Digital Transformation of the Notary Profession: Juridical Analysis of Cyber Notary Implementation in Authentic Deed Making in Indonesia

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Abstract
Digital transformation in the field of notary is a structural imperative in the era of rapid development of information technology. The concept of Cyber Notary is present as a form of modernization of the notary position through the integration of technology such as electronic signatures, video conferencing, and digital document management and storage systems. This study aims to examine the juridical aspects of the implementation of Cyber Notary in the making of authentic deeds in Indonesia. The method used is a normative legal research method with legislative, conceptual, and comparative approaches. The results of the study show that there is no explicit regulation in the Law on Notary Positions (Law No. 30 of 2004 jo. Law No. 2 of 2014) related to the practice of Cyber Notary causing legal uncertainty, especially in terms of the validity of digital deeds and verification of the identity of the parties. In addition, the lack of suboptimal digital infrastructure and information security systems increases the risk of ethical violations and data leaks. The conclusion of this study emphasizes the importance of regulatory reformulation through the harmonization of the UUJN with the ITE Law and the PDP Law, as well as the need for digital competency development and the renewal of the notary profession code of ethics so that the implementation of Cyber Notary can be carried out legally, accountably, and professionally.

1. Introduction

The rapid development of information technology in the last two decades has had a significant impact on almost all aspects of human life, including the legal and notarial professions. Digitalization is no longer an option, but a strategic necessity in facing an era that demands speed, accuracy,

and global connectivity. The presence of digital technology has changed the way people interact, transact, and access legal services, thus encouraging various legal institutions and professionals, including notaries, to adapt to this development. According to Statista's 2024 report, more than 5.3 billion people in the world have become internet users, which is an important indication for the legal world to join the digital ecosystem (Statista, 2025). Digital transformation in the legal field is not just a transfer from a manual system to an electronic system, but a structural reform process that involves aspects of regulations, procedures, and information governance. In the context of the notary profession, digitalization opens up great opportunities to improve work efficiency, reduce bureaucratic red tape, and speed up the process of making and storing deeds (Awwalia et., all 2023). According to Presidential Regulation (Perpres) Number 82 of 2023 on the Acceleration of Digital Transformation and the Integration of National Digital Services, the Indonesian government has set priorities on nine key services that will soon be integrated in a national digital platform called INA Digital (Setkab, 2025). Including an electronic-based service system for document legalization and notary deed registration.

The main thrust of digital transformation in the legal and notarial field is the need for efficiency, transparency and accessibility. Manual systems are often perceived as slow, prone to human error, and open to unethical practices. With the application of digital technology, various stages of work can be automated, document tracking becomes easier, and the public as service users can monitor the process more openly. This is in line with the principles of good governance and public services that are oriented towards the interests of the community. According to Richard Susskind, a British legal and technology expert, "The future of legal services lies in the ability to harness technology to deliver more accessible and efficient justice systems," underlining the importance of digital transformation to improve the quality of legal services (Irawan & Hasan, 2024). In the midst of growing digitalization, the notary profession has a strategic opportunity to strengthen its role as a link between individual legal interests and state legal provisions. By utilizing digital technology, notaries can improve the quality of legal services, expand the range of access to communities that were previously hampered by geographical limitations, and accelerate administrative processes without reducing legal validity. The use of electronic signatures, digital storage of deeds, and the integration of the notary service system with the national population database are tangible manifestations of this transformation (Omiyani et al., 2023).

The notary profession has a strategic position in the national legal system as a public official authorized by law to make authentic deeds, which have perfect evidentiary power. In the context of an increasingly complex and

dynamic modern society, the role of notaries is not only limited to recording and legalizing documents, but also as guardians of legal certainty and security in various civil transactions. Therefore, notaries are required to not only understand the law substantively, but also be able to respond to social, economic and technological changes that affect legal practice. One of the most significant changes today is the development of digital technology that has penetrated all aspects of life, including the field of legal services. Public demand for fast, efficient, and transparent services has forced legal institutions, including the notary profession, to adjust. The digitization of notary services is a very important issue, because it concerns not only the effectiveness of work, but also the ease of public access to legal and reliable legal protection. This is in line with the bureaucratic reform agenda and the digitization of public services that the Indonesian government continues to develop.

Digital transformation in the notary profession is not only technical, but also structural and conceptual. This change requires adjustments in the work system, regulatory updates, and an increase in the technological competence of notaries. For example, the implementation of electronic signatures, storage of documents in digital form, and the use of cloud-based information management systems are part of the profession's modernization efforts. As stated by Arie Sudjito, "Digitalization of the legal profession, including notaries, is not only a matter of efficiency, but also a way to maintain public trust through transparency and accountability of legal services (Katharina, 2021)."

However, the urgency of change in the notary profession is also driven by the fact that the manual system that has been used has shown various limitations. Starting from the long bureaucratic process, the risk of duplication or forgery of documents, to the difficulty of accessing data in real-time, all indicate the need for system reform. Digitalization is expected to be a solution to these weaknesses, as well as a tool to strengthen the position of notaries in responding to the challenges of the times. In an era where the speed of information and transactions is a primary need, the notary profession cannot be left behind. By considering all these dynamics, changes in the notary profession are a necessity. This urgency is not only driven by external factors such as technological developments, but also by the internal demands of the profession to remain relevant, adaptive and professional.

The development of information and communication technology has led to various innovations in the delivery of legal services, one of which is the emergence of the Cyber Notary concept. This term refers to the modernization of the role and function of notaries through the integration of digital technology in the notarial process. In a global context, Cyber Notary is a response to the public's need for legal services that are not only fast and

efficient, but also accessible from anywhere without geographical restrictions (Affan, 2025). In Indonesia, this concept has started to gain attention along with the digital transformation that has hit almost all public and private sectors, including the legal profession. Cyber Notary is a form of adaptation of the notary profession to the digital era, where conventional processes are being replaced by electronic systems (Nurmawati et al., 2022). The implementation of technologies such as digital signatures, video conferencing in the process of recording the parties' agreement, and electronic document storage are tangible manifestations of this modernization. By utilizing digital infrastructure, the process of making a deed that was previously face-to-face and manual can now be done online without reducing its legality aspects, as long as it still refers to the principles of prudence and legal validity.

The application of the Cyber Notary concept provides a number of advantages, including time and cost efficiency, increased data security, and reduced risk of document forgery (Amalia & Handoko, 2022). Encryption technology and biometric authentication are important tools in ensuring the validity of the parties' identities in online legal transactions. In addition, storing records in digital form allows for more systematic and searchable document management. In developed countries such as Estonia and Singapore, digital notary systems have become part of standardized legal services and have full legal legitimacy (Abdillah et al., 2025). However, the implementation of Cyber Notary in Indonesia still faces various challenges, both in terms of regulation, infrastructure readiness, and human resource readiness. Until now, the Law on Notary Position (UUJN) has not explicitly regulated digital-based notary mechanisms. Meanwhile, the recognition of electronic signatures and electronic deeds is still limited within the framework of the Electronic Information and Transaction Law (ITE Law). This unsynchronized regulation causes legal uncertainty that needs to be addressed immediately so that the notary profession can develop legally and optimally in the digital realm.

The implementation of Cyber Notary as a form of modernization of the notarial profession does promise efficiency and convenience in legal services, but at the same time it also presents serious challenges from a juridical aspect. One of the main issues is how to ensure the legal validity and evidentiary power of authentic deeds made digitally. Notarial deeds have been recognized as authentic evidence that has perfect evidentiary power before the law. Therefore, any changes in the form and method of deed making, including digitization, must remain within the legal framework that guarantees its validity and authority. Unfortunately, until now there has been no explicit regulation in the Notary Office Law (UUJN) or other implementing regulations that accommodate the practice of Cyber Notary. While the Law on Electronic Information and Transactions (UU ITE) does recognize the

existence of electronic signatures and electronic documents as valid legal evidence, these provisions are not specifically intended to regulate the form and function of authentic deeds in the notarial context. The lack of synchronization between general regulations regarding electronic transactions and specific norms regarding the notary profession creates a gray area in terms of the legal force of digital deeds made by notaries online.

The absence of a clear and explicit legal umbrella results in legal uncertainty that has the potential to reduce public trust in digital deeds and the function of notaries in the digital era. This uncertainty not only impacts the evidentiary aspect in court, but can also affect the validity of documents in large-scale civil transactions, such as sale and purchase agreements, financing, and establishment of legal entities. Therefore, an in-depth analysis of this juridical issue is very important so that the transformation towards Cyber Notary does not only become a technological agenda, but also becomes part of substantial and sustainable legal reform.

2. Research Method

This research uses the normative juridical method, which is an approach that focuses on the study of applicable legal norms (Jonaedi et al., 2018). This method is used to analyze legislation, legal doctrine, and legal principles relevant to the existence and implementation of Cyber Notary in the Indonesian legal system. Normative juridical research aims to examine the compatibility between the concept of Cyber Notary and existing regulations, such as the Notary Office Law (UUJN), the Electronic Information and Transactions Law (ITE Law), and other provisions relating to electronic signatures and digital authentic deeds. The approach used in this research is a statutory approach, namely by examining relevant regulations such as Law Number 2 of 2014 concerning Notary Position (UUJN), Law Number 11 of 2008 concerning Electronic Information and Transactions and its amendments (ITE Law), as well as Government Regulations and other implementing regulations relating to electronic signatures, electronic documents, and trusted electronic systems. In addition to the statutory approach, this research also uses a conceptual approach to understand legal concepts related to digital authentic deeds and the role of notaries in the digital transformation of public services. The data sources used in this research consist of secondary data, which includes primary, secondary, and tertiary legal materials (Sulung & Muspawi, 2024). Primary legal materials include applicable laws and regulations, while secondary legal materials include legal literature, scientific journals, and experts' opinions. Tertiary legal materials are used as support, such as legal dictionaries and legal encyclopedias. Data analysis is carried out using the descriptive-analytical method, namely describing the contents of applicable legal norms and then critically analyzing them to draw logical and systematic legal

conclusions.

3. Results and Discussion

The Effect of the Application of Cyber Notary Technology on Notary Professionalism and Independence in the Process of Making Authentic Deeds in Indonesia

Notary professionalism is a fundamental element in carrying out the functions of the notary office as a public official who has the authority to make authentic deeds. Professionalism in this context does not only include technical aspects or formal skills, but also involves substantial competence in understanding the law, procedures, and juridical implications of each deed made. A notary must have a strong understanding of the law as well as the ability to apply it appropriately in various civil contexts (Astawa & Yunus, 2025). This is important so that the deed made is not only formally valid, but also has legal force that can be accounted for. In addition to competence, an important element of notary professionalism is personal integrity, which is reflected in honesty, responsibility, and commitment to legal truth. Notaries are required not to abuse their authority for the sake of personal gain or certain parties. In practice, this integrity is seen in the refusal to make deeds that are contrary to the law or ethics, even if requested by the client. Therefore, integrity is at the heart of public trust in the notarial profession.

Professional ethics is also a major component of notary professionalism. The Indonesian Notary Code of Ethics established by the Indonesian Notary Association (INI) professional organization serves as a guideline for behavior that must be upheld in carrying out duties. Professional ethics limit the behavior of notaries to remain in accordance with moral and legal norms, and maintain the dignity of the office. Violations of these ethics not only affect the personal image of a notary, but also undermine public trust in the notary institution as a whole (Amin et al., 2025). The concept of notary independence is closely related to professionalism. As a public official, a notary is obliged to be neutral and impartial in making deeds. This independence requires the notary to stand above all the interests of the parties to the transaction and provide legal services objectively, without any pressure or intervention from any party. The notary does not act as a legal representative of one of the parties, but as a protector who ensures that the rights and obligations of the parties are legally reflected in legal documents.

In the opinion of Sudikno Mertokusumo, "legal professions such as notaries are required not only to master the law technically, but also to have high moral and social responsibility towards society (Solehan & Gun, 2017)." This statement emphasizes that notaries are not just administrative technical executors, but rather figures who play an important role in maintaining legal order and justice in society. Along with the increasing demands for professionalism and social responsibility of notaries as emphasized by Sudikno Mertokusumo, technological developments also require adaptation to more modern and efficient work patterns.

Digital transformation has brought about significant changes in the work patterns of notaries, especially in the way they interact with the parties. Previously, interactions were conducted directly and face-to-face at the notary office, but now technology such as video conferencing has begun to be used in the clarification and initial consultation process. The use of this technology not only expands the reach of notary services to areas that are difficult to reach physically, but also provides convenience for parties who have limited time or mobility (Dinata & Kurniawan 2024). However, in the context of Indonesian law, the use of video conferencing in the process of making authentic deeds still requires regulatory adjustments to be fully recognized. Digitization also has an impact on the administrative and documentation aspects of the deed, which was previously done manually by recording physical files and storage in conventional archives. Currently, notaries are beginning to adopt digital archive systems and the use of electronic signatures to facilitate the validation of documents (Mayana & Santika, 2021). In addition to saving storage space and operational costs, this digital system enables fast, accurate and structured data retrieval. This contributes to improving the quality of service as well as facilitating the process of auditing and supervision from the competent authorities.

Digitalization has a significant positive impact on the professionalism of notaries, especially in terms of accessibility of services and transparency of procedures. The use of technology makes it easier for people to access notary services, which previously required time and travel to meet in person. With the existence of an electronic-based service system, people can now apply, consult, and certify documents without having to leave the comfort of home. This of course increases the level of satisfaction and convenience for users of notary services. For example, the use of online platforms for the process of legalizing documents or making deeds allows notaries to serve more clients in less time. According to the Indonesian Notary Association, more than 80% of notaries in Indonesia have now adopted digital systems in some form of their services (Tvonenews, 2025).

In addition, adaptability to technological developments is part of modern professionalism. Notaries who are able to make good use of technology demonstrate their commitment to improving the quality of legal services and meeting the expectations of the Times. In the digital age, notaries not only act as compilers of deeds, but also as facilitators who understand and implement the latest technologies in their work. This expertise, which includes the use of digital signatures, video conferencing, and cloud-based document management systems, is an indicator of a notary's ability to keep up with the times without compromising the essence of his profession. This creates a professional environment that is more responsive and responds more quickly to people's need for efficient and technology-based legal services. One of the significant benefits of digitization is digital record-keeping, which can improve work accountability (Anjarwati et al., (2023). With the existence of a digital storage system, documents and data related to the creation of deeds can be stored in a structured, secure, and easily accessible for verification or audit purposes.

This reduces the possibility of human error in recording and searching documents, and minimizes the risk of losing important files that often occur in manual filing systems. In addition, digitization makes it easier for notaries to monitor and track the history of documents that have been legalized, providing stronger evidence in case of disputes or legal problems related to the deed that has been made. The implementation of this system is also an important aspect in maintaining the integrity standards of the notary profession.

Although digitalization has a positive impact on the professionalism of notaries, there is also a potential threat to independence and professional ethics that must be considered. One of the main risks is the possibility of third-party pressure through more open digital systems. In the digital world, access to information can be more easily obtained by parties who are not directly interested, who may try to influence notarial decisions. For example, the parties involved in a transaction may try to influence the notary to make the deed more favorable to one of the parties, using pressure or manipulation of information. In this case, the professionalism of the notary is tested to keep the principle of neutrality and independence. Another challenge faced by notaries is to maintain objectivity in conditions of limited in-person verification of identity. With digitization, the process of verifying the identity of the parties involved in making the deed is often done electronically, such as through video conferencing or digital identification systems.

Although this technology has a high level of accuracy, the potential for identity manipulation or misuse of the technology remains. This poses a major challenge in maintaining the credibility and integrity of the notarial process, as digital identities are more vulnerable to forgery or unauthorized use. Notaries need to ensure that all verification procedures are carried out carefully to avoid potential loss or misuse of data. In addition, there are concerns about external influences in the process of digitizing notaries. As technology develops and digital platforms are used to facilitate notary services, there is a risk that outsiders may exploit security gaps in the system to manipulate documents or infiltrate the deed-making process. Below is a table summarizing the positive impacts and potential threats associated with the application of Cyber Notary in the notary profession:

Table 1

Positive impact and potential threats of implementing Cyber Notary

Aspect	The Positive Impact of Cyber Notary	Potential Threats of Implementing Cyber Notary
Professionalism	- Efficiency and transparency of services- Digital record-keeping- adaptation of modern technology	- Digital skills gap between notaries-risk of miscommunication via digital media

Independence	- Processes are more electronically documented - proof is easier	- The difficulty of identity verification without face - to-face- outside pressure is easier to enter through an open system

Through this table, we can understand that although digitization opens up many opportunities for notaries, it also presents challenges that require serious attention so that the notary profession can continue to run with high integrity and independence.

In the digital era, training in technology and digital literacy for notaries is very important as part of professional development. Given the increasingly technologically connected role of notaries, notaries must master a variety of technological skills to be able to carry out their duties efficiently and safely. The training includes an in-depth understanding of the software used in data management, digital signatures, as well as communication tools that allow virtual interaction with clients. Without mastery of this technology, notaries risk losing professionalism and neglecting security aspects that are an integral part of their duties. Notary organizations, both local and international levels, need to play an active role in providing training and coaching related to this digital competence, so that every notary can adapt to rapid changes in the digital world. In addition, the role of notary organizations in setting Cyber Notary work standards is crucial to maintaining the quality and integrity of the profession. The standard includes clear procedures and guidelines on how notaries should perform their duties in a digital environment. This includes not only technical aspects, such as the use of appropriate and secure software, but also the professional ethics that must be adhered to in digital interactions. Notarial organizations, such as the Indonesian Notary Association (ini), can play a role in formulating guidelines and standard operating procedures that can ensure that technology is used wisely, without compromising the quality and reliability of the documents produced (Napitupulu, 2017). The implementation of consistent standards and followed by all members of the profession will strengthen the credibility of the notary profession in the eyes of the public.

On the other hand, the urgency of updating the notary code of ethics relevant to the digital ecosystem cannot be ignored either. The current code of conduct is generally designed in a conventional context, so some of its aspects need to be updated to respond to the challenges that arise with digitization. These updates should include guidelines regarding integrity, transparency, and confidentiality in the digital environment, as well as how notaries can maintain professional ethics in digital interactions with clients. In addition, this code of conduct should contain guidelines related to the use of technologies that can maintain the independence of notaries, prevent third-party pressure, and ensure that decisions made by notaries remain objective and free from external influences. This code of conduct update is

important to provide clear guidance for notaries in carrying out their profession in the digital era.

To ensure that the professionalism and independence of notaries are maintained in the era of Cyber Notary, one of the steps that needs to be done is regulatory adjustments to the practice of digital notaries, without reducing the precautionary principle. The current regulations are still largely focused on conventional practices and have not adequately accommodated aspects related to digitization. Therefore, it is necessary to update the regulations that clearly regulate the procedures and operational standards for digital-based notary practices, while maintaining the principle of prudence in every step. This regulation should cover aspects of the legality of electronic signatures, the protection of personal data, as well as the storage and management of digital documents, in order to ensure that all actions performed by notaries remain legal and in accordance with the law.

In addition, the supervision and certification of technologies used in Cyber Notary practices should be part of efforts to strengthen professionalism. This supervision aims to ensure that the devices and technological systems used by notaries meet high security and quality standards, and can protect the data and personal information of the parties involved in the transaction (Putra et al., 2023). Certification of the technology used can be a way to ensure that the system implemented has gone through the due diligence process and has met the established standards. With the strict supervision of the use of technology, public trust in digital notaries will increase.

It is also important to note that the role of governments and professional associations in shaping legal support and protection systems is vital. The government needs to issue policies that support the development of digital infrastructure, such as a secure and evenly accessible internet network throughout Indonesia, so that every notary can operate effectively. In addition, the government must ensure that there are clear legal protections for notaries who use technology in carrying out their duties, including guarantees of the validity of digitally created deeds. Professional associations, such as the Indonesian Notary Association (ini), also have a role to provide training, certification, and guidance for notaries so that they can follow technological developments well and still maintain the quality and ethics of their profession. With regulatory adjustments, supervision of the technology used, and support from the government and professional associations, the notary profession will be more prepared to face the challenges of this digital era. The implementation of Cyber Notary will become more secure, transparent, and efficient, without compromising the basic values that have long been inherent in the notary profession, namely integrity, independence, and credibility.

B. Juridical Challenges in the Implementation of Cyber Notary

One of the main challenges in the implementation of Cyber Notary in Indonesia is the absence or vagueness of the legal basis in the notary position law

(UUJN). UU No. 30 of 2004 on notary positions that have been amended by law No. 2 of 2014, until now has not explicitly regulated the implementation of notary authority in the digital space. In fact, the development of Information Technology and the demands for efficiency in public services are increasingly encouraging the birth of electronic-based notarial practices. The absence of explicit legal norms regarding the Cyber Notary creates a gray space that can generate legal doubts in its implementation. One of the juridical polemics that arises is the vagueness of the legality of the use of electronic media in making authentic deeds online, especially when interaction is carried out through video conferences or electronic signatures are used in deeds (Oktavianti, 2024). Although the ITE Law (Law No. 11 of 2008 jo. UU No. 19 of 2016) recognizing the validity of electronic signatures and electronic documents as valid legal evidence, UUJN itself has not regulated the mechanism and formal requirements regarding the use of such technology in the process of making authentic deeds. As a result, there is a gap between the development of legal technology practices and the basic regulation of notary positions.

This problem is even more complex when it is associated with the interpretation of Article 15 Paragraph (3) of the UUJN which states that notaries can also exercise other authorities stipulated in laws and regulations. Some legal experts try to expand the interpretation of this article as the basis for the implementation of Cyber Notary by referring to the recognition of electronic documents in the ITE Law. However, this approach causes debate because there is no specific elaboration of norms in the UUJN about the procedure, form and legal force of electronic deeds. According to Amaliyah, a notary law expert at the University of Indonesia, the existence of electronic documents has indeed gained legal recognition in the Indonesian legal system through the ITE Law, but this has not necessarily been able to replace the validity of authentic deeds made conventionally because the UUJN does not explicitly regulate the format and mechanism of digitizing deeds. This statement reinforces the argument that there is a need for regulatory reform and harmonization between UUJN and UU ITE to answer legal needs in the digital age.

In addition to the vagueness of the legal basis, the legal validity of authentic deeds made electronically is also an important issue in the Cyber Notary discourse. In the Indonesian civil procedure law, an authentic deed has the power of perfect proof of its content and existence, to the extent that it meets the formal requirements as stipulated in Article 1868 of the Civil Code. However, when the deed is made electronically and signed through a digital system, the question arises whether the deed can still be categorized as an authentic deed according to the Civil Code and Civil Procedure Code. This condition requires firm regulation and harmonization between laws and regulations so as not to cause legal uncertainty.

The main difference between the physical and digital authentic deed lies in the aspect of proving the formality and validity of the identity of the parties involved (Marpi & Kom, 2020). In the conventional system, a physical presence before a notary allows immediate verification of the identity, consciousness and free will of the facing

parties. Whereas in online systems, this process only depends on digital media which has the potential to open gaps against identity forgery or other party pressure. This creates the risk of denial of the contents of the deed by the parties who then claim that the procedure for making the deed was not carried out legitimately because they were not physically present, or because the electronic signature was not properly authorized.

Furthermore, the challenge of implementing Cyber Notary is the process of verifying the identity and presence of the parties. In conventional practice, notaries can directly ascertain the physical presence and identity of the addressees by examining the originals and matching them directly. But in digital models, especially through media such as video conferencing, the validity of attendance cannot be perfectly verified. The risk of using false identities, falsifying documents, or the participation of unauthorized parties becomes higher, potentially creating legal loopholes and making it difficult to prove later. In addition to presence, the validity of digital signatures is also a crucial issue. Although the law on information and Electronic Transactions (Law No. 11 of 2008 jo. UU No. 19 of 2016) has recognized the existence of certified electronic signatures, but not all notaries and the parties use signatures that meet certification standards. An uncertified digital signature will hardly be considered valid as a substitute for a wet signature in the process of creating an authentic deed. This raises the question of the evidentiary power of electronically signed deeds, especially in legal processes that promote formal certainty. Furthermore, technical challenges also arise from the limited digital infrastructure owned by many notary offices in Indonesia. Not all regions have stable and secure internet access, as well as sophisticated and reliable identity verification software or systems. Under these conditions, it is very difficult to guarantee that the verification and authentication process is carried out in real-time and free from manipulation risks. Therefore, the support of an integrated and nationally standardized technology system is needed so that the Cyber Notary work process is not only effective, but also safe.

The implementation of Cyber Notary brings new legal liability consequences for notaries, especially when technical errors or misuse of the system occur. In practice, errors in the creation of a digital deed such as data input errors, system failures, or technical glitches during the verification of the parties can have significant legal repercussions. This problem is more complex when there is unauthorized access or manipulation of data by third parties, which exploit the security gaps of the digital system used. In this context, it is important to clarify the limits of Notarial liability, whether personal or shared with the service provider of the technology used. Along with that, it needs to be emphasized in the regulation on the Professional Responsibility of notaries in the use of digital systems, including aspects of due diligence, information security standards, and the obligation to ensure that the systems used have been certified. Without clear arrangements, the notary risks facing lawsuits for negligence for which he may not be fully responsible. Therefore, a legal

framework is needed that not only sets professional standards, but also provides legal protection to notaries in carrying out their duties in the digital ecosystem.

To answer the above complexities, a comprehensive regulatory update is needed. The current Notary Office law (UUJN) has not explicitly regulated the practice of Cyber Notary, so revisions or implementing regulations are an urgent need. Harmonization between UUJN with the information and Electronic Transactions Law (ITE Law), Personal Data Protection Law (PDP law), and other technology sector regulations must be carried out immediately to create legal certainty. In this case, the role of the Ministry of Law and Human Rights and the notary Supervisory Council is very strategic to encourage the birth of policies that are able to accommodate digital developments, while maintaining the integrity of the notary profession. Here is presented a table of Juridical challenges in the application of Cyber Notary.

Table 2

Juridical challenges in the application of Cyber Notary

No.	Juridical Challenges	Brief Description
1	Absence of Explicit Legal Basis in the Law	The Notary Position Law has not expressly regulated *Cyber Notary*, thus creating a gap in norms in the implementation of digitization of notary services.
2	Legal Validity of Electronic Authentic Deeds	It is still questionable whether a digitally made deed can meet the formal element as a valid authentic deed with full evidentiary power.
3	Verification of Identity and Presence of Parties	Notaries find it difficult to ensure the identity and presence of the parties physically or online, as well as the validity of digital signatures.
4	Personal Data Protection and Information Security	There is no standard digital security system to maintain confidentiality, integrity, and limited access to notary electronic documents.
5	Legal Liability for System Disruption or Abuse	It is not yet clear who is responsible in the event of a technical error or misuse of the digital system in the creation of the deed.
6	The Need for Regulatory Harmonization	Synchronization between the UUJN, THE ITE LAW, THE PDP LAW, and other technical regulations is needed to support the operationalization of Cyber Notary legally and safely.

4. Conclusion

Digital transformation in the field of notary through the concept of Cyber Notary is a response to the demands of efficiency, transparency, and accessibility of legal services in the modern era. The digitization of processes such as the use of electronic signatures, video conferencing, and electronic storage of documents has driven significant changes in the work patterns and professionalism of notaries. However, the implementation of Cyber Notary in Indonesia still faces juridical challenges due to the lack of explicit regulation in the Notary Office Law (UUJN), especially regarding the validity of authentic deeds made online. Inconsistency with other regulations such as the ITE Law and the Personal Data Protection Law (Law No. 27 of 2022) reinforces the urgency for holistic and harmonious regulatory reform. In this context, strategic steps are needed in the form of drafting regulations that are able to ensure legal certainty and protection for notaries, as well as professional development that emphasizes strengthening digital competence and professional ethics. Professional and government organizations, especially the Ministry of Law and Human Rights and the notary Supervisory Council, have a central role in encouraging the reform of notary law that is adaptive to technology but still upholds the principles of prudence, independence, and integrity of the notary position as a public official. Thus, the existence of Cyber Notary is expected to function legally, effectively, and accountable in supporting the legal needs of the community in the digital era.

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