| **RESEARCH ARTICLE**

Digital Leadership in Realizing Bureaucratic Reform in the South Sulawesi Provincial Government

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| **ABSTRACT**

Bureaucratic reform efforts over the years have yet to yield optimal results, leaving government bureaucracy associated with pathologies such as corruption, collusion, nepotism (KKN), slow service performance, and an inability to meet public satisfaction. Digital leadership among heads of local government agencies is expected to contribute significantly to achieving bureaucratic reform. This study aims to analyze the role of digital leadership in facilitating bureaucratic reform in South Sulawesi Province and to formulate a digital leadership model for effective bureaucratic reform. The research employs digital leadership theory as outlined by Klein (2020), which encompasses business characteristics, attitudinal characteristics, and general characteristics, serving as the analytical framework to assess the state of digital leadership among local government leaders in South Sulawesi. The study adopts a qualitative descriptive method, with primary data collected through observations and interviews with key informants. Data analysis techniques include data reduction, data display, and drawing conclusions. The findings conclude that: 1) Not all local government leaders possess effective digital leadership skills, which results in suboptimal contributions to bureaucratic reform. This is evident through the evaluation of business characteristics, attitudinal characteristics, and general characteristics that have yet to support reform in institutional structuring, administrative processes, human resource management, and service delivery. 2) The researcher formulated the "S4P Digital Leadership Model," developed from Klein's (2020) digital leadership model, which is believed to contribute to more effective bureaucratic reform. The novelty of this model lies in the incorporation of local wisdom dimensions—*Sipakatau*, *Sipakalebbi*, *Sipakinge*, and *Sirri na Pacce*—as well as digital leadership prerequisites such as digital literacy, innovation, and collaboration. This comprehensive, contextually relevant, and responsive model can be implemented across different regions in Indonesia, utilizing local cultural values as guiding principles for governance and public service delivery.

1. Introduction

Bureaucracy plays a crucial role in ensuring the smooth functioning of government operations and public service delivery. As the backbone of state administration, bureaucracy is responsible for fulfilling public needs, implementing public policies, and

maintaining stability in national life. This role aligns with the mandate of the 1945 Constitution of Indonesia, which underscores the state's responsibility for public welfare, including the provision of accessible and high-quality public services. However, the challenges faced by Indonesia's bureaucracy often include classic issues such as corruption, inefficiency, and a lack of transparency. These challenges highlight the need for comprehensive and effective bureaucratic reform.

The Grand Design for Bureaucratic Reform 2010-2025, outlined in Presidential Regulation No. 81 of 2010, reflects the government's commitment to restructuring bureaucracy through organizational reform, improved governance, and enhanced human resource quality. The goal is to create a bureaucracy that is clean, efficient, and accountable. However, in practice, the implementation of these reforms has not been entirely effective. In 2022, the national average score for bureaucratic reform and the Government Performance Accountability System (SAKIP) was 65.64, categorized as "B," indicating that while progress has been made in certain work units, significant improvements are still needed across many others.

Moreover, Indonesia's Corruption Perception Index (CPI), as reported by Transparency International, has seen a notable decline. In 2022, Indonesia's CPI score fell by four points compared to the previous year, resulting in a drop in global rank from 96th to 110th. This decrease suggests a worsening public perception of integrity within the bureaucracy, indicating that efforts to combat corruption and enhance public accountability remain insufficient.

Figure 1
Indonesia's Corruption Perception Index (CPI)
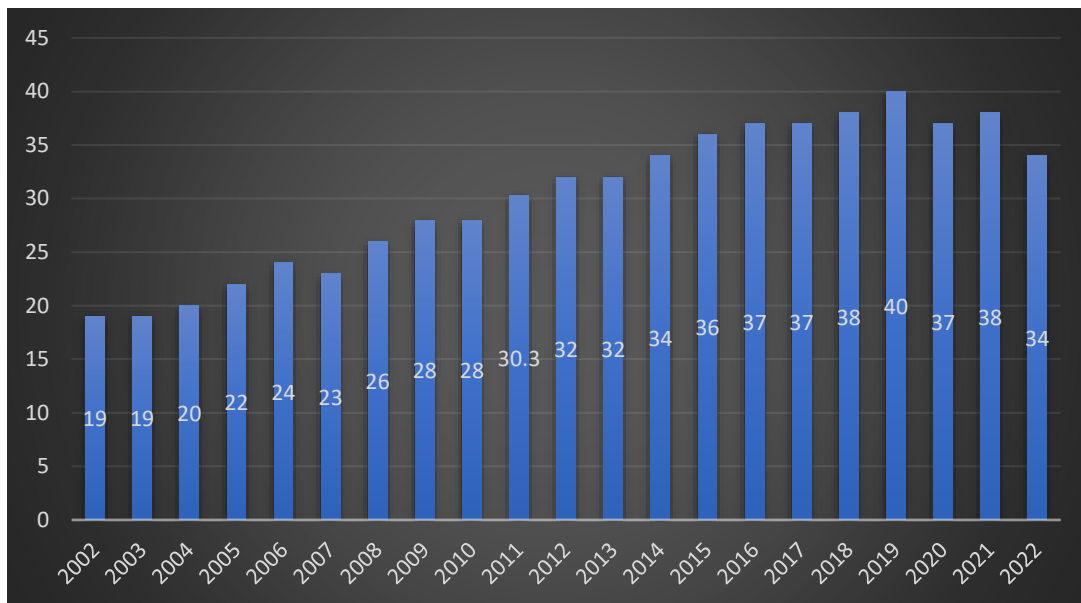
Source: Transparency International, 2022

The empirical gap in the implementation of bureaucratic reform is especially evident when observing the situation in South Sulawesi. As the gateway to eastern Indonesia, South Sulawesi is expected to be a model for modern and efficient bureaucratic practices. However, data shows that the implementation of the Electronic-Based Government System (SPBE) in the province is still suboptimal, with a 2022 SPBE index of 2.37, placing it 20th nationally. A particularly low score of 1.73 in the management domain indicates that digital leadership in the province has not been effectively leveraged to drive digital transformation and support bureaucratic reform.

Additionally, the 2022 report from the Indonesian Ombudsman recorded 8,292 complaints related to maladministration in public services nationwide, with 257 complaints originating from South Sulawesi. This highlights the suboptimal performance of the province's bureaucracy. Out of 24 regencies/cities, only four were categorized as being in the "green zone" for public service performance, while the majority were in the "yellow zone," and some even in the "red zone." This illustrates fundamental issues in the management of public services in South Sulawesi.

The theoretical gap in the context of digital leadership is also significant. Digital leadership is widely recognized as a critical factor in facilitating digital transformation and improving bureaucratic efficiency. Yukl (2009) highlights that effective leaders possess the ability to plan, organize, and manage information and strategic options relevant to organizational effectiveness. However, these theories often focus primarily on the role of leadership in the policy planning phase, with limited attention given to the implementation, control, and evaluation phases where digital leadership plays an essential role. Jacobs (1983) and Hermann & Hagan (1998) underscore the role of leaders in explaining, framing, and giving meaning to policy issues but do not explicitly address the role of digital leadership in public sector bureaucracy.

Previous empirical research, such as that conducted by Tulungen (2022), has shown that digital leadership can enhance operational efficiency through the use of information technology and big data in decision-making processes. However, this study focuses more on the technological aspects without delving deeply into the specific role of digital leadership in supporting the implementation of bureaucratic reform at the regional government level. Weber et al. (2022) identified that digital transformation requires leaders to possess a broader range of behavioral complexity, but their findings are more relevant to the private sector rather than public sector bureaucracy.

The empirical gap in South Sulawesi is evident from the low SPBE index and the high number of public service complaints. These findings indicate that digital transformation in the province has yet to meet the expectations of bureaucratic reform. Meanwhile, the theoretical gap lies in the insufficient discussion on how digital leadership can be effectively implemented in the practical phases of policy execution and evaluation in the public sector. Existing leadership models often emphasize vision development and policy planning without examining their practical application within regional governments.

To bridge this gap, an approach that incorporates local characteristics is essential. In South Sulawesi, cultural values such as "Sipakatau, Sipakalebbi, Sipakinge, and Sirri na Pacce" can serve as a foundation for developing an adaptive and relevant digital leadership model. This approach allows leaders to integrate digital technology with local wisdom to enhance public service efficiency and effectiveness. Leaders who apply digital leadership grounded in local cultural values will be better equipped to foster collaboration, innovation, and change within bureaucracy.

This study aims to explore the role of digital leadership in supporting bureaucratic reform in South Sulawesi and to formulate a digital leadership model that can be effectively implemented. Such a model is expected to serve as a strategic guide for regional governments to address the challenges they face and improve public service quality. Bureaucratic reform led by leaders with digital competence and adaptability to local contexts is believed to result in a more responsive, accountable, and efficient bureaucracy.

Against this background, this research seeks to fill the empirical and theoretical gaps related to the implementation of digital leadership in bureaucracy and present a relevant leadership model to support bureaucratic reform at the regional level. This effort is anticipated to contribute to the literature on digital leadership in the public sector and provide practical guidance for regional governments in enhancing public service performance aligned with digital transformation.

2. Literature Review

Several studies, both in the public and private sectors, have emphasized the urgent need for digital transformation in organizations amid current technological disruptions, driven largely by the role of digital leadership. Research conducted in both domestic and international contexts consistently highlights that, in the era of rapid technological change, the sustainability and success of an organization hinge on its leadership. Effective leaders can either propel their organizations forward through digital transformation or risk organizational stagnation.

Empirical studies have shown the importance of digital leadership in both governmental and non-governmental contexts. Research by Tulungen (2022), Thanh (2021), and Cahyarini (2021) examined digital leadership in the public sector and concluded that it significantly enhances public administration by improving service delivery efficiency and effectiveness. These studies emphasize the need for leaders who can adapt and leverage digital technologies in the public sector to optimize governance and service delivery.

In contrast, research by Imran et al. (2020), Weber et al. (2022), Schiuma et al. (2022), Maryati et al. (2022), and Hoerudin (2020) focused on digital leadership in private sector organizations. These studies revealed that digital leadership fosters innovation, manages complexity, and cultivates a culture that supports technological adaptation. Although these studies provide valuable insights into the traits and strategies of digital leaders, their applicability to the public sector, with its unique structural and regulatory frameworks, remains limited. This highlights an empirical gap in understanding how digital leadership operates within the public sector to facilitate comprehensive bureaucratic reform.

The current research aims to bridge this gap by investigating digital leadership in the context of the 2020-2024 bureaucratic reform roadmap (RB 2020-2024), based on Presidential Regulation No. 81 of 2010 concerning the Grand Design for Bureaucratic Reform 2010-2025 and Ministerial Regulation No. 3 of 2023. This study will explore how digital leadership can be aligned with bureaucratic reform efforts, particularly in South Sulawesi, which serves as the research locus. This specific focus introduces a novel contribution by examining digital leadership from a public administration perspective, whereas most existing studies approach the topic from human resource management or administrative perspectives.

Historically, bureaucratic reform in Indonesia has been perceived as an administrative program separate from development efforts, which has limited its effectiveness (Prasojo, 2009). To ensure that reform has tangible impacts, bureaucratic reform and development must proceed in tandem. The revised roadmap for RB 2020-2024 reflects this integration by shifting its focus toward thematic reforms with direct societal impacts, driven by global challenges such as the COVID-19 pandemic and accelerated digitalization. The updated goal of the roadmap emphasizes creating "a clean, effective, and competitive bureaucracy that supports national development and public service," replacing the previous focus on "good and clean governance."

The roadmap categorizes its strategic focus into two elements: hard and soft elements. The hard elements involve establishing effective digital governance structures that are collaborative and adaptable. The soft elements concentrate on fostering a bureaucratic culture of service, accountability, and adaptability, thereby building a professional and resilient civil service. These

changes aim to address persistent issues such as corruption, suboptimal public services, and governance lag relative to global standards.

Digital leadership is indispensable to achieving these objectives, as it extends beyond technology adoption to encompass a comprehensive organizational transformation. This transformation includes strategy, processes, human resources, culture, and leadership (Duerr, Holotiuk, & Beimborn, 2018). Digital leaders must possess certain characteristics to guide their organizations effectively. Klein (2020) identifies three core aspects of digital leadership: digital business characteristics, social attitudes, and a general mindset. Digital business characteristics include being an innovative visionary, networking intelligence, digital talent scouting, and mastering complexity. Social attitudes encompass motivational coaching, democratic delegation, and openness. The general mindset involves agility, learning from failure, knowledge orientation, and lifelong learning. These dimensions provide a robust framework for evaluating digital leadership.

The study applies Sedarmayanti's (2011) framework to analyze how digital leadership supports bureaucratic reform. This framework includes institutional restructuring, governance reform, human resource development, and public service improvement. These dimensions align with the objectives set out in the Presidential Regulation on the Grand Design for Bureaucratic Reform 2010-2025, ensuring relevance to current policy and practice.

Additionally, this study examines the enabling and inhibiting factors of digital leadership using Bryson's (2007) theory of strategic environmental factors. Internal factors include human resources, budgetary constraints, and infrastructure, while external factors cover political, economic, social, and technological conditions. Bryson's framework is particularly pertinent for analyzing leadership within non-profit and governmental organizations, making it suitable for this research.

The findings of this study aim to contribute to the development of a digital leadership model specifically tailored for bureaucratic reform. By combining digital leadership with strategies outlined in the RB 2020-2024 roadmap, this research will offer insights into how digital leadership can be effectively implemented to enhance governance and public service quality. This model is expected to guide regional governments in adopting digital leadership practices that lead to modern, efficient, and effective governance. Ultimately, such an approach can help bridge the empirical and theoretical gaps identified in previous research and provide a practical path for improving public administration through digital transformation.

3. Methodology

The research methodology employed in this study is qualitative in nature. Qualitative research aims to understand the meaning and uniqueness of the research object, focusing on processes and social interactions, with data analysis being descriptive (Nasution, 2023). This study utilizes a descriptive approach, which systematically and accurately presents phenomena, facts, or events concerning specific population characteristics or regions. This method does not aim to find or explain correlations or test hypotheses (Hardani et al., 2020).

The conceptual framework this study is primarily centers around digital leadership, as defined by Klein (2020), which includes business characteristics such as innovative vision, networking intelligence, the ability to recruit digital talent, and complexity management. It also examines social attitude characteristics like motivational skills, democratic delegation, and openness, as well as general mindset characteristics such as flexibility, learning from errors, knowledge orientation, and lifelong learning. Bureaucratic reform, as outlined by Sedarmayanti (2011), is studied across dimensions like institutional structuring, management organization, human resource development, and service provision. Additionally, the research considers strategic internal and external factors impacting leadership, based on Bryson (2007).

The study employs purposive sampling to select informants with relevant expertise and direct involvement in digital leadership and bureaucratic reform in South Sulawesi. Informants include key government figures such as deputies from the Ministry of Administrative and Bureaucratic Reform (Kementerian PAN RB), the Governor of South Sulawesi, the Secretary of the Regional House of Representatives of South Sulawesi Province, heads of various local government agencies, and community representatives. These individuals are chosen for their authority and direct influence or experience with digital leadership and bureaucratic processes.

The primary data collection methods include in-depth interviews, non-participant observation, and document studies. In-depth interviews are conducted to gather comprehensive insights, allowing informants to share detailed and candid information. Observations are carried out without researcher participation to maintain objectivity and accurately capture natural interactions and events related to digital leadership and bureaucratic practices. Document studies involve reviewing relevant reports, records, news articles, and literature related to digital leadership and bureaucratic reform in South Sulawesi.

Data validity is ensured using triangulation, where data from different sources and collection techniques are cross-verified. Triangulation includes comparing information gathered through interviews, observations, and document analysis. The analysis follows an interactive approach as described by Miles and Huberman (2019), comprising data reduction, data display, and conclusion drawing. Data is systematically summarized, relevant themes and patterns are identified, and clear visual representations of the data are created. Initial conclusions are refined with continued data collection to ensure credibility.

The research was conducted in various locations, including the Ministry of PAN RB offices, the Governor's office, and several local government offices in South Sulawesi. The choice of South Sulawesi is significant due to its role as the gateway and economic benchmark for Eastern Indonesia, with an economic growth rate above the national average (5.09% in 2022). However, the

implementation of the Public Service System (SPBE) revealed weaknesses, particularly in management, attributed to the limited role of digital leadership. This research aims to explore these challenges and develop a conceptual digital leadership model tailored to address the region's unique needs and facilitate bureaucratic reform.

4. Results and Discussion
4.1 Digital Leadership in Realizing Bureaucratic Reform in South Sulawesi Province

The research findings on digital leadership in facilitating bureaucratic reform in South Sulawesi offer in-depth insights into the strengths and potential areas for development among local government leaders. A thorough analysis based on interviews with key informants and triangulated data illustrates the vital role that Heads of Local Government Agencies play in driving institutional innovation and reform. Visionary thinking among these leaders has proven to be a significant factor in propelling digital transformation efforts forward, allowing for the introduction of creative solutions and the modernization of public services. Notable examples of such leadership-driven initiatives include the "Si Data Pintar" application and the "SPIPISE" integrated licensing system. These digital tools have improved service transparency and efficiency, demonstrating the practical impact of strong, future-oriented leadership. The Secretary of the South Sulawesi local government highlighted that these initiatives symbolize a robust commitment to innovation, reflecting a paradigm shift towards more modern public administration.

However, despite these advancements, the research identified persistent challenges, particularly in the realm of user adaptation and public engagement. Informants pointed out that while digital tools have increased service accessibility, their implementation has often outpaced the readiness of the public to use them effectively. Community feedback revealed that many service users experience difficulty navigating these platforms, which suggests that the rollout of new technologies has not always been accompanied by sufficient education and familiarization efforts. This feedback highlights the importance of complementing technological innovation with initiatives aimed at enhancing public digital literacy. To achieve this, local government agencies need to adopt more user-centric approaches that prioritize simplicity, user experience, and educational outreach to ensure the full benefits of digitalization are realized.

The research further explored the theme of collaboration and networking, revealing a significant empirical gap in the ability of Heads of Local Government Agencies to cultivate and sustain strategic partnerships. While there is widespread recognition of the importance of collaboration for effective service delivery and innovation, the study found that networking efforts often remain limited in scope and execution. Informants noted that while some leaders have established basic connections, there is a clear need for a more proactive approach in building robust inter-institutional relationships. Strategic collaborations with private sectors, non-governmental organizations, and academic institutions are essential for fostering an environment of shared knowledge and resources, which can greatly amplify the effectiveness and reach of digital transformation initiatives.

One of the critical areas highlighted in the findings was the recruitment and management of digital talent within government institutions. While many Heads of Local Government Agencies possess the vision and capability to conceptualize innovative strategies, the mechanisms for attracting, retaining, and developing digital talent were found to be insufficient. Informants from various agencies stressed the necessity for leaders to engage more actively in talent management and forge strategic relationships with educational institutions and professional associations. Such partnerships are crucial for creating a sustainable talent pipeline that can support long-term digital transformation efforts. The lack of a structured approach to digital talent recruitment and development presents a significant challenge, potentially undermining the sustainability of ongoing and future digital initiatives.

The research also revealed inconsistencies in strategic thinking among Heads of Local Government Agencies. While some leaders demonstrated strong analytical capabilities and were able to implement complex solutions effectively, others were found lacking in strategic foresight. Informants suggested that one contributing factor to this inconsistency is the appointment process, which sometimes prioritizes personal connections over merit and expertise. This approach can result in leadership that is less equipped to handle the complexities of digital transformation. A digital policy expert interviewed for this research emphasized the necessity for leaders to create a participatory environment that encourages team members to engage in critical thinking and contribute innovative solutions. Leaders who foster a collaborative and inclusive environment are more likely to succeed in driving effective and sustainable digital transformations.

Testimonies from informants reinforced the understanding that successful digital leadership is not merely about adopting new technologies but about inspiring and empowering teams to think ahead and adapt to rapidly changing circumstances. One representative from a government reform agency commented, "Digital leadership must go beyond the adoption of technology; it must inspire and equip teams to anticipate and meet future challenges." This view was echoed by a digital policy expert, who stated, "Without strategic talent recruitment and a focus on fostering collaborative partnerships, digital transformation risks becoming superficial and unsustainable." These insights were validated through triangulated data from reports and observations, which revealed that while digital leadership initiatives are in place, their long-term success often depends on fostering engagement and partnerships that extend beyond individual agencies.

The cultural context of South Sulawesi also emerged as an influential factor in shaping leadership approaches. Traditional values such as "Sipakatau, Sipakalebbi, Sipakinge, and Sirri na Pacce" were found to play a significant role in how leaders interact with their teams and the public. Leaders who were able to integrate these values into their leadership practices reported stronger

team cohesion, greater trust within the organization, and more effective community engagement. This culturally attuned approach to leadership can be a powerful tool for enhancing the effectiveness of digital leadership, as it fosters a sense of shared purpose and community involvement. By merging traditional values with modern digital strategies, leaders can create an approach that resonates with both their teams and the broader community, facilitating smoother transitions and stronger support for reform efforts.

The findings of the study highlight that both internal and external strategic factors play critical roles in the effectiveness of digital leadership in promoting bureaucratic reform. Internally, human resources are a key component. Informants emphasized that continuous training and education to improve digital skills among staff are essential for successful reform. Leadership that actively supports technological adaptation can create a culture open to innovation and change. However, challenges remain, such as resistance to change among employees, limited digital skills, and inadequate infrastructure, including unstable internet connectivity. Addressing these challenges requires targeted training programs and infrastructure improvements. Heads of Local Government Agencies who encourage innovation among employees contribute positively to these efforts, aligning with public expectations for more transparent and accessible services through digital platforms.

Budget resources are another important internal factor. Adequate funding for technology investments and staff training is essential to drive digital leadership. Informants noted that regional leadership plays an important role in ensuring proper budget allocation, supporting the progress of digital reform. However, budget constraints and poor coordination between agencies can hinder the effective use of available resources, slowing down progress. Overcoming these challenges requires careful financial planning and consistent support from leadership at all levels.

Infrastructure and facilities also have a major influence on digital leadership. The availability of reliable internet and modern hardware is crucial for successful digital transformation. While government support in providing these resources is evident, challenges such as limited funding, uneven infrastructure development in certain areas, and difficulties integrating new technologies with existing systems persist. Additionally, the lack of maintenance and technical support can slow down the effective use of these digital tools. To address these challenges, comprehensive planning, proper budget allocation, and continuous support are needed to maintain and develop infrastructure effectively.

Externally, the political, social, economic, and technological environments also play a significant role. Politically, digital leadership benefits from strong commitments by regional leaders and legislative support that ensures budget allocation and the creation of supportive policies. Public involvement in digital platforms can further increase transparency and accountability. However, resistance from employees and politicians wary of change, combined with inflexible regulations and shifting budget priorities, can create significant obstacles. Data security concerns add another layer of complexity to the implementation of digital systems.

Social factors include public support for digitalization in government, which can act as a catalyst for reform by encouraging greater transparency and improving service accessibility. Active community participation can accelerate the adoption of new technologies, resulting in easier access to information. However, challenges such as unequal access to technology and varying levels of digital literacy among the public, especially in remote areas, pose significant barriers. Resistance to change from communities more comfortable with traditional methods further complicates efforts. Addressing these social challenges requires initiatives to educate the public and bridge gaps in access and understanding.

Economic conditions present both opportunities and limitations. Digital transformation can lead to cost savings and higher productivity through automation and reduced manual processes. However, initial investments in infrastructure and training are often high and can strain budget resources. Informants noted that the expenses associated with the implementation and maintenance of digital systems, along with unexpected costs, complicate financial planning. To overcome these financial challenges, strategic investment planning is needed to ensure that the long-term benefits of digitalization, such as increased efficiency and cost-effectiveness, are realized.

Technology itself plays a dual role as both a support and a challenge. Adequate political and budgetary support can facilitate investments in modern technology, and improvements in IT infrastructure are essential for implementing digital leadership effectively. Technological advancements drive efficiency and better service delivery but can also create challenges due to their fast-paced nature. Maintaining existing systems while adopting new technology can be complex, particularly in regions with limited infrastructure. Cybersecurity concerns and a lack of skilled technical personnel add to the difficulty, as do issues integrating new systems with older ones. Continuous training and investment in technical expertise are crucial to keep up with technological changes and ensure smooth transitions.

Overall, while there are substantial opportunities to leverage these internal and external factors to support digital leadership in bureaucratic reform, addressing existing challenges is vital. Effective leadership, comprehensive planning, strategic financial management, and collaboration with stakeholders are necessary to maximize these factors and achieve sustainable digital transformation in public administration.

4.2 Digital Leadership Model in Realizing Bureaucratic Reform

In the initial step of formulating a digital leadership model for realizing bureaucratic reform, as referred to in the modeling proposed by Simatupang (1995), the researcher began by identifying issues related to the suboptimal role of digital leadership in achieving bureaucratic reform. The research findings on how digital leadership contributes to bureaucratic reform revealed that most Heads of Local Government Agencies do not yet exhibit strong digital leadership characteristics. These include weak networking capabilities, insufficient skills in recruiting digital talent, and limited abilities to handle complexity. These shortcomings in various dimensions and aspects have not significantly driven the realization of optimal bureaucratic reform.

Digital leadership among Heads of Local Government Agencies has not been fully adopted or applied to support bureaucratic reform. Analysis of digital leadership showed that while leaders play a crucial role in reform with a solid capacity for innovative vision, many still lack the networking skills and critical thinking needed to address complex issues. Although some leaders are capable of formulating new ideas to improve public service efficiency, the primary challenge lies in building mutually beneficial relationships with various stakeholders, including government institutions, the private sector, and civil society. To enhance networking capabilities, leaders must engage actively in collaborative forums and professional networks.

The lack of leadership ability in recruiting skilled digital human resources (HR) can be a significant barrier to bureaucratic reform. Without a competent digital team, efforts to improve efficiency and foster innovation in public services are hindered. Leaders who do not have sufficient understanding of digital needs and trends often face difficulties in identifying suitable candidates, which can lead to a shortage of necessary talent for implementing effective technological solutions. Consequently, bureaucracy may remain stuck in outdated practices, stalling progress and making it challenging to achieve desired reform goals. Therefore, enhancing leaders' abilities to recruit and manage skilled digital HR is crucial for significant changes in the bureaucratic system.

Moreover, critical and analytical thinking skills are essential for identifying the root causes of problems and exploring appropriate solutions. Therefore, regular training on problem analysis and decision-making must be conducted. Understanding and integrating concepts of collaboration and synergy should also be emphasized so that various parties can work together to achieve shared goals. In all of this, continuous education and development for Heads of Local Government Agencies are key to improving their skills and insights in facing complex challenges. With this approach, leaders will be better equipped to create an innovative and responsive environment, ultimately improving the quality of public services provided to the community.

The suboptimal role of digital leadership in realizing reform can broadly be observed through the insufficient application of relevant digital leadership characteristics in the dimensions of institutional arrangement, management, HR, and service delivery. This analysis also highlights various internal and external strategic factors. Despite support from regional leaders and assistance from various parties for digital transformation and bureaucratic reform—such as budget provision and infrastructure—significant barriers remain. These include budget limitations, inadequate infrastructure, insufficient quality and quantity of HR, resistance to change, disparities in public access and digital literacy, as well as inadequate system maintenance and cybersecurity assurance.

Referring to theories that state, "classic leadership styles do not sufficiently address the opportunities and challenges arising from digitalization (Klein, 2020), and leaders with a forward-looking perspective will have a clear vision and reasonable strategy, and can grasp the trend in the digital trend (Klein, 2020)," it can be concluded that the existing digital leadership model has not been optimal in realizing bureaucratic reform. Therefore, it needs to be developed further.

An ideal digital leadership model should encompass several key elements to enhance bureaucratic reform achievements. First, data-driven leadership, where decision-making is based on accurate and relevant data analysis, is crucial for addressing complex challenges and making more targeted decisions. Second, leaders need to foster technological skills among their staff, ensuring that all team members can utilize digital tools required to improve work efficiency.

Although the SPBE policy provides a framework for digital transformation, challenges persist, including resistance to change and a lack of digital skills among public servants. Therefore, it is essential for regional governments to provide adequate training and create a culture that supports innovation and collaboration. Consequently, Heads of Local Government Agencies must act as change agents who not only follow policies but also initiate new projects that support bureaucratic reform goals.

In this context, leadership plays a vital role in integrating technology and ensuring that the entire organization moves in the same direction. Leaders must set an example in using technology and encourage team members to actively participate in the digitalization process. If a well-developed digital leadership model can be formulated and implemented, it will positively impact public service delivery and government effectiveness in South Sulawesi.

The following presents the existing digital leadership model currently implemented in South Sulawesi:

Figure 2
Existing Model of Digital Leadership in South Sulawesi
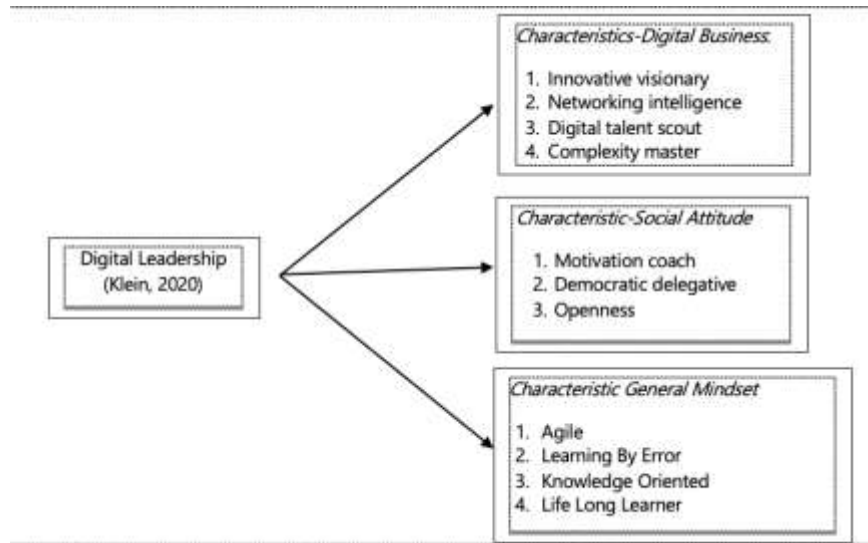
Source: Processed by the author,2024

Based on the formulation of the model in the image above and the findings indicating that digital leadership has not yet been optimally implemented to achieve bureaucratic reform in South Sulawesi, it is deemed necessary to develop a digital leadership model for realizing bureaucratic reform. The rationale for developing this model by expanding Klein's (2020) model is that Klein's (2020) model is oriented towards the conditions and subjects of digital leadership in Europe and some developed countries, making it inadequate to address issues within the context of Indonesia, specifically South Sulawesi, which has its own unique social, cultural, economic, political, and other aspects compared to the locus where Klein (2020) formulated his model.

Klein's (2020) model does not align with the variables or issues related to bureaucratic reform, thus the novelty in this model formulation lies in constructing digital leadership concepts that are relevant to bureaucratic reform. Furthermore, the development of this model is an effort to customize it based on the perspective of Public Administration, considering the characteristics of regional governance in Indonesia in general and specifically in South Sulawesi.

Therefore, the model developed by the researcher can be presented in the following image:

Figure 3
S4P Digital Leadership Model
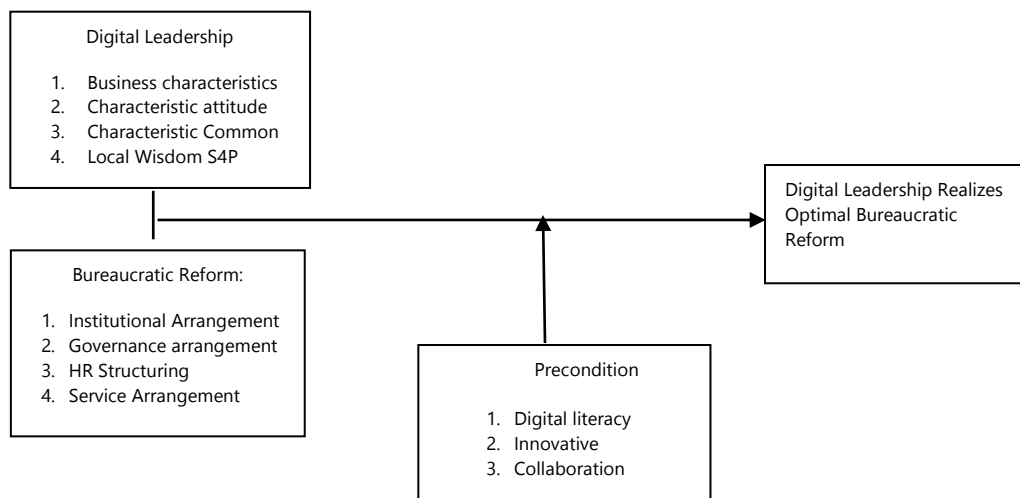
Source: Processed by the author, 2024

It can be described that the digital leadership model for realizing bureaucratic reform in South Sulawesi was developed by the researcher from Klein's (2020) digital leadership model. The researcher named this model the "S4P Digital Leadership Model." S4P

is an acronym for "*Sipakatau, Sipakalebbi, Sipakinge, Sirri na Pacce*," which represents the manifestation of the cultural values of the Bugis-Makassar community. In other words, the culture of South Sulawesi is elaborated to reflect the transformation of leadership behavior and performance within Local Government Agencies towards improvement.

The cultures of *sipakatau, sipakainge,* and *sipakalebbi*, rooted in the Bugis tradition, have a positive influence on the character formation of individuals (Kadir, 2000). *Sipakatau, sipakainge,* and *sipakalebbi* can be interpreted as mutual respect, mutual reminders, and mutual honoring. These values are foundational for interactions with elders, peers, and younger people (Yunus & Fadli, 2020). Sipakatau embodies the idea of recognizing each person as a dignified individual, fostering mutual respect and compassion (Maida, 2016).

Sipakatau implies that individuals must be respected as human beings, regardless of their social status or conditions. It conveys that treating others less than human is inappropriate, emphasizing that every person deserves to be treated with dignity (Darmawan et al., 2022). *Sipakatau* embodies shared values and respect, acknowledging that humans are noble creations of God and should be honored and treated properly. This principle aligns with religious teachings and underlines respectful interaction (Zahro et al., 2020).

Sipakalebbi refers to viewing individuals as beings who deserve appreciation and proper treatment. The Bugis people value each person's strengths and recognize that everyone has both merits and weaknesses. This creates an environment of mutual praise, fostering a spirit of cooperation and joy (Irnawati, 2021). Sipakalebbi supports a communal atmosphere that prioritizes mutual help and cooperation, embodying the value of collective effort (Zahro et al., 2020).

Sipakinge represents an effort to remind each other to maintain behavior according to established standards. This value helps the community stay aligned with socially accepted norms, encouraging beneficial actions. It reinforces the concept of social accountability, where individuals remind one another to uphold integrity and prevent misconduct. In practice, those who violate these standards are held accountable, ensuring collective adherence to societal norms (Ismail Rusli et al., 2015).

Sirri' na Pacce signifies the deep-rooted principle of pride and solidarity within the Bugis-Makassar community. "*Sirri'*" means honor, while "*Pacce*" implies compassion and solidarity. These values have been passed down through generations and are considered vital for maintaining dignity. This principle drives individuals to defend their honor rather than face shame, reflecting a strong sense of self-respect (Hardiyanto, 2016). Without this value, a person risks behaving in a dishonorable manner, as community sayings suggest that lacking sirri' and pacce results in behavior akin to that of an animal—indicative of having no shame (Jamil, 2021).

Siri' na Pacce influences the social lifestyle of the Bugis-Makassar people (Hardiyanto, 2016). This sacred value, central to the philosophical teachings and laws guiding the community, extends beyond their native region and accompanies them wherever they go (Zainal & Wahyuni, 2018). In relation to the digital leadership model aimed at achieving bureaucratic reform in South Sulawesi, local cultural values like *sipakatau, sipakainge, sipakalebbi, and sirri na pacce* serve as a foundation that supports digital leadership development. These values encourage mutual respect, guidance, and recognition, all of which are highly relevant in fostering collaboration and communication in the digital age.

In facing rapid changes, digital leadership must incorporate positive attitudes inspired by these cultural values. Leaders of Local Government Agencies are expected to not only implement technology but also use sipakatau as a guide for motivating their teams, facilitating participation, and creating an inclusive work environment. A work culture that values each individual and fosters openness can reduce resistance to change and enhance adaptability among civil servants.

Moreover, integrating values like *Siri' Na Pacce*, which emphasize dignity and solidarity, can strengthen accountability and transparency within the bureaucracy. In digital leadership, this means that leaders should focus not only on outcomes but also on the ethical and responsible ways these results are achieved. Integrating local cultural values with digital leadership helps the government become more responsive to the needs of its people, making public services more culturally and socially relevant. By adopting these principles, digital leadership can improve the effectiveness of bureaucratic reform while fostering stronger government-community relationships. This approach supports the development of a transparent, accountable, and responsive bureaucracy that meets public needs, ensuring that bureaucratic reform goals are achieved in a sustainable manner.

The internalization of local wisdom represents the transformation of digital leadership in bureaucratic reform. The study found that civil servants' (ASN) mindsets, which often show fear of change and preference for comfort zones, hinder professional development. Such mindsets can lead to passive, non-adaptive, ineffective, and inefficient work cultures. Implementing a work culture in local government institutions is crucial for achieving organizational goals. This requires the commitment of civil servants to embed local cultural values, such as *"Sipakatau"* (Synergy, Innovation, Professionalism, Accountability, Integrity, and Responsibility), as a work ethic that promotes mutual respect and accountability. Strategies in the Change Management area involve shifting mindsets and work cultures towards local wisdom by having all departments or work units commit to a "*Sipakatau*" work culture through declarations or joint agreements as a manifestation of individual and organizational performance commitments. Units with institutional functions must evaluate performance effectiveness and take follow-up actions based on the results (Regional Development Research and Planning Agency of South Sulawesi Province, 2023).

In summary, local cultural values such as *Sipakatau, Sipakalebbi, Sipakinge, and Sirri na Pacce* play an essential role in digital leadership for bureaucratic reform. These values help drive public participation, foster collaboration, ensure accountability, and uphold integrity and professionalism in leadership practices. Integrating local wisdom into digital leadership supports a holistic

and sustainable bureaucratic reform approach, ensuring that leadership practices are not only effective but also resonate with the community's cultural context.

The "S4P Digital Leadership Model," developed by the researcher, represents an extension of Klein's (2020) digital leadership dimensions with additional elements that signify a novel approach to leadership research. This model offers an enriched approach to digital leadership by incorporating local wisdom specific to South Sulawesi. This model is characterized by several key advantages that distinguish it from traditional models. First, it is built on a foundation validated for its reliability, with additional dimensions reflecting local cultural values and leadership prerequisites, making it more comprehensive and adaptable. By integrating digital orientation with *Sipakatau*, *Sipakalebbi*, *Sipakinge*, and *Sirri na Pacce*, the model becomes highly relevant and responsive to local conditions. This approach ensures that leadership not only aligns with modern collaborative governance principles but also respects and reinforces traditional values, promoting active participation from all stakeholders.

The model's cultural focus preserves and strengthens the identity of local communities, showcasing and sustaining the rich cultural heritage of the region. Furthermore, while deeply rooted in South Sulawesi's context, the model's flexibility allows for its application in other areas of Indonesia by adapting to local cultural nuances. This flexibility ensures that the model is not limited by regional differences but instead highlights the adaptability of core leadership values to various cultural settings.

The S4P model comprises specific dimensions, such as local wisdom and digital leadership prerequisites. The local cultural values—*Sipakatau*, *Sipakalebbi*, *Sipakinge*, and *Sirri na Pacce*—promote mutual respect, collaboration, supervision, accountability, integrity, and professionalism. These values support transparency and accountability in public service, ensuring that leaders act with humility, follow established procedures, and provide accessible information to citizens. The emphasis on openness and fair treatment aligns with efforts to foster community-oriented public service that caters to the specific needs of the population.

The integration of local values into digital leadership contributes to the concept of "indigenization," which advocates for the adaptation of public administration practices based on local traditions and societal norms. This cultural infusion into leadership helps shape organizational behavior, enhancing productivity and commitment to public service. For example, indigenous practices like *Pela Gandong* in Maluku, *Tri Kaya Parisudha* in Bali, and *Sipakatau-Sipakalebbi* in Makassar have shown positive impacts on organizational culture and performance.

In addition to local wisdom, the S4P model emphasizes key digital leadership prerequisites: digital literacy, innovation, and collaboration. Digital literacy involves leaders having a transformative vision, forward-thinking orientation, and solid technological knowledge, which are essential for guiding digital transformation. Innovative leadership fosters an environment that supports creative thinking and novel solutions, enhancing the ability to respond to public needs and leveraging technology for greater efficiency and transparency. Collaboration, as a fundamental aspect, facilitates the exchange of ideas among different parties and improves resource management. Effective collaboration leads to increased transparency, trust, and adaptability, vital for successful digital transformation in governance.

Overall, the S4P Digital Leadership Model bridges the gap between modern leadership needs and cultural identity. By integrating established digital leadership frameworks with local values, it creates a unique approach that is theoretically sound and practically applicable across various cultural contexts. This model not only enhances the effectiveness of bureaucratic reform but also fosters stronger community-government relationships, ensuring responsive, transparent, and culturally aligned public service.

The model formulated by the researcher is believed to be effective in preventing bureaucratic pathologies, as the internalization of local cultural values can enhance pride, dignity, and a sense of ownership of the community's primordial identity. This, in turn, fosters a shared understanding and collaborative effort in supporting digital leadership within the bureaucracy. Furthermore, by embedding these values in leadership practices, there is a stronger basis for encouraging ethical behavior and positive conduct across all levels of government. Additionally, the prerequisites of digital leadership, which include digital literacy, innovation, and collaboration, enable the involvement of all stakeholders. Enhanced digital proficiency, facilitated by innovative means such as accessible digital platforms, not only empowers bureaucratic leaders but also raises awareness among civil servants and the wider community, thereby increasing the collective capacity to prevent bureaucratic pathologies.

Bureaucratic pathology, defined as the ailments, negative behaviors, or deviations exhibited by bureaucratic officials or institutions in serving the public, carrying out their duties, and implementing development programs and public services (Thoha, 2011), underscores the importance of establishing robust preventive measures. Here, local cultural values play a crucial role as they inherently contain ethical, moral, and normative elements that guide society toward positive conduct and decision-making. Therefore, integrating these values into a digital leadership model can foster a culture of integrity and mutual accountability, which is essential for sustainable reform.

Ultimately, a digital leadership model that integrates local wisdom can significantly aid in preventing bureaucratic pathologies by promoting transparency, accountability, and relevance in public service delivery. The active involvement of the community, combined with a thoughtful adaptation to the local context, becomes the key to ensuring the successful implementation and long-term effectiveness of this model. With such an approach, bureaucratic leadership can be better positioned to deliver high-quality services and maintain public trust.

5. Conclusion

The research findings and discussions have led to the conclusion that the digital leadership of Heads of Local Government Agencies in South Sulawesi has not been fully developed or implemented effectively, resulting in suboptimal contributions to bureaucratic reform. This is evident in several aspects. From the business characteristics dimension of digital leadership, although Heads of Local Government Agencies demonstrate strong innovative vision, they often lack proficiency in networking, recruiting digital talent, and handling complex problem-solving. These shortcomings hinder their ability to drive bureaucratic reform, particularly in institutional restructuring. Regarding the attitudinal characteristics dimension, Heads of Local Government Agencies possess adequate motivational skills and exhibit democratic and open attitudes; however, these traits have not significantly advanced reform in areas related to administrative processes and civil servant management. In terms of general characteristics, they show flexibility, a capacity for learning from mistakes, and a continuous learning orientation, but these strengths have not yet had a notable impact on service delivery reform.

To address these gaps, the researcher has developed the "S4P Digital Leadership Model," an extension of Klein's (2020) digital leadership framework. This model incorporates local cultural values—*Sipakatau*, *Sipakalebbi*, *Sipakinge*, and *Sirri na Pacce*—and integrates essential digital leadership prerequisites such as digital literacy, innovation, and collaboration. The integration of these dimensions creates a model that is comprehensive, relevant, and responsive to local conditions. The model's novelty lies in its cultural adaptability, allowing it to be applied across different regions in Indonesia, with local values acting as the guiding principle for governance and public service delivery.

To enhance the practical application and impact of digital leadership, several recommendations are put forth. Future studies should apply the S4P model in different research locations to further explore its contributions to leadership and administrative practices in Public Administration. Additionally, it is imperative for regional and central governments to design and implement continuous training programs in digital leadership aimed at improving the networking and collaboration skills of Heads of Local Government Agencies. Such training should encompass both digital and managerial skills. Establishing collaborative forums between Heads of Local Government Agencies and relevant stakeholders is also crucial for addressing bureaucratic reform challenges, as these forums can offer valuable insights that help leaders understand community needs and develop pertinent solutions. Regular evaluations should be conducted to assess the progress of digital leadership implementation in bureaucratic reform efforts, providing feedback for government policy-making. A Digital Leadership Index for Bureaucratic Reform could be a useful tool for measuring and guiding these efforts, ensuring that leadership practices align with the goals of effective and transparent governance.

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