Indonesia collaborative digital transformation development case of INA-DIGITAL

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Abstract

Objectives: This study examines INA-DIGITAL as a flagship initiative for Indonesia's Collaborative Digital Transformation (CDT) toward 2045, aiming to understand how multi-stakeholder collaboration, technological readiness, and citizen-centric principles shape digital governance. **Prior work:** Grounded in CDT theory, which emphasizes network governance and socio-technical systems, the research addresses challenges such as institutional fragmentation and digital divides. **Approach:** A qualitative design was employed using documentary analysis, secondary literature review, and NVivo 12 Plus for thematic coding, cluster analysis, and visualization. **Results:** Results reveal strong correlations among organizational readiness, citizen-centric service, and service delivery, confirming that progress in one area reinforces others. Narrative and mapping analyses highlight INA-DIGITAL's positioning as a collaborative ecosystem integrating governance, technology, and public engagement. **Implications:** The study concludes that INA-DIGITAL exemplifies a holistic approach to digital transformation, though its success depends on balancing infrastructure readiness with accelerated service innovation. Limitations include reliance on secondary data and absence of primary stakeholder interviews, restricting generalizability. **Value:** Future research should adopt mixed-method approaches, integrate longitudinal tracking, and explore comparative cases across Southeast Asia, complemented by advanced analytics such as social network and sentiment analysis to deepen insights into collaborative mechanisms and public trust in digital governance.

Keywords: Multi-stakeholder Digital Evolution, Integrated National Digital Portal, NVivo Analysis, Digital Governance.

1. Introduction

This research explores the development and implementation of INA-DIGITAL, Indonesia's newly launched Government Technology (GovTech) platform, as a case study of collaborative digital transformation. Digital transformation has emerged as one of the most influential global trends reshaping governance, economic systems, and social interactions in the twenty-first century. Governments worldwide are increasingly leveraging digital technologies to enhance efficiency, transparency, and accountability in public service delivery. From big data analytics to artificial intelligence, digital platforms have become essential enablers of modern governance. The evolution from e-government to digital government reflects not only technological adoption but also structural, cultural,

and institutional shifts within the public sector. As digital ecosystems expand, states must realign bureaucratic systems, public policies, and citizen engagement strategies to meet the dynamic needs of society [1] [2] [3].

In public service delivery, digital transformation plays a pivotal role in improving accessibility, reducing bureaucratic barriers, and fostering participatory governance. Effective implementation of digital platforms empowers citizens to engage actively with government institutions, promoting inclusivity and social equity. However, this transformation is not without challenges. Issues such as the digital divide, cybersecurity risks, regulatory gaps, and resistance to change often hinder progress. For developing nations, particularly in Southeast Asia, these challenges are compounded by infrastructural disparities and institutional fragmentation, making integrated digital governance both complex and urgent.

Indonesia, as the world's fourth most populous country and the largest democracy in Southeast Asia, offers a compelling case for collaborative digital transformation. Its vast archipelagic geography and diverse population present persistent challenges in ensuring equitable access to public services. Recognizing these realities, the Indonesian government has launched ambitious initiatives to build a more integrated, citizen-centered digital governance ecosystem. At the forefront of this effort is INA-DIGITAL, a flagship national program envisioned as a cornerstone of Indonesia's digital governance agenda. By 2045 marking the centenary of Indonesia's independence INA-DIGITAL aims to transform public service delivery, strengthen state capacity, and promote socio-economic resilience [4] [5] [6].

By situating INA-DIGITAL within global debates on digital governance and national transformation, the analysis explores its institutional design, implementation challenges, and future prospects. The discussion highlights how INA-DIGITAL reflects Indonesia's aspiration to become a digitally empowered nation by 2045 while illustrating broader dynamics of governance modernization in the Global South. Through this lens, the study contributes to scholarly discourse on digital transformation, state capacity, and the interplay between technology and governance in emerging democracies.

Collaborative Digital Transformation (CDT) represents a paradigm shift in how organizations, governments, and societies approach technological change. Unlike traditional digital transformation, which often emphasizes internal efficiency and unilateral adoption of technology, CDT is rooted in the principle of multi-stakeholder engagement and co-creation. It integrates public, private, and civil society actors into a shared ecosystem where digital innovation is not merely a technical upgrade but a collective governance process [7]. The theoretical foundation of CDT draws from network governance theory, institutionalism, and socio-technical systems theory, emphasizing that technology adoption is inseparable from organizational culture, policy frameworks, and social norms. CDT views digital transformation as a collaborative journey where interoperability, trust, and shared accountability are critical success factors. This approach aligns with the growing recognition that complex societal challenges such as digital

divides, cybersecurity, and ethical AI cannot be solved by isolated actors but require coordinated strategies across sectors and levels of governance [8] [9] [10] [11].

The theory behind CDT builds on three interrelated dimensions: collaborative governance, platform ecosystems, and adaptive institutional design. Collaborative governance theory posits that effective policy outcomes emerge when diverse stakeholders engage in consensus oriented decision-making, particularly in contexts of high complexity and interdependence [12]. In digital transformation, this translates into joint development of standards, shared data infrastructures, and inclusive policy frameworks. Platform ecosystem theory further reinforces this by highlighting the role of digital platforms as enabling environments for collaboration, where APIs, cloud services, and open-source technologies facilitate interoperability and innovation. Finally, adaptive institutional design underscores the need for flexible regulatory structures that can evolve alongside technological advancements. Together, these theoretical pillars form the backbone of CDT, suggesting that successful transformation requires not only technological capability but also institutional agility and collaborative capacity. This theoretical synthesis positions CDT as a holistic model that bridges technology, governance, and societal values [13] [14] [15].

The CDT framework can be conceptualized through four core components: strategic alignment, technological interoperability, stakeholder engagement, and governance mechanisms. Strategic alignment ensures that digital initiatives are linked to broader national or organizational goals, such as sustainability, inclusivity, and economic resilience. Technological interoperability focuses on creating integrated systems that allow seamless data exchange across agencies and sectors, reducing fragmentation and duplication. Stakeholder engagement emphasizes participatory processes, where citizens, businesses, and civil society contribute to design and implementation, fostering legitimacy and trust [16]. Governance mechanisms provide the institutional scaffolding for collaboration, including legal frameworks, ethical guidelines, and accountability structures. These components operate within an iterative cycle of planning, implementation, evaluation, and adaptation, reflecting the dynamic nature of digital ecosystems. By embedding collaboration into each stage, the CDT framework mitigates risks associated with siloed approaches and enhances the resilience of digital transformation efforts.

Applying the CDT theory and framework to initiatives like INA-DIGITAL 2045 illustrates its practical relevance for emerging democracies [17]. Indonesia's ambition to become a digitally empowered nation by its centenary requires more than technological deployment; it demands a collaborative architecture that integrates diverse actors across its vast archipelago. CDT offers a roadmap for achieving this by promoting interoperability among government agencies, fostering partnerships with private tech firms, and engaging citizens in co-creating digital services [18]. Moreover, CDT addresses critical challenges such as digital inequality and institutional fragmentation by embedding inclusivity and adaptability into the transformation process [19] [20] [21] [22]. For emerging democracies, this approach strengthens state capacity while safeguarding democratic values, ensuring that digital governance does not become a tool of exclusion or centralization. Ultimately [23], CDT positions digital transformation as a collective endeavor that balances efficiency with

equity, innovation with accountability, and technological progress with societal well-being. Based the previous study focused on the theporitical scope of Collaborative Digital Transformation in Governance landscape, this article focused to fill the gap of the practical and progress the INA Digital 2045 in Collaborative Digital Transformation act. This article expected to give the describing and Illustrate of Collaborative Digital Transformation in INA Digital 2045. This article tries to answer of these Questions:

1. What kind the Focused areas Develops in the INA-Digital 2045 based the Collabortaive Digital Transformation?
2. What kind the correlation of each Focused Areas Developrs in INA-Digital 2045 in Collaborartive Digital Transformation?
3. What kind the narrative popular abouts INA-Digital 2045 in Collaborartive Digital Transformation?
4. What kind the Mappaing analysis abouts the INA-Digital 2045?

2. Method

This study adopts a qualitative research design to explore the dynamics of Collaborative Digital Transformation (CDT) within Indonesia's INA-DIGITAL initiative. CDT emphasizes multi-stakeholder engagement, interoperability, and co-creation, making qualitative inquiry the most suitable approach for capturing institutional complexity, governance innovation, and socio-political interactions that cannot be fully explained through quantitative metrics. The research framework integrates documentary analysis, secondary literature review, and benchmarking reports on digital governance, enabling a holistic understanding of how collaboration shapes policy design and implementation. Data Collection centers on official government documents, strategic plans, and policy briefs related to INA-DIGITAL and Indonesia's digital roadmap toward 2045. These are complemented by academic publications, think-tank studies, and international best practices to situate Indonesia's experience within global debates on digital governance. Media reports and stakeholder commentaries are also reviewed to capture public narratives and institutional responses. Triangulation of these sources ensures reliability and mitigates bias, while providing a multi-dimensional perspective on collaborative mechanisms embedded in INA-DIGITAL.

For Data Analysis, NVivo 12 Plus is employed as the primary tool for qualitative coding and thematic mapping. NVivo facilitates systematic categorization of textual data into nodes representing key dimensions of CDT, such as policy integration, stakeholder engagement, technological readiness, and citizen-centric service delivery that implemented on development areas like Organization and Technological Readiness that focused on Organizational management and Technologies aspect to run the INA Digital. Citizen-Centric that talk about the orientation of the service of INA Digital should Citizen centric. Service Delivery that essential in digital transformation of public services. The software's clustering and correlation features allow identification of conceptual linkages and co-occurrence patterns, revealing how collaboration operates across governance layers. This analytical process highlights not only dominant themes but also the relational structure among them, which is critical for understanding INA-DIGITAL as a collaborative

ecosystem rather than a siloed initiative. The procedure unfolds in three stages. First, all collected documents are imported into NVivo and organized into a structured dataset. Second, thematic coding is applied to classify content under categories aligned with CDT principles, including governance networks, interoperability strategies, and participatory mechanisms. Third, NVivo's visualization tools such as cluster analysis and concept mapping are used to synthesize thematic relationships, producing insights into how INA-DIGITAL fosters collaboration among government agencies, private actors, and citizens. This iterative process ensures analytical rigor and transparency, while enabling the study to capture both structural and discursive dimensions of digital transformation.

By employing this methodological approach, the research provides a systematic examination of INA-DIGITAL as a collaborative governance innovation. It demonstrates how digital transformation in Indonesia is not merely a technological upgrade but a coordinated effort involving institutional reforms, stakeholder partnerships, and citizen engagement. This focus on collaboration positions the study within broader debates on governance modernization and offers actionable insights for designing inclusive and resilient digital ecosystems in emerging democracies.

3. Result and discussion

In this analysis are define in Four analysis there are: First, Analysis of Focus Areas Developed in INA Digital. Second, Cluster analysis the correlation of each areas develop of INA Digital 2045. Third, Narrative Analysis of INA Digital Case. Fourth, Mapping Analysis of the INA Digital aspect. In this analysis parts using four Tolls there are: Crosstab Query, Cluster, Wordcloud and Maps. The analysis is explained as bellow.

3.1. Analysis of focus areas developed in INA Digital

In this analysis tries to analyze the Focus development on the INA Digital case, in this case using three Criteria's: First, Organization and Technological Readiness that focused on Organizational management and Technologies aspect to run the INA Digital. Second, Citizen-Centric that talk about the orientation of the service of INA Digital should Citizen centric. Third, Service Delivery that essential in digital transformation of public services. The analysis using Crosstab Query to explain the data with Figure and Table. The analysis on Figure 1 and table 1.

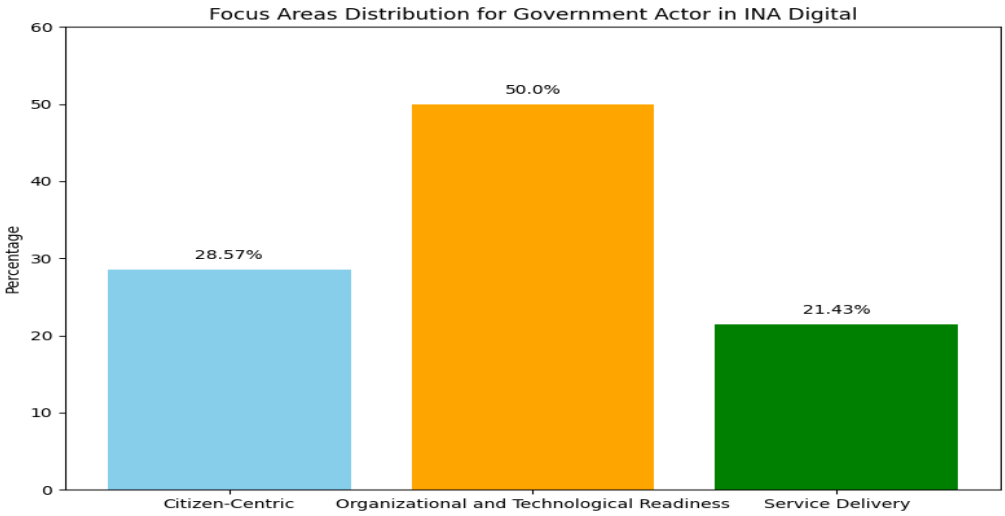

Fig. 1 Focus Areas Developed in INA Digital
Source: NVivo 12Plus analysis

Table 1. Focus Areas Developed in INA Digital

	Citizen-Centric	Organizational and Technological Readiness	Service Delivery	**Total**
Government	28,57%	50%	21,43%	100%
Total	28,57%	50%	21,43%	100%

Source: NVivo 12Plus analysis

The INA Digital initiative represents a strategic effort by the Indonesian government to modernize public service delivery through digital transformation. The data provided outlines the distribution of focus across three key dimensions: Citizen Centric, Organizational and Technological Readiness, and Service Delivery, with respective percentages of 28.57%, 50%, and 21.43%. These figures reflect the prioritization of foundational infrastructure and internal capabilities over direct citizen-facing services. The emphasis on Organizational and Technological Readiness (50%) suggests that the government recognizes the importance of building robust digital infrastructure, enhancing institutional capacity, and ensuring that public servants are equipped with the necessary digital competencies. This foundational investment is critical for enabling sustainable and scalable digital transformation. Without adequate readiness, efforts to improve service delivery or citizen engagement may falter due to technical limitations or organizational resistance. Thus, INA Digital's strategic orientation appears to be aligned with global best practices, which advocate for a phased approach starting with internal readiness before expanding outward to service innovation and citizen engagement.

Despite the foundational focus, the Citizen-Centric component still commands a significant share at 28.57%, indicating that INA Digital is not neglecting the end-user experience. This focus area likely includes initiatives aimed at improving accessibility, inclusivity, and responsiveness of digital public services. It reflects an understanding that digital transformation must ultimately serve the people, enhancing their interaction with government platforms and increasing trust in public institutions. However, the relatively lower emphasis on Service Delivery (21.43%) raises questions about the current stage of implementation. It may suggest that while the government is laying the groundwork for transformation, the actual rollout of improved services is still in its early phases. Alternatively, it could imply that service delivery improvements are being approached cautiously, perhaps due to the complexity of integrating legacy systems or the need for regulatory adjustments. This distribution also highlights a potential gap: if service delivery is not sufficiently prioritized, citizens may not yet experience tangible benefits from the digital transformation, which could affect public perception and adoption rates. Therefore, while the strategic focus on readiness is justified, a balanced approach that accelerates service delivery improvements is essential to maintain momentum and public support.

The data underscores a strategic orientation that prioritizes internal capacity building, which is a prudent approach for long-term success. However, to fully realize the potential of INA Digital, the government must ensure that the gains in organizational and technological readiness translate into meaningful improvements in service delivery and citizen satisfaction. This requires a shift from infrastructure development to service innovation, supported by agile governance, cross-sector collaboration, and continuous feedback mechanisms. Moreover, the relatively high percentage allocated to citizen-centric initiatives should be leveraged to foster digital inclusion, especially for underserved populations. This could involve expanding digital literacy programs, simplifying user interfaces, and ensuring mobile accessibility. To address the lower emphasis on service delivery, the government might consider piloting high-impact services such as digital identity, e-health, or e-permitting systems that can demonstrate quick wins and build public trust. In conclusion, while INA Digital's current focus areas reflect a sound strategic foundation, a recalibration toward more balanced investment in service delivery and citizen engagement will be crucial for achieving a truly transformative impact on Indonesia's public sector [24] [25] [26].

3.2. Cluster analysis of INA Digital

In this analysis using Cluster analysis as toll of Nvivo 12Plus to knowing the Correlation of each areas develop on INA Digitals 2045. Using Lower limit 0,7 Point pearson correlation. The analysis on Figure 2 and table 2.

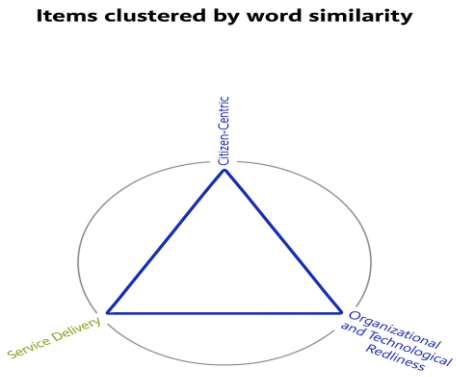

Fig. 2 Cluster analysis of INA Digital Case
Source: NVivo 12Plus analysis

Table 2. Cluster analysis of INA Digital Case

Code A	Code B	Pearson correlation coefficient
Service Delivery	Citizen-Centric	0,973767
Service Delivery	Organizational and Technological Readiness	0,912287
Organizational and Technological Readiness	Citizen-Centric	0,877187

Source: NVivo 12Plus analysis

The cluster analysis conducted through NVivo 12 Plus provides a comprehensive understanding of the interrelationships among the three core dimensions of INA-DIGITAL 2045: Service Delivery, Citizen-Centric Approach, and Organizational and Technological Readiness. By applying a Pearson correlation threshold of 0.7, the analysis ensures that only strong associations are considered, highlighting the structural coherence of Indonesia's digital transformation agenda. Figure 2 visually represents these clusters as a triangular configuration, indicating that each dimension is interconnected within a collaborative framework. The circle surrounding the triangle symbolizes the holistic ecosystem in which these elements operate, reinforcing the notion that digital transformation is not a linear process but a dynamic interplay of governance, technology, and citizen engagement. This visualization aligns with the theoretical premise of collaborative digital transformation, where synergy among components is essential for achieving inclusive and sustainable outcomes.

The correlation values presented in Table 2 further substantiate the strength of these relationships. The highest correlation (0.973767) occurs between Service Delivery and Citizen-Centric, suggesting that improvements in service delivery are strongly associated with prioritizing citizen needs and experiences. This finding underscores the critical role of

user-centered design in digital governance, where accessibility and responsiveness become key performance indicators. Similarly, the correlation between Service Delivery and Organizational and Technological Readiness (0.912287) reflects the dependency of efficient service provision on robust institutional and technological infrastructures. Without adequate readiness, service delivery initiatives risk fragmentation and inefficiency. The third correlation, between Organizational and Technological Readiness and Citizen-Centric (0.877187), indicates that technological preparedness and organizational adaptability significantly influence the ability to implement citizen-focused policies. Collectively, these correlations reveal a tightly knit framework where progress in one dimension catalyzes advancements in others, validating the integrated approach adopted by INA-DIGITAL.

From an analytical perspective, these findings have profound implications for policy design and implementation strategies under INA-DIGITAL 2045. The strong interdependencies suggest that isolated interventions such as upgrading technology without addressing citizen engagement are unlikely to yield optimal results. Instead, a collaborative model that simultaneously strengthens service delivery mechanisms, enhances organizational readiness, and embeds citizen-centric principles is imperative. The cluster analysis also highlights potential leverage points for accelerating transformation [27] [28] [29]. For instance, prioritizing citizen-centric initiatives could generate cascading benefits across service delivery and technological readiness, given their high correlation. Moreover, the triangular cluster structure emphasizes the need for continuous feedback loops among stakeholders to maintain alignment and adaptability in a rapidly evolving digital landscape. By integrating these insights into strategic planning, Indonesia can ensure that INA-DIGITAL not only meets its 2045 objectives but also sets a benchmark for collaborative digital governance in emerging democracies [30] [31] [32].

3.3. Narrative analysis of INA Digital case

In this analysis to look and explain the Popular narration about the INA Digital. In this case using Word Cloud features in NVivo 12Plus that limited on 30 Words on the figure. This analysis using figure and table to explain the values. The analiysis as explain in figure 3 and table 3.

Fig. 3 Narrative Analysis of INA Digital Case
Source: NVivo 12Plus analysis

Table 3. Top 10 Popular Narrative about INA Digital

Word	Count
digital	95
Layanan (Service)	31
indonesia	23
Pemerintah (Government)	23
peruri	21
panrb	19
Dengan (with)	18
publik	18
Produk (Product)	17
Rilis (Realese)	17

Source: NVivo 12Plus analysis

The narrative analysis of INA Digital, as visualized through the Word Cloud in NVivo 12Plus (Figure 3), offers a compelling snapshot of the dominant themes shaping public and institutional discourse around Indonesia's digital transformation initiative. By limiting the visualization to the top 30 words, the analysis focuses on the most frequently mentioned terms, providing clarity on what aspects of INA Digital are most emphasized. The word "digital," appearing 95 times, unsurprisingly dominates the narrative, reflecting the centrality of digitalization in the initiative's branding and strategic communication. This prominence suggests that INA Digital is widely perceived as a transformative digital

project, not just a bureaucratic reform. Following "digital," terms like "layanan" (services), "Indonesia," and "pemerintah" (government) highlight the initiative's public service orientation and national scope. These words indicate that the narrative is not only about technology but also about its application in improving government services and reaching citizens across the country. The presence of institutional names such as "Peruri" and "PANRB" further anchors the narrative in specific government bodies, suggesting that these actors are seen as key drivers or implementers of the digital transformation. This alignment between keywords and institutional roles helps validate the strategic positioning of INA Digital as a government-led, service-oriented digital initiative.

Based on table 3, it complements the visual narrative by quantifying the top 10 most frequently mentioned words, offering deeper insight into the thematic priorities of INA Digital. The high frequency of "layanan" (31 mentions) underscores the initiative's focus on service delivery, aligning with broader goals of improving public sector efficiency and citizen satisfaction. The equal mention of "Indonesia" and "pemerintah" (23 each) reinforces the national and governmental framing of the project, suggesting that INA Digital is not just a technical upgrade but a strategic reform with implications for governance and public administration. The appearance of "Peruri" (21 mentions), a state-owned enterprise known for secure printing and digital identity services, hints at the importance of digital security and identity verification in the initiative. Similarly, "PANRB" (19 mentions), the Ministry of Administrative and Bureaucratic Reform, reflects the bureaucratic backbone of the transformation. Words like "publik," "produk," and "rilis" suggest a narrative that includes public engagement, product development, and the launch of digital services key indicators of progress and innovation. The inclusion of "dengan" (with) as a frequently used connector word may point to collaborative language in the narrative, possibly indicating partnerships or integrated service models. Overall, the combination of visual and tabular data reveals a narrative that is both strategic and operational, emphasizing digital infrastructure, institutional leadership, and service innovation. This analysis not only maps the linguistic terrain of INA Digital but also provides a foundation for evaluating its communication strategy and public perception, which are critical for sustaining momentum and trust in digital governance [33] [34] [35].

3.4. Mapping analysis of the INA Digital aspect

In this analysis, to explain and image the conceptual relation of actors with several themes. In this case using figures to explain the data. The analysis features using Project Maps. The analysis as explain in figure 4.

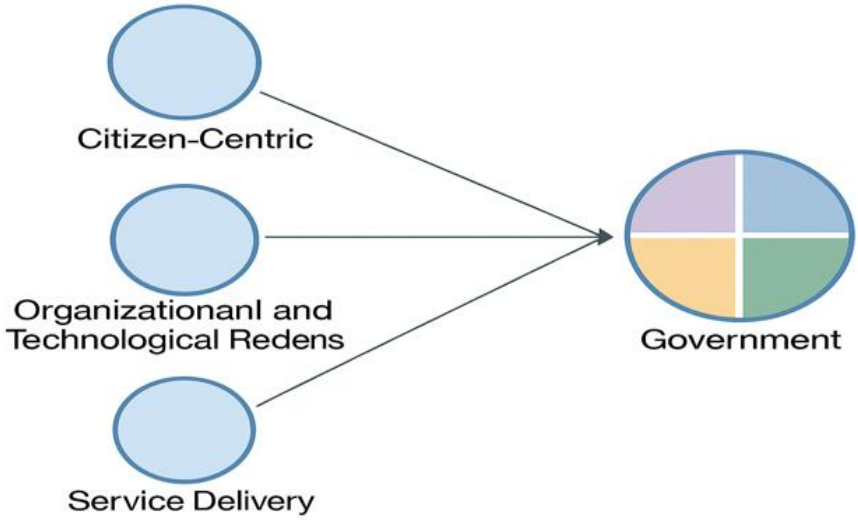

Fig. 4 Mapping Analysis of the INA Digital Case
Source: NVivo 12Plus analysis

The analysis features using Project Maps. The analysis as explain in figure 4. The diagram in figure 3 presents a conceptual framework that positions the Government as the central entity influenced by three interconnected domains: Citizen-Centric, Organizational and Technological Readiness, and Service Delivery. Each of these domains is represented by a distinct circle with directional arrows pointing toward the central government circle, indicating a flow of influence or contribution. This structure suggests that the effectiveness and transformation of government functions are contingent upon the integration and balance of these three focus areas [30], [31]. The Citizen-Centric domain emphasizes the importance of designing public services and digital platforms around the needs, behaviors, and expectations of citizens. It reflects a shift from traditional bureaucratic models to more participatory and user-oriented governance. Meanwhile, Organizational and Technological Readiness highlights the internal capacity of government institutions to adopt and manage digital technologies, including infrastructure, human resources, and policy frameworks. This readiness is foundational, as it enables the government to implement and sustain digital initiatives effectively. Lastly, Service Delivery represents the tangible output of digital transformation, how services are provided, accessed, and experienced by the public. The arrows converging on the government circle imply that these three domains are not isolated but must work in synergy to achieve holistic digital governance [32], [33], [34]. The central circle labeled Government is visually segmented into four colored quadrants, which may symbolize the multidimensional nature of governance in the digital era. Although the specific meanings of the colors are not labeled, their presence suggests that the government operates across various functional areas that are simultaneously impacted by the three external domains. This layered representation reinforces the idea that digital transformation is not a linear process but a dynamic interaction between internal capabilities and external demands. For instance, improvements in service delivery are only possible if the government has the technological infrastructure and organizational agility

to support them, and if those services are aligned with citizen needs [35]. The diagram also implies a feedback loop: as the government evolves through digital transformation, it must continuously reassess and adapt its strategies in response to changes in citizen expectations, technological advancements, and service performance. Strategically, this model encourages policymakers to adopt an integrated approach investing in digital literacy, cross-sector collaboration, and agile governance structures. It also serves as a visual tool for communicating the complexity of digital transformation to stakeholders, emphasizing that success depends on the alignment of citizen engagement, institutional readiness, and service innovation. Overall, the diagram encapsulates the core philosophy of INA Digital: a government that is responsive, capable, and citizen focused on its digital journey [35].

4. Conclusion

The findings of this study underscore that INA-DIGITAL represents a significant step toward Collaborative Digital Transformation (CDT) in Indonesia, where strong correlations among citizen-centric services, organizational and technological readiness, and service delivery confirm the integrated nature of digital governance reform. The NVivo-based analysis demonstrates that these dimensions are mutually reinforcing, suggesting that successful transformation requires a holistic approach combining infrastructure development, stakeholder engagement, and user-focused service innovation. However, the research is limited by its reliance on secondary data and qualitative coding without incorporating quantitative performance indicators or primary stakeholder perspectives, which constrains the depth and generalizability of insights. To address these gaps, future studies should adopt mixed-method designs, integrate longitudinal tracking of INA-DIGITAL's implementation, and include interviews or focus groups with policymakers, private sector partners, and citizens to capture real-time dynamics of collaboration. Comparative research across Southeast Asian contexts and advanced analytics such as social network mapping and sentiment analysis are also recommended to deepen understanding of collaborative mechanisms and inform policy strategies for inclusive, resilient, and adaptive digital ecosystems.

A.4. Appendix

Nvivo 12Plus Crosstab AnalaysIS Table

Stakeholder	Citizen-Centric	Organizational & Technological Readiness	Service Delivery
Government	28.57%	50%	21.43%

Nvivo 12Plus Cluster Analysis Table

Code A	Code B	Pearson Correlation
Service Delivery	Citizen-Centric	0.973767
Service Delivery	Organizational & Technological Readiness	0.912287
Organizational & Technological Readiness	Citizen-Centric	0.877187

Nvivo 12Plus Narrative Analysis Table

Word	Length	Count	Weighted Percentage (%)
digital	7	95	004
layanan	7	31	001
indonesia	9	23	001
pemerintah	10	23	001
peruri	6	21	001
panrb	5	19	001
dengan	6	18	001
publik	6	18	001
produk	6	17	001
rilis	5	17	001
kementerian	11	15	001
pemerintahan	12	15	001
readability	11	15	001
peran	5	14	001
govtech	7	13	001
teknologi	9	13	001
birokrasi	9	10	000
singapura	9	10	000
jakarta	7	9	000
mengembangkan	13	9	000
pengembangan	12	8	000
public	6	8	000
terbatas	8	8	000
transformasi	12	8	000
berbagai	8	7	000
kerja	5	7	000
menjadi	7	7	000
negara	6	7	000
permasalahan	12	7	000
pertama	7	7	000

Visual Outputs

Figure 1: Focus Areas Developed in INA-DIGITAL (Crosstab Visualization)
Figure 2: Cluster Analysis Diagram (Items Clustered by Word Similarity)
Figure 3: Word Cloud of INA-DIGITAL Narrative (Top 30 Words)
Figure 4: Conceptual Mapping of INA-DIGITAL Actors and Themes

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