



Digital Transformation: Creating an Effective and Efficient Court in Indonesia

Indriati Amarini^{1*}, Yusuf Saefudin², Ika Ariani Kartini³, Marsitiningsih⁴,
Noorfajri Ismail⁵

^{1,2,3,4} Faculty of Law, Universitas Muhammadiyah Purwokerto, Central Java, 53182, Indonesia

⁵ Faculty of Syariah and Law, Universitas Sains Islam Malaysia, Nilai Negeri Sembilan, 71800, Malaysia

* Corresponding author: indriatiamarini@ump.ac.id

Article	Abstract
<p>Keywords: Digital; transformation; court; effective; efficient.</p> <p>Article History Received: Jun 17, 2023; Reviewed: Jun 31, 2023; Accepted: Aug 28, 2023; Published: Sept 6, 2023.</p>	<p><i>This article discusses digital transformation as an effective and efficient paradigm in court services in Indonesia. The Supreme Court has used digital transformation in court administration by developing an electronic court system or e-Court since 2018. However, procedural law has no legal basis related to electronic trials. The development of online dispute resolution is very fast, while procedural principles regarding due process and neutrality must remain the court's main task. In addition, establishing Internet courts involves three fundamental legal ethical principles: restoring the ceremonial aspects of litigation and creating risk management mechanisms between the legal and technological systems. This study aims to analyze the court's efforts to create an effective and efficient trial in Indonesia. A normative legal method was employed, incorporating various approaches such as the statute, conceptual, and comparative approaches. The research results show that the digital transformation policy was incorporated into the 2010-2035 blueprint of the Supreme Court of the Republic of Indonesia, which has brought about the need to accelerate digital transformation in the justice system. Settlement of civil disputes is carried out using an electronic court (e-court) application with an electronic litigation (e-litigation) mechanism. Meanwhile, the criminal trial was conducted through teleconference media. Still, they have encountered obstacles: limited facilities and infrastructure in conducting the trial, such as internet stability in various regions and limited courtrooms with electronic trial equipment. Need to improve infrastructure and improve the quality of human resources.</i></p>



Copyright ©2023 by Author(s); This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License. All writings published in this journal are personal views of the authors and do not represent the views of this journal and the author's affiliated institutions.

INTRODUCTION

Human activities that were originally manual and physically based are now replaced with computer-based digital patterns. This kind of change in activity patterns is commonly referred to as digital transformation. The implementation of this process has resulted in substantial transformations in the field of law enforcement in Indonesia. These changes have given rise to a multitude of regulations and protocols that have overshadowed the traditional methods of law enforcement, paving the way for digital advancements (Mentari et al., 2023; Syarifuddin, 2020).

The right to access justice is a fundamental human right in a civilized society (Sung, 2020). The rapid digitization of courts should not conflict with the exercise of citizens' right to access justice. Digital transformation serves as an important means to achieve transparency in court proceedings (Hakim et al., 2023; Spesivov, 2023). In line with Richard Susskind's idea, technology revolutionizes litigation and offers ideas to address the issue of global access to justice. Many legal systems face problems of lengthy and expensive court proceedings that are outdated and difficult for laypeople to understand. Brazil and India, for example, have an enormous backlog of 100 million and 30 million cases respectively (Susskind, 2019).

As the internet rapidly expands worldwide, users have the opportunity to find information and data quickly and use it effectively. One of the main strategies to improve court administration in several countries is through the adoption of information and communication technology (Gomes et al., 2018). Several countries have attempted to set policies to improve court performance in recent decades. Many countries have been expediting their case resolution processes by simplifying legal procedures (Melcarne et al., 2021).

Courts are utilizing modern digital technologies to improve efficiency, transparency, and accessibility. This includes implementing electronic document management systems, creating resources and information systems, and developing judicial information systems. These technologies aim to enhance the quality of litigation, improve public access to justice, and facilitate the convenient execution of court-related tasks. Additionally, courts are providing interactive services through websites and undergoing significant reforms in their institutions (Avaz, 2022; Wicaksono et al., 2023).

In order to guarantee equitable service from court personnel in enhancing public trust, it is imperative that transparency be upheld. As a result, the adoption of digital technologies within the court system becomes an obligatory measure to enhance transparency, as it offers fresh avenues for court data to be made available, easily observable, and accessible to the general public. Commencing with the incorporation of e-court systems, the digital transformation of courts has been initiated to augment transparency, streamline operations, and maximize the efficiency of court procedures (Ahmed et al., 2022).

The role of digital technology in society has sparked discussions on the necessity of policy and regulatory changes to address the impacts it has on various aspects of our lives (Mansell, 2021). In particular, the justice system's success in upholding fairness and achieving its objectives heavily relies on the thoughtful development and continuous assessment of online systems, which have been significantly influenced by advancements in technology and the abundance of large-scale data (Bilal & Khokhar, 2021).

According to (Hinings et al., 2018), digital transformation involves three important institutional arrangements: digital organizational forms, digital institutional infrastructure, and digital institutional building blocks. The challenge in the justice system is to find innovations that can improve efficiency, legal certainty, and access to justice (Kucina, 2022). It is believed that digitization in courts can greatly enhance public access to justice, especially in cases involving small claims, online evidence, and long distances between parties. However, there is still room for improvement in the digital transformation of courts (Mita & Nishino, 2023).

Electronic courts and other uses of judicial technology are growing rapidly due to their propensity to advance the goal of austerity while expanding access to remedies. Nonetheless, there is a danger that the rush towards digitization will neglect due process and transparency in the name of efficiency. A new approach to creating rules is necessary. It is important to have judicial oversight (Siboy, et.al., 2022) and input in the design process of programmers creating new digital processes. However, constant refining and improvement based on testing and user feedback is also necessary, and it would be impractical to require new rules for every change. There are also technical difficulties in creating digital procedures (Etherton, 2020).

Delayed justice is essentially the same as denying justice. Several factors contribute to delayed justice, including complicated procedures, lengthy and inefficient laws, the attitudes of judges and attorneys, and a backlog of pending cases. In Indonesia, issues with the judicial system include slow dispute resolution, unresponsive courts, and costly litigation processes (Pratiwi et al., 2020). This research aims to analyze three main problems: (1) How has the effective and efficient paradigm developed in the courts (2) How can digital transformation be used to improve effective and efficient court services, and (3) How is the implementation of the use of digital transformation of the Court in Indonesia?

METHOD

This research focuses on normative legal studies (Al-Fatih & Siboy, 2021), and doctrinal research to find positive legal materials that will be used to develop theories and solve existing problems. This research critically evaluates legal principles, doctrines, and concepts as well as legislation relating to the use of digital transformation in court. As an initial step, an examination is carried out to identify the regulations pertaining to the utilization of digital transformation in the judiciary. This includes the examination of two provisions issued by the Indonesian Supreme Court, namely Supreme Court Regulation Number 3 of 2018 on Electronic Case Administration in Courts and Supreme Court Regulation Number 1 of 2019 on Electronic Case Administration and Trial in Court. This step is used to analyze the implementation of the use of digital transformation of courts in Indonesia.

RESULTS AND DISCUSSION

The Effective and Efficiency Paradigm in Courts

In the current era of the Industrial Revolution 4.0, the impact of digitalization has permeated various facets of human existence, including the legal system. Within this system, courts play a vital role in ensuring that justice is accessible to all members of society. The justice system is very important to society because it aims to protect formal rights and provide justice for the community (Falavigna et al., 2015). There are 3 objectives of digitizing court services, namely digitally accessible where court services can be accessed digitally; digitally connected, where the court is digitally connected, both between litigants and the court, between fellow court officials, and the court with related law enforcement; and digitally working, where the court apparatus works and provides services digitally (Supreme Court, 2023).

The use of technology to automate court processes has been quickly increasing in judicial systems globally. This is due to its ability to efficiently manage case files, provide instant access to case information, facilitate seamless communication between organizations, and expedite the delivery of justice. Advanced technologies such as electronic case management systems, electronic filing systems, and virtual environments for crime scene recreation and forensic investigations enable virtual court proceedings to take place (Satirah & Abrar, 2013).

The Indonesian justice system is built upon the principles of simplicity, speed, and affordability. This ideology, particularly the emphasis on expeditious justice, is universally recognized and embraced by courts worldwide. The universal nature of this principle is evident in the saying "Justice delayed is justice denied," which implies that a slow legal process equates to a failure to deliver justice to the parties involved. This concept originated from the public's desire for prompt resolution of cases to ensure justice, legal certainty, and immediate benefits (Nursobah, 2015). The Judicial Powers Law mandates that courts must aid those seeking justice and overcome any barriers or

hindrances to achieve a straightforward, prompt, and cost-effective trial. These regulations are put into practice through the implementation of an effective and efficient judicial administration system.

The Supreme Court is the highest court in Indonesia, which is responsible for overseeing and ensuring the effectiveness and efficiency of all lower courts. It supervises four different types of courts: (1) General Courts, with categories: criminal (general crime, special crime/corruption), Fisheries disputes, Civil disputes (General Civil, Commercial/Special/Industrial Relations Courts); (2). Religious Courts that adjudicate civil disputes for the Muslim community; (3). Administrative Court and Tax Court; (4). Military Court. The number of courts under the general court is 412 courts, religious courts with 441 courts, including the Syar'iyah Court, and the Administrative Court with 34 courts. The total number of courts in the four courts currently stands at 910 courts across Indonesia.

Courts are referred to as the last resort for individuals seeking truth and fairness. At this time, the judicial system serves as a mechanism provided by the state in resolving disputes. Public trust in the judiciary is still high, evident from the significant volume of cases that go to court throughout Indonesia. In 2020 the number of Supreme Court cases was 20,761 cases, a 2.40% increase compared to the cases in 2019, which amounted to 20,275 cases. Judicial systems are usually institutionalized under constitutions, and through political and administrative organizational strategies in different instances are pillars of the modern state. Maintaining a politically and socially legitimate judiciary depends on its ability to resolve disputes efficiently and effectively. Prompt and effective rulings are essential to creating the social, political, and economic equilibrium sustained by each society's set of legal standards (Procopiuck, 2018). Courts should assist justice seekers in overcoming all obstacles in the long bureaucratic journey that is costly and time- and energy-consuming.

Digitizing civil dispute resolution has become commonplace in the legal domain, particularly in the judiciary. This transformation has brought about a significant change in the way court services operate. In Indonesia, the court system has embraced digitalization with the establishment of virtual civil courts, a component integrated into the electronic court system. The adoption of electronic courts is driven by the objective of enhancing efficiency, particularly in terms of time and cost, for individuals seeking access to justice (Syarifuddin, 2020).

The advancement of technology has brought about various consequences, one of which is the influence it has had on the procedure of dispute resolution. This impact can be categorized as the efficiency paradigm ((Rabinovich-Einy, 2008)). The implementation of an electronic court system is anticipated to prioritize the achievement of efficiency in order to alleviate the burdensome bureaucratic processes that justice seekers often encounter (Susanto & Supriyatna, 2020). The primary objective of the electronic court system is to streamline the administration of court

proceedings. This is accomplished through the development of an online-based system that simplifies the exchange of documents involved in several court processes.

In addition to the electronic court system, the application applied in all courts under the Supreme Court is the Case Investigation Information System (SIPP). This system is a development of the Case Tracking System (CTS) application. The parties can monitor the case process online through the Case Investigation Information System (SIPP). In addition, the Supreme Court has also developed the SPPT-TI Dashboard, electronic signature, Command Center Information System, and e-court. The introduction of virtual courts brings about a significant shift in the way the public perceives the administration of justice, resulting in the emergence of a novel concept known as the *visuality of technocracy*. However, this development raises doubts about the widely held belief that digital technology will revolutionize public services and foster greater public confidence. The creation of virtual environments and interfaces is not without drawbacks and expenses, as it transforms citizens into mere spectators of justice and individual consumers of public services (Moore, 2019).

The acceleration of digital transformation marks the beginning of a broader and more significant transformation in the field of justice administration, aimed at expediting the attainment of modern justice. The adoption of the electronic court application for case settlements has garnered positive feedback and support from those seeking justice. In comparison to the previous year, there was a 295 percent increase in the number of civil cases registered through the electronic court in 2020. Additionally, a substantial total of 8,560 cases have been successfully tried through electronic litigation (Indonesian Ministry of Communication and Informatics, 2021).

The Court's digital transformation process faced various challenges due to both internal and external factors. Internal factors encompass aspects such as planning, coordination, and the availability of skilled personnel. On the other hand, external factors include budget constraints, geographical limitations, and the need for adequate supporting infrastructure. Moreover, alongside these internal and external factors, there are additional crucial considerations pertaining to the legal culture. These encompass technical and empirical issues, non-legal factors like human resources, and the availability of facilities and infrastructure. It has been observed that even decision-making habits can significantly impact the functioning of the legal system at a practical level. Therefore, in order to successfully embrace virtual trials in the future, it is imperative to address and prepare the legal framework, substance, and cultural aspects accordingly (Nugroho & Suteki, 2020). Several matters need to be evaluated in a virtual trial: the implementation of the fundamental principle of a trial being open to the public, the need to prevent unexamined witnesses from participating in the virtual proceedings, the measures taken to ensure that witnesses are not subjected to any form of pressure, coercion, or threats during their examination, and the challenges associated with guaranteeing the security of electronic networks involved in the trial.

Digital Transformation to improve effective and efficient court services

Digital Transformation (DT) is a revolutionary shift in the way modern organizations operate, involving strategic and customer-focused alterations to their infrastructure and processes. This transformation is driven by the Integration of advanced information and Communication Technologies (ICT) and encompasses a comprehensive approach rather than a singular event. The ultimate goal of DT is to enhance organizational performance and competitiveness by augmenting the organization's capabilities and creating innovative business models. These changes are vital for organizations to adapt and thrive in the rapidly evolving digital landscape (Igor Pihir, 2019).

The present paradigm of civil procedure, which has historically been built on the ideals of humanism, legality, equality, and competition, now incorporates "big data" technologies, software systems, and cloud services. Digital justice represents a cutting-edge approach to conducting court proceedings and resolving cases, leveraging the extensive application of diverse information technologies. (Shcherbakova et al., 2022).

Electronic court systems are driving transparency and efficiency globally, although courts in some regions still face infrastructure and literacy challenges. However, their benefits are critical to the modernization of the justice system. Electronic court systems significantly and positively affect the efficiency of the judicial process, and users find them efficient, easy to use, reliable, secure, and satisfying. Electronic court systems are a promising technology that can significantly improve the efficiency and effectiveness of the judicial process (Djamaludin et al., 2023).

The right to access justice is a basic right that applies to everyone, regardless of whether martial law or a state of emergency is in effect. This right is not only enshrined in constitutional law but it is also protected under the Convention for the Protection of Human Rights and Fundamental Freedoms of 1950 (Golubeva et al., 2020). When resolving disputes in court, the focus is not solely on individual rights or obligations, but rather on finding a balance between the two while considering the overall well-being of individuals. Therefore, it is the government's responsibility to prioritize the needs of its citizens. This commitment aligns with Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia, which guarantees every individual's right to live a prosperous life both physically and spiritually, in a good and healthy environment, and with access to healthcare services (Suryawati, 2020).

In order for a constitutional state to operate effectively, it is crucial that the judiciary is able to fulfill its responsibility of offering legal protection. To adapt this requirement to the modern era, it is imperative for courts to remain actively aware and cautious regarding the impact of digitization. Ensuring protection now extends beyond establishing regulations in the traditional offline realm. To truly uphold its obligation of providing legal protection, a constitutional state must also possess the necessary

adaptability to address the transformations brought about by digitization and leverage the opportunities it presents (Prins, 2018).

The use of digital transformation in courts is crucial, as demonstrated by research in Italy that shows improved court performance through technology-driven reforms. This necessitates a reorganization of the judicial system (Ippoliti & Tria, 2020). Integrating information and communication technologies into the court system presents opportunities to enhance efficiency, quality, and transparency in court cases, including better case management and increased accessibility (Ahmed et al., 2020). The results of implementing these technologies have shown significant improvements in various aspects of court operations. To effectively implement an electronic court system, various crucial elements are necessary, including a functioning information system, a platform that allows different systems to work together, electronic identification and signatures, support from relevant parties, involvement of all parties, careful planning and analysis, updated laws and regulations, and changes in organizational structure. (Adeleye et al., 2022).

However, the concept “when justice is delayed, it is essentially denied” has prompted numerous legal systems to investigate the potential of incorporating technological advancements to expedite urgent cases. (Denault & Patterson, 2021). The presence of various provisions related to virtual trials of criminal cases raises debates at the theoretical and practical levels. At the academic level, there are several legal shortcomings in the form inconsistencies between the provisions of teleconference proceedings and the Indonesian Criminal Procedure Code as listed in the following:

1. Court location; The introduction of the teleconference trial has significantly impacted the way trials are conducted, as outlined in Article 230 paragraphs (1) and (2) of the Criminal Procedure Code. According to these provisions, court hearings were traditionally required to take place in the physical courthouse, specifically in the designated courtroom. During these proceedings, judges, public prosecutors, legal counsels, and registrars were expected to don their official court attire and use their respective court-related attributes. Moreover, the specific physical requirements of the courtroom were further elaborated upon in Article 230 paragraph (3) of the Criminal Procedure Code.
2. Witness presence; According to the regulations outlined in Article 160 paragraph (1) of the Criminal Procedure Code, the process of summoning witnesses follows a specific procedure, which involves summoning them to appear in the courtroom sequentially.
3. The requirement for the defendant's presence during legal proceedings is extensively addressed in the Criminal Procedure Code, particularly in Articles 154 and 196. These regulations commonly stipulate that the defendant must physically attend the proceedings. Furthermore, the Law on Judicial Power,

specifically Article 12, further reinforces this requirement by mandating that the Court must conduct the examination, hearing, and determination of criminal cases with the accused present unless there are specific provisions in the law that allow for their absence.

4. According to Article 195 of the Criminal Procedure Code, it is imperative that trials are accessible to the public in order for any court decisions to hold validity and legal weight. The significance of this requirement is further reinforced by Article 13 paragraphs (1) and (2) of the Law on Judicial Power, which stipulate that all court hearings must be open to the public unless there are specific provisions in the law stating otherwise. Thus, it is evident that the legitimacy and enforceability of court decisions heavily rely on their pronouncement within a trial that is accessible to the general public.

Virtual courts have had a significant impact on the way courts function, as highlighted by the problems discussed above. These issues raise concerns about the impartiality of the panel of judges when making decisions in a case. The virtual system's limitations prevent it from accurately portraying the actual situations and conditions that would be present in a physical courtroom. Moreover, the potential technical hurdles, such as internet instability, can further impede the smooth progress of the court proceedings. In criminal justice, especially in cases involving corruption, it is crucial for judges to ascertain the facts and evidence.

The judge's objectivity is in the form of the belief that the judge holds a crucial position in a case. This is because the evidence system adopted by Indonesia is a system of evidence based on the law in a negative way. This can be concluded from Article 183 of the Criminal Code. In this system or theory of evidence negatively based on the law, the punishment is based on negative evidence, namely on statutory regulations and on the judge's conviction.

The application of criminal procedural legislation in Indonesia, as outlined in Law Number 8 of 1981, presents challenges due to its lack of provisions for conducting criminal justice procedures during a pandemic. To address this, the Supreme Court has implemented a virtual trial mechanism to prioritize the well-being of the people and ensure their safety. The principle of *salus populi suprema lex esto*, also affects law enforcement agencies. In response, the Supreme Court has issued a circular letter, specifically Circular Letter of the Supreme Court Number 1 of 2020, which focuses on protecting the rights of suspects. This letter states that the detention of defendants cannot be extended in criminal cases that involve detained individuals. (Adisti et al., 2021).

Disruption of the trial process often occurs due to unstable internet connections in offices, including court offices, prosecutors' offices, and correctional institutions in various regions. This is because not all law enforcement offices have the facilities and information technology technicians to support online trials. Apart from the delay in

the interaction between the parties, the loss of voice is a challenge for court officials. Therefore, each party must prepare the completeness of the trial if the defendant, witness, or victim is limited in their economic ability to access an internet connection. This has the potential to hinder the trial process and at the same time make it difficult for their rights to be fulfilled (Harkrisnowo, 2020).

Implementation of Digital Transformation in Indonesian Courts

The process of converting various types of information and news from an analog format to a digital version is known as digitization. This process is aimed at making it easier to create, store, manage, and distribute the information. The digitization of court services began after the publication of a roadmap for judicial reform. It started with document administration and the implementation of a system called SIPP, and later expanded to cover the entire process of handling court cases, from registration to delivering a legally binding judgement. Electronic courts now offer e-court and e-litigation applications to handle all aspects of a case. These court applications can adapt and improve based on the needs of those seeking justice.

The digitization of the judicial process has entered its third wave. In the first wave, the Court transferred paper-based documents to digital media. The second wave is the digitization of the judicial business process. At this stage all case administration is electronic. No more paper documents. At this stage, the court converts paper-based documents into digital ones. Litigants can still submit paper-based documents, then the court converts the media into electronic documents. The third wave is called digital transformation. At this stage, the court's business processes have been intervened by artificial intelligence. (Supreme Court, 2023). Electronic court is an online service that allows registered users to register and manage cases, pay court fees, issue summonses electronically, and conduct trials online. This includes features such as online case registration (e-Filing), online payment of court fees (e-Payment), online summoning of parties (e-Summons), and online trial proceedings (e-Litigation).

The obstacles that occurred in the virtual trial that the Supreme Court should have solved were technical constraints and substantive obstacles. Technical constraints are related to human resources and infrastructure, while substantive constraints are related to the following:

1. According to Article 20 of the Supreme Court Regulation Number 1 of 2019, the implementation of electronic hearings in civil, religious, military administration, and state administration cases is not obligatory, but rather contingent upon the agreement of both the plaintiff and the defendant. In simple terms, an electronic trial cannot be conducted without the mutual consent of the parties involved.
2. The current implementation of the electronic trial process remains relatively limited in terms of accessibility, as only the litigants are allowed to participate. This means that the general public does not have access to the

electronic trial process, which goes against the requirements stated in Article 153 paragraph (3) of the Criminal Procedure Code and Article 13 paragraph (1) of the Judicial Powers Act. These articles state that court hearings should be open to the public, except in cases where it is deemed indecent, the defendants are children, or the law specifies otherwise. Furthermore, the current closed nature of the electronic trial process also does not align with Article 195 of the Criminal Procedure Code and Article 13 paragraph (2) of the Judicial Powers Act. These provisions emphasize that a court decision can only be considered valid and legally binding if it is announced in a trial open to the public. Failure to comply with these provisions, as outlined in Article 153 paragraph (4) of the Criminal Procedure Code and Article 13 paragraph (3) of the Judicial Powers Act, renders the decision null and void. Having an open trial process is crucial as it promotes transparency and ensures the proper implementation of due process. Through transparency, the public can closely monitor the proceedings, listen to and observe the legal facts presented during the trial, and help prevent any occurrence of corrupt practices within the judiciary system.

3. The trial process is further hampered by the issue of providing sufficient proof, despite the crucial role that evidence plays in determining the guilt or innocence of the accused. According to the regulations outlined in Article 183 of the Criminal Procedure Code, a judge is prohibited from imposing a sentence on an individual unless they possess at least two credible pieces of evidence that establish both the occurrence of a criminal act and the culpability of the defendant. However, in reality, it is frequently observed that the submitted evidence is not readily available or easily obtainable.
4. Due to the defendant's absence from the trial and confinement in the correctional institution, there exists a considerable challenge for public prosecutors, judges, and legal advisors to extract relevant information and uncover crucial facts by means of questioning the accused.

One of the institutions that receive complaints related to public services is the Indonesian Ombudsman. Public reports to the Ombudsman on public services are increasing. In 2019, the Ombudsman received 7,903 public complaints regarding alleged maladministration in public services. The number of public complaints reports increased significantly in 2020. Reports to judicial institutions, as many as 241 are still in the completion process, and 43 reports have been completed. Public reports to court institutions include allegations of protracted delays, procedural irregularities, and not providing good service (Ombudsman.go.id, 2021).

The Ombudsman has discovered potential maladministration. This is primarily due to the significant delays caused by a lack of resources for information and technology officers. Consequently, the electronic preparation for trials becomes

sluggish, particularly when technical issues arise during the proceedings. Furthermore, the Ombudsman has identified numerous challenges, such as unclear timing of the trials, limited availability of facilities and infrastructure (including courtrooms equipped with teleconferencing capabilities), and an unreliable internet network. Additionally, there are various technical obstacles, including judges having limited control over the technology, poor coordination among the involved parties, the absence of legal advisors physically present with the accused, and the inability to ensure that witnesses and defendants are not under any duress or providing false information.

Implementing a virtual trial is not a simple matter. Electronic hearings and teleconferences have raised several procedural law issues that were not regulated in the Civil Procedure Code and Supreme Court Regulations. The rapid advancement of information technology always raises new legal issues that need to be addressed (Syarifuddin, 2020). Both substantive and technical problems need to be resolved so that electronic hearings can be carried out properly. Electronic trials need to be properly regulated in law to overcome substantive obstacles. Hence, there is a need to modify the Criminal Procedure Code or establish a distinct legislation to regulate court proceedings electronically.

To overcome technical challenges in implementing digital platforms for criminal justice processes, Indonesia needs to ensure it has enough skilled IT professionals, improve the understanding of technology among law enforcement officers, and establish reliable internet networks. Investing in infrastructure, providing training for legal professionals, and promoting secure digital technologies are also necessary. By doing so, Indonesia can build a strong foundation for electronic justice in its criminal law enforcement system, resulting in improved efficiency, accessibility, and transparency while safeguarding the rights and due process of all parties involved (Saputra et al., 2023). The use of teleconference applications for virtual sessions caused the following problems:

1. Potential for hacking. The potential for data hacking and the risks of using it.
2. The use of the teleconference application requires patience from various parties, which is the potential for clashes in the trial schedule because all parties must be well-connected during the trial.
3. Not all regions have stable internet connectivity, especially island areas, so the smooth running of the trial is sometimes disrupted.
4. Regarding the location of the virtual session, there is no special room that functions as a virtual meeting place in each of the relevant agencies.
5. The use of virtual trials poses a challenge in uncovering the truth and gathering factual evidence during court proceedings.
6. The trial has the potential to significantly impact the evidentiary process as it presents a virtual setting where the defendant cannot be directly confronted.

This poses a challenge for public prosecutors, judges, and legal advisers as they are unable to engage in questioning the accused to uncover crucial facts.

7. There is limited rapid test equipment in several places. This is because detention houses and correctional institutions require the acceptance of prisoners after going through a rapid test (Kompas.com, 2020)

The use of digital transformation in trials, especially in criminal cases, is important from a sociological point of view. This need can be attributed to the response to technological advances. Law enforcement officials are faced with the challenge of handling cases virtually or delaying trials, which in turn leads to a potential backlog of cases in the future. As a result of this situation, the legal system has shown adaptability by introducing various practiced regulations to ensure legal certainty, albeit not in the form of official legislation. The law is comprised of theoretical concepts that may seem intangible however, it holds significant influence and is actively integrated into our daily interactions and societal norms. Therefore, it is necessary to have an activity to realize these ideas in the community. The series of activities to turn these ideas into reality is a law enforcement process. As Lawrence M. Friedman stated, a legal system's operation is a complex organization in which structure, substance, and culture interact. The series of activities in question will always intersect with various surrounding factors, so ideally, law enforcement is not understood as something that stands alone in the black-and-white formulation of regulatory texts but is always the result of the interaction of various factors. It is important to consider how law is influenced by factors outside of the legal system, such as the values and attitudes of the people involved. This concept is commonly referred to as legal culture.

The formulation of 'what should be' versus 'what actually is' in the realm of law is always constrained by the specific situation or environment. Simply relying on the development of regulations alone is insufficient for fully understanding the progression of a trial. There are many factors, unrelated to the law itself, that can determine if a regulation is successful or not. These factors include things like personnel, information, budget, facilities, laws, rules, habits, and decision-making processes, all of which are important in enforcing the law. Neglecting any of these components can result in inefficiency or futility within the legal system. Focusing on the virtual trial phenomenon, in addition to the components of substantive law and procedural law that have been discussed previously, other components are important factors for the pattern of using the teleconference facility in the context of legal culture, namely the availability of human resources, information, budget, facilities, and decision-making methods. Therefore, building a legal culture is no less important than formulating more established regulations regarding virtual trials. As important as it is to build a legal culture, instead of entering into debates about the need for laws governing virtual courts, what is far more important is to question the readiness of legal actors and their legal culture (Nugroho & Suteki, 2020).

In relation to the issue of achieving material truth, virtual trials, in essence, do not substantially change the position of the parties in a trial, such as the public prosecutor with a prosecution-minded orientation, legal counsel with a defender-minded orientation and a breaker element represented by a judge with a problem solver or decision-maker orientation. In this way, the problem can be reduced to a technical level, namely the transfer of the trial room to a virtual space. So, the solutions are: first, developing an internal virtual network of law enforcement officers with good system quality; second, the development of human resources related to their competence in using virtual court facilities and infrastructure. Apart from this, as mentioned earlier, apart from technical problems, this virtual trial phenomenon requires a more established legal basis so that its implementation can be maximized in the future. From this point of view, it is essential for a law to go beyond mere procedural aspects. It should possess the qualities of competence and fairness, while also being capable of acknowledging the desires of the general public and demonstrating dedication to attaining substantial justice. The challenges faced by Internet courts should be solved through the establishment of a risk mitigation mechanism between the legal system and the technological system to develop the development capabilities of Internet courts (Guo, 2020).

Legal reforms have not sufficiently considered the level and kind of involvement citizens have in digital court processes, which is crucial for the fairness and effectiveness of these processes, as well as for advancing democratic procedures by providing better access to justice. Although digital court tools have the potential to enhance efficiency, involvement, and accessibility, they also have the potential to increase the likelihood of unfairness and undermine important principles of the legal system, such as access to justice (Donoghue, 2017).

CONCLUSION

The effectiveness and efficiency paradigm emerged as a result of public dissatisfaction with court services. Court systems based on the principles of simplicity, speed, and affordability are universally recognized and used by courts around the world. Universality implies that a slow legal process equates to a failure to deliver justice to the parties involved. This concept was initiated by the public's desire for speedy resolution of cases to ensure fairness, legal certainty, and perceived benefits. Efforts to improve court services are being made with the use of digital transformation. Digital transformation is used to ensure fair service from court personnel and to increase public trust. The adoption of digital technology in the court system is a mandatory step to increase transparency as digital technology offers a new way to provide court data that is easily observable and accessible to the general public. The digital transformation of the Courts in Indonesia commenced in 2018, marking a new era of technologically advanced justice in the judicial domain. The Supreme Court

introduced the concept of digital transformation through the implementation of an e-court electronic court system, aimed at providing efficient and accessible services to the public. To ensure the legality of this system, the Supreme Court issued Supreme Court Regulation Number 3 the Year 2018 on Case Administration in Court Electronically, which established new formal laws that were not previously addressed in existing civil procedure laws. These included electronic case registration (e-filing), electronic payment of case fees (e-payment), and electronic summons and notifications to litigants (e-summons). Furthermore, the Supreme Court enhanced the e-Court application by issuing Supreme Court Regulation Number 1 of 2019, which focused on case administration and trial procedures conducted electronically. Notable updates in this regulation include granting electronic litigation access to users beyond just Advocates, extending its applicability to cases of opposition, objection, rebuttal, and intervention, implementing electronic trial mechanisms, and facilitating electronic litigation processes.

ACKNOWLEDGMENTS

The author would like to thank Muhammadiyah Purwokerto University for its assistance in conducting this research. The author also thanks all those who have helped collect and analyze data to improve the results of this research. This research activity is a scheme of the Foreign Cooperation Research Program of Muhammadiyah Purwokerto University Number: A.11-III/867-S.Pj/LPPM/II/2023.

REFERENCES

- Adeleye, J. T., Ahmed, R. K., Nyman-Metcalf, K., & Draheim, D. (2022). *E-Court Transition Process: Identifying Critical Factors and Recommendations for Developing Countries BT - Electronic Governance and Open Society: Challenges in Eurasia* (A. V Chugunov, M. Janssen, I. Khodachek, Y. Misnikov, & D. Trutnev, Eds.; pp. 305–317). Springer International Publishing.
- Adisti, N. A., Nashriana, Nurilah, I., & Mardiansyah, A. (2021). Pelaksanaan Persidangan Perkara Pidana Secara Elektronik pada Masa Pandemi COVID-19 di Pengadilan Negeri Kota Palembang. *Jurnal Legislasi Indonesia*, 18(2), 222–232.
- Ahmed, R. K., Ahmed, O., Pappel, I., Reitsakas, A., & Draheim, D. (2022). The Role of Digital Transformation in Fostering Transparency: An e-Court System Case Study. In *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics): Vol. 13454 LNCS* (Issue September). Springer International Publishing. https://doi.org/10.1007/978-3-031-15342-6_17
- Ahmed, R. K., Muhammed, K. H., Pappel, I., & Draheim, D. (2020). Challenges in the Digital Transformation of Courts: A Case Study from the Kurdistan Region of

- Iraq. 2020 7th International Conference on EDemocracy and EGovernment, ICEDEG 2020, 74–79. <https://doi.org/10.1109/ICEDEG48599.2020.9096801>
- Avaz, K. D. (2022). Issues Of Introducing Digital Technologies Into The Activities Of Courts. *The American Journal of Political Science Law and Criminology*, 4(1), 1–6. <https://doi.org/10.37547/tajpslc/volume04issue01-01>
- Bilal, M., & Khokhar, F. (2021). Justice Delayed or Denied: The Myth of Justice in Pakistan. *Journal of Law & Social Studies*, 3(2), 124–132. <https://doi.org/10.52279/jlss.03.02.124132>
- Denault, V., & Patterson, M. L. (2021). Justice and Nonverbal Communication in a Post-pandemic World: An Evidence-Based Commentary and Cautionary Statement for Lawyers and Judges. *Journal of Nonverbal Behavior*, 45, 1–10. <https://doi.org/https://doi.org/10.1007/s10919-020-00339-x>
- Donoghue, J. (2017). The Rise of Digital Justice: Courtroom Technology, Public Participation and Access to Justice. *The Modern Law Review*, 80(6), 995–1025.
- Etherton, T. (2020). Rule-Making for a Digital Court Process: The Civil Procedure Rules—20th Anniversary Conference, 2019. In A. Higgins (Ed.), *The Civil Procedure Rules at 20*. Oxford University Press. <https://doi.org/10.1093/oso/9780198863182.003.0003>
- Falavigna, G., Ippoliti, R., Manello, A., & Ramello, G. B. (2015). Judicial productivity, delay and efficiency: A Directional Distance Function (DDF) approach. *European Journal of Operational Research*, 240(2), 592–601. <https://doi.org/10.1016/j.ejor.2014.07.014>
- Golubeva, N., But, I., & Prokhorov, P. (2020). Access to Justice Due to the Covid-19 Pandemic. *Ius Humani. Law Journal*, 9(2), 47–64. <https://doi.org/10.31207/ih.v9i2.243>
- Gomes, A. O., Alves, S. T., & Silva, J. T. (2018). Effects of investment in information and communication technologies on productivity of courts in Brazil. *Government Information Quarterly*, 35(3), 480–490. <https://doi.org/10.1016/j.giq.2018.06.002>
- Guo, Z. (2020). Psychiatric commitment under the criminal law in China: An empirical perspective. *International Journal of Law and Psychiatry*, 73, 101629. <https://doi.org/10.1016/j.ijlp.2020.101629>
- Hakim, H. A., Praja, C. B. E., & Ming-Hsi, S. (2023). AI in Law: Urgency of the Implementation of Artificial Intelligence on Law Enforcement in Indonesia. *Jurnal Hukum Novelty*, 14(1), 122–134. <https://doi.org/10.26555/NOVELTY.V14I1.A25943>
- Harkrisnowo, H. (2020). Angka Kejahatan dan Reaksi Sistem Peradilan Pidana di Masa Pandemi Covid-19. *Jurnal Hukum Pidana & Kriminologi*, 1(1), 34–58.
- Hinings, B., Gegenhuber, T., & Greenwood, R. (2018). Digital innovation and transformation: An institutional perspective. *Information and Organization*, 28(1), 52–61. <https://doi.org/10.1016/j.infoandorg.2018.02.004>

- Igor Pihir. (2019). Business Process Management and Digital Transformation. *Economic and Social Development: Book of Proceedings*, 353–360.
- Ippoliti, R., & Tria, G. (2020). Efficiency of judicial systems: model definition and output estimation. *Journal of Applied Economics*, 23(1), 385–408. <https://doi.org/10.1080/15140326.2020.1776977>
- Kompas.com. (2020). “Ini Kendala Sidang Online Menurut Jaksa Agung, dari Potensi Diretas hingga Keterbatasan Alat Rapid Test.” <https://nasional.kompas.com/read/2020/07/14/08264781/ini-kendala-sidang-online-menurut-jaksa-agung-dari-potensidiretas-hingga>
- Kucina, I. (2022). Challenges of Digitalisation in Judicial System. *SOCRATES. Riga Stradiņš University Faculty of Law Electronic Scientific Journal of Law*, 2(23), 51–60. <https://doi.org/10.25143/socr.23.2022.2.051-060>
- Mansell, R. (2021). Adjusting to the digital: Societal outcomes and consequences. *Research Policy*, 50(9), 104296. <https://doi.org/10.1016/j.respol.2021.104296>
- Melcarne, A., Ramello, G. B., & Spruk, R. (2021). Is justice delayed justice denied? An empirical approach. *International Review of Law and Economics*, 65, 105953. <https://doi.org/10.1016/j.irl.2020.105953>
- Mentari, N., Nugraheni, N., & Annas, M. (2023). Legal Protection of HARA Platform Users on the Service of Electronic Data Interchange. *Jurnal Hukum Novelty*, 14(1), 51–68. <https://doi.org/10.26555/NOVELTY.V14I1.A25547>
- Mita, N., & Nishino, N. (2023). Study on Personalized Service Contract : application of digital court. *Procedia CIRP*, 118, 15–19. <https://doi.org/10.1016/j.procir.2023.06.004>
- Moore, S. (2019). Digital government, public participation and service transformation: the impact of virtual courts. *Policy & Politics*, 47(3), 495–509. <https://doi.org/https://doi.org/10.1332/030557319X15586039367509>
- Nugroho, D. R., & Suteki, S. (2020). Membangun Budaya Hukum Persidangan Virtual (Studi Perkembangan Sidang Tindak Pidana via Telekonferensi). *Jurnal Pembangunan Hukum Indonesia*, 2(3), 291–304. <https://doi.org/https://doi.org/10.14710/jphi.v2i3.291-304>
- Nursobah, A. (2015). Pemanfaatan Teknologi Informasi Untuk Mendorong Percepatan Penyelesaian Perkara di Mahkamah Agung. *JHP: Jurnal Hukum Dan Peradilan*, 4(2), 324–334.
- Ombudsman.go.id. (2021). *Ombudsman Terima 1.120 Laporan Terkait Lembaga Penegak Hukum Di Tahun 2020*.
- Pratiwi, S. J., Steven, S., & Permatasari, A. D. P. (2020). The Application of e-Court as an Effort to Modernize the Justice Administration in Indonesia: Challenges & Problems. *Indonesian Journal of Advocacy and Legal Services*, 2(1), 39–56. <https://doi.org/10.15294/ijals.v2i1.37718>

- Prins, C. (2018). Digital justice. *Computer Law and Security Review*, 34(4), 920–923. <https://doi.org/10.1016/j.clsr.2018.05.024>
- Rabinovich-Einy, O. (2008). *Beyond Efficiency: The Transformation of Courts by Technology*. UCLA Journal of Law and Technology. <https://ssrn.com/abstract=3457265>
- Saputra, R., Setiodjati, J. P., & Barkhuizen, J. (2023). Under-Legislation in Electronic Trials and Renewing Criminal Law Enforcement in Indonesia (Comparison with United States). *Journal of Indonesian Legal Studies*, 8(1), 243–288. <https://doi.org/10.15294/jils.v8i1.67632>
- Satirah, W. M. S. W., & Abrar, H. (2013). E-Court: Technology Diffusion in Court Management. *AMCIS 2013 Proceedings*.
- Shcherbakova, L. G., Grigoryeva, T. A., & Ermakov, A. N. (2022). Digital Transformation Technologies of Legal Proceedings In Civil And Administrative Cases. In S. Afanasyev, A. Blinov, & N. Kovaleva (Eds.), *State and Law in the Context of Modern Challenges, vol 122. European Proceedings of Social and Behavioural Sciences* (pp. 560-565). European Publisher. <https://doi.org/https://doi.org/10.15405/epsbs.2022.01.89>
- Siboy, A., Al-Fatih, S., Nur, A. I., & Hidayah, N. P. (2022). Judicial Review in Indonesia: A Simplification Model. *Lex Scientia Law Review*, 6(2), 359-390. <https://doi.org/10.15294/lesrev.v6i2.54848>
- Spesivov, N. (2023). From Fantastic Theories to Objective Reality: Is there Future for Artificial Intelligence and Predictive Technologies in Administration of Criminal Justice? *Lex Russica*. <https://doi.org/https://doi.org/10.17803/1729-5920.2023.195.2.081-090>
- Sung, H. C. (2020). Can Online Courts Promote Access to Justice? A Case Study of the Internet Courts in China. *Computer Law and Security Review*, 39, 105461. <https://doi.org/10.1016/j.clsr.2020.105461>
- Suryawati, N. (2020). Criticize the Constitutional Rights of Citizens on Era and Post Pandemic COVID-19 in State of the Republic of Indonesia. *The 2nd International Conference of Law, Government and Social Justice (ICOLGAS 2020)*, 554–564. <https://doi.org/https://doi.org/10.2991/assehr.k.201209.337>
- Susanto, M. I., & Supriyatna, W. (2020). Menciptakan Sistem Peradilan Efisien Dengan Sistem E-Court Pada Pengadilan Negeri Dan Pengadilan Agama Se-Tangerang Raya. *Jurnal Cendekia Hukum*, 6(1), 104–116. <https://doi.org/https://doi.org/10.33760/jch.v6i1.287>
- Susskind, R. (2019). *Online Courts and the Future of Justice*. Oxford University Press. <https://doi.org/10.1093/oso/9780198838364.001.0001>
- Syarifuddin, M. (2020). *Transformasi Digital Persidangan di Era New Normal: Melayani Pencari Keadilan di Masa Pandemi Covid-19*. Imaji Cipta Karya.
- Wicaksono, G. W., Al'asqalani, S. F., Azhar, Y., Hidayah, N. P., & Andreawan. (2023). Automatic Summarization of Court Decision Documents over Narcotic Cases

Using BERT. *JOIV : International Journal on Informatics Visualization*, 7(2), 416–422.
<https://doi.org/10.30630/JOIV.7.2.1811>