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Normative Fragmentation in Regional Regulation Harmonization: Constitutional Imperatives and AI Integration in Indonesia

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Abstract

This article examines the systemic normative fragmentation arising from the implementation of the harmonization process for regional draft regulations (ranperda) in Indonesia. The study aims to identify the root causes of inconsistency in harmonization outcomes across jurisdictions, to critically evaluate the normative potential and operational limitations of the E-Harmonization Application as a standardization mechanism, and to formulate a constitutionally accountable technology-based solution. Employing a normative legal research approach with conceptual analysis, comparative institutional analysis, and legal hermeneutics, the study analyzes the normative framework of Ministerial Regulation on Law No. 40 of 2025. The analysis reveals that inconsistency in harmonization outputs stems from three interacting layers of deficit: a quantitative capacity deficit characterized by the disproportion between 33 Regional Offices of the Ministry of Law and 552 local government units; a methodological deficit arising from the absence of a uniform interpretive methodology standard for Harmonization Working Teams; and a quality deficit attributable to variations in the competency of legal drafters across regional offices. This study argues that the E-Harmonization Application has the potential to function as a nationally binding analytical precedent repository — as demanded by the principle of *de similibus idem est iudicium* grounded in Berman's theory of legal reasoning and Sidharta's precedent analogy mechanism — but currently suffers from two critical gaps: structural-technical limitations and the absence of a procedurally binding cross-jurisdictional reference mechanism. The integration of artificial intelligence (AI) as a substantive filter layer is proposed as the most proportionate solution for simultaneously addressing all three deficit layers, subject to three conditional prerequisites: binding sectoral AI regulation, national data infrastructure readiness, and data governance standards compliant with Law No. 27 of 2022 on Personal Data Protection. The study concludes that consistency in ranperda harmonization constitutes a constitutional imperative, not merely a managerial requirement, derived from the unitary state principle enshrined in Article 1(1) of the 1945 Constitution of the Republic of Indonesia and the purposive norm of Article 28D(1) of the same Constitution.

Keyword: normative fragmentation, harmonization of regional draft regulations, E-Harmonization, artificial intelligence

INTRODUCTION

As a positively regulated mechanism, the harmonization of legislation in Indonesia rests upon a multi-layered normative framework. Conceptually, harmonization — encompassing the alignment, rounding-out, and consolidation of the conceptual design of draft legislation — is defined as the process of aligning the substantive content of draft legislation and its drafting technique in order to form a coherent and unified whole within the national legal system.^[13] This conception entails that every regional draft regulation (ranperda) must not stand as a detached or self-contained legal product. Rather, it must be

systemically integrated within the national legal norm hierarchy in a cohesive and non-fragmented manner.

The applicable regulatory framework encompasses Law No. 12 of 2011 on the Formation of Legislation as lastly amended by Law No. 13 of 2022, Presidential Regulation No. 76 of 2021, Government Regulation No. 59 of 2015, and Ministerial Regulation on Law No. 40 of 2025 on the Procedures for the Harmonization, Rounding-Out, and Consolidation of the Conceptual Design of Regional Draft Regulations and Regional Head Draft Regulations. The complexity of this regulatory framework reflects the legislature's pronounced commitment to establishing harmonization as a constitutive instrument of regional legislative governance.

From the perspective of jurisprudence, regulatory harmonization is conventionally divided into two complementary instrumental categories. First, vertical harmonization — governed by the principle of *lex superior derogat legi inferiori*. Second, horizontal harmonization — operationalized through the principles of *lex posterior derogat legi priori* and *lex specialis derogat legi generali*.^[3] The practical relevance of this distinction is clearly reflected in the Academic Manuscript (*Naskah Akademik*) requirement for *ranperda*, which expressly mandates the inclusion of an "evaluation and analysis of related legislation" as the vehicle for simultaneously executing both vertical and horizontal harmonization.

The urgency of harmonization cannot be disassociated from the inherent complexity of Indonesia's legal system, which is susceptible to various forms of normative dissonance. At least six structural factors have been consistently identified as causes of legislative disharmony: (a) enactment by different institutions at different points in time; (b) changes in the officials' authorized to form regulations; (c) the dominance of sectoral approaches over systemic approaches in the legislative process; (d) weak inter-agency coordination; (e) limited public participation; and (f) the absence of a standardized methodology binding upon all regulatory authorities.^[5] Although a normative harmonization framework is formally in place, internal barriers — including institutional parochialism and the limited professional competence of legal drafters — as well as external barriers — such as the complexity of the existing regulatory corpus and difficulties in integrating across levels of government — remain tangible obstacles to the effective attainment of harmonization objectives.^{[5][7]}

Nevertheless, the gap between *das Sollen* (the normatively prescribed state of affairs) and *das Sein* (the empirically observed reality) in the conduct of harmonization transcends mere technical barriers. The quintessential function of a Harmonization Working Team is legal interpretation. As Sudikno Mertokusumo has affirmed, in order to apply a generally applicable and abstract statutory provision to a concrete and specific event, that provision must be assigned meaning, interpreted, and adapted to the circumstances of the event at hand.^[2] Since every Harmonization Working Team inevitably employs a particular interpretive methodology — whether consciously or otherwise — the absence of a nationally binding methodological standard across 33 Regional Offices distributed throughout Indonesia gives rise to what may be termed *normative fragmentation*: a condition in which substantively identical *ranperda* yield divergent harmonization outcomes across jurisdictions, thereby subjecting citizens to differential regulatory treatment solely on account of their geographical location.^[9]

This study pursues three interrelated objectives: (1) to identify and analyze the root causes of potential normative fragmentation in Indonesia's *ranperda* harmonization system through the construction of a layered *capacity deficit* framework; (2) to critically evaluate the normative potential and operational limitations of the E-Harmonization Application as a cross-jurisdictional conceptual standardization mechanism; and (3) to formulate an AI-based integrative solution that is both legally accountable and constitutionally supportive of the

unitary state principle as guaranteed under Article 1(1) of the 1945 Constitution of the Republic of Indonesia (UUD NRI 1945), as well as the right to equality before the law enshrined in Article 28D(1) of the same Constitution.

ARTICLE TYPE

This study constitutes an original article presenting the findings of normative legal research.

METHODOLOGY

This study adopts a normative legal research (*normative legal research*) approach — a methodology that treats law as a normative system and cohesively analyzes legal rules, principles, and doctrines. The selection of this approach is grounded in the nature of the research problem: normative fragmentation in the *ranperda* harmonization system is a problem rooted in the inconsistent application of existing legal norms, thereby methodologically requiring an analysis of normative construction rather than empirical field data collection.

The data sources employed in this study comprise three categories. First, primary legal materials, encompassing: the UUD NRI 1945; Law No. 12 of 2011 as amended by Law No. 13 of 2022 on the Formation of Legislation; Law No. 23 of 2014 on Regional Governance; Law No. 19 of 2016 on Electronic Information and Transactions; Law No. 27 of 2022 on Personal Data Protection; Ministerial Regulation on Law No. 40 of 2025; and Ministerial Regulation on Law No. 2 of 2024. Second, secondary legal materials, comprising legal doctrines and scholarly works in the fields of constitutional law, administrative law, legislative theory, legal reasoning, and legal informatics published in national and international peer-reviewed journals. Third, tertiary legal materials, including legal dictionaries, legal encyclopedias, and relevant public policy documents.

The data analysis method is qualitative in character, integrating three complementary analytical techniques. First, conceptual analysis (*conceptual analysis*). Second, comparative institutional analysis (*comparative institutional analysis*). Third, legal hermeneutics (*legal hermeneutics*) — employed to examine how the plurality of interpretive methodologies among Harmonization Working Teams potentially produces normative fragmentation, drawing on the scholarship of Sudikno Mertokusumo, Widodo Dwi Putro, Harold J. Berman, and Bernard Arief Sidharta.^{[2][8][15][16]}

RESULTS AND DISCUSSION

Institutional Capacity Deficit, Interpretive Methodology Pluralism, and Normative Fragmentation in the Harmonization of Regional Draft Regulations

The implementation of *ranperda* harmonization constitutes a strategic function of the Regional Offices of the Ministry of Law, as stipulated in Article 4(d) of Ministerial Regulation on Law No. 2 of 2024. However, this function confronts a fundamental structural disproportion: pursuant to Decree of the Minister of Home Affairs No. 100.1.1-6117 of 2022, Indonesia comprises 38 provinces, 416 regencies (*kabupaten*), and 98 municipalities (*kota*) — yielding 552 regional government units that potentially generate local legal products requiring harmonization. By contrast, Annex I of Ministerial Regulation on Law No. 2 of 2024 establishes only 33 Regional Offices of the Ministry of Law across the entire country. This disparity is immediately conspicuous: 33 implementing units are responsible for

harmonizing legislation from 552 regional governments, at an average ratio of more than 16 regional governments per Regional Office.

Assuming that each regional government enacts only one *ranperda* per year, the national harmonization volume amounts to at least 552 *ranperda* annually — contingent upon regional legislative program (*prolegda*) priorities.^[10] Under institutional capacity theory, an institution is deemed to possess adequate capacity when a balance exists among its mandate, resources, and workload.^[11] The disparity between 33 implementing units and 552+ *ranperda* per annum is indicative of a structural *capacity deficit* — a systemic condition in which institutional burden exceeds available capacity, rather than a merely incidental managerial shortfall.^[12]

Empirical research corroborates this condition: Regional Offices have in practice been minimally involved in the formulation of regional legislative programs, owing in part to institutional parochialism on the part of regional governments, inadequate infrastructure, and limited institutional support.^[4] Cahyani et al.'s observations reinforce these findings: even where a normative harmonization framework is formally adequate, both internal barriers (institutional parochialism, limited drafter professionalism) and external barriers (complexity of the regulatory corpus, difficulties in inter-governmental integration) remain substantive obstacles to the effective achievement of harmonization objectives.^[5]

Ministerial Regulation on Law No. 40 of 2025 mandates conceptual analysis of *ranperda* against twelve substantive parameters. As affirmed by Sudikno Mertokusumo, in order to apply a general and abstract statutory provision to a concrete and specific event, that provision must be assigned meaning, explained or interpreted, and directed or adapted to the relevant circumstances.^[2] The implication is unequivocal: every Harmonization Working Team functions primarily as an interpretive subject — a role that exceeds administrative execution.

As interpreters, Working Teams inevitably employ particular interpretive methods — whether consciously or otherwise. Sudikno Mertokusumo identifies a diverse range of methodologies commonly in use: grammatical, teleological, systematic, historical, comparative, and futuristic interpretation.^[2] Epistemologically, this plurality is unavoidable: Satjipto Rahardjo affirms that every individual may employ whichever interpretive method they deem appropriate, provided it is applied consistently.^[8] Yet within the context of a harmonization system distributed across 33 Regional Offices in the absence of a nationally binding methodological standard, this epistemological inevitability transforms into a systemic problem. Working Teams with a grammatical orientation will interpret norms strictly on the basis of textual fidelity; those with a teleological orientation will adapt norms to local social purposes; those with a systematic orientation will prioritize alignment with the national legal order. These differences — academically legitimate in themselves — become institutionally problematic insofar as they generate divergent harmonization products in respect of substantively identical *ranperda*.

This dimension of subjectivity is further underscored by Widodo Dwi Putro, citing Arend Soeteman: in *hard cases* — and conceptual analysis of *ranperda* almost invariably constitutes a *hard case*, given that it involves general-abstract norms that must be operationalized within a particular local context — legislation opens the possibility for divergent answers.^[8] Furthermore, Widodo Dwi Putro cautions that a legal drafter cannot conduct legal interpretation on the basis of positive norms alone, since interpretation is inevitably influenced by subjective factors such as educational background, psychological disposition, scholarly tradition, and ideological orientation.^[8] The potential for interpretive divergence among Working Teams, therefore, does not derive solely from methodological choices but also from individual subjectivity — a variable that is difficult to formally

standardize. This constitutes the second layer of the layered *capacity deficit* that lies at the heart of this article: *methodological deficit*.

Based on an analysis of the twelve parameters set forth in Article 7(2) of Ministerial Regulation on Law No. 40 of 2025, a three-category classification may be constructed according to the degree of normative certainty and the potential for interpretive fragmentation.

The Normative Category — encompassing parameters relating to conformity with the Pancasila, the UUD NRI 1945, decisions of the Constitutional Court, decisions of the Supreme Court, and established jurisprudence — carries a **low** fragmentation potential. The normative references therein are final, binding *erga omnes*, and have been established as uniformly applicable constitutional interpretive guidance throughout Indonesia's legal jurisdiction. These parameters function as a *constitutional anchor* that preserves minimum harmonization consistency, regardless of which Regional Office conducts the analysis.

The Technical Category — encompassing parameters relating to applicable legal principles, grounds for enactment, regulatory scope and direction, institutional interrelationships, and fiscal consequences for the state — carries a **high** fragmentation potential and represents the most systemically vulnerable category. Paradoxically, the technical category is also the category most closely connected to the substantive regulatory content that directly affects citizens' rights and livelihoods.^[5]

The Mixed Category — encompassing parameters relating to the legal basis of authority, linkage to national/regional development plans, and the "other elements" clause (Article 7(2)(1)) — carries a **medium to high** fragmentation potential. The "other elements" clause, in particular, constitutes an *open clause* that simultaneously affords adaptive flexibility and opens virtually unlimited interpretive discretion, rendering it highly sensitive to local contextual factors.^{[8][19]}

This classification reinforces the proposition that *methodological deficit* is not an abstract concern: precisely those technical and mixed parameters most susceptible to interpretive variation are those most intimately connected to the substantive regulatory content that directly affects citizens' rights. The greater the harmonization workload in the absence of a uniform methodological standard, the greater the risk of systemic normative fragmentation.^[5]

Normative fragmentation — defined as a condition in which significant regulatory divergences exist across jurisdictions with respect to substantively identical subject matter, thereby generating systemic normative non-uniformity ^[1] — is not merely a technical-administrative concern. Such fragmentation directly implicates a violation of the principle of legal certainty: citizens and regional governments are unable to consistently predict the content or standards of applicable regulations, given that harmonization standards differ from one jurisdiction to another.^[6] The juridical paradox that emerges is particularly striking: the very instrument designed to guarantee legal certainty — the harmonization process itself — potentially constitutes a source of legal uncertainty when not administered under a uniform and nationally binding methodological standard.^[5]

Sudikno Mertokusumo reinforces this argument through the mosaic metaphor: law is not a collection of discrete and self-standing rules, but a unity in which each component bears meaning only in relation to the whole.^[17] This constitutional dimension is further strengthened by the Elucidation of Law No. 23 of 2014, which affirms that regional government in a unitary state constitutes an integral whole with the national government, and that regional policy forms an integral component of national policy. Bagir Manan's conception of *lagere rechtsgemeenschappen* affirms that decentralization is not merely an

efficiency-driven imperative, but rather forms part of the constitutional consensus of the founding fathers, ensuring that local needs are accommodated without compromising the unitary principle.^[18]

Thus, the analysis of Indonesia's *ranperda* harmonization system reveals a tripartite problem: the first layer is a quantitative *capacity deficit* consisting in the disproportionality between the number of Regional Offices and the number of regional governments; the second layer is a *methodological deficit* consisting in the absence of a uniform and binding interpretive methodology standard; and the third layer is a *quality deficit* consisting in variations in the competency of legal drafters across Regional Offices. The consistency of conceptual analysis outputs across Regional Offices is therefore not merely a managerial quality concern, but a constitutional prerequisite for the meaningful discharge of the harmonization function.

Having established the tripartite deficit framework, it is now necessary to examine how an analytical precedent mechanism could mitigate the resulting normative fragmentation.

The Analytical Precedent Mechanism, the Principle of De Similibus, and the Imperative of Cross-Jurisdictional Consistency

The results of conceptual analyses of *ranperda* that have been reduced to written responses and uploaded to the E-Harmonization Application pursuant to Article 8(2) of Ministerial Regulation on Law No. 40 of 2025 ought, as a matter of juridical principle, to serve a function beyond mere administrative archiving. Rather, such documents must be regarded as binding reference materials for other Regional Offices — particularly when a subsequent analysis concerns a *ranperda* whose substantive content is identical to or materially similar to that of a *ranperda* from another jurisdiction that has already undergone the harmonization process.^[9]

The juridical-philosophical foundation for such a principle of binding precedent may be located in the classical legal postulate *de similibus idem est iudicium* or *similia similibus* — which literally signifies that like cases must be adjudicated with like decisions (*treat like cases alike and different cases differently*).^[14] This postulate is not merely a formal procedural principle; it represents a fundamental expression of the demands of justice and legal certainty that underlie the legitimacy of any civilized legal system. In the judicial context, this principle is operationalized through the doctrines of *stare decisis* and jurisprudence, consistent with the adage *eadem est ratio, eadem est lex*: where the reasoning is the same, the law must be the same.^[13]

Berman unequivocally demonstrates that legal reasoning inherently strives to achieve consistency in legal rules and decisions, premised on the axiom that law must apply uniformly to all persons within its jurisdiction.^[15] Furthermore, Berman affirms that legal reasoning seeks to maintain continuity over time — what he terms historical consistency — by reference to antecedent rules and decisions, so as to ensure stability and predictability.^[15] Both characteristics carry critical implications for the *ranperda* harmonization system: a Harmonization Working Team that disregards conceptual analyses previously produced by other Regional Offices in respect of substantively comparable *ranperda* not only violates the classical postulate of *de similibus* but departs from the fundamental character of legal reasoning itself.

Bernard Arief Sidharta explains that the primary form of legal logic is analogical reasoning. In precedent analogy, the process involves comparing the facts of the case at hand with those of previously decided cases, then distilling the legal principles or rules that served as the basis for those prior decisions, and subsequently applying those principles to the pending case.^[16] This principle guarantees four fundamental values that sustain the rule of

law: legal certainty, regulatory predictability, equality before the law, and the integrity of the national legal system.^[5]

Should substantively identical *ranperda* — for instance, *ranperda* on the empowerment of micro, small, and medium enterprises (MSMEs) drafted by two neighboring regencies — be harmonized differently by two Regional Offices due to divergent methodological orientations of their respective Working Teams, MSME operators conducting cross-boundary activities would confront differential regulatory standards for businesses of the same type and scale. This condition has the potential to produce systemic territory-based discrimination — a form of violation of the principle of equality before the law, in direct contravention of Article 28D(1) of the UUD NRI 1945. Accordingly, the integration of conceptual analysis outputs through the E-Harmonization system is not merely administrative in character, but carries substantive significance as a mechanism for protecting citizens' constitutional rights from territory-based regulatory discrimination.^[6]

So long as disparities in conceptual analysis outputs persist without a binding standardization mechanism, the principle of *de similibus idem est iudicium* will remain a normative aspiration. As a result, normative fragmentation will continue to erode citizens' constitutional right to equality before the law under Article 28D(1) of the UUD NRI 1945.^{[1][4]}

The E-Harmonization Application and Artificial Intelligence Integration: Bridging the Gap Between Normative Design and Operational Capacity

Ministerial Regulation on Law No. 40 of 2025 defines the E-Harmonization Application as "software designed and developed as a platform facilitating the electronic harmonization process for *Ranperda* and *Ranperkada* at the Regional Offices of the Ministry of Law." On the basis of this normative construction, the system underpins the entirety of harmonization process stages in electronic form.

The normative commitment to digitalization received explicit affirmation from the Minister of Law of the Republic of Indonesia, Supratman Andi Agtas, at the *Launching of the Question-and-Answer Handbook on Legislation Formation, the E-Harmonization Application for Central and Regional Legal Products, and the Signing of Cooperation Agreements* event held in Jakarta on 25 February 2025, who affirmed that digitalization of public service processes is indispensable for the creation of legal certainty, and that accountability can only be achieved when all services are conducted in digital form.^[27] The Director-General of Legislation, Dhahana Putra, at the same event, affirmed that the E-Harmonization Application is designed to facilitate the public in submitting harmonization applications and to enable monitoring of information related to harmonization requests.^[27]

Table 1. Role Matrix of the E-Harmonization Application

Process Stage	Role of the E-Harmonization Application	Legal Basis (Ministerial Regulation No. 40/2025)
Definition & Function	Serves as the electronic platform facilitating the entire harmonization process for regional draft regulations (<i>Ranperda</i> / <i>Ranperkada</i>)	Article 1(5)
Submission of <i>Ranperda</i> Application	Applications are submitted electronically through the application	Article 4(3)
Submission of	Applications are submitted	Article 5(3)

Ranperkada Application	electronically through the application	
Administrative Verification	The Working Team notifies the submitting authority of incomplete documentation through the application	Article 6(2)
Conceptual Analysis	Results of the conceptual analysis are uploaded to the application as working materials for the harmonization deliberation	Article 8(2)
Transmission of Harmonization Outcome	The letter of harmonization completion is transmitted electronically through the application	Article 12(1)
National Reporting	Data within the application serves as the basis for the report to the Minister and for monitoring and evaluation purposes	Article 15(1)
Contingency Procedures	In the event of application failure, the process is conducted by non-electronic means or electronic correspondence	Article 16(1)–(4)

Source: Authors' compilation

Notwithstanding the foregoing, a critical evaluation of the E-Harmonization Application's actual design and function reveals a significant gap between the normative potential of this system and its currently available operational capacity. Under the construction of Ministerial Regulation on Law No. 40 of 2025, there is no provision that explicitly governs a mechanism obligating Regional Offices to systematically examine and cross-reference prior conceptual analysis outputs before completing their own analysis.^[5]

Nor is there any mechanism that juridically compels Regional Offices to treat previously uploaded conceptual analysis outputs as binding reference materials (*binding reference*) when confronted with a *ranperda* of substantively identical or similar content. Although analytical outputs are technically uploaded and accessible through the application, interpretive disparities remain liable to occur in the absence of any procedurally binding inter-jurisdictional uniformity validation.^[7] This condition stands in direct contradiction to the normative objective of harmonization as articulated in Article 1(2) of Ministerial Regulation on Law No. 40 of 2025.^{[1][6]}

In order to bridge the gap between the normative potential and operational capacity of the E-Harmonization Application, simultaneous reinforcement at three levels is required: (1) normative reinforcement of a mandatory cross-jurisdictional reference mechanism (*mandatory reference mechanism*); (2) technical integration with a national regulatory database; and (3) the development of a substantive validation feature capable of generating alerts when potential inconsistencies arise between the analytical output under preparation and the standard established through prior analytical precedents stored in the system.^[13]

It is at this juncture that the relevance of artificial intelligence (AI) as an integrative instrument within the E-Harmonization system finds its most compelling justification. In the present analytical context, AI is positioned not as a replacement for human legal interpretation by Harmonization Working Teams — which inherently requires human legal

interpretation, as elaborated through the legal hermeneutic perspectives of Sudikno Mertokusumo and Widodo Dwi Putro — but as a *substantive filter layer* operating atop human analytical outputs, with the primary functions of detecting potential interpretive disparities among Regional Offices, identifying substantive similarities across *ranperda* from different jurisdictions, presenting relevant analytical precedents, and generating recommendations to maintain consistency of harmonization outcomes at the national level.^{[8][2]} The technical capabilities of AI in support of this function have been documented in the legal informatics literature: a systematic review of Natural Language Processing (NLP) applications in the legal domain demonstrates that NLP-based systems are capable of automating the analysis of regulatory documents, detecting normative non-conformities, and generating compliance recommendations at levels of accuracy substantially exceeding manual review capacity — a capability directly relevant given the volume of at least 552 *ranperda* per year requiring harmonization nationally.^[20]

Within this framework, the role of AI in the E-Harmonization system may be operationalized through three complementary functions. First, **norm mapping** — the capacity of AI to map vertical and horizontal inter-normative linkages so as to detect potential disharmony between the substantive content of a *ranperda* and other legislation at the earliest stage of conceptual analysis.^[9] Second, **document interoperability** — the capacity of AI to automatically cross-reference conceptual analysis outputs uploaded by one Regional Office against the national regulatory database and previously conducted analyses from other jurisdictions, thereby operationalizing the principle of *de similibus idem est iudicium*.^{[13][14]} Third, **interpretive disparity reduction** — the role of AI in generating precedent-based recommendations and alerting Working Teams to potential substantive inconsistencies between the analysis under preparation and established standards drawn from the national corpus of analytical precedents.^[5]

Table 2. AI Integration Framework for Regional Draft Regulation Conceptual Analysis Outputs

Stage	Role of the Regional Office Working Team (Legal Basis: Ministerial Regulation No. 40/2025)	Role of AI in Integrating Analytical Outputs
Conceptual Analysis	Article 7: The Working Team conducts substantive and technical analysis of Ranperda/Ranperkada	AI reads uploaded analytical outputs and extracts key indicators (legal principles, regulatory direction, grounds for enactment, fiscal consequences)
Upload to Application	Article 8(2): Conceptual analysis results are uploaded to the E-Harmonization Application	AI integrates analytical documents from multiple Regional Offices and cross-references normative conformity across jurisdictions
Harmonization Deliberation	Articles 9–10: Deliberation session to achieve conceptual consensus	AI provides interpretive recommendations grounded in national legal precedent, thereby reducing inter-regional

		office interpretive divergence
National Evaluation	Article 15: Harmonization report submitted to the Minister based on application data	AI constructs a normative consistency dashboard, generates conformity scores across analytical outputs, and flags potential normative fragmentation

Source: Authors' compilation

The legitimacy of AI integration also receives support from the evolving national policy direction. The Ministry of Communication and Digital Technology of the Republic of Indonesia has issued the National AI Roadmap 2025–2045, which explicitly positions digital transformation of governance — including regulatory quality improvement through data-driven approaches — as one of its strategic priorities.^[22] In the ASEAN context, the Expanded ASEAN Guide on AI Governance and Ethics (2024) emphasizes the harmonization of regional standards and institutional capacity building as prerequisites for responsible AI deployment in the public sector.^[23]

Notwithstanding the foregoing, the realization of the three AI functions outlined above confronts non-trivial implementation challenges in the Indonesian context. First, from a regulatory standpoint, the legal framework specifically governing the use of AI in sectoral governmental services remains under formulation.^[24] Second, from a data infrastructure standpoint, the National Digital Government Master Plan 2025–2045 expressly identifies disparities in data governance capacity between central and regional government as an unresolved challenge, such that the integration of AI with a national regulatory database presupposes the existence of uniform data infrastructure readiness across all Regional Offices — a condition that cannot be assumed to exist automatically.^{[25][26]} Third, from a data security governance standpoint, the application of AI within the E-Harmonization system involving regulatorily sensitive *ranperda* documents necessitates data security guarantees conforming to the standards of Law No. 27 of 2022 on Personal Data Protection.

Taking the totality of the foregoing analysis into account — from the quantitative *capacity deficit* and interpretive *methodological deficit* to the human resources *quality deficit* — the integration of AI within the E-Harmonization system represents the most proportionate and most direct response to the problem of normative fragmentation at hand. AI addresses not only the quantitative *capacity deficit* by enabling automated cross-jurisdictional processing and comparison of hundreds of *ranperda* per year, but also the *methodological deficit* by providing a uniform norm-mapping standard for all Working Teams, and the *quality deficit* by generating recommendations grounded in a national corpus of analytical precedents that are not contingent upon the varying individual competencies of drafters across Regional Offices. Nevertheless, the realization of this transformative potential is contingent upon three simultaneous prerequisites: binding sectoral AI regulation within the governmental legal services context, uniform national data infrastructure readiness, and data governance standards compliant with applicable data protection law.

Within the broader constitutional framework, the integration of AI in E-Harmonization is not merely a technological-administrative innovation — it is a normative instrument that upholds the unitary state principle, protects citizens' constitutional right to equality before the law, and ensures that every local legal product remains an integral component of a unified and non-fragmented national legal system.

CONCLUSION

This study concludes that normative fragmentation in Indonesia's ranperda harmonization system is not an incidental administrative shortfall, but a constitutional problem rooted in three cumulative and interacting deficits. The quantitative capacity deficit — reflected in the disproportionate ratio of 33 Regional Offices to 552 regional government units — constitutes a structural imbalance irresolvable through managerial measures alone, particularly when contrasted with Germany's proportionally distributed norm oversight and Australia's cooperative Ministerial Council mechanism. The methodological deficit arises from the absence of nationally binding interpretive standards, which allows Working Teams to employ divergent methods — grammatical, teleological, or systematic — producing materially different harmonization outcomes for substantively identical ranperda, consistent with Widodo Dwi Putro's observation that interpretation is inevitably conditioned by the drafter's subjectivity. The quality deficit, stemming from uneven human resource competencies across Regional Offices, further compounds these inconsistencies.

The E-Harmonization Application holds significant normative potential as a cross-jurisdictional repository of analytical precedents. Grounded in the principle of *de similibus idem est iudicium* — supported by Berman's insistence on historical consistency as an inherent demand of legitimate legal reasoning and Sidharta's precedent analogy mechanism — any Working Team that disregards prior analyses of comparable ranperda departs from the foundational character of legal reasoning itself. Nevertheless, this potential is undermined by two critical gaps: the absence of an automated cross-regional linkage mechanism and the absence of a procedurally binding obligation for Regional Offices to treat prior analytical outputs as mandatory references.

The integration of artificial intelligence as a substantive filter layer represents the most proportionate response to all three deficit layers simultaneously. Through norm mapping, document interoperability, and interpretive disparity reduction, AI enables automated cross-jurisdictional processing, provides uniform analytical standards, and generates precedent-based recommendations independent of individual drafter competency. Classified as an electronic agent under Law No. 19 of 2016, AI does not displace human legal responsibility, which remains vested entirely in the Working Teams and Regional Office heads. Realizing this potential, however, requires three simultaneous prerequisites: binding sectoral AI regulation for governmental legal services, uniform national data infrastructure across all Regional Offices, and data security governance compliant with Law No. 27 of 2022 on Personal Data Protection.

Ultimately, this study affirms that consistency in ranperda harmonization outcomes constitutes a constitutional imperative — not merely an institutional aspiration — derived from the unitary state principle in Article 1(1) of the 1945 Constitution, the integration mandate of Law No. 23 of 2014, and the *Zwecknorm* of harmonization under Ministerial Regulation No. 40 of 2025. Ranperda harmonization is therefore a constitutional instrument for upholding the unitary state principle, protecting citizens' right to equality before the law under Article 28D(1), and ensuring that every regional legal product remains an integral component of a unified and non-fragmented national legal system.

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CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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