Integration of Artificial Intelligence in Indonesian Legislation: Towards Participatory and Transparent Smart Law-Making

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Abstract. The rapid development of Artificial Intelligence (AI) has opened significant opportunities for reforming Indonesia's legislative system. The urgency of this research stems from the pressing need to enhance the quality, transparency, and public participation in the legislative process, which has long been perceived as slow, bureaucratic, and unresponsive to the rapidly evolving social dynamics. The presence of AI offers innovative solutions to these challenges through the application of analytical technologies, natural language processing, and legislative automation, which are capable of supporting faster and more accurate data-driven decision-making. The objective of this research is to examine the urgency of AI implementation in Indonesia's legislative process and to identify the opportunities and challenges of its integration, particularly concerning aspects of democracy, accountability, legitimacy, and personal data protection — which aims to safeguard individuals' privacy rights and ensure that data collection, storage, use, and deletion are conducted securely, transparently, and in compliance with the law. This study employs a juridical-normative method, incorporating statutory, artificial intelligence, and comparative conceptual approaches, to achieve a comprehensive understanding. The findings suggest that the application of AI has the potential to enhance participation by involving more stakeholders, particularly the public, in decision-making and policy formation processes, thereby making the outcomes more representative, democratic, and responsive to public needs, while also increasing the accuracy of participation. In conclusion, the integration of artificial intelligence into Indonesia's legislative process holds the potential to foster the creation of laws that are more participatory, transparent, and of higher quality — provided clear supporting regulations, guarantees of privacy protection, and the strengthening of institutional capacity within the state accompany it.

Keywords: Artificial Intelligence, Law-Making, Legislation, Participation.

Abstrak. Perkembangan pesat Kecerdasan Buatan (AI) telah membuka peluang signifikan bagi reformasi sistem legislasi Indonesia. Urgensi penelitian ini bermula dari kebutuhan mendesak untuk meningkatkan kualitas, transparansi, dan partisipasi publik dalam proses legislasi, yang selama ini dianggap lambat, birokratis, dan tidak responsif terhadap dinamika sosial yang terus berkembang pesat. Kehadiran AI menawarkan solusi inovatif untuk tantangan ini melalui penerapan teknologi analitis, pemrosesan bahasa alami, dan otomatisasi legislatif, yang mampu mendukung pengambilan keputusan berbasis data yang lebih cepat dan akurat. Tujuan penelitian ini adalah untuk mengkaji urgensi implementasi AI dalam proses legislasi Indonesia dan mengidentifikasi peluang serta tantangan integrasinya, khususnya terkait aspek demokrasi, akuntabilitas, legitimasi, dan perlindungan data pribadi — yang bertujuan untuk melindungi hak privasi individu dan memastikan bahwa pengumpulan, penyimpanan, penggunaan, dan penghapusan data dilakukan secara aman, transparan, dan sesuai dengan hukum. Penelitian ini menggunakan metode yuridis-normatif, yang menggabungkan pendekatan perundang-undangan, kecerdasan buatan, dan konseptual komparatif, untuk mencapai pemahaman yang komprehensif. Temuan ini menunjukkan bahwa penerapan AI berpotensi meningkatkan partisipasi dengan melibatkan lebih banyak pemangku kepentingan, terutama publik, dalam proses pengambilan keputusan dan pembentukan kebijakan, sehingga menghasilkan hasil yang lebih representatif, demokratis, dan responsif terhadap kebutuhan publik, sekaligus meningkatkan akurasi partisipasi. Kesimpulannya, integrasi kecerdasan buatan ke dalam proses legislasi Indonesia berpotensi mendorong terciptanya undang-undang yang lebih partisipatif, transparan, dan berkualitas tinggi — dengan syarat disertai regulasi pendukung yang jelas, jaminan perlindungan privasi, dan penguatan kapasitas kelembagaan dalam negara.

***Kata Kunci**: Kecerdasan Buatan, Pembentukan Undang-Undang, Legislasi, Partisipasi.*

INTRODUCTION

The development of information and communication technology in the 21st century has brought fundamental changes to various aspects of human life, including government functions and the legislative process. One of the most significant advances is the advent of Artificial Intelligence (AI), a technology that enables computer systems to think, learn, analyse, and make decisions similar to human capabilities.[1] In a global context, the use of AI has expanded into the realm of law and legislation, no longer limited to administrative instruments, but becoming a strategic partner in the design, evaluation, and implementation of regulations. This phenomenon is known as smart law-making, which is a data-driven, participatory process of law-making that prioritizes efficiency and transparency.[2]

The 1945 Constitution establishes Indonesia as a democratic country, and Law Number 12 of 2011 along with its amendments strictly regulate its legislative mechanism. This mechanism emphasizes the importance of planning, public participation, transparency, and legal certainty in every stage of law formation.[3] However, in practice, the legislative process still faces various classic problems, such as low-quality legal products, overlapping regulations, minimal meaningful public participation, limited access to information, and a tendency for legislation to be influenced more by political interests than by the needs of the community. Civil society criticism of the formation of the Job Creation Law and the Capital City Law shows the gap between procedural idealism and the reality of legislative practice.[4]

Based on the identification of existing challenges and the analysis of phases within the legislative process, two stages possess strategic positioning and substantial significance for the implementation of artificial intelligence (AI), namely: *First*, in the

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[1] Tristan Harley and Harry Hobbs, "The Meaningful Participation of Refugees in Decision-Making Processes: Questions of Law and Policy," *International Journal of Refugee Law* 32, no. 2 (October 5, 2020): 200–226, https://doi.org/10.1093/ijrl/eeaa010.

[2] roy Gava, Julien M. Jaquet, and Pascal Sciarini, "Legislating or Rubber-stamping? Assessing Parliament's Influence on Law-making with Text Reuse," *European Journal of Political Research* 60, no. 1 (February 16, 2021): 175–98, https://doi.org/10.1111/1475-6765.12395.

[3] Andi Agus Salim and Shu-Mei Tang, "Occupational Safety in the Age of Artificial Intelligence: Reformation of the Indonesian Work Safety Law," *Journal of Indonesian Legal Studies* 9, no. 2 (December 2024): 985–1026, https://doi.org/10.15294/jils.v9i2.4621.

[4] Rebecca Williams, "Rethinking Administrative Law for Algorithmic Decision Making," *Oxford Journal of Legal Studies* 42, no. 2 (May 23, 2022): 468–94, https://doi.org/10.1093/ojls/gqab032.

drafting phase of the Bill, lawmakers can utilize AI technology to support the formulation process, conduct substantial analysis, and refine the legal substance. *Second*, the deliberation phase of the Bill, wherein AI demonstrates potential to optimize public participation in a more inclusive and accelerate the analytical process concerning the impacts of the resulting policies.

Therefore, the integration of artificial intelligence technology into the legislative process is increasingly significant. AI technology possesses the capability to process massive-scale data (big data), generate analyses grounded in empirical evidence (evidence-based analysis), identify potential inconsistencies and overlaps within legal normative structures, and map public aspirations through social media and digital participation platforms. Through the use of AI technology, legislators can gain access to more accurate and reliable data, expedite the policy analysis process, and broaden the scope of digital public participation. This potential opens strategic opportunities for the realization of legislative products that are not only efficient in terms of formulation, but also responsive to the dynamics of societal needs and aligned with the principles of substantive democracy.[5]

Nevertheless, the implementation of artificial intelligence technology in the legislative process raises various complex legal implications and ethical issues. Fundamental problems emerge concerning the legal status of analyses and recommendations generated through AI systems, as well as issues of accountability and responsibility in their application.[6] Theoretical frameworks such as e-democracy and digital constitutionalism provide essential conceptual foundations in this context. The concept of e-democracy emphasizes the use of digital technology as a means to enhance public participation in political decision-making processes. In contrast, digital constitutionalism emphasizes the importance of applying constitutional principles, such as transparency, accountability, and the protection of human rights, in the use of

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[5] Rofi Aulia Rahman and Rizki Habibulah, "The Criminal Liability Of Artificial Intelligence: Is It Plausible To Hitherto Indonesian Criminal System?," *Legality : Jurnal Ilmiah Hukum* 27, no. 2 (November 2019): 147, https://doi.org/10.22219/jihl.v27i2.10153.

[6] Khotimatul Barki and Malında Aptıka Rachmah, "Systematic Literature Review: Agricultural Digitalization, Technological Transformation towards Efficient and Sustainable Agriculture," *Ege Üniversitesi Ziraat Fakültesi Dergisi* 61, no. 2 (July 2024): 259–71, https://doi.org/10.20289/zfdergi.1382916.

digital technology. Thus, the discourse regarding the application of AI in legislation is not merely related to the technological dimension but also touches upon the fundamental principles that underpin the concepts of the rule of law and democracy.[7]

From a comparative perspective, a few countries have integrated Artificial Intelligence (AI) into the legislative process. The European Union utilizes AI to conduct regulatory impact assessments and harmonize laws among its member states. The Finnish government has developed the "Aurora AI" platform, which utilizes artificial intelligence technology to integrate public data with mechanisms of citizen participation in the policy formulation process.[8]

Estonia is internationally recognized as a "Digital Republic," given that nearly all the country's public services have undergone digital transformation through an electronic governance (e-Governance) system. Since the early 2000s, Estonia has implemented various digital innovations encompassing electronic residency (e-Residency), digital identity (digital ID), online voting (i-Voting), and a data exchange system (X-Road). This established digital infrastructure provides a robust foundation for implementing artificial intelligence technology in governmental decision-making processes, including regulatory drafting and legal policy formulation. Indonesia is still in the stage of discourse and limited experimentation, with research focusing more on the use of AI in law enforcement than in the legislative process. This condition shows that there is still ample room for research to examine in greater depth the role of AI in the drafting, analysis, and evaluation of legislative products in Indonesia.[9]

METHODOLOGY

This study employs a normative juridical method, utilizing a conceptual, legislative, and comparative approach. The researchers chose this method because the issues examined are closely related to legal and regulatory aspects concerning the possibility

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[7] Kirana Rukmayuninda Ririh et al., "Comparative Study and SWOT Analysis of Artificial Intelligence Implementation in Indonesia," *Journal of Industrial Engineering* 15, no. 2 (2020): 122–33.

[8] Lisfer Berutu, "Realizing Simple, Fast, and Low-Cost Justice with e-Court," *Scientific Journal of World Law* 5, no. 1 (2020): 41–53.

[9] Mariska Cahyani Putri et al., "The Influence of the Use of Artificial Intelligence in the Formation of Legislation," *Terang : Journal of Social, Political and Legal Studies* 1, no. 2 (2024): 266–84, https://doi.org/10.62383/terang.v1i2.235.

of integrating Artificial Intelligence (AI) into the law-making process in Indonesia. This study employs conceptual, legislative, and comparative approaches to analyse the principles of the rule of law and democracy, assess regulatory harmonization, and explore international practices—particularly in the European Union, Finland, and Estonia—to develop an ideal model for applying AI in legislation.[10]

The focus of the research is to analyse the existing legal framework, assess the relevance of the principles of the rule of law and democracy in the application of AI, and examine the need for new regulations that can accommodate the development of this technology. The research objects include legal norms and doctrines governing the formation of legislation, digital technology, and data protection. The data sources used are secondary data consisting of primary and secondary legal materials. Primary legal materials include the 1945 Constitution, Law No. 12 of 2011 concerning the Formation of Legislation and its amendments, Law No. 11 of 2008 concerning Electronic Information and Transactions, and Law No. 27 of 2022 concerning Personal Data Protection.[11] Secondary legal materials include literature, legal journals, and relevant previous research results. The researchers obtained the data through library research, which involved searching legal documents, academic books, and scientific articles. The analysis technique employed was qualitative legal analysis, which involved interpreting legal norms, comparing international practices, and compiling legal arguments to formulate a conceptual model of AI integration in legislation in Indonesia.[12]

RESULTS AND DISCUSSION

The urgency of implementing Artificial Intelligence in the process of forming laws in Indonesia

The debate over the use of Artificial Intelligence (AI) in the law-making process is not only happening in Indonesia but has also become a global issue that has sparked

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[10] Peter Machmud Marzuki, *Legal Research, 14th Ed.* (Jakarta: Kencana, 2019).

[11] Americo Beviglia Zampetti, Patrick Low, and Petros C. Mavroidis, "Consensus Decision-Making and Legislative Inertia at the WTO: Can International Law Help?," *Journal of World Trade* 56, no. Issue 1 (December 1, 2022): 1–26, https://doi.org/10.54648/TRAD2022001.

[12] "Deploying AI in Taking down Indonesian Regulatory Problems: A Study on Early Pandemic Regulations," *Kasetsart Journal of Social Sciences* 43, no. 4 (2022), https://doi.org/10.34044/j.kjss.2022.43.4.16.

various approaches and controversies in many countries. In the European Union, for example, there is an initiative called the Artificial Intelligence Act, which aims to categorize the use of AI based on its level of risk, ranging from minimal to high, to ensure the protection of human rights and democracy in every application of automated systems. However, behind this caution lies criticism that overly strict regulations can slow down innovation and hinder the efficiency of public bureaucracy, including during the policy and legislation drafting process.[13]

Finland has developed the "Aurora AI" platform, which utilizes artificial intelligence to integrate public data with citizen participation in the policy formulation process. This system enables citizens to provide input on draft regulations through digital means, allowing AI to analyze patterns of public opinion and present them to policymakers.[14]

Estonia operates a digital participation platform (Rahvaalgatus.ee) that facilitates citizens in submitting input on draft Bills online, where AI technology plays a role in analyzing thousands of public responses to categorize main themes, identify dominant opinions, and measure public sentiment. The results of this AI-based analysis are subsequently presented to parliament as substantive consideration material in the legislative deliberation process. The Estonian government emphasizes the application of the "Human in the Loop" principle, which indicates that AI is not intended to substitute the role of human policymakers, but rather functions as a supporting instrument for analysis and efficiency enhancement. The primary orientation of this approach is not the automation of the legislative process, but rather enhancing transparency, procedural efficiency, and intensifying citizens' digital participation in the policy-making process.[15] Estonia utilizes artificial intelligence technology in the legislative process to conduct analysis of legal drafts, perform assessments of policy impacts, and manage mechanisms

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[13] Th. Kirat et al., "Fairness and Explainability in Automatic Decision-Making Systems. A Challenge for Computer Science and Law," *EURO Journal on Decision Processes* 11 (2023): 100036, https://doi.org/10.1016/j.ejdp.2023.100036.

[14] Peter Hilpold, "Opening up a New Chapter of Law-making in International Law: The Global Compacts on Migration and for Refugees of 2018," *European Law Journal* 26, no. 3–4 (July 18, 2020): 226–44, https://doi.org/10.1111/eulj.12376.

[15] Nikoleta Yordanova and Asya Zhelyazkova, "Legislative Control over Executive Law-making: Delegation of Quasi-legislative Powers to the European Commission," *JCMS: Journal of Common Market Studies* 58, no. 2 (March 28, 2020): 345–64, https://doi.org/10.1111/jcms.12943.

of public participation digitally. This innovative approach positions Estonia as one of the most advanced nations in realizing an intelligent law-making system (smart law-making system) at the global level.

This international comparison reveals that the application of AI in the legislative process is not merely a matter of technology, but is also closely tied to governance design and the legal values upheld by a country. Indonesia, with its complex social structure and diverse legal system, is in a position that requires similar caution. The growing urgency of AI implementation reflects the need to accelerate legislative processes and enhance their quality in the face of rapid socio-economic transformation and digital innovation. However, concerns over data misuse, algorithmic bias, and threats to political legitimacy necessitate rigorous and transparent oversight frameworks.[16]

Indonesia's legislative structure—characterized by protracted drafting processes, limited coherence among regulations, and predominantly procedural forms of public participation—underscores the imperative to implement AI in legislative development. AI offers potential solutions through its natural language. Processing capabilities to trace overlapping norms, map the interrelationships between regulations, and provide evidence-based recommendations on policy drafts. In the early stages of planning, AI can also assist the government and the House of Representatives in processing multi-source data, ranging from statistics and research results to public complaints, to compile the priorities of the National Legislation Program in a more objective manner based on the real needs of the community.[17]

However, this urgency must be accompanied by an awareness of the legal and ethical challenges that accompany it. Normatively, the integration of AI into legislation requires clarity on the boundaries between the roles of machines and humans. The principle of human-in-command must be upheld so that political decisions remain the domain of humans, while AI only functions as an analytical tool. From a legal perspective, it is essential to establish a robust normative framework for protecting

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[16] Imran Taj and NZ Jhanjhi, "Towards Industrial Revolution 5.0 and Explainable Artificial Intelligence: Challenges and Opportunities," *International Journal of Computing and Digital Systems* 12, no. 1 (2022): 295–320, https://doi.org/10.12785/ijcds/120128.

[17] Harry Surden, "Artificial Intelligence and Law: An Overview," *Regulating Artificial Intelligence* 35, no. 4 (2019): 225–54, https://doi.org/10.1007/978-3-030-32361-5_10.

data, ensuring the accountability of algorithmic results, and regulating responsibility in cases where automated system recommendations lead to erroneous decisions.[18]

Empirically, several issues and limitations remain in the application of AI in the field of legislation. [19] First, Indonesia continues to face challenges in ensuring the availability and quality of legal data, as many regulatory texts remain undigitized and lack structured, open access. Second, ethical and privacy limitations, especially when AI processes sensitive public data, such as citizen aspirations, social data, or court decisions. Third, institutional capacity limitations, as the implementation of AI systems requires a combination of legal, technological, and policy analysis expertise that is still rarely found in an integrated manner.[20]

Technologically, the next challenge is data integrity and security. AI-based legislation requires the management of large amounts of public, administrative, and social data. [21] Without robust security systems, such as end-to-end encryption, role-based access control, and the application of federated learning for sensitive data, the risk of data leaks or manipulation will increase. This technical weakness extends beyond issues of digital security and directly affects legal legitimacy, as laws produced through insecure processes risk being challenged for violating the principle of due process of law.[22]

From a democratic perspective, AI has great potential to enhance public accountability, but it also has the potential to erode it if not designed and implemented properly. AI can enhance public participation by aggregating public opinion from diverse digital sources and presenting it in a systematic manner to policymakers. [23] However, without algorithmic transparency and public oversight mechanisms, AI can

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[18] Joanna Mazur, "Automated Decision-Making and the Precautionary Principle in EU Law," *Baltic Journal of European Studies* 9, no. 4 (December 1, 2019): 3–18, https://doi.org/10.1515/bjes-2019-0035.

[19] Anna Saunders, "Constitution-Making as a Technique of International Law: Reconsidering the Post-War Inheritance," *American Journal of International Law* 117, no. 2 (April 6, 2023): 251–308, https://doi.org/10.1017/ajil.2022.86.

[20] Zahrashafa PM & Angga Priancha, "Current Legal Regulations on Artificial Intelligence in Indonesia By: Zahrashafa PM & Angga Priancha," Faculty of Law, University of Indonesia, 2023, https://law.ui.ac.id/pengaturan-hukum-artifical-intelligence-indonesia-saat-ini-oleh-zahrashafa-pm-angga-priancha/.

[21] Eliana Cusato, "International Law, the Paradox of Plenty and the Making of Resource-Driven Conflict," *Leiden Journal of International Law* 33, no. 3 (September 4, 2020): 649–66, https://doi.org/10.1017/S0922156520000266.

[22] Philipp Kastner and Elisabeth Roy Trudel, "Unsettling International Law and Peace-Making: An Encounter with Queer Theory," *Leiden Journal of International Law* 33, no. 4 (December 8, 2020): 911–30, https://doi.org/10.1017/S092215652000045X.

[23] Denico Doly, "Utilization of Artificial Intelligence in Law Enforcement in Indonesia," *Info Pendek* XV, no. 19 (2023): 1–5.

create black box legislation, where analysis results are accepted without knowing the underlying logic. Thus, AI can only become an accountable instrument of democracy if it meets three key prerequisites: openness of data sources, clarity of the analysis process, and public involvement in evaluating the results.[24]

In the context of legal development in Indonesia, lawmakers should direct the use of AI toward achieving three main objectives: first, strengthening the coherence of the legal system by identifying overlaps and conflicts between regulations; second, expanding meaningful public participation through the collection and classification of aspirations based on natural language; and third, increasing the transparency of the legislative process with an automated recording system, manuscript tracking, and open reporting of draft changes. Thus, the integration of AI in legislation is not just a digitization project, but a transformation of the legal paradigm towards a more responsive, collaborative, and equitable system.[25]

Ultimately, the urgency of applying AI in the legislative process is not only about speeding up the drafting of laws, but also about building a new epistemology in law-making where knowledge, participation, and transparency become foundations reinforced by technology.[26] The primary challenge is striking a balance between efficiency and accountability, between automation and human values. With the right governance design, Indonesia could make AI not just a technical instrument, but an integral part of a more responsive, participatory, and equitable legal system reform.[27]

Opportunities and Challenges of Integrating Artificial Intelligence into the Legislative Process, Especially Regarding Aspects of Democracy, Accountability, and Data Protection

The making of laws is at the heart of people's sovereignty in a democratic state governed by the rule of law. In the context of Indonesia, Article 1 paragraph (3) of the

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[24] Peter Blanck, "Supported Decision-Making: Emerging Paradigm in Research, Law, and Policy," *Journal of Disability Policy Studies* 34, no. 1 (June 22, 2023): 3–7, https://doi.org/10.1177/10442073211023168.

[25] Fatimah Nada et al., "The Idea of Regulating Artificial Intelligence as a Legal Subject in Indonesia," nd, 149–57, https://eduparx.id/blog/insight/artificial-intelligence/4-jenis-artificial-intelligence-atau-ai.

[26] Eka NAM Sihombing and Muhammad Yusrizal Adi Syaputra, "Implementation of the Use of Artificial Intelligence in the Formation of Regional Regulations," *Scientific Journal of Legal Policy* 14, no. 3 (2020): 419, https://doi.org/10.30641/kebijakan.2020.v14.419-434.

[27] Propylon, "Artificial Intelligence in Legislative Drafting: Benefits, Pitfalls and Regulations," 2024.

1945 Constitution of the Republic of Indonesia affirms that Indonesia is a state governed by the rule of law, while Article 20 places the People's Representative Council (DPR) as the holder of the power to form laws together with the President. However, the implementation of the legislative function often faces fundamental problems that hinder its effectiveness, participation, and legal legitimacy. In the digital age, which is characterized by the acceleration of information, the complexity of issues, and the massive volume of data, the conventional mechanism of law formation, which is highly dependent on manual processes and bureaucratic capacity, is no longer adequate.[28]

Artificial Intelligence (AI) has emerged as a new tool that offers efficiency, analytical accuracy, and broad public participation. Many countries have begun to incorporate AI into their legal governance systems, whether in policy planning, drafting regulations, or evaluating implementation. With AI's ability to process large datasets, map regulatory networks, and analyze policy impacts, there are significant opportunities to build a more responsive and evidence-based legislative system (evidence-based law-making). However, these opportunities are not without ethical, legal, and institutional challenges, particularly in the context of a constitutional democracy such as Indonesia. The use of AI has the potential to raise serious questions about accountability, algorithm transparency, and the protection of citizens' fundamental rights. Therefore, it is pivotal to first understand the challenges in law formation in Indonesia and then examine the extent to which AI can contribute to improving them by referring to best practices in various countries.[29]

The problems in the law-making process in Indonesia encompass not only technical aspects, but also conceptual and institutional dimensions. Based on studies conducted by the Expert Body of the House of Representatives of the Republic of Indonesia, the Ministry of Law and Human Rights, and various academic research, several

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[28] Sandra Lavenex and Marja-Liisa Öberg, "Third Country Influence on EU Law and Policy-making: Setting the Scene," *JCMS: Journal of Common Market Studies* 61, no. 6 (November 6, 2023): 1435–53, https://doi.org/10.1111/jcms.13490.

[29] M Wildan Mufti et al., "The Urgency of Establishing Artificial Intelligence-Based Technology Legislation" 1, no. June (2024): 137–41.

fundamental issues exist that impede the quality of legislative products.[30] In this context, the implementation of Artificial Intelligence (AI) technology has become a strategic urgency in efforts to improve the law-making process in Indonesia. AI technology can expand the dimensions of public participation digitally by the processing the public input from various online platforms. Thus, the integration of AI in the legislative process can serve as a strategic solution to realize law-making that is more efficient, accurate, transparent, and participatory, as well as capable of responding to the challenges of hyper-regulation and the complexity of Indonesia's legal system.[31]

Public participation in the legislative process is often formalistic, merely fulfilling legal obligations without meaningful consultation mechanisms. In other words, government institutions seldom involve the public from the planning stage, and they often overlook civil society's aspirations due to limited access and inadequate legal literacy. The legislative process of the Job Creation Law is a clear example of how time constraints and a lack of transparency have caused widespread controversy in society.[32]

Human resources in legislative and executive institutions still largely use manual methods in conducting regulatory reviews. There is no integrated system that combines legal, economic, social, and environmental data as input for policy considerations. As a result, the drafting of laws often fails to consider cross-sectoral impacts comprehensively. The legislative procedures stipulated in Law No. 12 of 2011, along with its amendments, ensure prudence, but they also create layers of complex bureaucracy. The drafting of a single law can take years, whereas social and technological dynamics change rapidly—this mismatch in pace results in laws that are often reactive rather than proactive. Lawmakers can integrate AI across all stages of

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[30] Nabila Fitri Amelia et al., "Implementation of Artificial Intelligence (AI) in the Formation of Legislation in Indonesia" 2, no. 1 (2024): 56–70.

[31] Hong Nhat Nguyen et al., "Conceptualizing the Effects of Transfer Pricing Law on Transfer Pricing Decision Making of FDI Enterprises in Vietnam," *International Journal of Data and Network Science*, 2020, 187–98, https://doi.org/10.5267/j.ijdns.2020.1.002.

[32] Eka Nanda Ravizki and Lintang Yudhantaka, "Artificial Intelligence as a Legal Subject: Conceptual Review and Regulatory Challenges in Indonesia" 5, no. 3 (2022): 351–76, https://doi.org/10.20473/ntr.v5i3.39063.

the legislative cycle, including planning, drafting, deliberation, and evaluation. Each stage has distinct analytical needs and requires a tailored design of the AI system.[33]

Policymakers can employ AI to conduct policy foresight and anticipate emerging legal issues by analysing social, economic, and technological trends. Through big data analytics, AI can map the legal needs of society and provide recommendations on legislative priorities. For example, through text mining of court decisions, news, or public complaints on social media, the system can identify policy areas that most need legal intervention.

The concept of Artificial Intelligence (AI) involvement in enhancing the quality of public participation in the law-making process should be oriented not to substitute the role of society, but rather to strengthen, expand, and deepen the dimensions of such participation. The following are several strategic concepts to ensure AI serves as a facilitator of digital democracy, rather than as a replacement for popular sovereignty:

First. AI as an Instrument for Participation Analysis, not a Substitute for Participants. Government institutions can employ AI technology to process and analyse public aspirations gathered through various participation channels, including consultation forums, online surveys, social media platforms, and official government portals. Through the application of Natural Language Processing (NLP) technology, AI possesses the capability to categorize substantial issues, identify trends in public opinion, and present thematic syntheses for legislators. In this context, AI does not replace public opinion but rather facilitates the compilation of a comprehensive and objective overview from thousands of inputs that are difficult to analyse manually.

Second. AI to Enhance Accessibility and Inclusivity of Participation. AI technology can be leveraged to facilitate participatory access for previously marginalized societal segments, including communities in remote areas and individuals with disabilities. For instance, automatic translation features into regional languages or voice recognition technology to accommodate those with digital literacy limitations.

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[33] Prakoso et al., "Implementation of Artificial Intelligence (AI) in the Formation of Legislation in Indonesia."

Through this approach, AI becomes an instrument that expands the scope of democracy, rather than reducing it.

Third. AI as a Supporter of Directed Public Discourse. AI technology can be utilized to map public discourse and present pro and contra arguments in a balanced manner regarding a draft law. This system can assist the House of Representatives and government in evaluating the quality of public discourse, not merely the quantity of support. Thus, AI serves as an intellectual mediator, facilitating dialogue between society and policymakers in a more rational, data-driven, and transparent manner.

Fourth. AI for Transparency and Accountability of Participatory Processes. AI technology can be utilized to document, track, and publish records of public participation in real-time, such that every public proposal can be traced regarding its response and follow-up in the legislative process. This strengthens accountability and public trust as citizens can verify that their participation has a tangible impact on legislative outcomes.

Fifth. AI as a Supporting Instrument, not a Decision-Maker. In principle, AI technology should not be granted the authority to decide on legal substance or replace deliberative processes involving humans. Decisions must continue to be made through democratic and participatory mechanisms by representatives of the people and civil society. AI only functions as an analytical and informative assistant that enriches the decision-making process with stronger data and evidence.[34]

In the context of the deliberation process and public participation in law-making, artificial intelligence technology can serve as an analytical instrument and a tool for mapping public aspirations, possessing the capacity to process various inputs from society through digital platforms, social media, and online consultation forums. Through the application of Natural Language Processing (NLP) technology, AI can categorize opinions, identify substantial issues, and conduct evaluations of public sentiment regarding draft legislation currently under deliberation. Thus, AI technology contributes to expanding the dimensions of public participation in a more

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[34] Roida Pakpahan et al., "Analysis Of The Effect Of Artificial Implementation" 5, no. 2 (2021): 506–13, https://doi.org/10.52362/jisicom.v5i2.616.

inclusive, efficient, and measurable manner, such that every public aspiration can be accommodated objectively and transparently in the legislative formation process.

AI also plays a role in recording every change to a draft, storing versions, and creating a transparent system based on a distributed ledger that cannot be manipulated. The public can openly access the history of law drafting, including who proposed the amendment and the academic arguments behind it. This strengthens public accountability.[35] Once the law is passed, AI can monitor its implementation in real time through analysis of public data, ministry reports, and court decisions. The system can identify areas where implementation has not yet occurred or where conflicts in implementation exist. In this way, AI accelerates the regulatory feedback process and policy revisions.

The European Union is a leading example of developing an AI legal framework. Through the EU Artificial Intelligence Act (2024), Europe places the principles of prudence and protection of human rights as the basis for AI use. In the context of legislation, the European Parliament has utilized AI for regulatory coherence analysis among member states, particularly in areas such as trade and data protection. Europe emphasizes the concept of human-in-command, meaning that normative decisions remain in the hands of humans, while AI only functions as an analytical tool.

Based on the above comparison, Indonesia has a significant opportunity to gradually adopt AI in its national legislative system. However, this adoption must consider three main aspects: (1) the suitability of the legal and political systems; (2) the readiness of data and technology infrastructure; and (3) the ethical and legal governance of AI.

First, from a legal system perspective, Indonesia adheres to a civil law system that emphasizes codification and legal certainty. Therefore, AI needs to be directed towards strengthening harmonization between regulations and supporting consistent legal arguments. European Union practices can serve as a reference because they share a similar legal structure.

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[35] FL. Yudhi Priyo Amboro, "Prospects of Artificial Intelligence as a Subject of Civil Law in Indonesia."

Second, from a technological perspective, Indonesia needs to build an integrated data infrastructure between institutions. Without data integration between ministries, agencies, and the House of Representatives, AI cannot function optimally. South

Third, from an ethical governance perspective, Indonesia must ensure that the principles of human oversight and transparency are built in by design. Every algorithm used in the drafting of legislation must be publicly auditable and subject to legal accountability mechanisms.

The implementation of Artificial Intelligence (AI) technology in the legislative process raises significant ethical implications as it potentially introduces algorithmic bias, privacy violations, and technocratic dominance that may threaten the principle of popular sovereignty. Algorithmic bias manifests when the dataset utilized by AI systems does not reflect neutrality, such that the analytical output may potentially discriminate against certain groups and exclude the aspirations of minority societal segments. Privacy violation risks emerge due to AI's requirement for massive volumes of data, where, without an adequate protective framework, citizens' personal data becomes vulnerable to misuse. Meanwhile, technocratic dominance occurs when political decision-making processes tend to rely excessively on the logic and results of AI analysis, rather than on substantive moral considerations and public aspirations. Consequently, the legislative process risks shifting toward a decision-making process that is elitist and technology-based in nature, departing from democratic principles. Therefore, the application of AI must be accompanied by mechanisms of transparency, accountability, and protection of human rights to preserve the essence of democracy and ensure that the people remain the holders of supreme sovereignty. Thus, AI must be positioned as a supporting instrument of democracy, not as a substitute for the deliberative and participatory processes that constitute the spirit of law-making in a democratic constitutional state such as Indonesia.

Therefore, there are three strategic recommendations: (1) Establish a legal framework for AI in legislation. Specific regulations are needed to govern the standards for AI use in drafting legislation, including the principles of openness, accountability, and data protection. (2) Build institutional capacity. The House of Representatives, the

Ministry of Law and Human Rights, and the National Development Planning Agency should establish a legal informatics unit to operate and overseeing the use of AI in legislation. (3) Launching a pilot project. AI can be tested in the legislative planning stage, particularly in the drafting of the National Legislation Program and the analysis of harmonization between regulations.

CONCLUSION

The development of artificial intelligence presents a significant opportunity for modernizing the law-making process in Indonesia. The integration of this technology can accelerate regulatory development, improve the quality of legislation through data-driven analysis, and expand public participation by providing more transparent and inclusive digital channels. Within the context of Indonesia's constitutionally democratic legal system, AI plays a strategic role as a supporting instrument for creating more effective, responsive, and community-oriented legislation. However, the urgency of implementing AI must be understood not only in terms of its benefits but also in consideration of the serious challenges inherent in it. Without clear regulations, strict oversight mechanisms, and consistent political commitment, the implementation of AI has the potential to create new problems that could undermine the principles of democracy, transparency, and human rights protection. Therefore, the integration of AI into Indonesian legislation must be gradual, measured, and based on a strong legal framework. AI needs to be positioned as an instrument that complements, rather than replaces, the role of human political deliberation. In this way, Indonesia can leverage technological advantages to strengthen the quality of democracy and legal governance, while maintaining the political legitimacy of every legislative product produced.

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