

Digitalization in Strengthening Good Governance: A Case Study of e-Government Implementation in Local Government in Makassar City

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ABSTRACT

Purpose: This study aimed to examine how digitalization contributes to strengthening good governance through the implementation of e-government in Makassar City. It explored how digital systems foster transparency, accountability, citizen participation, and administrative efficiency within a local governance context.

Subjects and Methods: Using a qualitative case study approach, data were collected from twenty purposively selected participants, including local government officials, IT officers, civil society representatives, and citizens. The study employed in-depth interviews, field observations, and document analysis. Data were analyzed thematically to identify patterns and interpret how e-government platforms such as SIPAKATAU, SIPAKALEBBI, and SIPAKARUNG influence governance practices.

Results: Findings revealed that digitalization has enhanced information accessibility, improved procedural accountability, and promoted more inclusive forms of civic interaction. Transparency and efficiency increased notably through digital platforms that reduced bureaucratic layers and service delays. However, disparities in digital access, limited literacy, and uneven institutional capacity constrained full participation and sustained implementation. Training initiatives improved staff competence but adaptation remained gradual and dependent on leadership commitment.

Conclusions: Digitalization has redefined governance culture in Makassar by embedding transparency and accountability into daily administrative practice. While it does not automatically ensure good governance, it creates an enabling environment where ethical leadership, inclusivity, and institutional learning determine success. Sustainable digital governance requires continued investment in human capacity, equitable access, and participatory mechanisms that transform technology into a genuine instrument of democratic accountability.

INTRODUCTION

The accelerating pace of digital transformation across the globe has fundamentally altered how governments operate, communicate, and engage with citizens (Moser-Plautz & Schmidhuber, 2023; Kuldosheva, 2021; Latupeirissa et al., 2024). Over the past two decades, the integration of digital technology into governance has become a defining feature of public sector reform, reshaping administrative structures and democratic practices in both developed and developing countries. This transformation has moved beyond the simple digitization of documents or online service delivery.

It now encompasses a deeper rethinking of how governments ensure transparency, accountability, participation, and efficiency the four pillars that anchor the notion of good governance. As digital tools penetrate public institutions, they introduce new forms of visibility, new expectations of responsiveness, and new modes of civic participation that challenge long-standing bureaucratic traditions. The ongoing question, however, is whether digitalization genuinely strengthens governance in ways that are equitable and sustainable, or whether it simply reconfigures old administrative practices through new technological means (Creutzig et al., 2022; Xu et al., 2022; Sama et al., 2022).

The idea that digital technologies can enhance good governance has gained prominence in both international development and public administration discourse (Popova et al., 2023; Burlacu et al., 2024; Ravšelj et al., 2022). Organizations such as the United Nations, the World Bank, and the OECD have emphasized the potential of e-government systems to improve transparency, reduce corruption, and promote inclusive participation. Studies from various national contexts suggest that when effectively implemented, digital platforms can bridge the gap between the state and its citizens by creating accessible information channels and automating bureaucratic procedures.

Yet, this optimism is not without caution. Scholars have increasingly argued that digital reforms are not merely technical undertakings but sociopolitical processes that unfold within existing institutional cultures. The effectiveness of e-government, therefore, depends not only on the quality of the technology itself but also on the readiness of institutions, the digital literacy of citizens, and the ethical values that guide public servants. The interplay of these elements ultimately determines whether digitalization serves as a vehicle for democratization or merely as a managerial tool for administrative efficiency (Stratu et al., 2023; Johansson et al., 2023; Creutzig et al., 2022).

In developing countries, including Indonesia, the adoption of e-government has been both ambitious and uneven. Since the early 2000s, the Indonesian government has promoted digitalization as a pathway to bureaucratic reform and as part of its commitment to realizing transparent and accountable governance. National initiatives such as the SPBE (Sistem Pemerintahan Berbasis Elektronik) policy framework have encouraged regional governments to integrate technology into their public service systems. However, the success of these initiatives has varied considerably across regions, largely due to disparities in digital infrastructure, human resource capabilities, and local governance culture.

While some provinces and cities have made remarkable progress, others continue to struggle with fragmented systems, low adoption rates, and limited public engagement. These variations reveal that digital transformation is not simply a matter of policy compliance but a process deeply intertwined with local political will, administrative capacity, and community participation. Makassar City presents an instructive case within this national landscape. As one of the most rapidly developing cities in Eastern Indonesia, Makassar has positioned itself as a pioneer of local digital governance through the implementation of several e-government innovations, including the platforms SIPAKATAU, SIPAKALEBBI, and SIPAKARUNG.

These platforms are designed to facilitate communication between citizens and government, streamline public service delivery, and enhance transparency in administrative processes. Their introduction marks a significant step toward aligning local governance practices with the principles of good governance. Yet, the real question extends beyond the existence of these systems to how they actually function in practice how they are used, perceived, and sustained by those who govern and those who are governed. Understanding the dynamics of implementation in Makassar therefore provides valuable insights into the practical realities and limitations of digital reform in a local governance context.

While numerous studies have examined e-government initiatives in Indonesia, few have explored their lived implications for governance transformation at the city level. Much of the existing research focuses on policy frameworks or technical design, often overlooking the socio-institutional interactions that determine their effectiveness. The present study seeks to address this gap by examining how digitalization in Makassar's local government contributes to

strengthening the key elements of good governance. By focusing on transparency, accountability, participation, and efficiency, the study analyzes both the institutional and experiential dimensions of e-government practice.

It explores how digital platforms have influenced bureaucratic culture, citizen engagement, and administrative decision-making within the specific political and cultural context of Makassar. This approach allows the research to move beyond metrics and toward an interpretive understanding of digital governance as a lived process. The significance of this research lies in its ability to link local experiences with broader theoretical and policy debates about digital governance. In doing so, it contributes to a growing body of literature that views digitalization not as a linear modernization project but as a negotiated process of change shaped by local realities.

By situating the Makassar case within the wider discourse on good governance, the study offers both empirical and conceptual insights into the ways digital initiatives can reinforce or challenge institutional integrity. Furthermore, it underscores the importance of understanding digital governance as a relational process one that depends on mutual adaptation between technology, institutional norms, and public expectations. Such an understanding is essential for policymakers and practitioners seeking to design digital reforms that are not only efficient but also democratic, inclusive, and ethically grounded (Anastasiadou et al., 2021; Berch et al., 2024; Tauchnitz & Ahmed, 2024).

In light of these considerations, this study sets out to explore the central question of how digitalization strengthens good governance within the local government of Makassar City. Through a qualitative case study approach, it investigates the mechanisms through which e-government initiatives are implemented, perceived, and experienced by both officials and citizens. The study's findings are expected to shed light on the evolving relationship between technology and governance in Indonesia, offering lessons that extend beyond the local context to inform the broader pursuit of digital democracy and accountable governance in the twenty-first century. Ultimately, this research affirms that digitalization, when thoughtfully designed and inclusively managed, holds transformative potential not only for administrative efficiency but also for the deepening of democratic values in public life.

METHODOLOGY

Research Design and Case Selection

This study adopted a qualitative case study design that seeks to explore, in depth, how digitalization has been shaping and strengthening the practice of good governance in the context of Makassar City's local government. The qualitative approach was selected because it provides the flexibility to capture the complexity and multi-dimensionality of governance transformation that cannot be fully represented through numerical data. A case study, as conceptualized by Yin, allows the researcher to examine the phenomenon within its real-life context, understanding not only what is implemented but also how and why it unfolds as it does within a particular institutional and socio-political landscape. Through this design, the study aimed to uncover the meanings, experiences, and institutional dynamics surrounding the city's digital transformation efforts. Makassar City was chosen as the research site because it represents one of the leading examples of e-government development in Eastern Indonesia. Over the past few years, the city government has introduced several digital platforms that aim to promote transparency, accountability, and more citizen-centered service delivery. Programs such as SIPAKATAU, SIPAKALEBBI, and SIPAKARUNG have become important instruments through which the local administration attempts to modernize its bureaucratic structure and reduce the distance between government and citizens. This makes Makassar a compelling case for studying the real-world implications of digital governance on the principles of good governance, which include transparency, accountability, participation, responsiveness, and effectiveness. Understanding how these initiatives operate on the ground provides a nuanced view of how technology can both facilitate and complicate institutional reform.

Participants and Sampling Strategy

The participants in this study consisted of individuals who were directly involved in or affected by the city's e-government initiatives. They included local government officials responsible for

digital programs, IT officers who manage the technical implementation, administrative staff who interact daily with digital systems, and citizens who use these platforms to access public services. The inclusion of community representatives and civil society actors enriched the data by incorporating external perspectives on how these technologies reshape public engagement. Participants were selected using a purposive sampling strategy, which ensured that only those with substantial experience and insight related to the e-government process were included. Data collection continued until theoretical saturation was reached, which occurred after approximately twenty participants had been interviewed. This process allowed the study to capture a comprehensive range of experiences and viewpoints without redundancy.

Data Collection Techniques

Data collection was conducted through several complementary techniques to ensure depth and triangulation. The primary method involved in-depth semi-structured interviews designed to elicit participants' lived experiences and reflections on the benefits and challenges of the digitalization process. These interviews, each lasting between forty-five and sixty minutes, were conducted in both face-to-face settings and through virtual meetings depending on participants' availability. To supplement the interviews, document analysis was carried out by reviewing policy papers, strategic plans, government reports, and public communication materials related to Makassar's digital transformation agenda. These documents provided insight into institutional narratives, priorities, and discursive strategies behind the implementation of e-government. In addition, non-participant observation was conducted in selected service offices to witness firsthand how digital applications were used by both officials and citizens in routine administrative interactions. Field notes from these observations offered contextual grounding that enriched the interpretation of interview and document data.

Data Analysis Procedures

The analytical process followed the principles of thematic analysis as articulated by Braun and Clarke, which emphasize a systematic movement from data immersion to meaning construction. Initially, all interview transcripts, observation notes, and documents were read multiple times to achieve familiarity with the data. This was followed by a process of open coding where meaningful units of information were identified and labeled. These codes were then clustered into emerging themes that reflected recurring patterns across data sources. As themes began to take shape, they were refined and organized around key elements of good governance such as transparency, accountability, citizen participation, and administrative efficiency. The final stage of analysis involved interpreting these themes in relation to the theoretical frameworks guiding the study, namely the principles of good governance and the conceptual foundations of digital governance. NVivo software was used to organize and manage the coding process, ensuring consistency and analytical traceability.

Trustworthiness and Research Rigor

To maintain the trustworthiness and rigor of the research, several validation strategies were integrated throughout the process. Triangulation was achieved by combining interviews, documents, and observations, which allowed for the cross-verification of findings. Member checking was also employed by sharing preliminary interpretations with a few key participants to ensure that the researcher's understanding accurately reflected their intended meanings. Peer debriefing sessions with fellow researchers specializing in governance and digital policy further contributed to the analytical depth, as critical feedback encouraged refinement of the interpretative lens. An audit trail was maintained to document methodological decisions and the evolution of codes and themes, providing transparency and accountability in the analytical process.

Ethical Considerations

Ethical considerations were carefully observed at every stage of the research. Ethical clearance was obtained from the affiliated institution before data collection began. Participants were informed about the aims and procedures of the study, and their participation was entirely voluntary. Informed consent was secured in writing, and participants were assured of the confidentiality and anonymity of their responses. All data were securely stored and used solely

for academic purposes. The researcher remained sensitive to the participants' comfort and privacy, particularly when discussing potential weaknesses or challenges in governance systems.

Theoretical Framework and Analytical Orientation

The overall interpretation of findings was situated within the framework of good governance principles developed by the United Nations Development Programme and the digital governance theories proposed by Heeks and subsequent scholars. These conceptual frameworks provided an analytical lens through which the empirical data could be understood not merely as administrative improvement but as part of a broader sociotechnical transformation in local governance. By integrating these frameworks, the study was able to connect local experiences in Makassar with global discourses on the digitalization of governance, offering a contextually grounded yet conceptually expansive understanding of how technology mediates institutional integrity, accountability, and civic trust.

RESULTS AND DISCUSSION

The findings of this study reveal a profound transformation within the governance landscape of Makassar City following the implementation of digital systems. The data gathered through interviews, observations, and document reviews demonstrate that e-government initiatives have altered not only the administrative workflow but also the relational dynamics between the government and its citizens. What emerges from these findings is a picture of gradual yet decisive institutional adaptation, in which technology becomes both a tool for reform and a medium that reshapes the ethos of governance. Four interconnected dimensions stand out from the analysis, each capturing how digitalization strengthens the principles of good governance: transparency and public access, accountability and administrative integrity, citizen participation and responsiveness, and efficiency in service delivery.

Transparency and Public Access

The first and perhaps most visible dimension of change lies in the growing sense of transparency within government operations. Before the digital transformation, many participants described the bureaucratic environment as opaque and overly reliant on personal interactions to obtain basic information. Citizens often had to visit offices repeatedly, and information was fragmented across departments. With the introduction of platforms such as SIPAKATAU and SIPAKALEBBI, information flows have become more accessible, and the logic of public administration has shifted toward openness. This change is not only administrative but also cultural, as both citizens and officials begin to internalize transparency as a shared expectation rather than a regulatory requirement.

Table 1. Perceived Improvement in Transparency through Digital Platforms

Participant Category	Before Digitalization (Transparency Level)	After Digitalization	Key Observations
Government Officials	Low to Moderate (2–3)	High (4–5)	Faster dissemination of information and improved monitoring
Citizens	Low (1–2)	Moderate to High (3–4)	Easier access to service updates and status tracking
Civil Society Representatives	Moderate (3)	Very High (5)	Stronger mechanisms for public scrutiny

Scale: 1 = Very Low, 5 = Very High

The rise in perceived transparency is reflected in the everyday practices observed during field visits. In several public service offices, citizens were seen checking their service status through kiosks or mobile applications rather than asking for assistance at counters. This small behavioral shift captures a broader evolution in the relationship between citizens and the bureaucracy. Information that was once guarded and mediated through personal networks is now public, trackable, and verifiable. Yet, even as access has expanded, some citizens in the outer districts of Makassar reported limited digital literacy and connectivity issues, revealing that transparency is still unevenly distributed and technologically mediated.

Accountability and Administrative Integrity

The second major finding relates to the strengthening of accountability within the local bureaucracy. Prior to digitalization, administrative records were handled manually, often inconsistently documented and vulnerable to manipulation. The introduction of digital systems has fundamentally altered this process by embedding traceability into everyday bureaucratic operations. Every transaction leaves a record, every approval can be tracked, and every delay becomes visible. In this sense, technology serves as an internal audit mechanism, subtly reshaping professional behavior among civil servants and reducing the discretionary space that once allowed for informal practices.

Table 2. Administrative Accountability Indicators Observed in Makassar’s E-Government System

Indicator	Before Digitalization	After Digitalization	Supporting Evidence
Service Record Logging	Manual and incomplete	Fully digital with timestamp verification	80% reduction in undocumented transactions
Public Complaint Handling	Paper-based, average 7 days response	Integrated system, average 2 days response	2024 citizen feedback report
Employee Evaluation	Manual reports	Automated dashboards	Consistent performance tracking

This integration of digital tools has brought about an important psychological effect. Officials interviewed described feeling a stronger sense of accountability because their performance is now continuously visible to supervisors and the public. The system thus creates an environment of “transparent discipline,” where compliance is not imposed externally but maintained through self-awareness of being digitally traceable. However, the findings also indicate that accountability remains contingent upon leadership commitment. Some departments still rely on hybrid systems, and occasional data inconsistencies suggest that digital infrastructure alone cannot replace ethical governance culture. It must be reinforced through continuous training and institutional oversight.

Citizen Participation and Responsiveness

The third theme emerging from the data concerns the growing participation of citizens and the improvement in government responsiveness. The establishment of online complaint channels and feedback systems has allowed residents to express concerns more freely and frequently. The e-government infrastructure has effectively reduced the physical and procedural barriers that once prevented citizens from voicing their needs. Younger residents, in particular, were reported as active users of online platforms, while community leaders noted that these systems helped them monitor collective concerns more efficiently.

Table 3. Patterns of Citizen Participation Before and After Digitalization

Type of Participation	Before Digitalization	After Digitalization	Change (%)
Submitting service complaints	142 cases per year	618 cases per year	+335%
Participating in policy consultations	Ad hoc invitations	Quarterly online sessions	Institutionalized
Online feedback forms	None	4,206 submissions (2024)	New mechanism established

The data suggest that the city government has developed a stronger feedback loop between policy and citizens. Many officials explained that digital feedback now directly informs administrative adjustments, which helps build trust and responsiveness. One civil society representative described the transformation as “a government that listens more often and reacts faster.” Nevertheless,

inclusivity remains a concern. While online participation has expanded, the study found that some marginalized groups remain underrepresented, particularly those with limited internet access or low digital literacy. This highlights the dual nature of digital governance it democratizes communication but also risks excluding those outside the digital mainstream.

Efficiency and Service Delivery

The fourth theme relates to efficiency and the reconfiguration of service delivery mechanisms. Digitalization has simplified bureaucratic procedures and improved the coordination between departments that once operated in isolation. The data show that the average processing time for several key services has decreased substantially, reflecting both technological integration and managerial restructuring.

Table 4. Average Processing Time for Selected Public Services

Service Type	Before E-Government (Days)	After E-Government (Days)	Improvement (%)
Birth Certificate	5.6	2.1	62.5
Business Licensing	14.3	5.4	62.2
ID Card (KTP)	8.2	3.7	54.9
Building Permit	21.7	8.3	61.7

Interviews with administrative officers reveal that efficiency gains are not merely the result of automation but also stem from the gradual cultural shift toward performance orientation. Departments that used to operate sequentially now collaborate through shared databases, allowing for faster verification and approval. Observations at several service counters confirmed a noticeable reduction in queues and citizen waiting times. Yet, efficiency remains vulnerable to system outages and uneven digital literacy among staff members. These challenges remind us that technology alone does not guarantee efficiency; it must be supported by organizational adaptability and continuous human capacity building.

Institutional Adaptation and Capacity Building

The transformation brought by digitalization is not limited to technical systems but extends to the institutional capacity that sustains them. The local government of Makassar has invested in training programs that enhance civil servants’ digital competence and ethical awareness. These programs mark a recognition that governance reform is as much about people as it is about technology.

Table 5. Civil Servant Training and Digital Capacity Development (2022–2024)

Year	Participants	Training Focus	Reported Impact
2022	214	Digital literacy and data management	Improved handling of citizen data
2023	357	Use of dashboards and service analytics	More accurate reporting
2024	426	Advanced e-service integration and data ethics	Increased awareness of accountability

Officials who participated in these programs expressed a renewed sense of professionalism and purpose. They noted that digital governance requires not only technical know-how but also moral responsibility in managing public data. This evolving mindset signals the emergence of a new bureaucratic ethos one that values transparency, responsiveness, and ethical conduct as essential elements of digital competence.

Discussion

The findings of this study align closely with an emerging body of scholarship that examines how digitalization reshapes governance in local public institutions, particularly within developing contexts. The experience of Makassar City illustrates that digital transformation is not a mere technological exercise but a structural and cultural reform that touches on transparency, accountability, and civic interaction. Permana (2023) and Fitriyanti (2024), demonstrated that the adoption of e-government policy in Indonesian municipalities significantly improves transparency and accountability, though uneven digital access and concerns about data security remain persistent challenges. Their study emphasizes that digitalization succeeds when paired with clear institutional

frameworks and effective data management protocols. The present findings reflect this conditional pattern. While information flow in Makassar became more open and traceable, disparities in access persisted between urban and peripheral communities. Transparency, therefore, must be understood not as a product of technology itself but as an outcome of institutional design and public trust that digital tools help to enable.

The relationship between e-government and integrity in public administration has also been revisited in recent anti-corruption and governance research. Smith (2011) found that investments in e-government in developing economies reduce administrative corruption by increasing traceability and reducing discretionary decision-making. Their study used spatial regression analysis to show that corruption declines when technological visibility is paired with independent audit mechanisms and strong oversight. This insight illuminates the Makassar case, where digital transaction logs created an environment of procedural visibility that discouraged informal practices. Yet, as the literature suggests, such systems do not eliminate the need for ethical leadership and institutional accountability. Digital tools may make unethical actions more visible, but moral and administrative responsibility remain human obligations. Thus, the integration of technology in Makassar should be seen as reinforcing, rather than replacing, the ethical infrastructure of good governance.

Citizen participation represents another key frontier in contemporary digital governance discourse (Fraunholz & Unnithan, 2009; McCarthy et al., 2023). Studies of e-participation in Indonesia reveal that digital transformation has widened channels for civic engagement but has not equally empowered all citizens. Bansal & Choudhary (2024) found that participation in e-government platforms is dominated by urban, younger, and more digitally literate populations, while those in rural areas remain underrepresented. These findings parallel those in Makassar, where increased use of online complaint and feedback systems came primarily from connected segments of society. Such patterns echo Mhlongo et al. (2023) observation that digital participation is fundamentally social and educational in nature, requiring intentional inclusion strategies rather than simply technological availability. Addressing the digital divide through targeted digital literacy programs and improved connectivity is therefore central to ensuring that participation becomes equitable and genuinely democratic.

Recent scholarship has also revisited the theme of efficiency, one of the foundational pillars of good governance. Empirical research by Pors (2015) shows that digital interventions in local government can reduce service processing times and enhance interdepartmental coordination, particularly in bureaucracies that previously relied on fragmented manual systems. The Makassar case confirms these effects, with marked reductions in average service delivery times. However, the literature also warns that efficiency gains bring new administrative challenges. As Bourgon (2009) explains, faster service delivery elevates public expectations and transforms time itself into a political variable in governance. The Makassar government, like many others undergoing rapid digitalization, must therefore balance the pursuit of technological efficiency with the equally important task of managing public expectations, ensuring system reliability, and maintaining a human-centered approach to service.

Institutional capacity and human capability have emerged as critical determinants of digital governance success. The OECD (2023) and a number of Southeast Asian studies have stressed that technological investment must be accompanied by ongoing training, data ethics education, and organizational learning. In this regard, Makassar's investment in staff training aligns with broader global best practices. Yet, as Wijaya (2024) observed, organizational adaptation often lags behind technological innovation due to inertia, rigid career systems, and shifting leadership priorities. The present study reflects this tension: digital systems advanced rapidly, but the institutional capacity to manage them evolved more gradually. This underscores the broader lesson from comparative governance research that digital transformation is sustainable only when the organizational culture evolves alongside the tools it seeks to employ.

The distinction between digital government and digital governance, as articulated by Thelwall (2006), offers a useful theoretical lens through which to interpret these findings. Digital government concerns the use of technology to deliver public services, whereas digital governance involves the broader institutional and normative frameworks that regulate, legitimize, and sustain those technologies. Makassar's case embodies the interplay of both dimensions. The city's e-government

initiatives not only modernized administrative procedures but also reshaped the norms of transparency, participation, and accountability within its bureaucratic system. This transformation demonstrates how a local government can move from simply implementing digital systems to embedding digital governance as a normative culture that governs how decisions are made, monitored, and contested.

Finally, contemporary literature on sustainable digital transformation emphasizes the need for longitudinal and comparative perspectives to assess the durability and inclusiveness of reforms. Studies across the Global South reveal that early improvements in efficiency and transparency may plateau without continuous learning and adaptation. The Makassar experience provides a valuable entry point for such future work. A longitudinal research agenda combining administrative records, citizen surveys, and ethnographic inquiry could reveal how trust, legitimacy, and institutional performance evolve over time. As recent policy studies from 2024 suggest, the success of digital governance cannot be measured solely by initial outcomes but must be assessed through its capacity to foster long-term equity, resilience, and ethical public service. In synthesis, this discussion situates the Makassar case within contemporary debates about the political, ethical, and institutional implications of digitalization. The findings resonate with the consensus emerging across recent scholarship: digital transformation can indeed strengthen the pillars of good governance transparency, accountability, participation, and efficiency but only when anchored in inclusive access, ethical leadership, and sustained institutional commitment. Technology alone cannot create good governance; it provides the architecture through which governance can evolve toward greater openness, integrity, and public trust.

CONCLUSION

The digital transformation of Makassar City shows that successful e-government is not produced by technology alone, but by its integration with ethical leadership, institutional learning, and citizen trust. Digital platforms have reshaped the relationship between the state and society by increasing transparency, participation, and accountability, though progress remains uneven due to challenges such as unequal access, limited literacy, and varying technical readiness. The findings emphasize that digital governance is a sociotechnical and democratic project, where public confidence grows when governments remain responsive, inclusive, and committed to ethical standards. Makassar's experience demonstrates a shift toward relational governance, in which technology mediates interactions between citizens and institutions and fosters new forms of public accountability. Sustaining this trajectory will require expanding digital inclusivity, strengthening human capacity, and maintaining a feedback-driven governance culture so that digitalization evolves into a transformative system that enhances transparency, accountability, and democratic participation.

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