

Legal Reconstruction of the Use of Digital Signatures in Deeds of Change of Capital of Limited Liability Companies

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Abstract. *This study aims to analyze the use of digital signatures in Limited Liability Company Capital Change Deeds and formulate ideal legal standards that can support the digitalization of notarial processes. The study uses an empirical juridical method with a statutory regulatory approach and a sociological approach. Data were obtained through literature studies and interviews with Notaries in Batam City, parties related to General Legal Administration services, and Limited Liability Company business actors. The results of the study indicate that the administration of legal entity changes has utilized an electronic system through the Legal Entity Administration System, but the process of reading and signing authentic deeds is still carried out conventionally because the provisions of the Notary Position require the presence of the appearers. This condition creates a gap between technological developments and notarial law. The ideal legal standard offered is reconstruction through the National Integrated Cyber Notary Platform that connects notaries, digital identity, biometric authentication, Digital Legal Room, certified electronic signatures, audit trails, and the Legal Entity Administration System. This reconstruction still places notaries as controllers of the legal process and is aimed at strengthening certainty, security, authenticity, and legal protection.*

Keywords: Digital; Capital; Cyber; Notary; Signature.

1. Introduction

Management: The development of information technology has transformed the delivery of public services and legal services from conventional mechanisms to electronic systems. This transformation has driven the need for law to not only regulate legal relations that occur digitally but also provide instruments that guarantee identity, document integrity, data security, and legal certainty. In notarial practice, this development has given rise to the concept of cyber notary, which utilizes information technology to support the implementation of notarial authority. Studies on cyber notary indicate that the need for digitalization is growing, but its implementation still faces regulatory and technical issues

because notarial law has not yet fully accommodated electronic mechanisms (Oktavianti, 2024; Rizqiya & Mahfud, 2024).

One of the developments that has been underway is the digitalization of legal entity administration through the Legal Entity Administration System (SABH). This allows administrative processes related to Limited Liability Companies to be conducted electronically, thus providing time efficiency and convenience for business actors. However, the digitization of legal entity administration does not automatically change the procedures for creating authentic deeds. The status of notarial deeds remains determined by legal provisions regarding the notary's authority, the form of the deed, the reading, the presence of witnesses, witnesses, and signing. Thus, there is a difference between the administrative process that has been digitized and the process of creating authentic deeds that still relies on conventional mechanisms.

Electronic signatures have essentially been recognized under Indonesian law. The Electronic Information and Transactions Law recognizes electronic signatures as long as they meet the legal requirements, while the Government Regulation on the Implementation of Electronic Systems and Transactions regulates system reliability and authentication mechanisms. Legal literature indicates that electronic signatures can function as a means of authentication and verification and provide assurance of document integrity. Problems arise when electronic signatures are used in authentic notarial deeds, as the validity of the deed is determined not only by the signature but also by the deed formation process and the authority of the public official (Setiadi & Bagiastra, 2021; Salsabila & Patras, 2022).

The notary's obligation to read the deed and ensure that the signing process is carried out according to regulations is an important part of the notary's preventive function. Research by Pratama, Wisnaeni, and Cahyaningtyas (2021) confirms that reading the deed is a notary's obligation and is related to the notary's responsibility for the deeds they create. In a digital context, the issue is not simply whether electronic signatures are technologically feasible, but rather how the presence, reading, approval, and free will of the parties can be proven electronically with a level of certainty comparable to conventional mechanisms.

This issue becomes increasingly relevant in the context of changes to the capital of a Limited Liability Company. Capital changes are legal actions related to the company's capital structure and are outlined in a notarial deed based on a decision of the General Meeting of Shareholders. For businesses, especially in highly mobile environments, the need for fast and flexible processes is increasingly significant. Previous research on Limited Liability Company capital indicates that capital changes play a crucial role in the sustainability and development of business activities (Purnamasari, Anshori, & Gunarto, 2018). Therefore, the need for digitalization in these processes must be placed within a

framework of legal certainty, not merely efficiency.

Conditions in Batam City demonstrate this need more concretely. Based on empirical research in this thesis, interviews with notaries in Batam City, parties involved in the services of the Directorate General of AHU, and business actors indicate that digitalization of legal services is necessary due to time constraints, differences in the locations of parties, and the mobility of the business world. Business actors fundamentally do not want the role of notaries to disappear, but rather require a mechanism A valid electronic notary so that the presence, identity, will, and consent of the parties can still be verified. This finding aligns with research showing that the implementation of cyber notary still requires regulatory certainty and a system design capable of maintaining the authenticity of the deed.

Thus, there is a gap between *das sein*, the need for and development of electronic-based legal administration, and *das sollen*, the formal provisions for the creation of authentic deeds, which are still oriented towards physical presence and conventional signing. This gap is important to examine because digitalization is not sufficient by replacing manual signatures with electronic signatures. A reconstruction is needed that regulates the entire process, from identity verification, legal presence, deed reading, approval, signing, storage, and validation through the legal entity administration system. This study aims to analyze the practice of using digital signatures in Limited Liability Company Capital Change Deeds and formulate ideal legal standards through the National Integrated Cyber Notary Platform that still guarantees the position of notaries and the authenticity of deeds.

2. Research methods

This study uses an empirical-juridical (normative-empirical) research method, combining a study of applicable legal norms with their practical application. The approaches used include a statutory regulatory approach, a conceptual approach, and a sociological approach. The statutory regulatory approach is used to analyze provisions regarding the Notary Office, Limited Liability Companies, electronic information and transactions, and the implementation of electronic systems. The conceptual approach is used to examine the concepts of electronic signatures, deed authenticity, digital legal presence, and cyber notary.

The research data consists of primary and secondary data. Primary data was obtained through interviews with Yeni Amir, SH, M.Kn. and Sera Astuti, SH, M.Kn. as Notaries in Batam City, Ravel Anderson, SH as a party related to the services of the Directorate General of General Legal Administration, and Dedy Yongky as a business actor and owner of a Limited Liability Company in Batam City. Secondary data was obtained through laws and regulations, books, scientific journals, and library sources related to the research object.

Data collection was conducted through literature review and field research. The data obtained were analyzed qualitatively using a prescriptive approach, linking interview results to legal norms, theories of legal certainty, legal effectiveness, legal protection, and expediency. The analysis aimed to identify gaps between existing regulations and practical needs and to formulate a legal model that could be implemented if the digitalization of Limited Liability Company Capital Amendment Deeds were provided with an adequate legal basis.

3. Research Results and Discussion

3.1. Practice of Limited Liability Company Capital Change Deeds and Obstacles to Implementing Digital Signatures

In practice, changes to the capital of a Limited Liability Company still originate from a decision of the General Meeting of Shareholders and are outlined in a notarial deed. This deed serves as the basis for changes to the company's data or articles of association, which are then processed through the Legal Entity Administration System. Thus, there are two layers of processes that need to be distinguished: the process of creating an authentic deed and the process of legal entity administration. The SABH has provided electronic means for submission and recording, but this system has not replaced the formal mechanism for creating an authentic deed.

Based on research in Batam City, the process of reading and signing capital change deeds is still carried out conventionally. The parties appear before a notary, their identities are verified, the deed is read, the parties express their agreement, and then the deed is signed by the parties, witnesses, and the notary in accordance with the provisions of the Notary Office. Once the deed is completed, the notary uses an electronic administration system to carry out processes related to changes to legal entity data. These findings indicate that digitization at the administrative stage is not yet identical to the digitization of authentic deeds.

This situation is legally understandable because electronic signatures recognized by the ITE Law have their own legal regime, while authentic deeds have formal requirements stipulated by notarial law. This means that the recognition of electronic signatures does not automatically eliminate the formal requirements for authentic deeds. Research by Setiadi and Bagiastra (2021) also shows that electronic signatures have been recognized as a means of authentication and verification, but the Notary Law does not specifically regulate the electronic signature mechanism for authentic deeds. A similar finding is evident in research by Salsabila and Patras (2022), who found legal uncertainty when the regulation of digital signatures meets the provisions of the ITE Law and the Notary Law.

From the perspective of a notary's obligations, the presence of the parties is not

an empty formality. Presence allows the notary to verify identity, competence, and free will, as well as provide legal advice. Reading the deed also allows the parties to understand the contents of the legal act before declaring their consent. Therefore, digitalization must be able to provide a functional substitute for these aspects. Electronic presence must be demonstrable; identity must be verified; communication between the notary and the parties must be recordable; and the consent must be securely linked to the signed document.

Interviews with business owners indicate that the main obstacles to conventional mechanisms are time and location constraints. Shareholders or company organs may be located in different locations, making scheduling physical meetings difficult. In certain circumstances, granting power of attorney is a practical solution. However, business owners fundamentally desire an electronic mechanism that remains legally valid. Therefore, the need for digitalization arises not because the parties want to reduce the role of notaries, but because they require a more efficient mechanism without compromising legal certainty.

From the Ministry of Law's perspective, interviews indicate that legal administration is indeed moving toward digitalization. The AHU system has demonstrated that legal entity data can be managed electronically. However, administrative digitization cannot be used as a basis for assuming that all stages of deed creation are validly conducted electronically. The primary issue is normative legitimacy. Technology capable of identity authentication, biometrics, certified electronic signatures, and audit trails is essentially available, but these mechanisms must first obtain a clear legal basis within the notary system.

These findings align with research by Oktavianti (2024), which shows that the implementation of cyber notaries in Indonesia still faces obstacles due to the lack of clear implementing regulations and the existence of provisions requiring physical meetings. Rizqiya and Mahfud (2024) also point out that the development of cyber notaries has the potential to increase service efficiency, but unclear regulations still create uncertainty regarding the evidentiary power of deeds. Thus, the problems encountered in Batam City are not merely local issues, but part of a national legal issue concerning the lack of synchronization between the digitalization of services and the law on the formation of authentic deeds.

When analyzed using the theory of legal certainty, this situation demonstrates that norms do not yet provide a clear answer regarding how electronic signatures, electronic presence, and electronic deeds can be placed within the construction of authentic deeds. From a legal effectiveness perspective, the law has not fully responded to societal needs and technological developments because legal factors, facilities, and legal culture have not been integrated. Therefore, the required reforms are not simply new applications, but changes in legal construction that make technology a legitimate means of exercising notarial

authority.

Thus, current practice can be formulated as a hybrid system: legal entity administration is electronic, while the core process of creating authentic deeds remains conventional. This hybrid model is still viable and provides certainty under applicable law, but it does not optimally address the need for efficiency. If digitalization is to be extended to the deed creation stage, regulations must be in place that explicitly equate electronic presence that meets certain requirements with legal presence, recognize certified electronic signatures in notarial deeds, and define standards for electronic security and evidence.

3.2. Ideal Legal Standards and Reconstruction of the National Integrated Cyber Notary Platform

The research results show that ideal legal standards should be based on the principle that technology does not replace notaries. Notaries remain public officials who control the legal process, while technology serves as an instrument to exercise that authority more effectively. Therefore, reconstruction is not intended to change the nature of authentic deeds, but rather to change the media and mechanisms for implementing several stages so that they can be carried out electronically with adequate security and proof guarantees.

First, harmonization is needed between the Notary Law, the Limited Liability Company Law, the Electronic Information and Transactions Law, and regulations governing the implementation of electronic systems. This harmonization must provide a legal basis for electronic presence, electronic reading of deeds, certified electronic signatures, electronic storage of minutes, and mechanisms for providing evidence in the event of a dispute. Without such a foundation, technically available technology cannot be used as a substitute for legally mandated procedures.

Second, it is necessary to develop a National Integrated Cyber Notary Platform connected to the SABH (National Digital Identity Agency), a national digital identity agency, and electronic certification providers. This platform will not simply serve as a place to upload documents, but will also serve as a legal process ecosystem that records all stages of notary and party actions. This concept aligns with the needs identified in the research, namely the integration of notary authority, digital identity, system security, and legal entity administration.

The first stage in the platform is Digital Identity Verification. Parties authenticate using digital identities linked to population data and electronic certificates. The system verifies the identity, status, and authority of the parties intending to take legal action. For Limited Liability Companies (LLCs), the system also needs to verify the legal entity status, board of directors and commissioners, shareholder

list, and data on previous company changes. This check is crucial because capital changes are actions related to the company's internal structure.

The second stage is biometric authentication and facial recognition. This mechanism ensures that the digital account and identity are actually used by the identity holder. In the context of authentic deeds, biometrics should not be viewed as a substitute for notary assessment, but rather as a tool to strengthen identity verification. The system can record the time, device, and verification results so that if a dispute arises later, a track record can be verified.

The third stage is the Digital Legal Room, an electronic legal space. Authorized parties are present in the room with a notary. The system verifies participants before access is granted. The notary then performs the same functions as in conventional mechanisms: verifying identity and authority, explaining legal consequences, reading the deed, ensuring the parties understand the contents, and ensuring there are no defects in will. The difference is that this attendance takes place through an electronic system that meets security standards and is recorded as part of an audit trail.

The concept of a Digital Legal Room must be accompanied by Digital Presence Verification. Electronic legal presence cannot be proven simply by logging in. Presence must consist of several indicators, namely identity authentication, biometric verification, timestamps, location verification (if necessary), and activity recording. This way, the system can prove who was present, when, from which system, and what legal action was taken. This model addresses the key question of how the concept of "facing" can be translated into a digital environment.

The next stage is a digital GMS. Digitizing a GMS does not change the Limited Liability Company's organs or its authority. The GMS remains the decision-making forum, while the platform merely provides the means for its implementation. The system must be able to verify the quorum, participant authority, voting results, and decision documents. The GMS decisions then serve as the basis for the notary to draft the Limited Liability Company's Capital Amendment Deed. In this way, digitization does not change the legal substance of a Limited Liability Company but instead provides a more efficient means.

Once the deed has been read and approved, it is signed using a certified electronic signature. The electronic certificate links the signer's identity to the document and helps maintain its integrity. The system must prevent changes to the document's contents after signing and provide information regarding the time and status of the signing. The notary's signature must also use a mechanism that meets the electronic certification standards set out in the regulations.

The next stage is validation through the SABH. In an ideal model, the SABH not

only receives the final results but also structured data from the legal process. The system can verify the legal entity's status, the authority of its organs, and the conformity of capital change data. Once the validation process is complete, the company's data changes are recorded in the government database. This integration will minimize duplicate data input and reduce the risk of inconsistencies between the deed and the legal entity database.

The integration model can be described in the flow: The company submits a change in capital → verification of company data → verification of identity and authority

→ Digital Legal Room → notary review and reading of deeds → party approval → certified electronic signature → audit trail and document security → SABH validation → recording of capital changes. Each stage has an electronic trail so the process can be audited and accounted for.

From a legal protection perspective, an audit trail is a key component. It records identity, time, activity, approval, and document status changes. If a shareholder later denies approving a capital change, the system can provide evidence of the verification process, including attendance, reading, approval, and signing. Thus, the audit trail serves as both a preventative mechanism and a tool for proof. The use of audit trails also can provide additional protection to the notary if the process has been carried out according to procedures.

Legal protection must also be provided through the allocation of responsibility. If the error originates from the parties, for example, the use of false identification or the provision of false information, responsibility rests with the party committing the act. If the error arises from a failure of the electronic system or system security, responsibility must be directed to the system administrator in accordance with applicable regulations. Meanwhile, if the error stems from the notary's negligence in carrying out their duties, the notary remains responsible in accordance with the Notary Law. This division is important to prevent technology from placing all risks on the notary.

This model can also be used to prevent fraud. The system can cross-check company data, the status of directors, commissioners, shareholders, and capital change history. If discrepancies are found, the system can issue a warning or halt the process until the issue is resolved. This mechanism strengthens the notary's preventive function by providing more verified data. Technology, therefore, does not diminish the principle of prudence but rather provides additional tools for its implementation.

From a legal standpoint, the use of digital media does not automatically diminish its authenticity. The authenticity of a deed depends on the authority of the public official and the fulfillment of legally mandated requirements. Therefore, if

future law explicitly recognizes electronic notarial deeds and regulates the procedures for their creation, such deeds can remain authentic as long as all formal and material requirements are met. Technology merely serves as a medium for implementing the legal process, while authority and responsibility remain with the notary.

This concept also positions the notary as the controller of the legal process. Notaries continue to receive the wishes of the parties, verify identity and competency, confirm the authority of company organs, provide legal advice, read deeds, confirm approval, and sign deeds. Digitization simply changes the way these processes are carried out. Therefore, concerns that cyber notaries will replace notaries are unfounded if the legal design explicitly maintains notaries as the parties responsible for the legal process.

From a utility theory perspective, this model offers benefits in the form of time efficiency, reduced travel costs, ease of coordination, and increased administrative speed. For businesses, these benefits are crucial because capital changes are often related to investment needs, restructuring, and business development. However, utility cannot stand alone. The system must still meet legal certainty, legal protection, security, and authenticity. Thus, efficiency is a legitimate outcome of digitalization, not an excuse to ignore legal requirements.

From a legal protection perspective, an integrated system provides protection to three main parties. First, notaries obtain more comprehensive electronic evidence regarding the processes undertaken. Second, companies receive assurance that data changes can only be made by authorized parties and based on valid documents. Third, the state obtains a more accurate and monitorable legal entity database. Balancing these three interests is a crucial foundation for establishing a digital system oriented towards legal certainty.

However, the implementation of the National Integrated Cyber Notary Platform faces several challenges. The first challenge is the inadequate legal basis in the Notary Law. The second challenge is cybersecurity, including the risk of data leaks, system attacks, and identity theft. The third challenge is dependence on technological infrastructure and internet networks. The fourth challenge is changes in legal culture and the readiness of the notary profession. The fifth challenge is the potential reduction in direct interaction, which has traditionally been part of the trusting relationship between notaries and their respective parties.

These challenges do not mean that digitalization should be rejected. Instead, they should be used as parameters in developing regulations. Systems must provide layered authentication, encryption, backup, disaster recovery, audit trails, access control, and mechanisms to stop processes in the event of anomalies. Furthermore, digital competency standards for notaries and oversight

mechanisms for electronic system administrators need to be established. Thus, technological change goes hand in hand with improvements in legal and professional capacity.

This research also shows that the concept of digital legal presence needs to be positioned carefully. Electronic presence should not be interpreted simply as presence via video conference. Presence must be a legal status that can be proven through a series of authentications and recordings. Therefore, the term legal digital presence is more accurately understood as a legal construct consisting of verified identity, confirmed will, communication with a notary, time of presence, and activity records. This concept bridges the gap between the conventional principle of "facing" and digital needs.

Based on the overall analysis, the proposed legal reconstruction does not allow for the free, unrestricted creation of digital deeds. The ideal model is controlled: only parties whose identities and authority are verified can access the process; only authorized notaries can open the process; each stage is recorded; signatures are signed using electronic certificates; documents are locked after signing; and the results are validated through the SABH. This model reinforces the principle of prudence and allows for accountability in the digital process.

Thus, the ideal legal standard for the use of digital signatures in Limited Liability Company Capital Change Deeds must include five main elements, namely regulatory legitimacy, verified identity and authority, provable electronic legal presence, certified electronic signatures with Document integrity, as well as integration with the SABH and audit trail. These five elements must operate in an integrated manner. Simply replacing manual signatures without addressing attendance, reading, verification, and storage is insufficient to maintain the authenticity of the deed.

This model aligns with the development of research on cyber notaries. Abdal and Handoko (2024) demonstrated that technology can be a tool for notaries to navigate conditions that limit physical meetings, while Tandiono, Adjie, and Mashdurohatun (2024) emphasized that digital transformation in notary services must be accompanied by attention to legal challenges and legal certainty. Therefore, legal reconstruction needs to be directed toward a model that not only follows technological developments but also ensures that the technology is legally accountable.

Ultimately, the National Integrated Cyber Notary Platform represents a proposed reconstruction that places law at the heart of technology. Notaries remain public officials, the General Meeting of Shareholders (GMS) remains the decision-making body, Limited Liability Companies remain subject to company law, and the Legal Entity Registration System (SABH) remains the legal entity administration system. Changes only occur in the medium and implementation

mechanism. With this construction, digitalization can provide benefits without sacrificing legal certainty, authenticity, and legal protection.

The first aspect that needs to be emphasized in the reconstruction is the relationship between physical presence and legal presence. Presence in notarial law serves to connect a person's identity with the will they express before a notary. Therefore, when presence is conducted electronically, the system must be able to establish the same legal relationship. Digital presence should not be reduced to a person's presence on a screen, but must be proven through verified identity, two-way communication, verification of will, and recording of the process. With this construction, digital presence can be viewed as a mechanism for proving presence that has clear legal parameters.

The second aspect is the authority and capacity of the parties. In changing the capital of a Limited Liability Company, not everyone with access to the company's account automatically has the authority to change the capital structure. Therefore, the platform must distinguish between identity, capacity, and authority. Identity answers who the person is; capacity answers the position in which they act; and authority answers whether they have the right to take certain legal actions. All three must be verified before the process can proceed. A system that only verifies identity without verifying authority has the potential to create new risks.

The third aspect is the relationship between the GMS and notarial deeds. Digitizing the GMS does not mean that company decisions can stand alone without the notarial process. GMS decisions remain the source of the company's will, while the notary public documents these decisions in the deed within their authority. Therefore, the platform needs to Separate the company's decision-making and deed-drafting stages, but connect them electronically. GMS resolution documents, participant lists, voting results, and proof of quorum can serve as supporting data for notaries. This integration will reduce the risk of discrepancies between GMS resolutions and the contents of the deed. The fourth aspect is document integrity. In electronic mechanisms, documents can be altered without leaving any visible physical changes. Therefore, the system must implement safeguards that ensure that once a document is signed, it cannot be altered without detection. Certified electronic signatures, document hashes, timestamps, and secure storage mechanisms can be used together. Any changes or attempted access must be logged. The principle is that once a document has been approved and signed, its integrity must be verifiable at any time.

The fifth aspect is personal data protection. Platforms that integrate digital identity, biometrics, corporate data, and legal process records will manage high-value data. Therefore, technical regulations need to define access limits, data usage purposes, and data storage, retention, and deletion in accordance with data protection provisions. Notaries should not have broader access than

necessary to exercise their authority. The principles of data minimization and access control need to be part of the platform design from the outset.

The sixth aspect is the mechanism for system disruptions. Because deeds are legal instruments with significant consequences, system disruptions should not automatically render the legal process unclear. Platforms should have fail-safe procedures, backups, data recovery, and temporary suspension mechanisms. If a disruption occurs before signing, the process can be resumed after the system recovers, while maintaining verified data. If a disruption occurs after signing, the system must be able to prove the final, valid document status. These arrangements are crucial to prevent technological failures from turning into legal uncertainty. The seventh aspect is the division of responsibilities within the digital ecosystem. Notaries are responsible for their legal actions and official obligations; system administrators are responsible for the reliability and security of the system; and parties are responsible for the accuracy of the data and their stated intentions. This division of responsibilities needs to be explicitly stated in the regulations and platform usage agreements. This is crucial because digital systems involve more actors than conventional mechanisms. Without a division of responsibilities, disputes can escalate into blame-shifting between notaries, users, and system administrators.

The eighth aspect is the audit trail's function as an accountability instrument. Audit trails are not merely technical records, but rather part of the evidentiary architecture. The system needs to automatically and non-manipulatedly record relevant activities, including logins, identity verification, attendance, reading, approval, signing, and sending documents to the SABH. In dispute proceedings, data This can help demonstrate the chronology of legal actions. Thus, the audit trail strengthens the position of the parties and the notary while enhancing the state's ability to conduct oversight. The ninth aspect is the need for standardization. If each notary office uses a different application with varying security standards, the level of legal protection may be inconsistent. A national platform is more appropriate because it can provide the same standards for identity, certification, security, storage, and auditing. Notaries still have the freedom to exercise their professional authority, but the digital infrastructure they use must meet national standards. Standardization also facilitates integration with the SABH and other government systems.

The tenth aspect is a shift in legal culture. Digitalization will be effective if notaries, business actors, and the public understand that technology is not a substitute for legal judgment. Notaries must continue to conduct substantive examinations and provide counseling, while parties must understand the consequences of digital agreements. Therefore, regulatory updates need to be accompanied by education and training. Digital competence for notaries needs to be integrated with legal competence so that technology use remains within

the bounds of prudence.

If all these elements are implemented, the digital model can yield several broader benefits. For business owners, the capital conversion process becomes faster and less affected by distance. For notaries, more comprehensive electronic data and evidence are available to support their duties. For the government, legal entity data becomes more integrated and easier to verify. For the public, legal services can become more transparent and documented. These benefits demonstrate that digitalization has strong utility when built on a clear legal foundation. However, this model must also be tested through a precautionary principle. Not all types of deeds need to be digitized immediately at the same level. Changes to the capital of a Limited Liability Company (LLC) could be a relatively relevant area for development because the process has a fairly clear data structure and is closely related to legal entity administration. Implementation can be carried out in stages through pilot projects, security evaluations, evidentiary testing, and regulatory refinements before being expanded to other legal procedures. A phased approach will reduce risk and allow policymakers to gain empirical experience.

From the overall discussion, legal reconstruction should not use a solely technology-oriented approach. A more appropriate approach is legal technology by design, where technology is designed from the outset based on legal needs. Each feature must have a clear legal function: biometrics for identity verification, the Digital Legal Room for establishing legal presence and communication, electronic signatures for document authentication and integrity, audit trails for accountability, and SABH for validation and recording.

legal entity. With this approach, technology becomes part of the legal system, not a separate system that is then forced into law. Thus, the urgency of reconstruction lies in the need to unify three developments that have been operating separately: the digitalization of government administration, the recognition of electronic documents and signatures, and the authority of notaries to create authentic deeds. All three share the same goal: to provide effective legal services and ensure certainty. Obstacles arise because the norms governing them are not yet fully synchronized. The National Integrated Cyber Notary Platform can serve as an institutional instrument to unify these three regimes while maintaining the boundaries of their respective authorities. Within the framework of legal certainty, the reconstruction must produce predictable rules for all parties. Parties must know when a digital presence is considered valid, what type of identity is used, how signatures are obtained, how documents are stored, and who is responsible in the event of a disruption. Notaries must also have clear guidelines to avoid taking legal risks based on personal interpretation. This certainty will ultimately increase trust in digital notarial services.

Within the framework of legal protection, systems must be designed to prevent disputes before they occur. Identity verification, authority checks, approval records, and audit trails are all forms of preventative protection. If a dispute does arise, electronic records can serve as a basis for tracing the process and determining who is responsible. Thus, legal protection not only arises when a dispute occurs, but is built into the deed-making process itself. Within a utilitarian framework, digitalization must be assessed based on its net benefits. Speed of service cannot be considered a benefit if it is accompanied by an increased risk of forgery, data breaches, or uncertainty regarding the status of documents. Conversely, a slightly more complex system capable of verifying identity, maintaining document integrity, and providing an audit trail can provide greater benefits in the long run. Therefore, platform design must balance efficiency with security and legal certainty.

Empirical findings in Batam City reinforce this need. Batam City was chosen due to its high economic activity and the business community's need for fast legal entity administration services. Interviews with notaries, parties related to the Directorate General of AHU, and business actors revealed a shared need for a legitimate electronic mechanism. These findings provide an empirical basis for the reconstruction initiative and demonstrate that legal reform should address real-world practical needs. Taking all these factors into consideration, the National Integrated Cyber Notary Platform can be formulated as a system consisting of seven layers: digital identity, biometric verification, corporate authority verification, Digital Legal Room, certified electronic signatures, audit trails and secure storage, and SABH validation integration. These seven layers must be interconnected and governed by clear legal regulations. The notary remains at the center of the legal process, while the platform provides verification and recording facilities.

This model also enables the development of more proactive legal services. The system not only accepts data provided by users but can also cross-check government and legal entity data. In the long term, integration with government identity and administration systems could reduce the need for repeated data checks. However, integration must respect the authority of each agency and data protection principles. This way, efficiency is achieved through controlled interoperability. Therefore, the research findings do not directly recommend the use of digital signatures in capital change deeds based on current law. The research recommendations are prescriptive, meaning that the use of digital signatures in authentic deeds can only be fully implemented after a legal basis exists to accommodate such a mechanism. This position is crucial for maintaining academic and professional prudence, as available technology does not automatically change legal requirements. Regulatory reconstruction is a prerequisite for full implementation.

4. Conclusion

Based on the research results, it can be concluded that the practice of changing the capital of Limited Liability Companies in Batam City has utilized an electronic system at the legal entity administration stage through the Notary Public Registration System (SABH), but the reading and signing of authentic deeds are still carried out conventionally because the provisions of the Notary Public Position do not provide an adequate basis for the use of digital signatures and electronic presence in authentic deeds. Interview results indicate that the need for digitalization is primarily driven by efficiency, business actor mobility, and differences in the locations of the parties. The ideal legal standard that can address these needs is reconstruction through the National Integrated Cyber Notary Platform that connects notaries, digital identity, biometric verification, Digital Legal Room, certified electronic signatures, audit trails, and SABH. This model still places notaries as controllers of the legal process and does not change the position of the GMS or the structure of Limited Liability Companies.

It is recommended that lawmakers harmonize and update regulations on Notary Public Positions, Limited Liability Companies, and Electronic Information and Transactions by providing a clear legal basis for the existence of electronic law, electronic notarial deeds, and certified electronic signatures. The Ministry of Law also needs to develop the SABH into a more integrated system with digital identity, biometric authentication, a Digital Legal Room, electronic certification, location verification, and an audit trail. This development is necessary accompanied by cybersecurity standards, division of responsibilities between the parties, notaries, and electronic system organizers, as well as increasing the digital competence of notaries so that digitalization truly produces effective services without reducing certainty, authenticity, and legal protection.

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