

The Challenge of National Regulation Reform in Facing Legal Technology Disruption

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Abstract: *The development of digital technology has brought significant disruption in the national legal system, giving rise to normative and institutional challenges that have not been fully anticipated by existing regulations. Innovations such as artificial intelligence (AI), blockchain-based smart contracts, and electronic court systems (e-courts) have structurally changed the way the law works, but at the same time have raised new issues related to legality, accountability, and procedural justice. Law Number 19 of 2016 as an amendment to the ITE Law and Law No. 27 of 2022 concerning Personal Data Protection has not been responsive enough in dealing with the ever-growing complexity of digital law. In addition to legal vacancies, multiple interpretations of norms, and regulatory fragmentation, the Indonesian legal system also faces limitations in harmonization with international legal standards such as GDPR, as well as low institutional capacity in implementation. Through a normative juridical approach with the analysis of primary and secondary legal materials, this study highlights the importance of legal reform based on regulatory foresight, legal harmonization, and institutional transformation. Digital legal reform in Indonesia must be anticipatory, adaptive, and interdisciplinary, in order to be able to ensure legal certainty, human rights protection, and the rule of law in the midst of increasingly intensive and disruptive digital globalization*

Keywords: *Disruption-Technology; Harmonization-Law; Reform Technology*

INTRODUCTION

The development of legal technology today has resulted in a significant disruption to the traditional paradigm in the national legal system. Innovations such as *artificial intelligence* (AI) in decision prediction, *blockchain* for contract recording, and electronic courts (*e-courts*) have created more efficient but complex models of legal interaction. For example, AI used to detect potential fraud or assist in jurisprudence analysis can speed up legal work, but at the same time raise juridical issues regarding decision authorization and algorithm accountability. In the lens of progressive law, this disruption reflects the need for legal adaptation to radical social changel.¹ However, without a solid and flexible regulatory framework, these innovations can actually obscure fundamental legal principles such as legality, justice, and due process of law.

Furthermore, the use of *smart contracts* through blockchain technology has deconstructed classic contractual principles in civil law, such as the principles of freedom of contract and the validity of

¹ Buwono, S. R., Abubakar, L., & Handayani, T. (2022). Kesiapan Perbankan Menuju Transformasi Digital Pasca Pandemi Covid-19 Melalui Financial Technology (Fintech). *Jurnal Poros Hukum Padjadjaran*, 3(2), 228-241.



agreements. Automatically executed contracts based on program code raise crucial questions: how does positive law verify the intentions of the parties, what if there are *bugs* in the code that result in losses, as well as who is responsible? This suggests that national regulation needs to undergo profound reform, not only in the form of substantive legislation, but also in methodologies for law-making that are more responsive to technology. Technology is not only an aid, but it has also become a new "normative architecture" that shapes legal behavior.² Therefore, national legal reform needs to embrace an interdisciplinary approach that combines law, technology, and ethics to maintain the rule of law in the midst of disruptive digital transformation.

The delay in regulatory reform in responding to technological innovation not only has implications for the occurrence of a *legal vacuum*, but also creates an imbalance between technological advances and the principle of legal certainty. In this context, the lagging of the law causes the existing regulatory apparatus to become outdated, unable to reach the complexity of modern legal relations based on digital technology. For example, in *fintech* or *legal tech* practice, many legal service models operate in a "grey area" because they have not been explicitly regulated by law. This situation is contrary to the principle of *lex certa* in the law, which requires that every legal norm be written clearly, firmly, and predictably applied.³ This uncertainty opens up space for human rights violations, especially in the issue of personal data protection, algorithmic supervision, and the right to procedural justice in electronic systems.

In addition, the delay in legislation also exacerbates regulatory fragmentation that causes overlapping authority between institutions. For example, in the regulation of digital data protection, there is a wedge between the ITE Law, the PDP Law (2022), and sectoral regulations issued by the OJK, BI, and the Ministry of Communication and Information. Without harmonious coordination and an integrated legal framework, normative and institutional conflicts are born that have an impact on the weak effectiveness of law enforcement. A good law must be able to provide a consistent and reliable regulatory framework for citizens to plan their actions.⁴ Therefore, the biggest challenge in dealing with technological disruption is not just drafting new regulations, but building regulatory foresight that is able to anticipate changes and harmonize various legal, technological, and societal interests.

The lack of infrastructure and capacity of law enforcement officials in responding to technological disruption are structural obstacles that hinder the effectiveness of digital-based regulatory implementation. Law No. 19 of 2016 concerning Amendments to Law No. 11 of 2008 concerning Information and Electronic Transactions (UU ITE) has indeed provided a normative basis for the use and protection of information technology. However, these legal norms are often not followed by institutional readiness, both in terms of human resources and supporting technology. Law enforcement officials who do not have adequate digital competence often experience difficulties in interpreting, implementing, and enforcing the provisions in the ITE Law, especially in terms of digital proof, cyber tracking, and handling cyber disputes. This indicates

² Wirawan, V. (2020). Penerapan E-Government dalam Menyongsong Era Revolusi Industri 4.0 Kontemporer di Indonesia. *Jurnal Penegakan Hukum Dan Keadilan*, 1(1), 1-16.

³ Riyanto, H. B. (2020). Pembaruan Hukum Nasional Era 4.0. *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional*, 9(2), 161.

⁴ Taeihagh, A., Ramesh, M., & Howlett, M. (2021). Assessing the regulatory challenges of emerging disruptive technologies. *Regulation & Governance*, 15(4), 1009-1019.

that there is a gap between legal norms and law enforcement *capacity*, which ultimately leads to injustice in the application of the law in the field.⁵

In addition, the inequality of digital infrastructure between regions also creates disparities in the implementation of the ITE Law, which is factually contrary to the principle *of equality before the law* as guaranteed in Article 28D paragraph (1) of the 1945 Constitution. In areas with limited access to the internet or digital devices, the implementation of electronic legal systems such as *e-courts* and *e-filing* cannot be carried out optimally, and is even completely hampered. On the other hand, law enforcement in urban areas that are more facilitated tend to implement the law more progressively. This imbalance shows the state's failure to fulfill the mandate of Law No. 19 of 2016 Article 40 paragraph (3), which emphasizes the protection of the public interest in the digital space. Therefore, in addition to updating legal norms, the state is also required to carry out institutional reforms and equitable technology investments so that digital transformation in law is not elitist, but is inclusive and substantially fair.

The harmonization of national regulations with international legal standards is an absolute necessity in the face of legal technology disruption. In the context of digital globalization, regulations regarding personal data protection, cross-border electronic transactions, and cyber sovereignty have become transnational issues that can no longer be regulated sectorally and partially. Law No. 19 of 2016 as an amendment to the ITE Law, although it has accommodated a number of aspects of data protection and cybercrime, is still not fully aligned with international principles such as the European Union's General Data Protection Regulation (GDPR). The absence of principles such as the right to be forgotten, data portability, and independent oversight mechanisms for data management shows the weak position of Indonesian law in protecting the rights of data subjects in a global context. This can lead to resistance from international trading partners and hinder the entry of technology investments that require strong and reliable data governance standards.⁶

Furthermore, the absence of integration of national law with international legal frameworks also has implications for weak cross-jurisdictional legal protection. For example, cyber disputes between Indonesian business actors and users from other countries often experience a legal impasse due to the absence of rules governing the choice of law, international jurisdiction, and recognition of foreign judgments in the Indonesian legal system. In fact, Article 43 of Law No. 19 of 2016 has given a mandate to law enforcement officials to carry out international cooperation in terms of cyber law enforcement. Unfortunately, this normative order has not been followed up with an effective bilateral agreement or multilateralism. Without regulatory clarity and concrete international cooperation mechanisms, national law will continue to lag behind in dealing with cross-border technology issues. Therefore, a comprehensive policy revision is needed, not only at the legislative level, but also at the level of digital legal diplomacy that strengthens Indonesia's position in the era of global cyber sovereignty.

METHOD

This research uses a normative juridical research method, namely legal research conducted by examining primary and secondary legal materials through a legislative approach, a conceptual approach, and a

⁵ Webb, J. (2022). Legal technology: the great disruption. *Lawyers in 21st Century Societies*, 2, 515-540.

⁶ Galhardo, J. A. G., & de Souza, C. A. (2024). Listening to regulators about the challenges in regulating emerging disruptive technologies. *Transforming Government: People, Process and Policy*, 18(4), 768-784.

comparative legal approach. This method aims to analyze the suitability, vacuum, and normative weaknesses in the national regulatory system in response to disruptive legal technology developments, as well as to formulate alternative regulatory reform models that are adaptive, progressive, and in line with the principles of the rule of law. Normative research aims to examine and understand how the law should apply (das sollen), not how the law is practiced in empirical reality (das sein), so that the entire analysis process relies on primary and secondary legal materials that are textual and conceptual.⁷

As explained by Peter Mahmud Marzuki, normative legal research is a method that focuses on the study of legal materials as the main object of study, by interpreting and constructing applicable laws to answer certain legal issues.⁸ According to Marzuki, this approach is prescriptive because it aims not only to describe the law, but also to provide normative arguments for the validity of a legal action or act in the legal system adopted.⁹ Meanwhile, Soerjono Soekanto and Sri Mamudji stated that normative legal research includes research on legal principles, legal systematics, legal synchronization, legal history, and comparative law.¹⁰

The primary legal materials in this study consist of relevant laws and regulations, such as Law Number 11 of 2008 concerning Information and Electronic Transactions, as amended by Law Number 19 of 2016, the Personal Data Protection Law (Law No. 27 of 2022), as well as international provisions such as the General Data Protection Regulation (GDPR) and other international cyber law instruments. Secondary legal materials include legal literature, scientific journals, expert opinions, as well as official documents from international institutions such as the OECD and UNCITRAL. The analysis techniques used are systematic interpretation and legal argumentation to evaluate the positive legal structure and examine the need for national legal reform that is more responsive to technological developments. The results of the research are expected to make a conceptual contribution to the formation of more integrated, fair, and sustainable technology law regulations.

DISCUSSION

1. Incompatibility of the National Regulatory System in Responding to Legal Technology Disruption

The inconsistency of the national regulatory system in responding to legal technology disruptions has become a crucial problem in the contemporary Indonesian legal landscape. Although Law Number 19 of 2016 as an amendment to the ITE Law has tried to adapt to the development of information technology, its substance has not yet reached the further disruption caused by the emergence of Artificial Intelligence (AI), blockchain, and smart contracts. The ITE Law is still reactive and focused on classic issues such as electronic transactions and information dissemination, while new phenomena in the world of digital law

⁷ Novea Elysa Wardhani, Sepriano, and Reni Sinta Yani, *Metodologi Penelitian Bidang Hukum* (Jambi: PT. Sonpedia Publishing Indonesia., 2025).

⁸ Peter Mahmud Marzuki, *Penelitian Hukum* (Jakarta: Kencana Prenada Media Group, 2011).

⁹ Mahlil Adriaman et al., *Pengantar Metode Penelitian Ilmu Hukum* (Padang: Yayasan Tri Edukasi Ilmiah, 2024).

¹⁰ Rangga Suganda, "Metode Pendekatan Yuridis Dalam Memahami Sistem Penyelesaian Sengketa Ekonomi Syariah," *Jurnal Ilmiah Ekonomi Islam* 8, no. 3 (2022): 2859, <https://doi.org/10.29040/jiei.v8i3.6485>.

demand a much more progressive and futuristic normative response. As AI begins to be integrated in legal analysis and judgment prediction, as well as smart contracts are used as a new form of electronic contracts that are executed automatically on blockchain networks, our legal system does not yet have explicit legal norms governing the validity, legal responsibility, and guarantees of rights protection in that context. This lag reflects the limitations of national regulations in responding to disruptive and rapidly evolving technological changes.¹¹

Furthermore, this delay in regulation creates a legal vacuum in various aspects of digital law. For example, there are no laws and regulations that directly regulate the legal status of digital entities such as AI agents who can conduct transactions or make legal decisions autonomously. In addition, blockchain-based contracts that use smart contracts also do not have explicit recognition in the Indonesian civil law system, so their validity and enforceability are problematic. In Indonesian civil law, which still adheres to the principle of consensualism, the meeting of wills in a smart contract that is automatic and without human negotiation directly raises serious normative questions. The importance of "technology-proof" legal reform in order to be able to face paradigm changes structurally, not just regulatory cosmetics.¹²

Not only that, the multiple interpretations of norms in the ITE Law also worsened the situation. The unclear formulation in certain articles opens up space for different interpretations of the law, both by law enforcement and by the courts. This certainly creates legal uncertainty, which is contrary to the principle of legal certainty as a basic principle in the state of law (*rechtsstaat*). For example, the unclear definition of "electronic information" and "electronic documents" when faced with distributed ledger-based data structures or non-fungible tokens (NFTs), raises doubts about the legality of proofing or digital asset-based transactions. As Lawrence Lessig explains in his theory Code is Law, when the legal system fails to regulate the new digital architecture, then the logic of the technological system itself applies, which can be at odds with classical legal values such as accountability and justice. This indirectly weakens the role of the state in ensuring access to justice and regulating technology-based social relations.¹³

Delays in legislation in responding to legal technology disruptions also have direct implications for the implementation of fundamental legal principles, such as legal certainty, justice, and the protection of human rights.¹⁴ Without adequate regulation, there is no guarantee that the AI systems used in criminal risk assessment or verdict prediction do not discriminate algorithmically, or that personal data is not misused in the process of blockchain transactions. According to the Agile Governance approach developed by the World Economic Forum, the regulatory system must be adaptive, collaborative, and principle-based, not just based on rigid rules.¹⁵ Therefore, the formation of new legal norms in responding to legal technology

¹¹ Ghazmi, S. F. (2021). Urgensi Pengaturan Artificial Intelligence pada Sektor Bisnis Daring di Indonesia. *Jurnal Hukum Lex Generalis*, 2(8), 782-803.

¹² Taeihagh, A., Ramesh, M., & Howlett, M. (2021). Assessing the regulatory challenges of emerging disruptive technologies. *Regulation & Governance*, 15(4), 1009-1019.

¹³ Liu, H. Y., Maas, M., Danaher, J., Scarcella, L., Lexer, M., & Van Rompaey, L. (2020). Artificial intelligence and legal disruption: a new model for analysis. *Law, Innovation and Technology*, 12(2), 205-258.

¹⁴ Januru, L., Milia, J., Yani, M. A., Utama, A. S., Damayanti, I., Ferdinanto, T., ... & Hamzah, I. F. (2025). *Pengantar Ilmu Hukum dan Tata Hukum Indonesia*. Yayasan Tri Edukasi Ilmiah.

¹⁵ Bahram, M. (2025). REORIENTASI PERAN HUKUM DALAM MENGHADAPI DISRUPSI TEKNOLOGI: STUDI NORMATIF TENTANG REGULASI DIGITAL DI INDONESIA. *SINERGI: Jurnal Riset Ilmiah*, 2(3), 1691-1702.

is not only important, but urgent, so that the Indonesian legal system is not trapped in normative stagnation. Legal reform based on anticipatory regulation needs to be implemented to bridge regulatory lag and realize a legal system that is inclusive, responsive, and able to guarantee citizens' rights in the digital legal era.

2. Implementation Problems and Institutional Readiness in Digital Law Enforcement

In the context of the globalization of digital law, the urgency of harmonizing Indonesia's national regulations with the principles of international law is very important, considering that data flows and digital activities no longer recognize the boundaries of state jurisdiction. National regulations such as the Electronic Information and Transaction Law (ITE Law) and the Personal Data Protection Law (PDP Law), although important milestones, still show limitations in answering the complexity of transnational legal issues. For example, Indonesia's PDP Law is not fully aligned with international standards such as the European Union's General Data Protection Regulation (GDPR), both in terms of consent mechanisms, data subject rights, and data transfer mechanism principles. This discrepancy has the potential to be an obstacle to international cooperation and the sustainability of the cross-border digital economy ecosystem, as well as raising doubts from foreign investors about legal guarantees in Indonesia.¹⁶

Furthermore, Indonesia also faces a legal vacuum related to jurisdiction in handling cross-border cybercrime, which has not been widely regulated within the framework of national legislation. Indonesia's non-involvement in the Budapest Convention on Cybercrime despite having a strategic position in Southeast Asia is evidence of Indonesia's weak strategic approach in establishing harmonization of international law. In addition, the absence of an efficient and accountable cross-border digital dispute resolution mechanism exacerbates the risk of legal uncertainty. Therefore, regulatory reforms that are integrative (unifying national and international norms), adaptive (responsive to technological developments and global practices), and based on regulatory foresight (anticipatory of future trends) are needed. This effort will not only strengthen Indonesia's digital sovereignty, but also increase the competitiveness of national law in an international legal system that is increasingly digitized and transnationally connected.

In the midst of the flow of digital globalization that crosses the country's jurisdiction, Indonesia is faced with a serious challenge in aligning its legal system with the principles of international law. Harmonization of national regulations with global standards such as *the European Union's General Data Protection Regulation (GDPR)* and various international conventions on cybercrime is no longer just an option, but a strategic necessity. Law No. 27 of 2022 concerning Personal Data Protection (PDP Law), although a normative advance, still contains a number of substantive weaknesses when compared to the GDPR standard. For example, regulations regarding data subject rights, data minimization principles, and cross-border data transfer mechanisms have not been explicitly regulated or do not have strong implementable effectiveness. The paradigm difference between the PDP Law and GDPR can pose a compliance risk for digital business actors operating across countries, as well as create potential data isolation for the Indonesian legal system.¹⁷

¹⁶ Dewanto, H. (2022). The Urgency of Digitalization in the Law Enforcement System for Corruption Prevention. *Legal Readiness to Face Digital Transformation*, 289.

¹⁷ Manko, D., Zghama, A., Atamanova, N., Arabadzhly, N., & Ustinov, D. (2023). Legal regulation of the digital environment: digitization of the state-legal and law enforcement sphere. *Amazonia Investiga*, 12(70), 125-133.

In addition to the issue of personal data protection, the incompatibility of the national legal system is also seen in the handling of transnational cybercrime. Indonesia has not yet been a party to the Budapest Convention on Cybercrime (2001), which is the main international instrument in building a framework for cooperation between countries in combating cybercrime. This lack of participation puts Indonesia in a weak position in international cooperation in digital law enforcement, and increases the potential for jurisdictional conflict. From the perspective of international law, states have an obligation to harmonize their legal systems in order to participate effectively in international law enforcement cooperation. The absence of regulations that clearly regulate the authority of investigation, digital extradition, and cross-border data tracking shows the weak readiness of Indonesia's juridical in dealing with the transnational character of digital crime.¹⁸

The urgency of national legal reform must be directed towards the formation of an integrative, adaptive, and regulatory foresight-based legal system. Integrative means the ability of national law to adopt and internalize international norms into the framework of domestic law. This is in line with the legal harmonization theory by Snyder (1995), which emphasizes the importance of unifying legal principles to ensure coherence across legal systems. Meanwhile, adaptive shows the capacity of the legal system to evolve following the ever-changing dynamics of global technology and practices. In this context, Indonesia's digital legal reform requires not only normative revisions, but also institutional transformation, including increasing the capacity of legal human resources, establishing an independent regulatory body, and strengthening a cross-sectoral digital legal oversight system. Regulatory foresight acts as a predictive instrument in formulating data-based legal policies, technology trends, and future legal scenarios.

Ultimately, the harmonization of Indonesian legal regulations with the principles of international law is the main foundation for digital sovereignty and the legitimacy of the national legal system in the eyes of the global community. Falling behind in responding to transnational technological developments not only has an impact on the effectiveness of the law, but also reduces the country's competitiveness in the global digital economy. A study from the World Economic Forum (2022) confirms that countries with open, harmonized, and high-standard digital regulations tend to recover faster and adapt to the post-pandemic digital economy. Therefore, Indonesia must immediately develop a forward-looking legal policy and open up space for multi-stakeholder participation, both at the national and international levels. With this approach, the Indonesian legal system will not only be normatively sovereign, but also able to become an active actor in shaping an inclusive and sustainable global legal system.

3. The Urgency of Reform and Harmonization of National Regulations with International Law Principles

In the digital law enforcement landscape in Indonesia, the main problem that often arises is the inequality between the formulation of legal norms and the reality of implementation in the field. Law Number 19 of 2016 concerning Amendments to the ITE Law, as well as various derivative regulations, has normatively reflected the state's efforts in responding to digital transformation. However, in practice, many of these provisions are too technocratic and difficult to translate by law enforcement officials who are still weak in

¹⁸ Karina, I., Gultom, M., Flora, H. S., Sidabalok, J., & Butarbutar, E. N. (2024). Implications of Digital Technology for Criminal Law Enforcement: Challenges and Opportunities in the Age of Digitalization. *UNES Law Review*, 6(4), 10039-10047.

understanding information technology. For example, concepts such as electronic evidence, digital footprint, or blockchain-based transactions are not all uniformly understood by investigators, prosecutors, and judges. Low digital literacy among law enforcement is the main obstacle to the effectiveness of digital law enforcement.¹⁹ This disparity in knowledge not only produces legal disparities, but also opens up a gap in criminalization based on multiple interpretations of norms, as has happened many times in the application of Articles 27 and 28 of the ITE Law.

Furthermore, the problem of institutional readiness does not only dwell on the aspect of human resources, but also on the availability and equitable distribution of technological infrastructure. Indonesia as an archipelagic country faces acute geographical challenges, so access to digital legal tools and communication networks is often only concentrated in big cities. This condition widens the digital divide which has direct implications for people's access to digital justice. From a human rights law perspective, this limited access is a violation of the principle of equality before the law as stipulated in Article 28D paragraph (1) of the 1945 Constitution and Article 14 of the International Covenant on Civil and Political Rights (ICCPR). Digital inequality in the legal sector has led to "digital exclusion", where people in disadvantaged areas do not receive equal legal protection in the cyber realm.²⁰ This certainly weakens the state's credibility in carrying out law enforcement functions in an inclusive and fair manner.

In response to this condition, it is necessary to formulate an institutional design that is able to adapt to the characteristics of legal technology that continues to evolve. The establishment of an independent supervisory institution that specifically handles digital law enforcement issues is very urgent. This institution is not only tasked with overseeing procedural integrity, but also formulating ethical standards, assessing algorithmic risks, and conducting audits of digital systems used in legal processes. This concept is in line with the idea of cyber oversight institutions that have been implemented in countries such as Estonia and Singapore, where supervision of digital governance in the legal system is carried out by independent bodies free from political intervention. In the Indonesian context, such an institution can be designed as an extension of Komnas HAM or the Ombudsman, but with a technological mandate and digital jurisdiction. This is in line with the view of Oona Hathaway (Yale Law School) who emphasized that digital legal reform requires new institutional actors that are not only legalistic, but also based on technology and accountability frameworks.

Finally, the long-term strategy required includes institutional capacity building, reform of the legal education curriculum, as well as the drafting of national technical standards in digital law. Capacity building does not only target law enforcement officials, but must also include the establishment of technical units such as digital forensic divisions, cybercrime rapid response teams, and specially certified cyber judges. Legal education at the university level also needs to revise its curriculum to include an in-depth understanding of cyber law, data protection, and digital contract enforcement. In addition, the establishment of national technical standards is important so that there is a single reference in the procedures for identification, confiscation, and assessment of digital evidence. Without this standard, there will continue to be juridical fragmentation that hinders the uniformity of decisions and leads to legal uncertainty. Thus,

¹⁹ Arafah, R., & Triadi, I. (2025). Analisis Peran Hukum Internasional Dalam Mencegah Perdagangan Manusia Di Indonesia. *Media Hukum Indonesia (MHI)*, 3(3).

²⁰ Vinanda, O. R., Septiyani, N., Aliyah, D., Huda, M., & Meta, S. A. (2024). Urgensi Harmonisasi Hukum Perdata Nasional Dengan Dinamika Hukum Global. *Jurnal Intelek Insan Cendikia*, 1(10), 7832-7839.

institutional readiness in digital law enforcement is not just a matter of policy, but is the main prerequisite for ensuring the rule of law in an era of technological disruption.

CONCLUSIONS

This entire discussion confirms that Indonesia's legal system is not fully ready to respond to complex and multidimensional legal technology disruptions. The inconsistency of national regulations in regulating AI, blockchain, and smart contracts has created a vacuum of norms and legal uncertainty. On the other hand, existing regulations are not in line with international legal principles such as GDPR, which results in barriers to cross-border cooperation. The weakness of digital literacy among law enforcement officials has also worsened the effectiveness of digital law implementation in the field. Regulatory fragmentation and inequality in digital infrastructure deepen the gap between the central and regional levels. This condition shows that a reactive legal approach is no longer adequate in dealing with digital transformation. An anticipatory and holistic legal framework is needed, which not only adjusts the content of regulations, but also improves the institutional structure. Digital legal reform must integrate the principles of regulatory foresight and legal harmonization so as not to be left behind in global dynamics. The establishment of independent digital oversight agencies is crucial to maintain accountability and justice in cyberspace. In addition, the legal education curriculum needs to be reorganized to produce legal actors who are tech-savvy. Without systemic reforms, the rule of law in the digital age will only become rhetoric. Therefore, Indonesia must immediately design a progressive, inclusive, and sustainable digital legal strategy.

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