impartiality.

The application of technology must be free of bias or partiality, thereby guaranteeing that these rights are upheld without discrimination. The European Court of Human Rights (ECtHR) has accommodated its case law to technological advancements, acknowledging, for instance, that Article 6 can be satisfied by remote participation in trials via videoconferencing, provided that specific conditions are met. The use of technology in judicial contexts should be supported by

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<sup>21</sup> Guide on Article 6, of the European Convention on Human Rights, Right to a fair trial (criminal limb) updated on 29 February 2024, <https://rm.coe.int/1680304c4e>

member states through legislation that ensures it does not compromise data protection or decision-making. This involves the establishment of judicial data protection supervisory bodies and the preservation of non-technology-based access to justice for individuals who are unable to utilize digital solutions. In order to guarantee that the judiciary has the freedom to select the most suitable methods for various types of hearings, procedural rules must specify the circumstances under which technology may be implemented in court proceedings<sup>22</sup>.

### **Technology implementation in different judicial systems.**

A range of data tools are used by the judiciaries in the Netherlands to enhance efficiency and quality of justice. These tools include information technology for civil case processing<sup>23</sup>, data as evidence in criminal courts<sup>24</sup> and public sector data analytics for inspection and enforcement of social services and criminal investigation<sup>25</sup>. The collection of data for evidence in criminal courts is not impeded by the current legal framework in the Netherlands. Nevertheless, the regulation of data collection (in criminal law) and the regulation of data processing and analysis (in data protection law) are not interconnected. Additionally, automated data analysis is not subject to regulation, in contrast to the numerous regulations that govern data collection. The Netherlands employs numerous public sector data analytics applications for operational purposes, such as resource allocation, inspection, and enforcement, rather than for forecasting. The most common application type is inspection and enforcement, particularly in the social services sector.

In the Netherlands, more than half of the applications are pilots, rather than fully implemented, and nearly half of the applications involve collaborations between various organizations and government levels. The integration of judicial databases is also employed to monitor crime and law enforcement<sup>26</sup>. However, the use of these tools is not without challenges, such as the need for

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<sup>22</sup> CONSULTATIVE COUNCIL OF EUROPEAN JUDGES (CCJE) CCJE Opinion No. 26 (2023): Moving forward: the use of assistive technology in the judiciary, Strasbourg, 1 December 2023

<sup>23</sup> Reiling, D. (2006). Doing justice with information technology. *Information & Communications Technology Law*, 15, 189 - 200.

<sup>24</sup> Custers, B.H., & Stevens, L. (2021). The Use of Data as Evidence in Dutch Criminal Courts. *European Journal of Crime, Criminal Law and Criminal Justice*.

<sup>25</sup> Veenstra, A.F., Grommé, F., & Djafari, S. (2020). The use of public sector data analytics in the Netherlands. *Transforming Government: People, Process and Policy*.

<sup>26</sup> Braak, S.W., Choenni, S., & Verwer, S. (2013). Combining and Analyzing Judicial Databases. *Discrimination and Privacy in the Information Society*.

regulation in data collection and processing<sup>27</sup>, and the protection of privacy in data integration<sup>28</sup>. In order to monitor crime and law enforcement, it is necessary to integrate databases from various criminal justice organizations. The integrated data can be analyzed to investigate the progression of suspects through the system. Data warehouses and dataspace are the two methods employed to integrate judicial data. The integration of judicial data necessitates the consideration of privacy concerns, including the use of aggregate data, adherence to data protection laws, and the exclusion of sensitive information. In order to prevent discrimination and inaccurate conclusions, caution is necessary when mining judicial data. Despite these challenges, the judiciaries are adapting to the changing economic landscape, with a focus on improving efficiency and coping with increased caseloads and reduced budgets<sup>29</sup>. European judicial organizations are currently experiencing significant transformations, as a result of the economic recession, the emphasis is shifting from the quality of justice to efficiency. The efficient functioning of the judiciary is being faced with challenges in numerous countries due to the increased number of court cases and the reduction of budgets for the judiciary. On the other hand, the European Networks of Councils for the Judiciary (ENCJ), which represents the judiciaries of the European Union (EU), is concerned about the economic crisis's potential impact on the judiciary.

In Germany, A range of data tools are being used by judiciaries, with a focus on open judicial data, empirical legal studies, and the use of artificial intelligence. Markovic<sup>30</sup> emphasizes the importance of open judicial data: Judicial data sets should include court decisions, case registers, filed document records, and statistical data. Markovic suggest actions to improve the openness of judicial data, including publishing data in standardized machine-readable formats, assigning metadata, providing access, publishing licenses, and creating a centralized portal. Hamann<sup>31</sup> introduces the German Federal Courts Dataset as a resource for empirical legal scholars. The German Federal Courts Dataset was established, which comprises a docuset of more than 3,000 digitized pages and a machine-readable dataset of more than 6,000 entries. The dataset was easily combined with other datasets by being modelled as linked open data and imported into Wikidata.

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<sup>27</sup> Custers, B.H., & Stevens, L. (2021). The Use of Data as Evidence in Dutch Criminal Courts. *European Journal of Crime, Criminal Law and Criminal Justice*.

<sup>28</sup> Braak, S.W., Choenni, S., & Verwer, S. (2013). Combining and Analyzing Judicial Databases. *Discrimination and Privacy in the Information Society*.

<sup>29</sup> Dijk, F.V., & Dumbrava, H. (2013). Judiciary In Times Of Scarcity: Retrenchment And Reform. *International Journal for Court Administration*, 5, 15-24.

<sup>30</sup> Markovic, M., & Gostojić, S. (2020). Open Judicial Data: A Comparative Analysis. *Social Science Computer Review*, 38, 295 - 314.

<sup>31</sup> Hamann, H. (2019). The German Federal Courts Dataset 1950–2019: From Paper Archives to Linked Open Data. *Legal Information & Technology eJournal*.

The dataset's potential is realized through its ability to be utilized across multiple data sources, which enables combinatoric analyses that capitalize on the data compatibility.

The application of machine learning to predict decisions of the European Court of Human Rights is discussed by Medvedeva<sup>32,33</sup>, highlighting the potential and limitations of these tools. The authors conducted several experiments that involved analysing language of the judgements of the European Court of Human Rights to predict if the case was judged to be a violation or not. The results showed that using relatively simple and automatically obtainable information, the proposed models are able to predict decisions correctly in about 75% of the cases, which is much higher than the chance performance of 50%. Ruppert<sup>34</sup> presents LawStats, a tool for large-scale German court decision evaluation using web service classifiers. LawStats provides quantitative insights into German court decisions from the Federal Court of Justice (BGH) by automatically classifying the revision outcome and offering statistics on judges, senates, and previous instances. The statistics are accessible through an open web interface to aid law professionals, with a focus on interpretability so users can understand the reasoning behind the machine's decisions. The tool can provide a foundation for further quantitative research in the legal domain and serve as a proof-of-concept for similar efforts.

In France, the French judiciary is increasingly utilizing data tools, particularly artificial intelligence and open data, which has the potential to be highly beneficial. AI is being utilized in legal service activities on a more frequent basis, with the implementation of predictive technologies and search algorithms. - Lawyers are beginning to receive assistance from AI algorithms through AI search tools. Additionally, AI is providing justice administrations with predictive technologies and business analytics that are based on big data. Conversely, the legal knowledge tools that are based on this technology can expedite the delivery of legal services by extracting precise information in a customized manner<sup>35</sup>. Nevertheless, this raises concerns regarding intellectual property and liability. In France, the utilization of artificial intelligence is on the rise, particularly in the field of justice. However, this has resulted in issues regarding

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<sup>32</sup> Medvedeva, M., Vols, M., & Wieling, M. (2018). Judicial decisions of the European Court of Human Rights: looking into the crystal ball.

<sup>33</sup> Medvedeva, M., Vols, M., & Wieling, M. (2019). Using machine learning to predict decisions of the European Court of Human Rights. *Artificial Intelligence and Law*, 28, 237 - 266.

<sup>34</sup> Ruppert, E., Hartung, D., Sittig, P., Gschwander, T., Rönneburg, L., Killing, T., & Biemann, C. (2018). LawStats - Large-Scale German Court Decision Evaluation Using Web Service Classifiers. *International Cross-Domain Conference on Machine Learning and Knowledge Extraction*.

<sup>35</sup> Abiodun, O.S., & Lekan, A.J. (2020). Exploring the potentials of artificial intelligence in the judiciary. *International Journal of Engineering Applied Sciences and Technology*.



intellectual property and liability. The French government has prioritized the development of AI; however, it is currently awaiting the implementation of new EU regulations before enacting comprehensive AI legislation. The distribution of intellectual property rights related to AI systems should reflect the principle of prioritizing human interests over AI. France has legalized the use of AI in the judiciary, but with measures in place to ensure transparency and protect individual rights. A natural or legal person is responsible for any damages or violations that result from the use of AI systems.<sup>36</sup> The use of AI in the judiciary is already challenging the distribution of agency between judges and technological devices. The introduction of the "justice prediction" software does not represent a radical disruption, but rather puts to the test the existing tension between the independence of the judge (autonomy vs. control) and the need to harmonize judicial decisions<sup>37</sup>.

The development of AI and the opening of judicial data may lead to the emergence of predictive justice, which could improve the predictability of case law<sup>38</sup>. AI tools are also being used to predict judgments, with potential impacts on the judicial system<sup>39</sup>. However, the use of AI in the judiciary presents both challenges and opportunities, including greater legal transparency and more efficient dispute resolution. In the short run, AI is expected to lead to greater legal transparency, more efficient dispute resolution, improved access to justice, and challenges to the traditional law firm model. In the longer term, the impact of AI on the legal profession is difficult to predict as lawyers incorporate these tools into their practice<sup>40</sup>. The development of AI capable of predicting judicial decisions raises questions about the potential robotization of justice<sup>41</sup>. The algorithm examined in this study was able to accurately predicting the decisions of judges at the European Court of Human Rights with 80% precision. This implies that judicial decisions may be more influenced by logical reasoning than by subjective factors. Nevertheless, the investigation presents inquiries regarding the possibility and appeal of employing computers to assist justice in the future.

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<sup>36</sup> Dufлот, A. ARTIFICIAL INTELLIGENCE IN FRENCH LAW. *Courier of Kutafin Moscow State Law University (MSAL)*.

<sup>37</sup> Licoppe, C., & Dumoulin, L. (2019). Le travail des juges et les algorithmes de traitement de la jurisprudence. Premières analyses d'une expérimentation de « justice prédictive » en France. *Droit et société*.

<sup>38</sup> Vigneau, V. (2021). Faudra-t-il encore des juges ? *Annales Médico-psychologiques, revue psychiatrique*.

<sup>39</sup> Yassine, S., Esghir, M., & Ibrihich, O. (2023). Using Artificial Intelligence Tools in the Judicial Domain and the Evaluation of their Impact on the Prediction of Judgments. *ANT/EDI40*.

<sup>40</sup> Alarie, B., Niblett, A., & Yoon, A.H. (2018). How artificial intelligence will affect the practice of law. *University of Toronto Law Journal*, 68, 106 - 124.

<sup>41</sup> Barraud, B.A. (2017). Un algorithme capable de prédire les décisions des juges : vers une robotisation de la justice ?

### **Albanian context**

In the past 15 years, there have been many attempts to introduce, pilot, and improve judicial case management systems. At present, there is no unified system in operation across all courts. As a result, the Albanian judiciary is in need of a modern, advanced system to replace the two current case management systems (ARK-IT and ICMIS, as well as their variations and 27 local installations).

Under the supervision of the High Judicial Council (HJC), the justice system comprises 38 courts that employ two distinct case management systems (ARK-IT and ICMIS) and seven separate applications that are not integrated, meaning they do not interact with one another. This resulted in the courts' ineffective management of human resources, challenging workflow, and inadequate court services. The outdated technologies have made both current case management systems (CMS) ineffective. They are unable to accommodate the increasing workload and the demand for digitalized services in courts. Consequently, the outdated nature and incurred costs of maintaining the dysfunctional current systems necessitate the urgent implementation of a case management system.

The new CMIS<sup>42</sup>, as planned, will be an integrated system for all justice institutions, not only for the courts. Given the extent and need for collection, store and process of databases and documents, the judiciary will be the first to implement a case management system. At a later, subsequent stage, the new system will connect the rest of justice related institutions, including the Ministry of Justice, High Judicial Council, School of Magistrates, police, prosecutorial system, national electronic civil registry, and TIMS<sup>43</sup>. This integration will facilitate the exchange of information between these institutions in a mutually beneficial manner. As a result, the implementation of such a system is critical not only for the courts and the HJC, but also for Albania's entire justice system.

Currently, the High Judicial Council is utilizing indicators collected from all courts to enhance and sustain both systems. It enabled compatibility between their systems and databases that contain information about individuals and legal entities in early 2021. However, the court staff only partially employs these functionalities and the overall systems as a result of their lack of substantial benefits. These systems are unable to produce meaningful statistics, streamline document creation, or facilitate the monitoring of case statuses and deadlines. The forthcoming CMIS will function as

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<sup>42</sup> Kiškis, M., & Petrauskas, R. (2004). ICT adoption in the judiciary: classifying of judicial information. *International Review of Law, Computers & Technology*, 18, 37 - 45.

<sup>43</sup> TIMS system enable automated passport checks.

a web-based system for the management of data and documents across all courts in Albania. The deployment of new software versions, as well as all maintenance and backup tasks, will be simplified by the implementation of a single, centralized installation. Centralizing the database will reduce the necessity for continuous efforts to ensure data consistency across multiple data sources and will facilitate the synchronized transfer and access of data. A centralized system will be able to effectively protect data from potential risks to its confidentiality, integrity, availability, and privacy by making the necessary investments in security measures, both technological and procedural. At present, there are frequent and prolonged periods of service disruption that last for hours or even days due to irregularities encountered by physical servers located in courts. Through the implementation of a reliable continuity plan and the maintenance of reliable internet connectivity, a centralized system can reduce the possibility of interruptions, data loss, or corruption during incidents.

Optimizing the efficiency of the courts, enhancing the quality of their work, outcomes, and data generated, and fostering transparency, accountability, and inclusivity are the primary objectives of the new CMIS. Judicial leaders who are responsible for the development of this system will implement measures to prevent any adverse effects on the implementation of the rule of law that may arise from the rules, laws, and practices that are driven by digitalization. In order to guarantee a fair trial, all digitalized legal proceedings must include all requisite safeguards. The system will achieve a variety of objectives, such as the provision of efficient and adaptable instruments for the creation and distribution of digital judicial rulings, which include anonymity and the option of categorization. It will also create comprehensive digital case files that facilitate access to all case-related documents<sup>44</sup>, including audio recordings and multimedia electronic evidence, from a single location. Judges, legal professionals, assessors, and other involved parties, including the High Judicial Inspectorate, will be able to access digital case files securely, even when working remotely. The system will also manage video conferences and integrate their recordings into the digital case files.

All components contained within electronic case files must be stored within a common document repository<sup>45</sup>. Audio recordings of sessions are already stored in the Recorded Digital Audio (RAD) system, which guarantees secure access to them. Additionally, any forthcoming video recordings of live or remote sessions are included in this system. It is imperative to implement a Digital Rights

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<sup>44</sup> Kramer, X.E. (2022). Digitising Access to Justice: The Next Steps in the Digitalisation of Judicial Cooperation in Europe. *SSRN Electronic Journal*.

<sup>45</sup> Bryantseva, O.V. (2022). Digitalization Of Judicial And Enforcement Proceedings: Development Prospects. *European Proceedings of Social and Behavioural Sciences*.

Management (DRM) solution to regulate the access and usage of documents created within the CMIS framework by external users. The most strict data protection protocols in the judiciary will be guaranteed by utilizing the Common Document Repository (CDR). This repository can also be employed by the case management system for prosecutors and other external applications, which will result in shared maintenance expenses across institutions and streamline document exchange between them. This process involves the integration of front-office functionalities that facilitate the exchange and access of electronic documents and data, with a particular emphasis on the e-filing system. Two modes of interaction will be available to external users who are involved in judicial proceedings, including parties, citizens, private companies, public institutions, and lawyers. The web portal is designed to accommodate external users, including lawyers and citizens who are representing themselves in court without legal representation, who do not utilize any specific application. Individuals will be able to submit legal acts to the court by uploading pertinent documents once they have completed a secure electronic identification process, preferably utilizing two-factor authentication. This process is facilitated by an application form that is user-friendly. Additionally, they will have the ability to request services, access digital files and information related to their case, and receive electronic notifications. This portal will provide a comprehensive range of search capabilities that are both efficient and streamlined, in addition to enabling the appropriate level of customization. In order to facilitate the digitalization of the back office and optimize its organization, this web-based electronic service will be developed.

The digitization of judicial procedures<sup>46</sup> and electronic filing<sup>47</sup> requires comprehensive legislation aimed at formalizing, simplifying, and/or dematerializing and standardizing processes. In order to prevent potential legal challenges and maintain the necessary flexibility for special use cases, it is imperative to establish strict rules and technical requirements. The fundamental principles of effective legislation include the following: the drafting of a coherent and independent regulation, the harmonization of the legislation with existing laws, the allowance of some flexibility for a variety of exceptions and special use cases, the establishment of obligations regarding readiness, the transition period, and subsequent measures, the preservation of alternative channels for those who wish to opt out or disconnect, and the promotion of data exchange with external systems. In practice, the range of procedural actions and declarations of authenticity in electronic form as regulated by law should be described by laws or formal decisions taken by competent institutions

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<sup>46</sup> Zeman, J. (2022). Digitalization and COVID-19 in the Justice Sector. *EDAMBA 2021 : COVID-19 Recovery: The Need for Speed : Conference Proceedings*.

<sup>47</sup> Kramer, X.E. (2022). Digitising Access to Justice: The Next Steps in the Digitalisation of Judicial Cooperation in Europe. *SSRN Electronic Journal*.

or bodies. Generally, procedural actions in electronic form should be undertaken according to respective procedural laws and the concept of a centralized unified information system for courts providing electronic services, including electronic registration and allowing access to digital case files and public electronic records held by judicial authorities, including free and public access to registers and statistics defined by law or other parts of legislation. On the other hand, it should introduce the digital-by-default principle and mandatory measures to be taken in that direction. This includes the creation of a one-stop platform to facilitate communications from the court to the end-user (and vice versa) with digital means and ensure the reuse of process points facilitated by the government, such as existing platforms or frameworks for electronic signatures, electronic identity cards, and electronic payments, as appropriate.

In this context, the new regulation will necessitate the adoption of secondary legislation to regulate the use of a single time standard to determine the occurrence of a variety of legal or technical events (e.g., using the format of year, date, hour, minutes, and seconds). This regulation will take into account the time zone, the regime for the creation, maintenance, preservation, and access to electronic documents, including electronic evidence, as well as other information processed by the judiciary, and the regime for keeping and accessing digital case files.

Furthermore, the new legislation will regulate that declarations and acts submitted to judicial authorities on paper, as well as all paper documents and information, be entered into the judicial information systems by capturing electronic images in a specific form and manner that allow their recreation; and ensuring the unification of the regime for keeping digital files and physical files, as well as simultaneous actions, both electronically and on paper, the automated exchange of electronic documents (and digital case files) between judicial authorities, in terms of interoperability and information security, as well as the automated exchange of data (such as individual identification data and marital status, company data, property data, etc.) and electronic documents between judicial authorities and other state authorities (if requirements change) to minimize the workload in managing case files, the use of electronic signatures, electronic seals, and electronic identification by judicial authorities, including conditions and terms for purchasing, using, renewing, and terminating electronic signature, seal, and identification certificates by judicial bodies.

Additionally, the new sublegal acts will regulate the maintenance, preservation, and access to a public register of judicial decisions, which will include rules and procedures for the protection of personal data, the unique identification of decisions, and other matters. These regulations will be

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in accordance with the current framework for the publication of judicial decisions, which includes the types of judicial decisions that should be published, the time limits for publication, public/restricted access to decisions/details about the decisions, and any other matter that enables the execution of procedural actions and declarations of authenticity in electronic form, as well as the specifications of electronic registration.<sup>48</sup>

## CONCLUSION

The integration of AI into the judicial system is contingent upon digitalization. The judiciary can guarantee that a vast amount of information is accessible and manageable for AI applications by converting paper-based records into structured digital data. This change not only simplifies routine procedures such as document management and case scheduling, but it also standardizes data and minimizes human errors, which are critical for the precise operation of AI.

Furthermore, digitalization serves as a catalyst for enhanced transparency and access to justice. It facilitates remote access to judicial services, thereby increasing the system's accessibility, and it fosters a more transparent judicial process that the public can comprehend and rely on. These days. In just a few years, the digital era and AI have revolutionized all aspects of life. This transformation is increasingly involving the judiciary in all countries, including Albania. The challenge is not in the integration of new digital technologies into the development and implementation of a sound case management system in courts; rather, it is in the establishment of a safe, accountable, and legally compliant environment that enables these tools to support and not impede the rule of law and human rights principles as enshrined in the European Convention of Human Rights.

The ongoing challenge is to align the AI's limitless potential for efficiency enhancement with the rights safeguards that extend beyond legislation and its enforcement. The success of technological advancements in the Albanian judiciary will need to be balanced against broader considerations regarding the rule of law and democratic culture in general, trust in institutions, and the results of an ongoing judicial reform that has not yet been fully realized. These advancements should also align with the general technological literacy of the general population and, in particular, of judicial

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<sup>48</sup> European Commission for the Efficiency of Justice (CEPEJ), *Strengthening Efficiency and Quality of Justice in Albania (SEJ III) Final Report with Recommendations to Support the High Council of Justice in Finalizing the Roadmap for the Development of the New Case Management System*, 14 October 2021.

users. In that regard, the outcomes will necessitate a minimum of a decade to have a positive impact on the current length of proceedings and efficiency issues of the Albanian courts. It will take several generations before the widespread acceptance of these technologies overcomes skepticism and negative perceptions.

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