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Perception on Human-AI Interaction and Organizational AI Readiness: East Kalimantan Province Government Public Official Case Study

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Abstract

This study explores the perceptions of public officials regarding human-AI interaction within their work environment and to identify the factors influencing organizational AI readiness within the East Kalimantan Province Government. Employing a qualitative methodology with semi-structured and unstructured interviews, the study uncovers significant generational gap that affect AI adoption rates and preferences for specific human-AI interaction modes, reflecting broader challenges in public sector AI implementation. Key findings reveal that while strong leadership commitment and a clear strategic vision are fundamental, progress is often hindered by inadequate technology infrastructure, data governance deficiencies, and widespread concerns among officials about potential job displacement. The study reveals the utilization of informal knowledge transfer networks for AI-related skills. While these networks contribute to some AI adoption, they simultaneously indicate critical gaps in systematic organizational readiness for AI implementation. The insights derived lead to actionable policy recommendations aimed at enhancing regional AI readiness in the region. Ultimately, the study concludes that successful and sustainable AI integration in this public sector context demands more than technological upgrades; it requires a comprehensive institutional transformation that addresses structural, cultural, and human-centric elements to fully realize AI's potential for enhancing public service delivery.

Keywords: artificial intelligence, public sector governance, organizational ai readiness, human-ai interaction, Indonesia, East Kalimantan, digital transformation, bureaucratic reform

Content

Figures

Tables

Abbreviations

AI	Artificial Intelligence
ASIC	Australian Securities and Investments Commission
AWS	Amazon Web Services
HLEG	High Level Expert Group
EU	European Commission
Fig	Figure
Gen Boomer	Generation Baby Boomer – As of 2025, approximately 60+ years old
Gen X	Generation X – As of 2025, approximately 44 to 59 old
Gen Y	Generation Y – As of 2025, approximately 28 to 43 years old
Gen Z	Generation Z – As of 2025, approximately 13 to 27 years old
IKN	Capital City Nusantara *(Ibu Kota Nusantara)*
NLP	Natural Language Processing
ODP	One Data Policy
OECD	Organisation for Economic Co-operation and Development
RPA	Robotic Process Automation
SPBE	Electronic Government System *(Sistem Pemerintahan Berbasis Elektronik)*
Stranas KA	National Strategy of Artificial Intelligence (*Strategi Nasional Kecerdasan Artifisial*)

1 Introduction

1.1 Motivation

> *"I have also ordered the Ministry of State Apparatus Utilization and Bureaucratic Reform to replace the bureaucracy with artificial intelligence, if it is replaced with artificial intelligence our bureaucracy will be faster, I am sure of that!"*
>
> - Joko Widodo, the former president of Indonesia (2019)

Indonesia is currently at a crucial moment where it is challenged by the bureaucratic reform and technological advancement. The former Indonesia's President (2014-2024), Joko Widodo, mentioned the importance of simplifying the nation's bureaucracy, advocating for a shift from traditional processes to efficient, AI (Artificial Intelligence)-driven systems (Antara & Purwanto, 2019; Yulianto, 2021; Zaghlul Ismail, 2021). This declaration underscored AI's transformative potential to streamline governance, a vision institutionalized through the National AI Strategy (*Strategi Nasional Kecerdasan Artifisial* - Stranas KA) 2020–2045 (BPPT, 2020; Wadipalapa et al., 2024) – which prioritizes AI adoption across healthcare, education, and bureaucratic reform, aiming to position Indonesia among the world's top 10 digital economies by 2045 (BPPT, 2020; DTIKN BAPPENAS, 2022). However, AI remains absent as a strategic priority in Indonesia's National Medium-Term Development Plans (RPJMN) for 2020–2024 (BAPPENAS, 2019) and 2025–2029 (BAPPENAS, 2024).

Compounding this, the current president, Prabowo, emphasizes the need for AI education within the central government (Rosmalia, 2024; Rowi, 2024) – indicating an ongoing awareness of the capacity gap among public officials (Aziz et al., 2025; Kompas Cyber Media, 2025). AI implementation within the Indonesian public sector remains scattered, though notable examples exist, such as chatbots for public services, data analytics for decision-making (DTIKN BAPPENAS, 2022), and facial recognition in public transport (Fadhilla & Putra, 2024; Lestari, 2024). These initiatives often appear as isolated efforts rather than part of a deeply integrated in the government strategy.

As national AI goals encounter practical limitations and capacity issues (Adatia et al., 2019), advanced AI will increasingly redefine the duties of public officials (Maragno et al., 2023). Such transformation raises crucial questions about the future of work within

the bureaucracy, potential job displacement (Mayer et al., 2025), and the emergence of new, AI-augmented roles requiring different skill sets (House of Commons - UK Parliament, 2025; World Economic Forum, 2025). Ensuring a smooth and effective transition requires a deep understanding of the human element in this technological evolution (Guingrich & Graziano, 2024; Zhang & Gosline, 2023) as AI systems can act as decision aides (Fragiadakis et al., 2025), automate routine tasks (Gillespie et al., 2023), and provide insights that augment human capabilities (Dwivedi et al., 2023; Wang et al., 2023).

Against this national backdrop of AI aspirations, implementation challenges, and impending workforce transformations, the East Kalimantan Province emerges as a particularly relevant case for this study. The province's growing interest in leveraging AI to improve public administration and service delivery (Dewi, 2024; KaltimExpose, 2024), is especially relevant given its designation as the host Indonesia's new capital, Nusantara (*Ibu Kota Nusantara* - IKN). This monumental project demands advanced governance frameworks and infrastructure and creates a momentum for the rapid modernization and digitalization of public administration (Firnaherera & Lazuardi, 2022; Purnama & Chotib, 2023). While IKN's public official body is still forming, the vision of IKN as a smart city and its ongoing development influence the strategic thinking and digital aspirations of the established East Kalimantan Province Government (Otorita Ibu Kota Nusantara, 2024).

Therefore, this study specifically focusses on the perceptions of current public officials within the East Kalimantan Province Government. Their input provides a vital baseline understanding, as these officials and the local populace will likely form a significant part of IKN's future bureaucracy. Thus, while IKN itself will undoubtedly become a 'living laboratory' for smart governance (Bahfein & Alexander, 2024; Riza, 2025), the current East Kalimantan Provincial Government offers a critical precursor case. Investigating the current perceptions and readiness within the East Kalimantan Province Government, at this specific juncture, could yield valuable insights into how public sector facing waves of technology-driven transformation and development pressures.

1.2 Research Aims and Research Questions

The current discourse surrounding AI in Indonesia's public sector primarily focuses on strategic frameworks and technological potential (DTIKN BAPPENAS, 2022; Rakuasa

et al., 2024; Silitonga & Isbah, 2023; Wadipalapa et al., 2024). A significant research gap exists in understanding public officials' nuanced perspectives on collaborating with AI systems. This includes their concerns, acceptance levels, and the various factors influencing their individual and collective readiness for AI adoption, despite being the group most impacted and instrumental in this process. Moreover, the organizational context of public officials plays a critical role in facilitating or hindering AI integration, including infrastructure, internal policies, leadership support, and training (Ali et al., 2024). However, this aspect of organizational readiness within the Indonesian public sector remains largely unexplored through empirical investigation (Silitonga & Isbah, 2023). Specifically, the dynamic environment of the East Kalimantan Province Government, with its unique regional context and emerging interest in AI, presents a valuable case for a focused examination of these critical aspects.

Building on this identified gap, the aim of this study is to explore the perceptions of public officials regarding human-AI interaction within their work environment and to identify the factors influencing organizational AI readiness within the East Kalimantan Province Government. To achieve this aim, the study will address the following research questions:

- 1) How do public officials in East Kalimantan Province Government perceive human-AI interaction in their work environment?
- 2) What factors influence organizational AI readiness within the East Kalimantan Province Government?

2 Theoretical Framework: Understanding AI in Public Sector, Human AI Interaction, and Organizational Readiness

This chapter establishes the theoretical foundation and reviews existing literature relevant to the study of Artificial Intelligence adoption, particularly within the public sector context. It discusses the aspects of AI systems, ranging from their inherent characteristics and applications to the crucial considerations of human-AI interaction, and the prerequisites for successful organizational integration. By synthesizing current academic literatures, this chapter aims to provide a conceptual lens to analyse the opportunities and challenges of AI implementation in government.

2.1 Artificial Intelligence Systems in the Public Sector

The concept of AI was first coined in the mid-1950s by John McCarthy, subsequently solidifying as a formal academic discipline during the 1956 Dartmouth conference (Dartmouth Edu, 2025; McCarthy, 2007). Since then, AI has transcended from theoretical frameworks to become a revolutionary technological force with wide-ranging applications (Wirtz et al., 2018). Despite its growing prominence, AI implementation in the public sector presents unique challenges distinct from private sector adoption (Silitonga & Isbah, 2023), including amplified requirements for transparency, accountability, and ethical considerations (Chen et al., 2023; Engin & Treleaven, 2019; Wang et al., 2023). This section discusses the fundamental concepts of AI relevancies for public administration, including classification of AI systems applicable to public sector, exploration of current and potential applications in public service delivery, and the challenges associated with AI adoption in public institutions.

2.1.1 Defining AI in Public Sector

The High-Level Expert Group (HLEG) on AI established by the European Commission offered a definition that combines these aspects, describing AI systems as follows:

> *"Artificial Intelligence (AI) systems are software (and possibly also hardware) systems designed by humans that, given a complex goal, act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information, derived from this data and deciding*

> *the best action(s) to take to achieve the given goal. AI systems can either use symbolic rules or learn a numeric model, and they can also adapt their behaviour by analysing how the environment is affected by their previous actions." (EU HLEG, 2019).*

This comprehensive definition establishes a foundation for understanding AI's capabilities, but practical implementation in government requires recognizing different AI system types and their unique implications. Following classification specifically addresses AI types, the European Union's Artificial Intelligence Act (EU AI Act) implements a risk-based classification system for AI technologies to ensure the ethical and secure integration of AI while simultaneously promoting technological advancement (EU Artificial Intelligence Act, 2024). The principal classifications are listed as follows:

- **Unacceptable Risk AI Systems**: These systems are strictly prohibited due to their inherent potential to violate fundamental human rights and democratic (EU Artificial Intelligence Act, 2024). Examples include AI systems that manipulate human behaviour to cause significant harm, exploit vulnerabilities of specific groups, implement social scoring by public authorities, or conduct untargeted scraping of facial images from public sources (Bach, 2020; Dwivedi et al., 2021; Kaminaris, 2025; Rowlands, 2024).
- **High-Risk AI Systems**: While not prohibited, these AI systems are subject to stringent regulatory requirements due to their significant potential to cause harm to health, safety, or fundamental rights (EU Artificial Intelligence Act, 2024). This category encompasses AI used in critical sectors such as healthcare, law enforcement, critical infrastructure, education, and employment. Providers and deployers of high-risk AI systems must adhere to comprehensive obligations, including strict risk assessments, data quality standards, human oversight, and detailed documentation (Dwivedi et al., 2021; Rowlands, 2024; van Noordt & Misuraca, 2022).
- **Limited Risk AI Systems**: This category includes AI systems that pose a lower risk but necessitate specific transparency obligations to ensure users are aware they are interacting with an AI (EU Artificial Intelligence Act, 2024). Examples typically involve generative AI systems like chatbots, voice cloning tools, and deepfake technologies, where the primary requirement is to disclose that the

content is AI-generated (Kaplan & Haenlein, 2019; Rowlands, 2024; Shan et al., 2023).

- **Minimal or No Risk AI Systems**: This category encompasses AI systems that pose negligible or no foreseeable risk to fundamental rights or safety, where generally exempt from specific regulatory requirements under the EU AI Act, though they remain subject to existing general EU laws and ethical guidelines (EU Artificial Intelligence Act, 2024). Examples include AI-enabled video games, spam filters, and other personal productivity tools (Kaplan & Haenlein, 2019; Rowlands, 2024; Stone et al., 2022).

Complementing the EU AI Act risk-based classification, the Organisation for Economic Co-operation and Development (OECD) Framework classifies AI systems across five dimensions to facilitate a nuanced understanding of their implications for policy and governance. These dimensions include People & Planet, assessing AI's impact on human rights, well-being, society, and the environment; Economic Context, detailing the AI's sectoral deployment, business function, and operational scale; Data & Input, characterizing the data's provenance, collection, and properties; AI Model, defining the model's technical type, construction, and objectives; and Task & Output, specifying the system's functions, autonomy, and evaluation methods (OECD, 2022).

Building upon international frameworks, Indonesia establish the Stranas KA which provides a functional AI categorization aligned with the nation’s development priorities. The Indonesian government has identified five priority areas for AI implementation: healthcare services, bureaucratic reform, research and education, food security, and mobility and smart cities (BPPT, 2020; DTIKN BAPPENAS, 2022). In healthcare, AI applications include disease diagnosis and public health management. Bureaucratic reform focuses on improving government efficiency through administrative task automation and data analysis for policy formulation. The research and education category leverages AI to enhance learning outcomes and accelerate scientific discovery. For food security, AI is utilized in precision agriculture and supply chain optimization. The mobility and smart cities category implement AI for intelligent traffic management and urban planning (BPPT, 2020; DTIKN BAPPENAS, 2022; Wadipalapa et al., 2024).

Various approaches to AI classification demonstrate how such systems can be tailored to address specific priorities and societal challenges, providing a strategic framework for AI application in the public sector.

2.1.2 Applications of AI in Public Service Delivery

AI represents a transformative force in government operations and public service delivery, offering capabilities that can enhance efficiency, decision-making, and citizen engagement across administrative functions. Researchers have identified a diverse range of potential AI applications specifically relevant to public sector contexts, in various implementation possibilities as summarized in the following Table 2.1.

Table 2.1 Potential AI Applications for Public Sector

AI Application	AI Value Creation	Public Sector Use Cases
AI-Based Knowledge Management (KM) System	• Automated knowledge organization and discovery to classify, tag, and categorize information from vast datasets. • Proactive knowledge delivery through personalized feeds, intelligent chatbots, or automated alerts	Intelligent Learning System (DTIKN BAPPENAS, 2022); Intelligent game-based learning environments (Dwivedi et al., 2021)
AI Process Automation Systems	• Automation of repetitive, rule-based tasks, ensuring consistent quality and freeing human resources • Complex human action processes transferable to automation systems • Intelligent workflow integration with rule-based assessment, data mining, and intelligent sensing	Automated image diagnoses (Wirtz et al., 2018); Object Detection Technology (DTIKN BAPPENAS, 2022);
Virtual Agents	• Interactive systems using written input, speech analytics, or computer vision • Real-time translation, natural language processing, and affective computing capabilities	Chatbot System for COVID-19 Management (DTIKN BAPPENAS, 2022); A chatbot for asylum

AI Application	AI Value Creation	Public Sector Use Cases
		seeking refugees (Wirtz et al., 2018)
Predictive Analytics	• Quantitative and statistical analysis of data • Big data processing for reporting, prescriptive and predictive analysis for policy recommendation	Agricultural Data Processing and Exchange Platform (DTIKN BAPPENAS, 2022); Predictive analytics AI Healthcare (Chen et al., 2023)
Identity Analytics	• Advanced analytics combined with identity access management • Automated risk-based identity checks using deep learning, machine learning, and artificial immune systems	AI-Based Public Officials Attendance System (DTIKN BAPPENAS, 2022); Facial Recognition as Public Transportation Ticket (Fadhilla & Putra, 2024; Lestari, 2024)
Recommendation Systems	• Information filtering systems that predict individual preferences • Personalized content screening and suggestion	E-service for government offices to provide personalized information for employees (Wirtz et al., 2018);
Cognitive Security Analytics & Threat Intelligence	• Security information analysis via natural language processing and machine learning • Information interpretation, organization, and reasoning	Watson for cybersecurity support human security analysis (Wirtz et al., 2018);

Source: Author

While these AI applications present significant opportunities for public sector transformation and value creation, their implementation requires careful consideration of organizational, ethical, and technical factors (Ali et al., 2024; Wirtz et al., 2018). The adoption of these technologies involves complex trade-offs between innovation and responsibility, necessitating a balanced approach that maximizes benefits while mitigating potential risks. The following section examines these critical dimensions through an analysis of the challenges, risks, and benefits associated with AI implementation in government settings.

2.2 Challenges and Opportunities of AI in the Public Sector

AI is rapidly transforming various sectors, and its rapid adoption within the public sector holds immense potential to enhance efficiency, personalize services, and inform policy decisions. However, this increasing scope and mainstream integration of AI systems also present significant inherent challenges, and opportunities for government and organizations (Dwivedi et al., 2021). These aspects are broadly categorized into six key dimensions of AI implementation: social, economic, ethical, political/legal/policy, organizational & managerial, and technology & data.

The following subsections will delve into each of these six dimensions, elaborating on the challenges and opportunities presented within the public sector context, frequently referencing, and expanding upon the points summarized in Table 2.2 and Table 2.3.

Table 2.2 AI Implementation Challenges from the Literatures

AI Implementation Challenge	Details
Social	- Workforce Transformation & Upskilling (House of Commons - UK Parliament, 2025; Mayer et al., 2025; World Economic Forum, 2025) - Fostering Public Acceptance and Trust: (Dwivedi et al., 2021; Gillespie et al., 2023) - Job Displacement/Substitution (Mayer et al., 2025; World Economic Forum, 2025) - Public Anxiety and Concerns (Chen et al., 2023; Gillespie et al., 2023) - Bias and Inequality (Chen et al., 2023; Dwivedi et al., 2021; Gillespie et al., 2023)

AI Implementation Challenge	Details
Economy	- Financial Feasibility, investment, and operational costs (Dwivedi et al., 2021; Lui et al., 2018; Wirtz et al., 2018)
Ethic	- Bias in AI Systems (Chen et al., 2023; Gillespie et al., 2023; Mayer et al., 2025; Wirtz et al., 2018). - Accountability and the "Responsibility Gap" (Wirtz et al., 2018) - Erosion of authority and trust (Chen et al., 2023; Gillespie et al., 2023; Wirtz et al., 2018). - Opaqueness of AI "Black Box" Problem (Dwivedi et al., 2021; Kaplan & Haenlein, 2019; Wirtz et al., 2018) - Loss of human control (Chen et al., 2023; Wirtz et al., 2018)
Politic, Legal and Policy	- Pace of AI Development vs. Regulation (Chen et al., 2023; Dwivedi et al., 2021; Wirtz et al., 2018) - Impact on Transparency and Discretionary Authority (Chen et al., 2023; Mayer et al., 2025; Silitonga & Isbah, 2023) - Legal Liability Ambiguity (Dwivedi et al., 2021; Wirtz et al., 2018)
Organization and Managerial	- Organizational Structure Transformation (Maragno et al., 2023; Mayer et al., 2025) - Integrating AI into Existing Routines & Cultural shift (Maragno et al., 2023) - Scaling Pilot Projects (Parton, 2025) - Skill Gaps and Workforce Transformation (Wirtz et al., 2018; World Economic Forum, 2025) - Upskilling and Reskilling Employees (Mayer et al., 2025; World Economic Forum, 2025) - Lack of Organizational Awareness and Trust (Maragno et al., 2023)
Technology and Data	- Reliance on High-quality, Unbiased, and Relevant Data (Chen et al., 2023; Wirtz et al., 2018) - Protecting Individual Privacy and Data Security (Mayer et al., 2025; Wirtz et al., 2018) - Data Quality and Integration (Chen et al., 2023; Dwivedi et al., 2021; Wirtz et al., 2018) - Outdated Legacy IT Systems (House of Commons - UK Parliament, 2025; Parton, 2025) - Cyberattacks and Privacy Violations (House of Commons - UK Parliament, 2025; Mayer et al., 2025; Wirtz et al., 2018)

Source: Author

Table 2.3 AI Implementation Opportunities from the Literatures

AI Implementation Opportunities	Details
Social	- Potential for Beneficial Development (Wirtz et al., 2018) - Creation of New Job Opportunities (Chen et al., 2023; Dwivedi et al., 2021; Wirtz et al., 2018; World Economic Forum, 2025)
Economy	- Enhanced Efficiency & Cost Savings (Chen et al., 2023; Mayer et al., 2025; Wirtz et al., 2018) - Increased Productivity & Economic Growth (Dwivedi et al., 2021; Mayer et al., 2025; Rowlands, 2024; Wirtz et al., 2018)
Ethic	- Fostering Public Trust (Dwivedi et al., 2021; Gillespie et al., 2023; House of Commons - UK Parliament, 2025; Wirtz et al., 2018) - Maintaining Human Control (Maragno et al., 2023) - Human Centricity Policies (Mayer et al., 2025)
Politic, Legal and Policy	- Improved Governance Accountability (Chen et al., 2023; Dwivedi et al., 2021; House of Commons - UK Parliament, 2025; Wirtz et al., 2018) - Improved Governance Solutions (Chen et al., 2023; Dwivedi et al., 2021; Wirtz et al., 2018)
Organization and Managerial	- Enhanced Efficiency and Service Delivery (Chen et al., 2023; Dwivedi et al., 2021; Wirtz et al., 2018) - Augmenting the Decision-making Process (Maragno et al., 2023) - Enhance Collaboration Among Public Service Organization (Maragno et al., 2023)
Technology and Data	- Ensuring trustworthiness and compliance (Wang et al., 2023) - Cybersecurity Precaution (Dwivedi et al., 2021; Wirtz et al., 2018) - Creation of a Data-driven Organization (Maragno et al., 2023)

Source: Author

Table 2.3 compiles AI implementation opportunities from existing literature, demonstrating AI's wide-ranging potential benefits across social, economic, ethical, governance, organizational, and technological spheres, which are detailed further in the next section.

2.2.1 Social Implications

The deployment of AI in the public sector carries social implications that directly impact citizens' lives, trust, and equitable access to services. As highlighted in Table 2.2 and

Table 2.3, key social challenges include concerns surrounding workforce transformation, upskilling, public acceptance and trust, job displacement, public anxiety, bias, and inequality. One prominent concern is job displacement and unemployment, as increasing automation could lead to a substantial portion of work activities being taken over by AI, with some forecasts predicting significant job elimination (Mayer et al., 2025; World Economic Forum, 2025). This creates worries about the transformation of the labour market and the need for workforce upskilling. As AI capabilities advance, the skills required from humans will shift dramatically, requiring comprehensive new training programs (House of Commons - UK Parliament, 2025; Mayer et al., 2025; World Economic Forum, 2025). Incorporating human values and principles into AI design is a critical social imperative to avoid bias and inequality that could lead to public anxiety and concern (Chen et al., 2023; Dwivedi et al., 2021; Gillespie et al., 2023).

Despite inherent challenges, AI presents significant opportunities to revolutionize social sectors such as healthcare, transportation, and finance, thereby facilitating beneficial advancements across various industries (Wirtz et al., 2018). More importantly, while some jobs may be displaced, AI simultaneously creates new employment opportunities in fields demanding creativity, problem-solving, and emotional intelligence (Chen et al., 2023; Dwivedi et al., 2021; Wirtz et al., 2018; World Economic Forum, 2025).

2.2.2 Economic Considerations

Economically, the integration of AI within public administration introduces a complex interplay of substantial investment costs, potential efficiency gains and economic growth. The financial feasibility of AI adoption is a considerable hurdle, requiring substantial investment in technological infrastructure, and facing high demand for AI experts leading to significant operational costs (Dwivedi et al., 2021; Lui et al., 2018; Wirtz et al., 2018).

Despite these challenges, AI offers compelling economic benefits. It can significantly enhance efficiency and generate considerable cost savings through automation and augmentation of labour, streamlining administrative processes, and reducing human workload (Chen et al., 2023; Mayer et al., 2025; Wirtz et al., 2018). Moreover, AI contributes to increased productivity and overall economic growth, both through improved efficiency and by enabling more accurate policy planning and efficient resource

management (Dwivedi et al., 2021; Mayer et al., 2025; Rowlands & Gobbi, 2024; Wirtz et al., 2018).

2.2.3 Ethical Dimensions

Ethical considerations shape a critical factor of AI implementation in the public sector, demanding careful navigation of issues like accountability, transparency, and bias to ensure responsible and trustworthy systems. A significant challenge lies in the potential for AI algorithms to start and amplify societal prejudices if trained on biased or incomplete datasets, leading to discriminatory outcomes in areas such as public service delivery or hiring (Chen et al., 2023; Gillespie et al., 2023; Mayer et al., 2025; Wirtz et al., 2018). This problem is worsened by the *black box* nature of many AI systems (Dwivedi et al., 2021; Kaplan & Haenlein, 2019; Wirtz et al., 2018), where opaque internal decision-making processes contribute to a responsibility gap, making it difficult to assign accountability for faulty or harmful decisions (Wirtz et al., 2018). Furthermore, the increasing automation facilitated by AI raises concerns about the *erosion of discretionary authority* among public servants (Chen et al., 2023; Gillespie et al., 2023; Wirtz et al., 2018).

Despite these challenges, opportunities exist to ethically leverage AI for societal benefit. AI offers substantial potential for enhanced efficiency and improved service delivery by automating and augmenting human capabilities. Crucially, addressing ethical dimensions like bias and accountability is important for fostering public trust and ensuring AI systems align with public values (Dwivedi et al., 2021; Gillespie et al., 2023; House of Commons - UK Parliament, 2025; Wirtz et al., 2018). Maintaining human control and judgment is also important particularly in high-stakes decision-making, to prevent risks and ensure a clear understanding of AI's capacities and limitations (Maragno et al., 2023). The development of human-centred policies and guidelines aims to ensure AI serves humanity and augments human skills rather than undermining individual autonomy (Mayer et al., 2025).

2.2.4 Politic, Legal, and Policy Frameworks

AI implementation also presents a complex interplay of political, legal, and policy challenges alongside various opportunities for improved governance. A primary challenge lies in the disparity between the swift pace of AI innovation and the slower

development of regulatory frameworks, creating an urgent need for comprehensive policy structures to guide its deployment (Chen et al., 2023; Dwivedi et al., 2021; Wirtz et al., 2018). Within this context, concerns emerge regarding AI's potential to negatively impact governmental transparency and diminish the discretionary authority of public servants (Chen et al., 2023). Furthermore, the unresolved issue of responsibility gap in legal liability, making it difficult to assign blame and seek compensation for harm caused by AI (Wirtz et al., 2018).

Despite these challenges, the discourse surrounding AI implementation also highlights considerable opportunities for fostering more effective and equitable governance. National AI strategies, such as Indonesia's Stranas KA (BPPT, 2020; DTIKN BAPPENAS, 2022) and Australian counterparts (Australian Securities and Investments Commission [ASIC], 2025) demonstrate commitments to embedding public values like transparency and equity into AI development guidelines.

2.2.5 Organizational and Managerial Aspects

Implementing AI solutions within public organizations demands significant managerial and structural adjustments, encompassing workforce transformation and cultural shift. AI systems are inherently dynamic, demanding continuous human interaction for training and maintenance, which require the formation of dedicated teams and a change from traditional, deterministic workflows (Maragno et al., 2023; Mayer et al., 2025). There is an urgent global demand for AI specialists and experts (Mayer et al., 2025; Wirtz et al., 2018; World Economic Forum, 2025) Integrating AI into existing routines can create implications in employee tasks, even with minor changes, requiring careful management (Maragno et al., 2023). Furthermore, scaling successful AI pilot projects beyond initial stages is complex, involving not only technical implementation but also critical considerations of organizational culture, workforce adaptation, and the cultivation of public trust (Parton, 2025). Additionally, a lack of organizational awareness and trust in AI can significantly constrain its successful deployment (Maragno et al., 2023).

Despite these challenges, the organizational and managerial opportunities presented by AI are substantial. AI offers considerable potential for enhancing efficiency and improving service delivery across various sectors (Chen et al., 2023; Dwivedi et al., 2021; Wirtz et al., 2018). Critically, AI can augment human capabilities, freeing up human

capacity to engage in more complex decision-making process (Maragno et al., 2023). Furthermore, AI can enhance collaboration among public service organizations, fostering better communication and coordinated efforts to achieve common goals (Maragno et al., 2023).

2.2.6 Technological and Data-Related Challenges

At its core, successful AI adoption in the public sector hinges on technological infrastructure and high-quality data governance, which present both considerable technical challenges and transformative opportunities. A fundamental challenge for AI effectiveness stems from its reliance on high-quality, unbiased, and relevant data (Chen et al., 2023; Wirtz et al., 2018). Organizations frequently struggle with data readiness, facing hurdles in collecting, aggregating, and storing diverse data sources, often worsened by the presence of outdated legacy IT systems which hinder accessibility and quality (House of Commons - UK Parliament, 2025; Parton, 2025). The direct consequence of poor data quality can be catastrophic, leading to significant failures in AI applications (Chen et al., 2023; Dwivedi et al., 2021; Wirtz et al., 2018). Beyond data quality, the increasing integration of AI systems introduces critical cybersecurity vulnerabilities. AI applications, especially those managing sensitive information or controlling physical systems, are susceptible to sophisticated cyberattacks, posing serious risks to privacy and public safety (Mayer et al., 2025; Wirtz et al., 2018). The rapid integration of AI in the public sector where assets are frequent targets, often precedes the establishment of adequate security safeguards. This lag creates a vulnerability, allowing cybercriminals to exploit advanced AI capabilities for more sophisticated attacks (House of Commons - UK Parliament, 2025; Parton, 2025).

Despite these challenges, addressing the technological hurdles associated with AI implementation offers considerable opportunities for value creation, particularly in ensuring trustworthiness and compliance in government operations (Wang et al., 2023). Consequently, the inherent risks associated with AI adoption necessitate the development of cybersecurity measures, thereby enhancing data safety and privacy across AI systems (Dwivedi et al., 2021; Wirtz et al., 2018).

2.3 Human-AI Interaction in the Public Sector Context

The integration of AI systems into the public sector is fundamentally reshaping how government services are delivered and how public administration operates. It requires an understanding of Human-AI Interaction as it moves beyond basic automation to a more nuanced collaboration between human decision-makers and AI tools (Raees et al., 2024). As AI has entered to various governmental functions, it introduces new paradigms for interaction where AI systems can act as decision aides, automate routine tasks, and provide insights that augment human capabilities (Fragiadakis et al., 2025; Maragno et al., 2023; Zhang & Gosline, 2023). This evolving relationship requires careful consideration to ensure that in Human-AI interaction, AI complements human roles rather than replacing them; fostering a human-centric approach where systems are designed to enhance both worker effectiveness and citizen experience (Mayer et al., 2025).

A critical challenge in public sector human-AI interaction lies in balancing transparency with interactivity (Raees et al., 2024). While explainability remains foundational to building trust, current research advocates for advancing toward Interactive AI where users—public administrators or citizens—are granted agency to co-design, adapt, and refine AI systems rather than merely contest outputs (Dwivedi et al., 2021; Raees et al., 2024). For instance, enabling users to iteratively refine AI-driven models through participatory co-design ensures alignment with dynamic contextual needs, mitigating risks of rigid automation (Raees et al., 2024). This shift aligns with guidelines emphasizing iterative user control where AI systems should *enable granular feedback,* indicating user preferences during regular interaction with the AI system (Amershi et al., 2019). However, challenges persist as noted by Yang et al. (2020), with AI's unpredictable errors demand safeguards in high-stakes public contexts, therefore complicate the issue.

Trust dynamics complicate this landscape, as studies show public scepticism towards AI, often due to its opaque decision-making (Liao et al., 2022; Maragno et al., 2023; Wirtz et al., 2018) , despite AI's potential to surpass human performance in efficiency and quality (Zhang & Gosline, 2023). Furthermore, to overcome the bias where people unfairly favour human judgment even when AI performs better, it's crucial to clearly communicate AI's role and limitations (Zhang & Gosline, 2023). Addressing this, Fragiadakis et al.

(2025) advocate various human-AI interaction modes that can shape user perception and system effectiveness.

2.3.1 Human-AI Interaction Modes

Human-AI Interaction as advocated by Fragiadakis et al., (2025) can be conceptualized into in three distinct modes that reflect different balances of agency and control between humans and AI systems:

1. *AI-Centric Mode*: *where* AI serves as the primary agent, leading decision-making processes with minimal human intervention. The AI executes tasks independently, with interactions flowing primarily from AI to human. This mode prioritizes system efficiency and computational capabilities, often featuring automated processes that require little human oversight. For example, autonomous vehicles operating under normal conditions and automated content moderation systems.
2. *Human-Centric Mode*: This mode positions humans as the primary decision-makers, with AI serving as an augmentative tool that enhances human capabilities without superseding human authority. It values human intuition and oversight while leveraging AI for managing repetitive or data-intensive tasks. Explainable AI approaches illustrate this mode, as they aim to explain complex AI operations to support human decision-making (Liao et al., 2022)
3. *Symbiotic Mode*: Representing a balanced partnership, this mode features close collaboration between humans and AI systems, with mutual enhancement of capabilities. It is characterized by two-way interaction, shared decision-making, and continuous feedback exchange. Researchers are examining people's tendency to attribute blame, emotions, and intentions to AI and how the framing of AI's role (e.g., as a tool, partner, or teacher) influences these perceptions and interactions. (Liao et al., 2022; Q. Wang et al., 2024).

The selection of an appropriate human-ai interaction mode depends on various factors, including task complexity, task allocation, goals, and contextual interaction (Fragiadakis et al., 2025).

2.4 Organizational Readiness for AI Adoption in the Public Sector

A public sector organization readiness for AI is not simply preparing to buy and install new technology. The transformative nature of AI requires extensive preparation across multiple critical areas. Building on theoretical foundations of Technology Acceptance Models (Davis & Granić, 2024; Marangunić & Granić, 2015) and Technology Organization Environment (Maragno et al., 2023; Marangunić & Granić, 2015), this section discusses organizational readiness as interplay between technological, human, and organizational capacities. The discussion is anchored in Ali et al. (2024) AI-Readiness Framework, developed through expert consensus to address the unique factors public institutions face when adopting AI technologies. This framework gains urgency considering its application in developing countries and documented failures of AI implementation, where inadequate readiness assessments have led to costly setbacks (Ali et al., 2024; Dwivedi et al., 2021).

Figure 2.1 AI-Readiness factors (Adapted from Ali et al., 2024)

Ali et al. (2024) identify five interdependent dimensions of readiness: People, Strategy & Policies, Processes, Technology, and Organizational Environment as detailed in Figure 2.1. In this section, each dimension addresses specific barriers identified in prior research, including workforce skill gaps (Mayer et al., 2025; Wirtz et al., 2018; World Economic

Forum, 2025), organizational transformation (Maragno et al., 2023; Mayer et al., 2025), regulatory development (Dwivedi et al., 2021; Wirtz et al., 2018), ethical governance (Chen et al., 2023) and legacy system incompatibilities (House of Commons - UK Parliament, 2025).

2.4.1 People Readiness

For successful AI adoption, particularly in developing countries, people readiness is crucial. It encompasses the individual and collective capacity to accept, adapt to, and effectively utilize interconnected skills, organizations, and technologies (Ali et al., 2024; Maragno et al., 2023). This concept becomes especially significant in public sector organizations, where employees frequently exhibit substantial resistance and scepticism to AI (Dwivedi et al., 2021; Mayer et al., 2025), making comprehensive preparation essential before implementing AI systems across governmental functions.

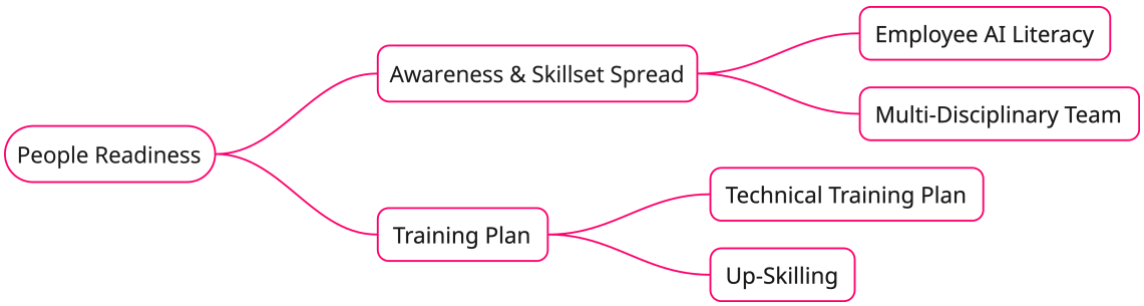


Figure 2.2 People Readiness Factors (Adapted from Ali et al. 2024)

At its core, people readiness is conceptualized through two interdependent factors: 1) awareness & skill set spread, and 2) structured training plan development as illustrated in Figure 2.2 by Ali et al. (2024). The awareness & skill set spread factor emphasizes AI literacy -- defined as an understanding of AI capabilities, limitations, and ethical implications. This is particularly important since AI implementation failures frequently stem from resistance rooted in misconceptions about AI's operational parameters (Kempeneer et al., 2024; Maragno et al., 2023). Furthermore, multi-disciplinary teams foster inter-dependence among their members, which subsequently facilitates a richer exchange of information and strengthens the collective intention to adopt technologies (Awa et al., 2017).

The second factor, training Plan addresses capability building through targeted technical training and organization-wide upskilling initiatives. This systematic approach to

capacity building in technical and up-skilling aligns with the need for comprehensive workforce transformation and addresses the global demand for AI specialists and experts identified in the literature (Martins, 2023; Mayer et al., 2025; Wirtz et al., 2018).

2.4.2 Strategy and Policies Readiness

The AI implementation in public sector depends on strategies and comprehensive policies, which translate aspirational goals into actionable plans and mitigate the risks of unguided AI adoption (Ali et al., 2024). Given the rapid pace of AI innovation versus slower regulatory development (Chen et al., 2023; Dwivedi et al., 2023; Wirtz et al., 2018), strong top management support is highly important. This leadership is crucial for shaping organizational norms and vision (Awa et al., 2017), and for developing a multi-faceted strategic approach. This approach must include an organizational AI-plan, transition and change management strategies, implementation risk mitigation, and effective communication to address high failure rates in AI projects (Makarius et al., 2020).

Figure 2.3 Strategy Readiness Factors (Adapted from Ali et al. 2024)

As illustrated in Figure 2.3 by Ali et al. (2024), the strategy and policies readiness factors consist of leadership & vision that consist of clear organizational vision, management support and engagement and strategy which include AI strategy, change management, risk mitigation. Establishing explicit strategies and policies -- like Indonesia's Stranas KA (BPPT, 2020; DTIKN BAPPENAS, 2022) and Australian examples (Australian Securities and Investments Commission [ASIC], 2025) -- is crucial as initiatives to embedding public values into AI development. Ultimately, well-defined strategies and policies are the essential framework for navigating to foster the sociotechnical capital (Makarius et al., 2020).

2.4.3 Process Readiness

Exploring into the optimization and adaptation of operational processes, the process readiness is categorized into two primary factors for AI integration, particularly in public sector organizations as illustrated in Figure 2.4 by Ali et al. (2024). The first is business process alignment, which involves evaluating and redesigning business processes and integration of AI into these. The second is related to external parties' interaction, focusing on the readiness of entities outside the organization.

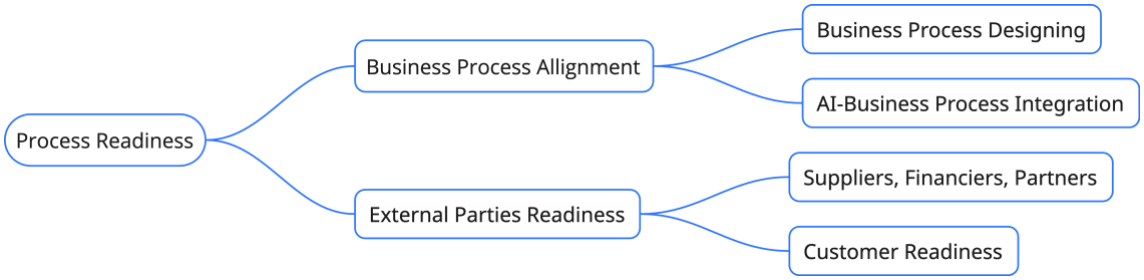


Figure 2.4 Process Readiness Factors (Adapted from Ali et al. 2024)

Processes in AI implementation are dynamic (Abbasi et al., 2024) and require continuous adjustment and alignment with management and integration activities to ensure that AI functionality remains relevant to specific tasks and is effectively executed (Martins, 2023; Terry et al., 2023). Partnerships with external organizations—such as private firms or philanthropic entities—can accelerate transformation by offering resources, strategic guidance, and implementation support, especially when government agencies lack certain capacities themselves (Adatia et al., 2019). Equally important is the readiness of the people, or customers, whose acceptance, engagement, and ability to adapt to new systems are essential for the successful adoption and sustained use of innovations within public institutions (Poushneh & Vasquez-Parraga, 2018). Thus, AI implementation process readiness in public sector need to consider the interplay between internal readiness and external stakeholders as well as the people.

2.4.4 Technology Readiness

Technology readiness is fundamental for successful AI adoption, encompassing an organization's IT infrastructure and data governance as illustrated in Figure 2.5 by Ali et al. (2024). A primary challenge lies in AI's reliance on high-quality, unbiased data, which is often hindered by difficulties in data collection, aggregation, and storage, frequently compounded by outdated legacy IT systems (Chen et al., 2023; House of Commons - UK

Parliament, 2025; Parton, 2025; Wirtz et al., 2018). Poor data quality can lead to significant AI application failures (Dwivedi et al., 2023; Y.-F. Wang et al., 2023; Wirtz et al., 2018).

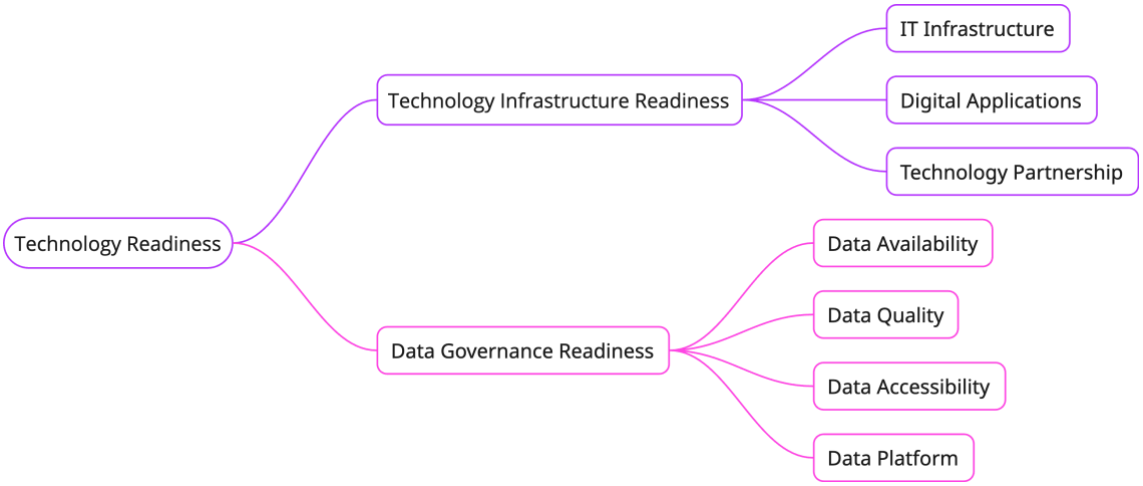


Figure 2.5 Technology Readiness Factors (Adapted from Ali et al. 2024)

Furthermore, developing cybersecurity measures is essential to enhance data safety and privacy across AI systems however it also introduces critical cybersecurity vulnerabilities (Dwivedi et al., 2023). As the more sophisticated the AI, it's susceptible to more sophisticated the attacks that risk privacy and public safety, especially when security safeguards lag behind AI deployment in the public sector (House of Commons - UK Parliament, 2025; Mayer et al., 2025). Ultimately, a comprehensive focus on technological readiness will empower organizations to harness AI's full potential responsibly and sustainably.

2.4.5 Organisational Environment Readiness

Investigating the broader organizational culture and internal dynamics, organizational environment readiness emphasizes how structure dynamics, environment acceptability to change, and resource availability are crucial for fostering collective readiness as illustrated in Figure 2.6 by Ali et al. (2024). Adaptive and cross-functional organizational structures facilitate effective communication and collaboration among domain experts, IT, and AI specialists, which is essential for integrating AI technologies into business processes (Fountaine et al., 2019). Furthermore, the concept of *"environment acceptability to change,"* which includes elements such as an organization's backing for AI projects, its capacity to adapt to change, and the sustainability of those changes,

corresponds directly to the environment aspect of the TOE framework. This framework considers external factors like market dynamics, legal stipulations, industry-specific traits, competitive forces, and societal or cultural standards (Alsheibani et al., 2018; Awa et al., 2017).

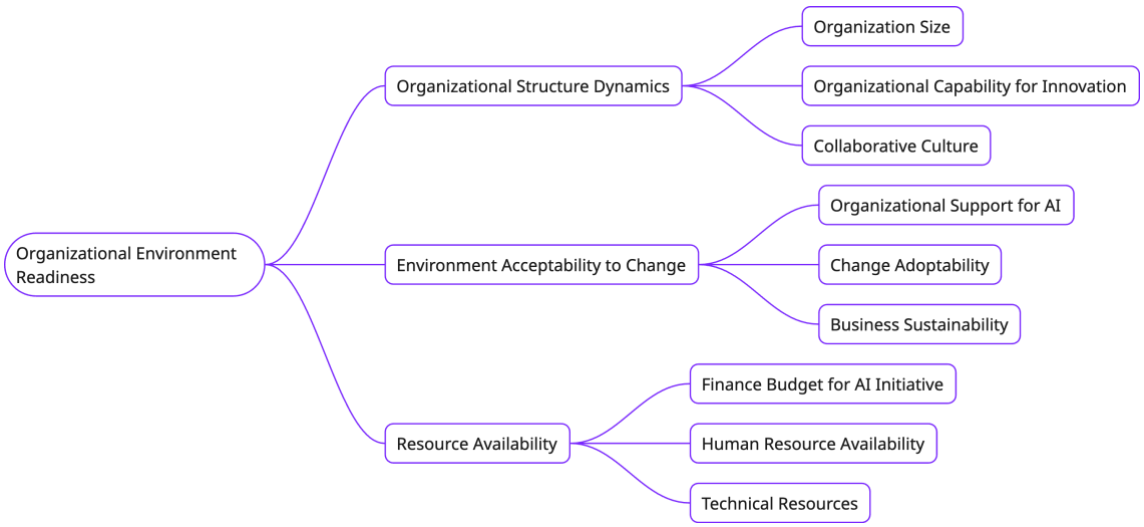


Figure 2.6 Organizational Readiness Factors (Adapted from Ali et al. 2024)

Resource availability is another vital component, while AI implementation promises long-term cost savings (Chen et al., 2023; Wirtz et al., 2018), upfront investments ongoing operational cost poses budgetary in resource-constrained public institutions (Dwivedi et al., 2023; Lui et al., 2018; Mayer et al., 2025). Furthermore, public sector organizations often struggle acquiring quality human resources (Maragno et al., 2023) and still utilize outdated legacy IT (House of Commons - UK Parliament, 2025). Addressing these challenges requires strategic budget reallocation, targeted workforce development programs (Dwivedi et al., 2023), and partnerships with tech providers to bridge resource gaps (Adatia et al., 2019).

The successful implementation of AI in public sector organizations hinges on understanding organizational readiness as an interplay between technological, human, and organizational capacities as demonstrated by the framework of (Ali et al., 2024). This foundation becomes particularly relevant when examining Indonesia's ongoing efforts to integrate AI-driven solutions within its public sector infrastructure, as explored in the following chapter on Digitalization and AI in Indonesia.

2.5 Summary of Theoretical Foundation

The preceding subchapters have collectively established a comprehensive theoretical framework essential for understanding the multifaceted phenomenon of AI adoption within the public sector. This framework progresses from defining AI and its applications to exploring its societal impacts, the nuances of human-AI collaboration, and the critical prerequisites for organizational readiness.

Subchapter 2.1 defined AI based on the foundational work of the EU High-Level Expert Group on Artificial Intelligence (EU HLEG, 2019) and introduced the EU AI Act's risk-based classification system, which includes: 1) Unacceptable Risk AI, 2) High-Risk AI, 3) Limited Risk AI, and 4) Minimal or No Risk AI Systems. Moreover, OECD and Indonesia's Stranas KA each have their own framework to classify AI system (BPPT, 2020; OECD, 2022). Several example AI applications in public service delivery with value creation and use cases also introduced in this subchapter.

Subchapter 2.2 provides a comprehensive overview of the challenges and opportunities inherent in AI adoption. It systematically examines six critical dimensions:

- Social: e.g., workforce transformation, public trust, bias
- Economic: e.g., financial feasibility, efficiency gains
- Ethical: e.g., accountability, transparency, the 'black box' problem
- Political, Legal, and Policy: e.g., regulatory lag, impact on discretionary authority
- Organizational and Managerial: e.g., structural transformation, skill gaps
- Technology and Data: e.g., data quality, cyberattacks and privacy.

This comprehensive overview underscores that AI implementation is not merely a technological undertaking but a profound socio-technical shift (Chen et al., 2023) requiring careful navigation of diverse and often competing interests.

Subchapter 2.3 explored Human-AI Interaction in the public sector. It emphasized the shift from basic automation to nuanced collaboration (Raees et al., 2024), where AI can augment human capabilities (Fragiadakis et al., 2025; Zhang & Gosline, 2023). Key considerations such as transparency, interactivity, trust dynamics (Liao et al., 2022; Wirtz et al., 2018), and the need for iterative user control (Amershi et al., 2019) were highlighted. The subchapter introduced distinct modes of interaction: AI-centric, Human-centric, and Symbiotic (Fragiadakis et al., 2025). The design of these interactions

significantly impacts system effectiveness and user acceptance (Mayer et al., 2025) for public sector applications.

Subchapter 2.4 addressed the crucial prerequisite of Organizational Readiness for AI adoption. Drawing on the AI-Readiness Framework by Ali et al. (2024), it synthesized concepts from Technology Acceptance Models (Davis & Granić, 2024) and the Technology-Organization-Environment framework (Awa et al., 2017). This subchapter detailed five interdependent dimensions of readiness:

- People (awareness, skills, training),
- Strategy & Policies (leadership, vision, risk mitigation),
- Processes (business process alignment, external party interaction),
- Technology (infrastructure, data governance, cybersecurity),
- Organizational Environment (structure, culture, resource availability)

This framework suggests that successful AI integration is contingent upon a holistic and proactive approach to building these capacities. Together, these theoretical perspectives provide a robust conceptual lens for analysing, planning, and executing AI initiatives in a manner that is effective, ethical, and aligned with public value.

3 Indonesian Context for AI Adoption

Indonesia's public administration features a dynamic central-regional relationship. The central government exclusively handles absolute affairs (e.g., foreign policy, defence), while concurrent affairs allow regional autonomy within central norms, standards, procedures, and criteria (LPS Alliance, 2015). Despite legal frameworks for coordination, administrative fragmentation persists due to regional disparities in capacity, priorities, and budgets, hindering uniform policy implementation, especially for digital transformation and AI (Wadipalapa et al., 2024). Regional governments also face significant fiscal dependency on the central government, with 72.88% of their 2022 revenue from central transfers, potentially impacting their ability to independently pursue technological advancements (Bernard, 2023).

Further complicating the challenge, in 2023, the public service workforce was predominantly composed of Generation X, with 83.65% of public official members over the age of 35, while those under 35 constituted only 16.35% (BKN, 2023). This generational composition is noteworthy, particularly when considering the population median age of 30.4 in 2025 (Worldometer, 2025) and the national digital literacy index stood at 3.54 (on a scale of 1-5) in 2022 (Katadata Insight Center, 2023), suggesting a potential skills gap. This demographic reality could present difficulties in adapting to rapid technological changes and digital tools, a challenge often associated with older generation (Gen Boomer, Gen X and Gen Y) cohorts when compared to younger generation (Gen Z), digitally native populations (Çoklar & Tatli, 2021).

Despite these challenges, Indonesia has demonstrated progress in its e-government journey. The National Electronic Government System (*Sistem Pemerintahan Berbasis Elektronik* - SPBE) index for 2024 reached 3.12, categorized as *"Good"* (Sinambela, 2025). Furthermore, the nation's UN e-Government Development ranking improved significantly, moving from 88th in 2020 to 64th in 2024 (UN DESA, 2024). Public sentiment towards AI also appears favourable; a 2025 survey indicated that 85% of Indonesians view AI products and services positively (Katadata Insight Center, 2025).

However, this progress is not uniform, with a significant digital gap persisting across the archipelago as reported by Intimedia (2024). For instance, Java accounted for 58.76% of Indonesia's internet penetration in 2024. While overall internet penetration reached 74.6%

in January 2025, a substantial 25.4% of the population, equating to approximately 72.2 million people, remained offline in early 2025. Regional disparities in internet access are also evident, with Kalimantan reporting 77.42% penetration compared to Maluku/Papua at 69.91% in 2024.

Indonesia is actively pursuing a comprehensive national digitalization agenda, with the SPBE serving as its foundational e-government framework, aiming to streamline administrative processes, reduce corruption, and establish the necessary digital infrastructure conducive to AI adoption (Sinambela, 2025). Complementing SPBE, the One Data Policy (ODP) is crucial for enhancing government data governance by ensuring data accuracy, integration, and accessibility—all vital components for effective AI systems. This policy framework is further reinforced by recent regulations aimed at strengthening data governance and cybersecurity (DTIKN BAPPENAS, 2022). Furthermore, the strategic direction for AI development is articulated in Stranas KA 2020-2045, prioritizes key areas such as ethics, talent development, and research, with a significant emphasis on bureaucratic reform (BPPT, 2020).

A significant development with potential implications for AI adoption in public administration is the relocation of capital IKN in East Kalimantan province region (Firnaherera & Lazuardi, 2022; Purnama & Chotib, 2023). This monumental project is explicitly designed with smart city principles at its core, with *"Smart Governance"* identified as one of its six foundational domains. As stated by Otorita Ibu Kota Nusantara (2024), this monumental project is explicitly designed with smart city principles at its core, with "Smart Governance" identified as one of its six foundational domains. While IKN is currently managed by Otorita IKN during its building and relocation phase, existing East Kalimantan Province officials and the local populace will likely form a significant part of IKN's future bureaucracy. Consequently, IKN is positioned as a potential catalyst and pilot for broader AI adoption within Indonesian public administration (Saffa, 2024) and offers a unique opportunity to serve as a testbed for AI-supported public services and administrative models (Riza, 2025).

4 Methodology

This chapter begins by justifying the chosen research design and outlining the key methodological decisions made. It then details participant selection, including inclusion criteria and the sampling approach. Subsequent sections describe the techniques and procedures used for data collection and the analytical methods applied to the data. Finally, potential ethical considerations pertinent to the research and an assessment of the research questions are discussed.

This research adopts a qualitative approach to gain an in-depth understanding of a particular phenomenon by exploring the perspectives and experiences of the participants. This approach was chosen because it allows for the collection of rich, descriptive data through detailed participant selection and specific data collection techniques, enabling a nuanced analysis of complex issues, consistent with an interpretive research philosophy as illustrated in Figure 4.1 research onion by Saunders et al. (2019).

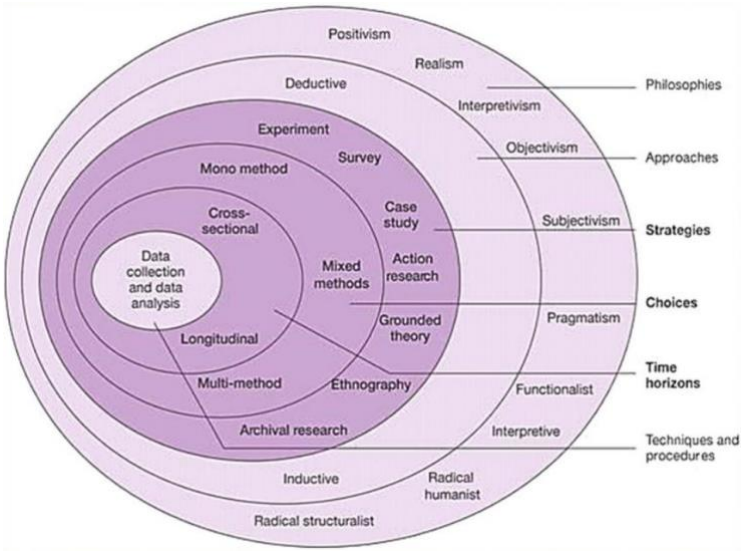


Figure 4.1 Research onion presented by Saunders et al. (2019)

4.1 Data Collection

Data for this study were collected through interviews with 13 public officials from eight Indonesian public sector organizations, holding seven distinct leadership roles within local and regional government bodies in East Kalimantan Province.

4.1.1 Selection Criteria for Interview Participants

Given the early stage of AI implementation in the Indonesian public sector, participants were selected using a non-probability sampling technique. It is specifically targeting organizations and individuals possessing insights into human-AI interaction and organizational readiness. This approach includes leadership actors and entities involved in initial AI implementation efforts. To enhance the reliability and richness of collected data, specific criteria were employed for participant selection. This includes: (i) strategic roles in leadership, (ii) permanent employees within the target organization, and (iii) representation across key functional areas. Potential participants meeting these criteria were contacted and through referrals initiated by early participants, leveraging a snowball sampling method. Using this methodological approach, from the initial target of 10-15 people, 13 interviews were completed as saturation was reached, meaning no new substantive information emerged from additional interviews (see details in Annex A). Participants were drawn from eight distinct public organizations, with representation from sectors including Human Resources, Information Technology, Structural Leadership, Research and Policy Development, and Socio-political fields. These 13 individuals occupied seven distinct leadership positions, such as Regional Representative Council, Sub-District Head, Head of Agency, Head of Department, Senior Manager, Team Leader, and Manager.

Interviewees were given the options of participating in either digital or physical interviews to accommodate their preference and ensure their comfort during the data collection process. The comfort of interviewees can be directly linked to the location in which the interview is conducted. To establish a setting where participants feel at ease is important to a successful interview – both for the interviewees' well-being and the quality of the data collected. The choice of locality should therefore consider the participants' comfort and the ability to respond openly to the questions, which is why the decision was left to the interviewees themselves.

All participants in this study opted for physical interviews conducted in their respective offices. This unanimous preference for face-to-face interaction provided several advantages for the research. As noted by Opdenakker (2006), physical interviews allow for the observation of non-verbal cues, mannerisms, and body language, which give the interviewer extra information that explain the nuance in the verbal answer of the

interviewee. These non-verbal elements added richness to the collected data and provided additional context for analysis. Additionally, conducting interviews in the participants' workplaces provided contextual insights into their organizational environment. Another significant advantage of physical interviews was the synchronous nature of communication, with no delays between questions and answers, facilitating direct reactions from both parties.

Document studies were conducted to supplement the interview with additional information AI related policies in the Indonesian public sector. These documents were selected to provide context and background for the interview process. The document collection for this study comprised various formal, publicly available materials published by the government, including: two national development plans, two regional development plans, two strategic plans, one workplan, and two regulatory documents (see details in Annex B).

Given the cross-sectional time horizon with a defined timeframe, interviews provided an appropriate method for obtaining rich insights despite the limited sample size. Two interview structures were employed in this study: unstructured and semi-structured interviews. This dual approach was specifically adopted to leverage the inherent flexibility of both methods, which proved crucial for comprehensively capturing the rich tapestry of participants' experiences and thoughts. The unstructured format allowed for spontaneous exploration of emerging themes and deeper dives into individual narratives, while the semi-structured approach provided a guiding framework to ensure key areas of inquiry were covered across all interviews, ultimately yielding a more holistic and nuanced understanding.

The interviews featured open-ended and probing questions within a 45–90-minute timeframe. Questions were informed by the research focus on human-AI interaction and organizational readiness within the Indonesian public sector context. The interview guides underwent iterative revisions, with questions sometimes omitted, altered, or added based on each participant's role while ensuring all essential information was covered.

4.2 Data Analysis

This study adopts thematic content analysis as outlined by Braun & Clarke (2006) to analyse data collected from interviews. It has six-phase framework: familiarization with

the data through repeated reading, generation of initial codes across the dataset, searching for potential themes by collating relevant coded data, reviewing themes for coherence and distinctiveness, defining and naming themes to capture their essence, and producing a scholarly report that connects the analysis to the research questions.

Table 4.1 Phases of Thematic Analysis

Phases	**Process**
Phase 1: Familiarizing yourself with your data	Transcribing data with AI transcription model, rigorously checked against original recording, familiarising the data
Phase 2: Generating initial codes	Produce of initial codes across the entire data set, collating data relevant to each code.
Phase 3: Searching for themes	Identifying patterns within the dataset, gathering all data relevant to each potential theme.
Phase 4: Reviewing themes	Generating a thematic map based on two levels of theme review, deciding level 1 based on theoretical framework for grounded relation.
*Phase 5: Defining and naming themes***:**	Ongoing analysis to refine the specifics of each theme and the overall story the analysis tells; generating clear definitions and names for each theme.
Phase 6: Producing the report	Conduct quotes analysis, compelling extract quotes, relate back of the analysis to the research question and literature, produce report of the analysis.

Source: Author

4.2.1 Phase 1: Transcription and Data Familiarization

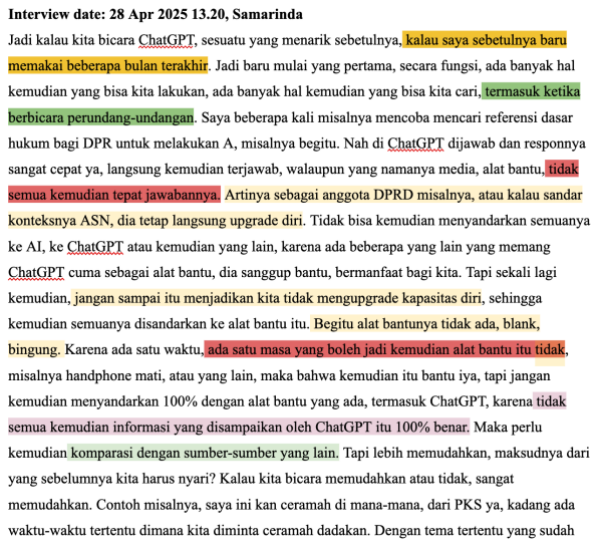
The first phase of data analysis involved transcription of the audio-recorded semi-structured interviews. The data for this study consisted of total 9 hours audio recordings of interviews. First, all audio files were transcribed into text format using *TurboScribe AI,* an AI transcription model. These initial transcripts then were checked by the researcher to validate with its original audio recordings. Errors in transcription, speaker attribution, and unclear segments were corrected to verified dataset for analysis.

The transcription and proof-reading processes already provided initial knowledge of the data. To deepen this understanding, the transcribed material was re-read multiple times, with relevant ideas and quotes being noted. These notes were then collectively reviewed, and short summaries were created for each interview to establish a clear overview of the dataset. These summaries and annotations served as valuable resources during the subsequent phase of generating initial codes.

4.2.2 Phase 2 and 3: Initial Coding Process and Theme Development

In this phase, the codes that represent relevant words and phrases based on interview transcript (see Figure 4.2 and Figure 4.3) are developed. The researcher manually conducted the codebook and coding process, utilizing both semantic and latent coding approaches. Semantic codes or data-derived, describe the explicit content present in the data, while latent codes or researcher-derived interpret the content to identify implicit concepts embedded within participant's responses.

Figure 4.2 Top Level themes of coding (source: Author)



Interview date: 28 Apr 2025 13.20, Samarinda

Jadi kalau kita bicara ChatGPT, sesuatu yang menarik sebetulnya, kalau saya sebetulnya baru memakai beberapa bulan terakhir. Jadi baru mulai yang pertama, secara fungsi, ada banyak hal kemudian yang bisa kita lakukan, ada banyak hal kemudian yang bisa kita cari, termasuk ketika berbicara perundang-undangan. Saya beberapa kali misalnya mencoba mencari referensi dasar hukum bagi DPR untuk melakukan A, misalnya begitu. Nah di ChatGPT dijawab dan responnya sangat cepat ya, langsung kemudian terjawab, walaupun yang namanya media, alat bantu, tidak semua kemudian tepat jawabannya. Artinya sebagai anggota DPRD misalnya, atau kalau sandar konteksnya ASN, dia tetap langsung upgrade diri. Tidak bisa kemudian menyandarkan semuanya ke AI, ke ChatGPT atau kemudian yang lain, karena ada beberapa yang lain yang memang ChatGPT cuma sebagai alat bantu, dia sanggup bantu, bermanfaat bagi kita. Tapi sekali lagi kemudian, jangan sampai itu menjadikan kita tidak mengupgrade kapasitas diri, sehingga kemudian semuanya disandarkan ke alat bantu itu. Begitu alat bantunya tidak ada, blank, bingung. Karena ada satu waktu, ada satu masa yang boleh jadi kemudian alat bantu itu tidak, misalnya handphone mati, atau yang lain, maka bahwa kemudian itu bantu iya, tapi jangan kemudian menyandarkan 100% dengan alat bantu yang ada, termasuk ChatGPT, karena tidak semua kemudian informasi yang disampaikan oleh ChatGPT itu 100% benar. Maka perlu kemudian komparasi dengan sumber-sumber yang lain. Tapi lebih memudahkan, maksudnya dari yang sebelumnya kita harus nyari? Kalau kita bicara memudahkan atau tidak, sangat memudahkan. Contoh misalnya, saya ini kan ceramah di mana-mana, dari PKS ya, kadang ada waktu-waktu tertentu dimana kita diminta ceramah dadakan. Dengan tema tertentu yang sudah

Figure 4.3 Example of transcript and manual coding (source: Author)

4.2.3 Phase 4: Reviewing

Utilizing the result of coding, the researcher then focused on identifying patterns within the dataset. Theme-based analysis facilitated the identification of attributes relevant to addressing the research question. The frequency of code appearance served as one criterion for determining potential themes. Through the development of a codebook to guide thematic responses, similar statements and words were organized into natural groupings, which subsequently formed overarching themes. To establish relationships between themes and codes and provide contextual understanding, a visual representation was created to helped illustrate the interconnections between different elements of the analysis and supported the development of a coherent analytical framework. It was generated from 2 level of theme review: 1). examines the appropriateness of themes in relation to the codes and 2). evaluates themes against the entire dataset. To evaluate the themes, the transcribed material was re-read considering the newly generated codes and themes. This iterative process involved noting potential adjustments and discussing interpretations of the codes.

4.2.4 Phase 5: Defining Themes

Phase five was built upon the thematic map and focuses on refining themes through ongoing analysis as illustrated in Figure 4.4. It involved identifying the essence of each theme and the overall narrative they collectively conveyed to establish clearer definition of relation between themes to theoretical framework. This refinement procedure led to the development of a final thematic map that provided the structure for producing the analytical report. The defined themes represent distinct patterns of meaning within the data that directly address the research questions while maintaining internal coherence and external heterogeneity.

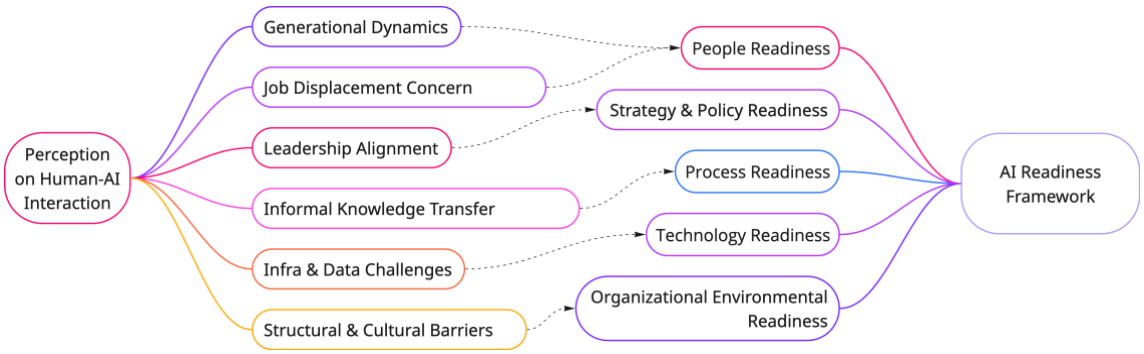


Figure 4.4 Map of Thematic Analysis during phase 5 (source: Author)

4.2.5 Phase 6: Reporting

This phase involves the report writing based on the selected interesting quotes, classified across five factors of AI readiness – people readiness, strategy and policy readiness, process readiness, technology readiness, and organization environment readiness analysis. Following that, synthesizes the empirical data into six themes contextualizing the findings within the broader theoretical landscape while maintaining analytical rigor. This approach ensures that the conclusions drawn are both empirically grounded and theoretically informed, contributing meaningful insights to the understanding of the human-AI interaction and organizational readiness in the Indonesian public sector.

4.3 Ethical Considerations

Ethical considerations are important in research, particularly given the inherent challenges in conducting studies involving human participants. This study bears responsibility to uphold the safety, dignity, and rights of those who contribute to research. Informed consent was meticulously secured, detailing research objectives, procedures, potential risks, and the unconditional right to withdraw. Confidentiality and, where feasible, anonymity was strictly maintained through secure data management, de-identification, and pseudonymization in all reported findings. This chapter describes the ethical considerations applied to this study, encompassing both formal procedural requirements and the emergent ethical challenges, commonly referred to as *"ethics in practice"* (Guillemin & Gillam, 2004).

4.3.1 Processing of Personal Data

Compliance with Indonesia's Personal Data Protection Law (UU PDP) is ensured prior to the implementation of the study. The UU PDP governs the processing of personal data with the objective of protecting individuals' privacy rights within Indonesia where personal information is defined as any information pertaining to an identified or identifiable individual (Indonesia. Pemerintah Pusat., 2022). This study is ensured not to involve the collection of directly identifiable or sensitive information. Therefore, in adherence to the UU PDP principles, participants were provided with comprehensive information regarding the study and the associated data processing procedures.

4.3.2 Informed Consent

To safeguard informants' privacy, ensure legality, and transparency, consent is obtained from all participants. Written consent was utilized specifically prior to all semi-structured interviews (see details in Annex C). The consent form was developed according to established ethical guidelines and customized for this specific study and translated to local language. The voluntary nature of participation was emphasized, with participants free to withdraw from the interview at any time, while ensuring their anonymity. To sustain participants' rights while promoting comfort and trust, verbal consent was deemed appropriate for unstructured interviews. Participants were verbally informed about the purpose, methods, and intended use of the study, in addition to what their participation entailed, to safeguard their privacy.

4.3.3 Anonymity

The declaration of consent stated that participants could withdraw at any moment and would remain anonymous (see details in Annex C). To preserve informants' anonymity, personal information was limited, and participants were presented using pseudonyms (see details in Annex A). References to specific public organizations by name were avoided, as organizational names did not add value to the research context. This approach minimized the possibility of connecting information to specific individuals. Moreover, audio recordings were encrypted and stored securely using appropriate digital tools and will be deleted securely at the conclusion of the project.

5 Findings and Analysis

This chapter presents the empirical findings uncovered during data collection and analysis. The collected data were analysed, revealing several themes under the five factors Ali et al. (2024) AI readiness. Consequently, this chapter is structured according to those factors then later summarized and discussed according to themes identified. Anonymous quotes from interviews and findings from document studies are highlighted within the chapter.

5.1 Perceive People Readiness

The interviews conducted reveal significant insights into the perceived People Readiness factors for AI adoption within the public sector. Table 5.1 Perceived People Readiness for AI-Adoption below presents the observed conditions and their implications for organizational readiness.

Table 5.1 Perceived People Readiness for AI-Adoption

Perceive People Readiness	Observed Conditions (from interviews)	Nature of the Challenge/Implication
Awareness & Skill Set	Generational gap in AI readiness (older generation resist, younger generation adapt faster but not universally knowledgeable).	Creates an uneven landscape for digital transformation and institutionalizes resistance due to long leadership tenures.
	Leadership positions predominantly held by older generation lacking digital fluency.	Leads to a bottleneck for organizational change and places additional burden on digitally capable junior staff.
	Junior staff often perform digital work for senior officials due to hierarchical power dynamics.	Places additional responsibilities on junior staff, potentially leading to burnout or inefficiency.
	Significant gap in understanding practical AI applications in government work (e.g., proper data input for optimal results).	Risks ineffective AI investments due to poor data infrastructure/quality.
	Limited awareness extending to conceptual frameworks for AI's	Hinders strategic implementation and utilization of AI due to a lack of foundational understanding.

	transformation of public service delivery.	
	Some younger generations (Gen Z, Alpha) also show confusion regarding basic AI tools.	Indicates that digital aptitude is not universally tied to age and highlights a general need for better foundational understanding.
Training Plan	Absence of formalized AI training programs; departments rely on self-directed learning.	Represents a significant institutional gap, leading to inconsistent skill development.
	HR departments often lack AI literacy themselves.	Signals a significant institutional gap in preparation for technological transformation, as central training units are unprepared.
	Knowledge about AI tools is primarily shared through informal channels and personal networks.	Creates uneven skill distribution and lacks standardization and quality control for organization-wide competency.
	Reliance on individual "champions" for knowledge dissemination.	While beneficial for rapid tool adoption, it lacks the systematic coverage needed for organization-wide competency.
Concerns about Job Displacement	Significant concerns about AI potentially replacing human workers, particularly in administrative and routine roles.	Creates anxiety that manifests as cultural resistance to AI adoption.
	Fears about professional identity and job security.	Can lead to resistance and unwillingness to engage with new AI tools.
	Limited understanding of how AI typically augments rather than replaces human work.	Without addressing these misconceptions, organizations may face significant cultural barriers to successful AI implementation.

Source: Author

A. Awareness & Skill Set

The interviews conducted reveal a generational gap in AI acceptance among public officials. Older generation tend to show considerably more reluctance in embracing new technologies than their younger generation. This generational gap creates a digital gap,

where some segments of the population readily adopt advancements while others are lacking. It makes the technological integration more complex and takes uneven process.

> *"For Generations X and Y, accepting such technology is very slow. But for Gen Z, it's fast." (NFID-02)*

This observation highlights not just a skills gap but also a fundamental difference in technological adaptability across age groups. For example, this case includes the utilization of ChatGPT and Digital Signature. This gap is particularly problematic because leadership positions are predominantly held by older generations who often lack digital fluency, creating a bottleneck for organizational change:

> *"For me, like it or not, I use AI... But I'm not sure about my colleagues, especially those who are about to retire, Generation X, those born in the 60s, who even struggle with opening a laptop and updating" (NFID-09)*

These quotes reveal a critical structural challenge—the psychological aspects of resistance to change become institutionalized when leadership remains static for extended periods. This creates organizational resistance, where negative perceptions about technology adoption cascade through leadership structures as (Makarius et al., 2020) identified. With nearly two decades of service remaining for many senior officials, their technological reluctance creates a long-term obstacle to innovation that permeates organizational culture and decision-making processes.

> *"I was a secretary for a long time. My agency head wasn't very tech oriented. With his tenure continuing, I automatically had to do all the [digital] work..." (NFID-01)*

This testimony demonstrates how hierarchical power dynamics exacerbate the generational technology gap. Junior staff with digital skills find themselves performing additional responsibilities. Despite increasing exposure to AI such as ChatGPT, there remains a significant gap in understanding practical AI applications in government work.

> *"I barely understand it, but looking at it, we first need to understand how to input data properly, that's essential in the beginning, [good] kind of data will produce optimal AI results" (NFID-04)*

This statement reveals a fundamental insight—that many officials recognize data quality as crucial for AI effectiveness but lack deeper understanding of how AI processes that data. Without comprehensive understanding of AI's data requirements, organizations risk investing in systems that cannot deliver results due to poor data infrastructure or quality. Interestingly, the interviews found that technological aptitude doesn't always follow expected generational patterns:

> *"When I used ChatGPT, some from the generation below me, Generation Z and Alpha, were actually confused, asking 'What application is this, Sir?'" (NFID-06)*

Interestingly, the interview reveals that generational technology adoption does not always follow expected patterns. Some younger officials demonstrated unexpected confusion about AI tools, challenging simplistic demographic determinism. This finding indicate that individual characteristics and exposure sometimes override generational tendencies, creating opportunities for targeted engagement strategies based on personal openness rather than age cohort.

The generational dynamic fundamentally influences the types of Human-AI Interaction modes present in an organization. As Fragiadakis et al. (2025) identified three distinct modes: AI-Centric, Human-Centric, and Symbiotic, the current findings indicates that older officials generally favour Human-Centric approaches, where AI assists under strict human oversight. On the other hand, younger officials are more open to Symbiotic modes, which feature shared decision-making and continuous feedback. This difference in generational preference could create tension when trying to establish consistent human-AI interaction frameworks across various departments. The generational structure of leadership directly impacts strategic vision for AI implementation, budget allocation priorities, and the institutional tolerance for innovation risk.

B. Training Plan

Padovano & Cardamone (2024) state that sophisticated AI knowledge require more structured learning through formal training programs. However, the interviews reveal that knowledge about AI tools predominantly spreads through colleague-to-colleague interactions rather than structured educational interventions. As one participant explained, *"Those who understand the concept will teach their colleagues... by learning*

this way, I don't need to hold meetings anymore" (NFID-01). This organic knowledge dissemination represents what Wenger (1998) described as "*community of practice,"* where learning occurs through participation in peer shared activities rather than formal instruction.

The absence of structured AI training program is acknowledged by multiple participants, with one stating:

> *"There are no special programs…, we usually just learn about the technology on our own" (NFID-01).*
>
> *"There is not yet training for that [AI]. Even here in internal department" (NFID-06).*

This finding aligns with OECD (2017) report that to adopt new technology, organizations could facilitate new ways of working, including informal learning and voluntary training, which help overcome barriers such as cultural discomfort with change and lack of technological skills.

The research reveals that these informal knowledge networks form around individual *"champions"* who possess technical aptitude and willingness to share knowledge. These champions emerge organically rather than through formal designation, creating what Yang et al. (2020) might recognize as an ad-hoc solution to the challenge of understanding AI capabilities and limitations during the initial design process then adoption process. These champions serve as crucial knowledge bridges, translating complex technical concepts into practical applications relevant to specific contexts.

This reliance on informal knowledge transfer creates several distinctive patterns that influence organizational AI readiness. First, knowledge distribution becomes uneven, concentrated around socially connected individuals with access to champions. This creates knowledge silo within the organization where some departments develop significant AI literacy while others remain uninformed. Second, without standardization, the quality and completeness of knowledge transfer varies considerably, potentially propagating misconceptions or incomplete understanding as AI-infused system may still demonstrate unpredictable behaviours (Amershi et al., 2019).

C. Concerns About Job Displacement

The interviews showed that a common anxiety of AI replacing jobs creates a significant psychological barrier to its adoption across the entire organization. Anxiety about workforce reduction emerges consistently across interviews, with one participant directly stating,

> *"But if it's used for everything, it means there will be a reduction in our workforce. That seems certain." (NFID-01)*

This statement reflects a widely held assumption that AI implementation inevitably leads to job elimination. Interviewee perception reflects deeper anxieties about professional identity and job security:

> *"It's somewhat frightening actually. We worry that our roles will be taken over by these systems, while from the human side, they [AI systems] don't have that [human] aspect." (NFID-06)*

> *"AI tends to need to take over functional positions. Because functional positions are consistent " (NFID-01).*

These concerns are not baseless, as AI technologies may indeed automate certain tasks currently performed by workers. These concerns align with Engin & Treleaven (2019) findings that natural threat of potential job-losses is "*extremely valid and timely considerations*". This perception generates targeted anxiety among administrative staff, suggesting leadership and policy roles are potentially more insulated from immediate displacement.

Concerns about AI-driven job displacement extend to management, as one department head acknowledged, *"What's threatened is the number of human resources. Many will be unemployed later. Because even now, for example, I used to instruct staff to make this report. Now I never instruct them anymore. I do it myself [with help of AI]" (NFID-02).* This leadership observation indicates job displacement is an emerging reality, affecting workflow. This aligns with Makarius et al. (2020) statement that managers themselves harbour anxiety about AI's impact on organizational structures and roles, creating complex dynamics where the same individuals responsible for implementation may harbour ambivalence about its consequences.

5.2 Strategy and Policy Readiness

A clear strategy and supportive policies are fundamental to AI success. Table 5.2 Perceived Strategy and Policy Readiness for AI Adoption summarizes the findings related to Strategy and Policy Readiness factors, detailing the observed conditions and their implications for AI adoption in the public sector.

Table 5.2 Perceived Strategy and Policy Readiness for AI Adoption

Perceive Strategy and Policy	Observed Conditions (from interviews)	Nature of the Challenge/Implication
Clear Organizational Vision	Organizations are developing formal long-term plans (e.g., "master plan" for 5-10 years) to incorporate digital technology and AI, ensuring continuity regardless of personnel changes.	Demonstrates a proactive approach to embedding AI within the strategic framework, providing a stable blueprint for future implementation.
	AI implementation is increasingly being integrated into high-level strategic documents like the Regional Medium-Term Development Plan (RPJMD).	Signifies a growing recognition of AI's importance at the political and strategic level, ensuring its long-term adoption.
	Vision for AI specifically is still developing in many organizations, with some respondents stating "There isn't any yet" regarding AI policies from leadership.	Indicates an inconsistent level of strategic maturity regarding AI, with some organizations lacking a dedicated, formalized vision for its use.
Management Support, Commitment, and Engagement	Strong leadership support, including budget allocation, is crucial for AI initiatives to succeed ("If the leader supports the budget, it's great. Whatever we do, it gets done.").	Direct leadership championship is a primary enabler, aligning resources and priorities for AI adoption.
	Leadership commitment is considered paramount for digital transformation initiatives, seen as "number one" above everything else.	Underscores that top-down commitment is the most critical factor for successful digital and AI transformation.
	Leaders who personally engage with AI technologies (e.g., using ChatGPT for work) demonstrate greater readiness to incorporate these tools.	Personal engagement of leaders acts as a strong positive example, fostering a culture of adoption and practical application.

	Leadership awareness remains inconsistent, with some leaders having fundamental misconceptions about AI ("Where is the AI office? Who made it?").	Highlights a potential knowledge gap at leadership levels that could impede strategic decision-making and resource allocation for AI.
Organizational AI Strategy	Some organizations have created comprehensive policies and master plans (e.g., mayor's regulation) for technology adoption, including AI.	Provides a structured and organized approach to technology implementation, ensuring consistency and clear direction.
	Specialised units or labs (e.g., Digital Research and Innovation Lab - DRIL) are being established to explore AI applications and collaborate with external experts.	Shows a proactive and innovative approach to exploring and integrating AI, leveraging external expertise.
	Most organizations lack comprehensive AI-specific strategies, instead relying on broader digital transformation frameworks.	Indicates a nascent stage of AI strategic planning, where organizations are still seeking clear models and references for government AI use.
Risk Mitigation	Organizations are developing multi-layered security measures and establishing ISO standards to address data security concerns related to AI implementation.	Demonstrates a proactive effort to build a secure foundation, mitigating primary risks associated with data in AI systems.
	Focus on building data foundations to minimize AI "hallucination" or inaccurate responses by pulling only official, prepared data.	Acknowledges and directly addresses a critical technical risk of AI, aiming to ensure reliability and accuracy of AI outputs.
	Concerns about workforce displacement due to AI automating tasks currently performed by human staff.	Highlights a significant socio-economic risk and potential source of internal resistance, requiring strategic workforce planning and communication.
	While awareness of AI-related risks is growing, comprehensive risk management frameworks specific to AI are still lacking in most organizations.	Indicates incomplete approach to risk management, potentially leaving organizations vulnerable to unaddressed AI-specific challenges.

Source: Author

A. Clear Organizational Vision

The research indicates that having a structured, long-term vision for AI implementation is essential for successful adoption. Organizations that develop formal planning documents demonstrate greater readiness:

> *"I created something like a plan, like a master plan. So, it can't be changed easily. It's for 5 years, 10 years for example. It must be implemented for 10 years. So, if I move to another position, they can't deviate from it. It's the blueprint." (NFID-02)*

Strong leadership support emerges as a prerequisite for AI adoption across all departments studied. As one participant emphatically stated, *"The most important thing is leadership. If the leadership supports it, the budget is available, and we can do anything" (NFID-02)*. Another participant reinforced this perspective with remarkable clarity*: "Leadership commitment is number one. In my experience, digital commitment means leadership commitment is number one. Above everything else" (NFID-10)*. This centrality of leadership aligns directly with Ali et al. (2024) AI readiness framework, which identifies "Leadership & Vision" as a critical factor encompassing both clear organizational vision and top management support.

The research reveals that AI is increasingly being incorporated into high-level strategic planning documents. One participant noted,

> *"The advancement of digital technology plus AI. This is the governor's campaign promise that will be realized in these five years. So, God willing, AI will still be used in the province... Later, the use of AI will most likely be included in the RPJMD [Regional Medium-Term Development Plan]." (NFID-09)*

This integration into formal planning frameworks represents a critical step in legitimizing AI as a strategic priority as mentioned in major news outlet Kompas Cyber Media (2025) regarding the nation’s plan to implement proper AI regulation. However, the findings also indicate this integration remains unclear in many departments, with another participant confirming *"There isn't any yet, Sir, none yet"* (NFID-06) when asked about AI-specific policies from leadership.

B. Management Support, Commitment, and Engagement

Strong leadership support emerges as a crucial enabler for AI adoption. The interviews reveal that when leadership actively champions AI initiatives, resources and organizational priorities align accordingly:

> *"If the leader supports the budget, it's great. Whatever we do, it gets done." (NFID-02)*

Leadership commitment manifests most concretely through budget allocation decisions. As one participant explained, *"I said, IT is expensive, Mr. Mayor. If we don't prepare the budget, we can't do it. The Mayor also supports it. He's extraordinary" (NFID-02)*. This observation aligns with Ali et al.'s (2024) identification of "resource availability" as a critical readiness factor, with leadership budget decisions directly enabling or constraining implementation options. However, the interview reveals a contrast between departments, with one participant lamenting, *"Still just lip service politics, talking, understanding but ultimately not budgeting for it [AI]" (NFID-10)*.

A revealing finding is the significant disconnect between verbal support and actual understanding among some leaders. This knowledge gap manifests in fundamental misconceptions, with one participant recounting leadership questions like "*Where is the AI office? Who made it?" (NFID-13)*. suggesting that non-technical leaders face even greater comprehension challenges. This finding aligns with Yang et al. (2020) observation that even specialists *"largely struggle to envision and prototype AI systems,"* suggesting that non-technical leaders face even greater comprehension challenges.

The research identified a striking pattern where leadership's personal engagement with AI technologies strongly predicts organizational adoption progress (Shan et al., 2023). Leaders who directly experiment with AI tools demonstrate greater commitment to institutional implementation, as exemplified by statements like *"I type directly in ChatGPT... I already got 10 points. In a very limited time" (NFID-02)* and *"I'm also an AI user. Personally. Then for office needs..." (NFID-09).* This personal familiarity enables leaders to envision specific applications and benefits (Dwivedi et al., 2023), facilitating what Fragiadakis et al. (2025) would recognize as the selection of appropriate Human-AI Interaction modes aligned with organizational needs.

These findings collectively demonstrate that leadership and vision alignment represent the foundation upon which all other AI readiness factors rest. Without consistent leadership commitment translated into strategic planning documents, budget allocations, and organizational priorities, even technical departments struggle to advance AI implementation.

C. Organizational AI

The findings highlight the importance of developing comprehensive AI strategies that align with broader organizational goals. Successful strategies include detailed master plans and formal policies,

> *"So, because we have already created a policy as mayor's regulation. It's called the master plan I mentioned earlier. We built it (technology adoption) based on that (master plan) so that it's organized." (NFID-02)*

Some organizations have begun establishing specialized units to explore AI applications, *"At the beginning of this year, in January, I established DRIL. DRIL is the Digital Research and Innovation Lab... I called friends from universities, asked them to make movies for me, using generative AI." (NFID-09).*

However, most organizations lack comprehensive AI-specific strategies, instead relying on broader digital transformation frameworks (Adatia et al., 2019). As one respondent explained:

> *"What form it will take, what model it will follow, there's no formulation yet. We need to find as many references as possible first about the use of AI in government. There's no clear picture yet." (NFID-09).*

Moreover, departmental silos emerge as a persistent structural impediment to coordinated AI development. One participant described this challenge bluntly: "The second difficulty besides my leadership's commitment. Sectoral ego. Oh, silos. They want to build their own system. Develop their own. They want to be famous" (NFID-10).

This study identifies organizational size as a structural factor influencing implementation complexity. Larger departments with more complex processes face greater challenges in comprehensive AI integration compared to smaller, more focused units. The finding aligns with what Wirtz et al. (2018) might recognize as the organizational complexity

challenge in AI implementation, where the number of stakeholders, processes, and legacy systems directly impacts adoption difficulty. The findings suggest that organizational scale requires proportionally more robust change management approaches to achieve successful implementation.

D. Risk Mitigation

Organizations are developing strategies to address risks associated with AI implementation, including data security concerns:

> *"For us, [our security] already multi-layered. We made this previously, we dare to dive into this because we consider it safe." (NFID-02)*

Data security emerges as a primary concern: *"We strengthen the information security, stabilize it, create ISO standards for it." (NFID-10)*.

To mitigate risks of AI hallucination or inaccurate responses, one organization are focusing on building data foundations:

> *"Minimizing hallucinations. It cannot respond differently. We've already designed it [in the blueprint]. We've also discussed it during its creation. So, it only pulls official data that we've prepared." (NFID-02).*

The findings indicate a growing engagement with AI-related risks among organizations. Proactive measures particularly concerning data security are evident, as shown by NFID-02's confidence in their "multi-layered" security infrastructure and NFID-10's efforts to ISO standards. However, current organizational responses may be more tactical and problem-specific rather than embedded within a holistic, AI-centric risk governance structure, potentially leaving further AI risk beyond immediate output and data security.

5.3 Process Readiness

Beyond strategy, how organizations design and integrate AI into their daily operations is critical. Table 5.3 examines the Process Readiness factors, highlighting observed conditions and their practical implications for AI adoption in the public sector.

Table 5.3 Perceived Process Readiness for AI Adoption

Process Readiness Factors	Observed Conditions (from interviews)	Nature of the Challenge/Implication
Business Process Designing	Development of long-term strategic plans ("master plan") for AI implementation to ensure continuity despite leadership changes.	Provides a stable blueprint for digital transformation, ensuring consistent direction for AI adoption over time.
	Formalization of business process design through official policies (e.g., mayor's regulation) to ensure structured implementation.	Prevents fragmented approaches and ensures organized, consistent implementation across different departments.
	Systematic approach to process redesign: prioritize infrastructure development before application deployment (analogy: "build the roads first" before "luxury cars/applications").	Ensures a foundational readiness that supports effective and scalable AI application, preventing investments in applications without adequate underlying support.
	Recognition by local government officials of the shift towards digitalization for acceleration, effectiveness, and cost/time benefits, though implementation is uneven.	Indicates a positive perception of digitalization benefits, but highlights the need for more consistent and widespread implementation of digital processes as a precursor to AI.
AI Business Process Integration	Recognition that collaboration between technology development and data readiness is crucial for supporting AI-driven processes.	Emphasizes the critical interdependency between technological tools and the quality/availability of data for effective AI integration.
	Public organizations are increasingly developing applications with an "AI-minded" approach for current and future needs.	Shows a proactive shift towards incorporating AI thinking into application development, indicating a readiness to leverage AI's potential.
	Integration involves automating routine tasks while maintaining human oversight for complex decision-making (AI taking over "functional positions" that are consistent and routine).	Highlights a strategic approach to AI integration, focusing on efficiency gains in predictable tasks while preserving human roles for critical functions.

	Introduction of AI into existing business processes remains ad hoc rather than systematic, with individuals experimenting with AI as a "tool" rather than a core reference.	Indicates a lack of formalized integration strategies, potentially leading to inconsistent application of AI and limited impact on core business processes.
External Parties Readiness	Collaboration with multiple external technology partners (e.g., Grab consultants, database providers, Amazon Web Services (AWS)) for AI implementation.	Demonstrates a willingness to leverage external expertise and resources to bridge internal capability gaps for AI development.
	Preference for maintaining internal control over implementation while leveraging external expertise for design and planning.	Suggests a balanced approach to external partnerships, aiming to build internal capacity and ownership while benefiting from specialized external knowledge.
	Academic institutions (e.g., University of Gajah Mada, University of Indonesia) play a crucial role as partners in forming teams for AI readiness (e.g., smart city teams).	Highlights the importance of partnerships with academia for research, talent, and specialized knowledge in AI.
	Varying levels of readiness among partners and suppliers to support AI initiatives, with challenges in developing specific AI applications.	Indicates that the ecosystem of external partners may not be uniformly ready, posing potential bottlenecks for AI project development.
	Citizen readiness is a significant challenge for digital platform adoption, let alone AI implementation for public services.	Identifies a critical external barrier to public service AI adoption; citizens' willingness to use digital tools directly impacts AI service uptake.
	Implementation of gradual approaches (e.g., "district digitalization") to encourage digital adoption among citizens, often requiring incentives or necessity.	Shows a pragmatic strategy to overcome citizen resistance by slowly transitioning them to digital platforms, which is a prerequisite for AI-powered public services.

Source: Author

A. Business Process Designing

The interviews indicates that strategic business process design is fundamental to AI readiness. Organizations must develop comprehensive plans that align technological implementation with organizational goals and processes.

> *"I created something like a plan, like a master plan. So it can't be changed easily…So if I move to another position, they can't deviate from it. It's the blueprint." (NFID-02).*

The statement highlights the need for long-term strategic planning that remains consistent despite leadership changes, ensuring continuity in digital transformation efforts. The business process design should be formalized through official policies. One respondent (NFID-02) described how (NFID-02) *"create what's called a mayor's regulation... master plan"* to ensure structured implementation and prevent fragmented approaches across different departments. Build upon that masterplan, local government officials recognize the transition toward digital processes, though implementation remains uneven. As one official noted: *"Almost all our activities are already moving toward digitalization. We are indeed encouraging this. Because from the positive side, we see the benefits in terms of acceleration, effectiveness, cost, time, and so on" (NFID-03).*

The interviews also reveal that process design must be approached systematically, starting with infrastructure development before application deployment to general users. As stated by one interviewee: *"Applications [such as AI] are like luxury cars [analogy]... Before that I should build the roads first. The applications can wait. Luxury cars are easy to buy but the roads come first" (NFID-02)*. This suggests stage-based progression models that extends current theoretical models by emphasizing that prerequisite capabilities must be established before advanced AI applications can be successfully deployed, adding assumptions about technology in developing contexts (Wirtz et al., 2018).

B. AI Business Process Integration

The integration of AI into existing business processes requires careful planning and data preparation. As one respondent noted: *"Therefore, collaboration between the technology we create, and data readiness must also already use what needs to support AI" (NFID-*

02). This statement is coupled with a strategic intent to embrace AI, evidenced by the same respondent's claim that future applications are *"already toward AI-minded."*

> *"Our applications for this year and the next are already toward AI-minded. We can't leave that behind" (NFID-02)*

Furthermore, process integration also involves automating routine tasks while maintaining human oversight for complex decision-making (Maragno et al., 2023) with one interviewee observed, *"AI tends to need to take over functional positions… if the position is consistent, and follows routines, that's suitable"* (NFID-01). However, the introduction of AI into existing business processes remains ad hoc rather than systematic. Individuals within the organizations are experimenting with AI but haven't fully integrated them into their organizations' core processes: *"As I mentioned earlier, this is a tool. A tool. Being a tool, we can use it as one reference, but not the main reference" (NFID-08).* This statement reveals the high preference of AI operations to support human decision-making (Liao et al., 2022).

This suggests that while organizations acknowledge AI's transformative potential and are beginning to lay the groundwork, the journey towards deep, systematic integration into core business processes is still in its early stages, with AI predominantly serving as an auxiliary rather than a central operational driver.

C. External Parties Readiness

The readiness of external parties, including technology partners, academic institutions, and citizens, is a critical component for the successful implementation of AI in the public sector. The findings indicate that public organizations are actively seeking collaborations with various external entities, including technology consultants and database providers, to support their AI initiatives. One respondent described working with multiple partners: *"For consultants, I collaborate with those who previously in Grab in Singapore... For the database, we take it from Jogja... We collaborate with AWS Amazon" (NFID-02).* However, the respondent also reveals a preference for maintaining internal control over implementation while leveraging external expertise for design and planning. As the interviewee stated: *"I don't want to be tied to consultants... So, I asked help from them to plan, design, but then we handle the implementation" (NFID-02).*

Academic institutions also emerge as vital partners, with one respondent noting the involvement of universities in forming specialized teams, *"We form a team first. For [example] the smart city team, we involve universities... I bring in people from University of Gajah Mada and from University of Indonesia. I call everyone who study it" (NFID-02).*

In other interviews revealed varying levels of readiness among partners and customers to support AI initiatives:

> *"I challenge and call my friends from IT universities here... To create an AI application for me [city department] that can be used for our children to play games but using the northern Kalimantan [traditional] language" (NFID-09).*

> *"Very few people utilize that technology [Digital District Platform]. They still want to come to the district office. They still request to be served manually" (NFID-02)*

While there are proactive efforts to engage IT universities in developing localized AI applications (NFID-09), the adoption of existing digital platforms by the public remains low, with a preference for traditional, manual service delivery (NFID-02). This highlights a gap in "Customer Readiness," a crucial aspect of process readiness framework by Ali et al. (2024)

To address this, organizations are employing gradual strategies to encourage digital adoption, such as familiarizing citizens with platforms within public offices before expecting remote use. One interviewee described their strategy: *"It's called district digitalization. So, in the district office, I prepare platform... So, when people come to the district office people [we teach them to] must use this platform there [in the office], or they can do it from home... Sooner they will choose to do it from home" (NFID-02).*

The sentiment that *"People need to be pushed. If they need it, they will surely learn" (NFID-03)* suggests that creating a perceived necessity or incentive is key to improving citizen readiness for AI-driven public services. Therefore, achieving successful AI implementation necessitates not only technological and strategic readiness within the organization but also a concerted effort to foster readiness and acceptance among all external stakeholders (Adatia et al., 2019).

5.4 Technology Readiness

Infrastructure and data governance are the backbone of AI readiness. Table 5.4 provides an overview of the Technology Readiness factors, highlighting observed conditions and their critical implications for AI adoption in government.

Table 5.4 Perceived Technology Readiness for AI Adoption

Technology Readiness Factors	Observed Conditions (from interviews)	Nature of the Challenge/Implication
Technology Infrastructure Readiness	Centralized management of infrastructure (e.g., Internet, data connection) by the city government.	Enables efficient resource allocation and consistent service delivery across departments, ensuring foundational support for AI.
	Infrastructure development follows strategic master plans (5-10 years), ensuring continuity beyond political cycles.	Reflects a recognition of the need for sustained investment and long-term vision in technology infrastructure, crucial for AI.
	Significant geographical barriers (e.g., vast area of East Kalimantan) to telecommunication infrastructure development.	Necessitates innovative solutions and partnerships (e.g., hybrid cloud models) to overcome physical limitations and provide necessary connectivity.
	Implementation of hybrid infrastructure models, leveraging cloud services (e.g., AWS Cloud) for high-performance computing needs.	Demonstrates pragmatic problem-solving, addressing limitations of on-premises infrastructure and supporting AI's demanding computational requirements.
	Development of AI-powered executive dashboards for improved decision-making at leadership levels.	Represents a forward-looking initiative to harness AI for strategic insights, potentially improving resource allocation and policy implementation.
	Departmental silos and "sectoral ego" leading to fragmented infrastructure development and redundancies.	Creates inefficiencies and hinders comprehensive, integrated infrastructure essential for organization-wide AI readiness.

Data Governance Readiness	Efforts to standardize data collection and storage practices, including metadata preparation.	Recognizes that consistent data structures and metadata are foundational for successful AI implementation and integration of disparate systems.
	Mandates for centralized data storage for all regional government units.	Represents a top-down approach to address data fragmentation, aiming for better data governance and accessibility for AI.
	Challenges in implementing data governance frameworks, with accounting data remaining "scattered" and "isolated" despite policies.	Highlights the practical difficulties in achieving full data integration and standardization across complex organizational structures.
	Ongoing challenges with data quality, transitioning from paper-based records to structured digital data with greater granularity.	Essential for providing the detailed, actionable data required by AI systems for effective analysis and service delivery.
	Concerns about AI training data relevance due to reliance on foreign contexts and languages ("its brain is still a foreign brain," "more inputs from abroad").	Highlights the "localization challenge," where generic AI models may not adequately address local needs or cultural nuances.
	Improved departmental data sharing through interconnected infrastructure, facilitating real-time data access and service integration.	Represents significant progress in breaking down data silos, enabling more efficient public services through integrated data.
	Tension between data accessibility for AI application development and the protection of sensitive information.	Reflects the challenging balance required in government contexts between leveraging data for AI and ensuring privacy and security.
	Development of multi-layered security measures and ISO standards for data platforms.	Demonstrates a maturing understanding of cybersecurity requirements for AI-ready data platforms, addressing sensitive data concerns.
	Implementation of governance policies (e.g., Mayor's Regulation) to ensure consistency in	Attempts to reinforce technological solutions with formal policies to ensure coherent infrastructure

	application development and address the silo issue.	development and prevent fragmentation.
	Fundamental concerns about implementing AI without proper data infrastructure, with some noting "Why is it [big data platform] being skipped."	Highlights a critical "sequencing challenge" – the necessity of establishing data infrastructure and governance as a prerequisite for successful AI implementation.

Source: Author

A. Technology Infrastructure Readiness

The interviews demonstrate that centralized management is a key approach to infrastructure development in local government. As one respondent explained:

> *"All the infrastructure in Pemda [City Government] Samarinda, especially the Internet, we control it all from here. So, all the regional official devices are controlled by us from here. So how many Mega [data connection] they get, we manage all of that from here." (NFID-02)*

This centralized approach enables more efficient resource allocation and consistent service delivery across departments. The infrastructure development follows strategic master plans spanning 5-20 years as in Regional Long-Term Development Plan, ensuring continuity regardless of leadership changes (Pemerintah Provinsi Kalimantan Timur, 2024). This long-term planning approach reflects a recognition that technology infrastructure requires sustained investment beyond political cycles.

This centralization approach in technology management could indicate better process when introducing new infrastructure required for AI. However, the research also reveals drawbacks due to department autonomy, with another participant noting departmental resistance: *"Sectoral ego. Oh, silos. They want to build their own system" (NFID-10).* This tension between centralization and department autonomy creates ongoing implementation challenges.

The research also uncovered geographical barriers to technology infrastructure development, as one interviewee pointed out:

> *"East Kalimantan is 127 thousand [square kilometers]. Its area is equal to the entire Java Island. This is East Kalimantan's problem with telecommunications. Due to geographical and demographic factors." (NFID-10)*

These geographical challenges necessitate require solutions and partnerships. To tackle the challenge for high-performance computing needs, the interviews show implementation of hybrid infrastructure models in collaboration with external parties, *"we finally used AWS Cloud. Some [server] are there." (NFID-02)*. This hybrid approach demonstrates practical problem-solving, leveraging cloud capabilities where on-premises infrastructure would be inadequate or cost-prohibitive.

Beyond basic infrastructure, the research identified forward-looking initiatives leveraging AI technologies. A significant initiative is the development of AI-powered executive dashboards: *"I'm creating a program now. It's called an executive dashboard. Executive dashboard, but it's AI-based." (NFID-02)*. The success of such applications, however, is linked to the quality and accessibility of underlying data (Chen et al., 2023; Wirtz et al., 2018), and the overall technological readiness of the organization (Ali et al., 2024). These dashboards, by providing analysed insights, can support the creation of a data-driven organization, which is a noted opportunity in AI implementation (Maragno et al., 2023).

B. Data Governance Readiness

The interview findings reveal complex data governance challenges across public sector organizations. Data availability varies significantly across departments, with efforts to standardize data collection and storage practices. NFID-02 explains: *"So now I'm preparing the metadata. We've prepared it."* This focus on metadata preparation reflects an understanding that consistent data structures are important for AI implementation. Without standardized metadata, integration of disparate systems becomes extremely difficult. This aligns with the principle that AI effectiveness fundamentally relies on high-quality, unbiased, and relevant data (Chen et al., 2023; Wirtz et al., 2018). Some organizations have recognized this need and established centralized approaches: *"All regional government units are required to store their data here" (NFID-02)*. This mandate for centralized data storage represents a top-down approach to data governance, attempting to address fragmentation issues. However, implementation challenges remain substantial, as another respondent acknowledged: "*If you open accounting data, it is still scattered. It's still isolated. But I let it be." (NFID-10)*. This contrast between policy and

reality demonstrates the ongoing challenges of implementing data governance frameworks across complex organizational structures.

Data quality presents ongoing challenges, with organizations working to transition from paper-based records to structured digital data with greater granularity:

> *"In the past, we only had data on paper. That there are poor people in Samarinda, for example, 2000 people. But who are those 2000? Mr. ACB. But where are they located? Now, it has to be directed towards that." (NFID-02)*

This example illustrates the evolution from aggregate, low quality data to detailed, actionable information that includes spatial components necessary for effective service delivery. The transformation from paper to digital systems represents not just a change in medium but a fundamental shift in data quality and utility, this highlights ongoing efforts to improve data quality, a critical component of data governance readiness (Ali et al., 2024).

Beyond basic data quality issues, the interviews revealed more sophisticated concerns about AI training data relevance:

> *"This AI is also said to be not yet optimal. Because its brain is still a foreign brain... This AI has more inputs from abroad. Yes, English. English and the policies or analyses use principles from abroad." (NFID-04)*

This insight highlights an important consideration often overlooked in AI implementation; those algorithmic systems trained on foreign contexts potentially misaligning with local contexts and policies, a crucial consideration for avoiding bias and ensuring AI utility (Chen et al., 2023; Gillespie et al., 2023; Mayer et al., 2025; Wirtz et al., 2018)

Departmental data sharing has improved through strategic infrastructure developments. The practical benefits of this approach are evident in-service delivery improvements:

> *"For example, a Health Center, the Health Center just needs to type in a person's ID. They just type it. So, if this person wants to deal with the Health Center for treatment, they just type in their ID. Their data already appears." (NFID-02)*

These service improvements demonstrate how enhanced data accessibility directly benefits citizens through faster, more efficient public services. However, the concern between accessibility and security remains high, *"Because the data is quite sensitive. That's also one of them. Once we input or it takes sensitive data, that also becomes a concern." (NFID-04).* This security concern reflects the challenging balance between data openness for AI application development and the protection of sensitive information, particularly in government contexts. To address these concerns, organizations are developing comprehensive data platforms with enhanced security measures: *"For us, [our security] already multi-layered. We made this previously, we dare to dive into this because we consider it safe." (NFID-02)* and *"We strengthen the information security, stabilize it, create ISO standards for it." (NFID-10),* recognizing the need for robust cybersecurity precautions (Dwivedi et al., 2021; Wirtz et al., 2018).

Beyond technical solutions, governance policies are being implemented to ensure consistency:

> *"This Mayor's Regulation will emphasize that regional government units cannot create applications outside of what is made by Kominfo [Department of Communication and Information]. So that the structure of making everything is good." (NFID-02)*

This regulatory approach attempts to address the silo issue through formal policy, demonstrating recognition that technological solutions alone are insufficient without supporting governance frameworks. Despite these varied initiatives, the interviews revealed fundamental concerns about implementing AI without proper data infrastructure:

> *"[We]want to design AI but there is no big data [platform]... Why is it [big data platform] being skipped." (NFID-12)*

This critical observation highlights a key insight from the research, that organizations need to establish data infrastructure and governance before successful AI implementation is possible (Ali et al., 2024).

5.5 Organizational Environment Readiness

Beyond technical capabilities, the internal dynamics, culture, and resource landscape of an organization are vital for AI success. Table 5.5 provides an in-depth look at the Organizational Environment Readiness factors, highlighting interview observations and their crucial implications for AI adoption in the public sector.

Table 5.5 Organizational Environment Readiness for AI Adoption

Organizational Environment Readiness Factors	Observed Conditions (from interviews)	Nature of the Challenge/Implication
Organizational Structure Dynamics	Generational gap between older and younger officials leads to tension regarding technology adoption and work ethics.	Creates friction in collaboration and knowledge transfer, impacting overall AI implementation efficiency and fostering intergenerational conflict.
	Organizational structures are shifting towards more functional roles rather than rigid hierarchical structures (e.g., mayor's policy for "efficiency" and "functional aspects").	Represents a fundamental reconceptualization towards agile frameworks, creating opportunities for more effective AI integration by removing hierarchical barriers.
Environment Acceptability to Change	Innovation capability varies significantly across departments, heavily influenced by leadership.	Leads to an uneven landscape for AI adoption where some departments advance rapidly while others lag, complicating coordinated government-wide initiatives.
	Establishment of dedicated innovation units (e.g., Digital Research and Innovation Lab - DRIL).	Creates structured pathways for AI exploration and implementation, establishing centers of excellence to drive organizational learning.
	Creation of collaborative physical spaces (e.g., redesigned meeting rooms for team-based work, non-traditional seating).	Facilitates intergenerational and inter-skill collaboration, breaking down traditional hierarchical barriers to open communication for AI adoption.

	Emphasis on human-AI collaboration ("don't let it [AI] work on its own").	Recognizes AI as a collaborative partner, highlighting the importance of human oversight and engagement in AI processes for effective integration.
	Individual attitudes toward technology can transcend generational lines, suggesting personality-based openness to change.	Indicates that demographic factors are not deterministic, allowing for targeted engagement strategies based on individual characteristics rather than age.
	External factors (e.g., infrastructure development due to IKN development) can accelerate change adoption.	Shows that external pressures can create imperatives for change, overcoming internal resistance and influencing organizational adaptability.
Resource Availability	Dedicated budget allocation is a significant factor in AI readiness and implementation progress.	Financial commitment directly translates into implementation capability, moving AI initiatives from verbal support to concrete execution.
	AI initiatives often require substantial initial investment in external technology platforms and expert consultation.	Highlights the significant financial commitments needed for AI, which many organizations may struggle to secure.
	Budget growth can be achieved through persistent advocacy and demonstrated success.	Illustrates how strategic advocacy and successful project outcomes can secure increasing financial resources over time.
	Disconnect between verbal commitments and actual budget allocation ("lip service politics").	Highlights the challenge of translating leadership enthusiasm into concrete financial commitments, hindering AI progress in resource-constrained environments.
	Scarcity of skilled human resources, with capabilities varying significantly across organizations.	Presents a significant hurdle to effectively implement and maintain AI initiatives due to a lack of internal expertise.
	Investment in building internal AI capabilities (e.g., hiring expert programmers) and	Creates internal capacity for ongoing AI development and

	reliance on contract workers for specific tasks.	adaptation, balancing external expertise with self-sufficiency.
	Strategic approaches to human resource development, including targeting younger generations for recruitment.	Leverages generational differences in technological aptitude to build organizational capability and create multi-generational teams.
	Specific AI-related training programs are largely absent, limiting upskilling of existing staff.	Represents a significant gap in organizational readiness, impeding broad-based AI literacy and specialized skill development.
	Initial steps by HR agencies (BKD) towards assessing employee capabilities, though not directly focused on AI.	Indicates early recognition of the need for structured human resource development for AI, laying foundations for future capacity building.

Source: Author

A. Organizational Structure Dynamics

Organizational size emerges as a significant factor influencing AI readiness, with larger entities frequently encountering more intricate implementation hurdles. A notable generational gap in technological adoption is also apparent. For instance, public officials over 30-40 years of age, who may still have considerable tenures, are sometimes perceived as *"idle toward technology"* and *"difficult to change" (NFID-10),* creating friction in assimilation processes.

This generational gap is further compounded by perceptions of differing work ethics and technological fluency. One interviewee observed, *"...there is a kind of gap between Boomer employees, Gen X. There's a gap because these Gen Z kids are intellectually smart and technologically savvy, but their ethics are lacking" (NFID-02)*. Such perspectives can foster organizational tensions, wherein older generations may view younger officials as lacking respect, while younger staff might perceive senior colleagues as resistant to innovation. These intergenerational dynamics can directly impair collaboration and knowledge transfer, both of which are critical for the successful implementation of AI (Mayer et al., 2025; World Economic Forum, 2025)

In response to technological advancements and the need for efficiency, a shift towards more functional roles rather than rigid hierarchical structures is currently underway, with policies favouring *"not much structural [elements], but [more emphasis on] the functional aspects" (NFID-04).* This structural evolution, moving towards more agile frameworks, is essential for AI integration as organizational structure directly impacts an organization's capability and receptiveness to change (Ali et al., 2024; Maragno et al., 2023).

B. Environment Acceptability to Change

Innovation capability varies significantly across departments and is heavily influenced by leadership. Organizations with forward-thinking leaders demonstrate greater AI readiness regardless of generational composition. This suggests that effective leadership can overcome demographic challenges through strategic vision and commitment to technological advancement.

> *"I'm the one making policies for all AI-based applications because I understand that this technology must be embraced. We must utilize it. We cannot detach ourselves from it" (NFID-02).*

Some departments have established dedicated innovation units, *"I founded DRIL. DRIL stands for Digital Research and Innovation Lab... because we have an innovation function" (NFID-09).* These institutional commitments to innovation create structured pathways for AI exploration and implementation, establishing centres of excellence that can drive organizational learning and technology diffusion. However, one interviewee indicates that innovation capability is not uniform across public sector organizations, *"Not all government agencies are heading in that direction yet" (NFID-02).* This uneven distribution of innovation capability creates a landscape where some departments surge ahead while others left behind, complicating coordinated AI adoption across government.

This creates a paradoxical situation where those with decision-making authority (typically older generations) are often the least adaptable to the technologies they need to approve: *"In bureaucracy, there's a hierarchy... Generation X is now mostly in official positions, decision-makers in civil service" (NFID-02).* This paradox represents a structural barrier to AI adoption, as the very individuals with the power to advance technological initiatives may be the most resistant to them, creating a bottleneck in the innovation process.

However, individual attitudes toward technology sometimes transcend generational lines, *"It depends on the person's personality, whether they want to change or not, for example" (NFID-06).* This observation suggests that demographic factors are not deterministic and that personal characteristics can override generational tendencies, opening possibilities for targeted engagement strategies based on individual openness rather than age cohort. External factors can also accelerate change adoption, *"It was forcibly accelerated. Telecommunications access that previously sought 2-3 towers built in East Kalimantan over half a period. Because of [the development of] IKN, in just one year 40-50 towers could be built" (NFID-10).* These external pressures create imperatives for change that can overcome internal resistance, demonstrating how contextual factors can significantly influence organizational adaptability.

C. Resource Availability

Resource availability, encompassing both financial and human capital, emerges as a critical determinant of AI readiness within public sector organizations. The allocation of dedicated budgets is a tangible manifestation of leadership support, directly translating into implementation capability. As one interviewee highlighted, *"I said, IT is expensive, Mr. Mayor. If we don't prepare the budget, we can't do it. The mayor also supports it." (NFID-02).* This financial commitment is crucial, given that AI initiatives often necessitate substantial initial investments for external expertise, such as consultants from Singapore, and technology platforms like AWS Amazon (NFID-02). Such investments align with the recognized economic challenges of financial feasibility and operational costs associated with AI adoption (Dwivedi et al., 2021; Lui et al., 2018; Wirtz et al., 2018).

Budget growth can be achieved through persistent advocacy, "*2020 I entered here, my budget was only around 30 M [Billion Rupiah]. After 1 year here it became 60. Add another year it became 80. Another year 90. And now it's already 125 M [Billion Rupiah]" (NFID-10).* This progressive budget expansion illustrates a pathway to securing increasing financial resources, thereby enhancing an organization's capability for AI development, a key component of Organisational Environment Readiness (Ali et al., 2024)

However, in other department organizations there's often a disconnect between verbal commitments and actual budget allocation, *"Still just lip service politics, talking, understanding but ultimately not budgeting for it" (NFID-10).* This gap between rhetoric and reality highlights the challenge of translating leadership enthusiasm into concrete financial commitments, particularly in resource-constrained public sector organizations. Without budgetary follow-through, even the most enthusiastic verbal support remains ineffective in advancing AI initiatives.

Beyond financial constraints, the availability of skilled human resources presents another significant hurdle, with capabilities varying markedly across organizations. Some departments have proactively invested in building internal AI capabilities by hiring dedicated technical personnel, such as *" have expert staff, about 8 programmers who just joined after being selected" (NFID-02).* This approach fosters internal capacity, reducing long-term dependency on external providers and aligning with the "People Readiness" factor, specifically fostering employee AI literacy and desired skillsets (Ali et al., 2024). Other organizations adopt a hybrid model, using contract workers for specific tasks like data input (NFID-10) or engaging consultants for initial setup with a plan for internal continuation: *"I pay a lot, but once it's done, we continue it ourselves" (NFID-02).* This approach balances external expertise with internal capability development, creating a pathway toward organizational self-sufficiency in AI management. Furthermore, a forward-looking strategy involves targeting younger generations, such as Gen Z and Alpha, who *"really have that talent"* (NFID-04), to address skill gaps and build a workforce equipped for future technological demands.

6 Discussion

This chapter interprets the empirical data on human-AI interaction and organizational AI readiness within the East Kalimantan Province Government. By exploring the interplay of human perceptions and organizational readiness factors, the analysis progresses from interpreting key findings to outlining theoretical contributions, practical applications, research limitations, and future directions, ultimately extending current understanding of AI integration in government.

6.1 Interpretation of Key Findings

Building upon the findings across the five factors of AI readiness – people readiness, strategy and policy readiness, process readiness, technology readiness, and organization environment readiness – this section synthesizes the empirical data into six themes. These themes represent key insights emerging from the analysis of interviews, offering a consolidated understanding of the perception of human-AI interaction and organization readiness in the East Kalimantan Province public officials. The following Table 6.1 provide description of each identified theme, highlighting their characteristic.

Table 6.1 Thematic Summary of the findings

Theme	Description	Characteristic
Generational Dynamics in AI Adoption	Notable divide between older decision-makers reluctant to technology and younger staff more open to AI adoption.	Decision-making authority concentrated among older generations less comfortable with technology, creating a mismatch between positional power and technological aptitude.
Concerns About Job Displacement	Pervasive anxiety about AI replacing human workers creates psychological barriers to adoption across all organizational levels.	Worries of workforce reduction, particularly for routine positions, drives preference for human-controlled AI despite recognition of efficiency benefits.

Theme	Description	Characteristic
Informal Knowledge Transfer Patterns	Knowledge about AI tools spreads through improvised community of practice networks rather than formal training programs.	Creates uneven knowledge distribution centred around individual champions, leading to knowledge silos that facilitate experimentation but lack standardization.
Leadership and Vision Alignment	Leadership commitment and strategic prioritization of AI fundamentally determine organizational capacity for implementation.	Requires both strategic vision in official planning documents and concrete budget allocations, with leaders' personal engagement with AI strongly predicting organizational adoption.
Infrastructure and Data Governance Challenge	Technical readiness barriers spanning physical infrastructure limitations and data governance deficiencies.	Organizations often attempt AI implementation before establishing proper data foundations, facing challenges with connectivity, data silos, and the relevance of AI systems to local contexts.
Structural and Cultural Barriers	Organizational architecture, power dynamics, and collective mindsets determine how readily AI can be integrated.	Hierarchical bureaucracy and departmental silos impede innovation, while generational resistance patterns and professional identity concerns create cultural obstacles to adoption.

Source: Author

The generational dynamics in AI adoption theme highlights a significant divide within organizations, older decision-makers often show reluctance towards new technology, while younger officials tend to be more open to adopting AI. This creates a challenging mismatch where individuals with the authority to make decisions are less comfortable with the technology, thereby potentially hindering organizational progress in AI integration. Closely related are concerns about job displacement, a pervasive anxiety across all organizational levels. This worry about AI replacing human workers creates significant psychological barriers to adoption. Even when efficiency benefits are recognized, a preference for human-controlled AI often persists (Zhang & Gosline, 2023), driven by fears of workforce reduction, especially in routine positions.

In the absence of formal AI training programs, knowledge about AI tools and concepts predominantly disseminates through informal, community of practice networks. While this fosters rapid knowledge dissemination and the rise of individual "champions", it also leads to uneven knowledge distribution and potential knowledge silos, making standardization difficult. Leadership and Vision Alignment emerges as a foundational theme, emphasizing that the commitment and strategic prioritization of AI by leadership are paramount. This requires not only a clear strategic vision documented in official plans but also concrete budget allocations. The personal engagement of leaders with AI strongly predicts how readily an organization will adopt these technologies.

Furthermore, organizations confront significant technical readiness barriers, particularly limitations in physical infrastructure and deficiencies in data governance. Within this context, findings indicate that public organizations attempting AI implementation without establishing these crucial data foundations encounter issues such as poor connectivity, fragmented data silos, and difficulties ensuring local relevance, ultimately rendering their AI systems unsustainable. Beyond technical readiness, structural and cultural obstacles also impede AI integration. Structurally, elements like hierarchical bureaucracies and departmental silos can hinder innovation. Culturally, existing power dynamics, resistant collective mindsets, generational gap, and concerns about professional identity create significant hurdles to successful AI adoption.

6.2 Theoretical Implications

6.2.1 Contributions to Human-AI Interaction Theory

This study extends Human-AI Interaction theory by examining how public officials perceive and engage with AI systems within the context of regional government in Indonesia. Our study contributes to human-AI interaction theoretical frameworks in several significant ways.

First, our findings provide empirical validation for (Fragiadakis et al., 2025) theoretical model of interaction modes, while revealing contextual factors that influence mode preferences. This tendency toward human-centric interaction is evident in statements like *"As I mentioned earlier, this is a tool. A tool. Being a tool, we can use it as one reference, but not the main reference" (NFID-08).* This preference suggesting that cultural and

institutional factors shape interaction mode preferences beyond the task-focused variables emphasized in human-AI interaction theory.

Second, our findings on informal knowledge transfer provide a complementary perspective to the Guidelines for Human-AI Interaction by Amershi et al. (2019), suggesting that human-AI interaction research must account for organic, peer-based learning processes that operate alongside—or in place of—formal training initiatives, particularly in developing country contexts.

These contributions collectively demonstrate that human-AI interaction theory and guideline could be strengthened beyond its current focus on technical system design by incorporating social, cultural, and organizational dimensions that fundamentally shape how humans interact with AI systems. By demonstrating the significant role of cultural institutional factors and informal learning networks on the preference and adoption of HAI modes in a public sector, this study enhances our understanding of the complex sociotechnical systems that emerge at the intersection of human actors and artificial intelligence, especially in developing country context.

6.2.2 Advancing AI Readiness Frameworks in Public Sector

This study advances theoretical frameworks for AI readiness in public sector organizations by empirically validating and extending the five-factor model of Ali et al. (2024). While confirming the model's core constructs, the study uncovers the nuances. It extends 'people readiness' by demonstrating how generational demographics create uneven adoption landscapes and by highlighting the importance of informal knowledge transfer as a pathway to capability development, beyond formal training. The study enriches 'process readiness' theory by emphasizing sequential capability development, positing that business process design is a prerequisite for AI implementation and advocating for stage-based progression models in readiness frameworks.

The study refines 'technology readiness' by incorporating geographical constraints' impact on infrastructure, showing how vast territories necessitate hybrid infrastructure solutions. It contributes to 'data governance readiness' by identifying cultural relevance as a previously undertheorized dimension, arguing that AI systems require training on culturally contextualized data to be effective in developing nations. The study offers insights on the connection between 'organizational environment readiness' and resource

availability, suggesting a cyclical mutually reinforcing dynamic where advocacy for acceptability to change translates into resource allocation. This enhances Ali et al. (2024) AI readiness frameworks and provide nuanced guidance for their application in diverse institutional settings, especially within the public sectors of developing countries.

6.3 Practical Implication: Policy Recommendation

Aligning National Strategies with Local Readiness in East Kalimantan

Stranas KA 2020–2045 aims to position Indonesia among the top 10 digital economies by 2045, prioritizing AI adoption in sectors like bureaucratic reform. However, AI development or utilization focus is notably absent from the national medium-term development plans for 2020–2024 and 2025–2029. While there are scattered examples of AI implementation within the Indonesian public sector, these often appear as isolated efforts. Moreover, the growing recognition of AI's potential in East Kalimantan Province, particularly considering the IKN new capital city development, highlights a need for guidance, support, and collaboration with the central government. Refer to Table 6.2 for a comprehensive list of policy recommendations concerning AI readiness in the East Kalimantan Province Government.

Table 6.2 Policy Recommendation for East Kalimantan Province Government

Policy Recommendation	Description
Integrate AI into Regional Development Plans (RPJMD)	Explicitly incorporate digital transformation toward AI adoption and development as a strategic priority within East Kalimantan's Regional Medium-Term Development Plan (RPJMD). This formal integration will legitimize AI as a key area for investment and focus, ensuring alignment with national aspirations while addressing local needs and challenges.
Develop AI Roadmap	Create a detailed AI roadmap tailored to Kalimantan's unique geographical, demographic, and economic contexts. This roadmap should identify specific use cases for AI in local governance, public services, and key industries within the province, accounting for existing infrastructure limitations and data maturity levels.

Policy Recommendation	Description
Establish a Dedicated AI Task Force	Form a dedicated cross-departmental task force within the province government, comprising representatives from various agencies, local universities, and industry. This body would be responsible for coordinating AI initiatives, translating national policies into actionable local plans, and ensuring consistent implementation across regional government institutions.
Pilot AI Projects with National Strategy Alignment	Focus initial AI pilot projects on areas prioritized by the National AI Strategy (e.g., bureaucratic reform, smart city initiatives interconnected with IKN). These pilots should be designed to demonstrate tangible benefits, build local capacity, and provide empirical data for scaling up, while considering human-AI interaction perceptions.
Comprehensive AI Literacy and Skill Development Programs	Implement structured, training, and upskilling programs for public officials at all levels, specifically addressing varying generational comfort levels and AI understanding. These programs should not only cover technical skills but also focus on fostering an understanding of human-AI collaboration (e.g., Human-Centric vs. Symbiotic modes), ethical considerations, and how AI augments rather than solely replaces human roles.
Formalize Data Governance and Infrastructure Development	Prioritize the establishment of data infrastructure and adherence to Indonesia's One Data Policy (ODP) principles. This includes standardizing data collection, ensuring data quality and interoperability across departments, and strengthening cybersecurity measures for sensitive data. Emphasize that proper data infrastructure is a prerequisite for effective AI deployment.

Source: Author

6.4 Limitations and Future Research Directions

6.4.1 Limitations

This study, while providing valuable insights into Human-AI interaction and organizational readiness in the East Kalimantan Province Government, contains several limitations. The qualitative methodology, while offering depth, employed a small sample of 13 participants from a single province. This limits the generalizability of the results to the broader Indonesian governmental context, particularly given East Kalimantan's

unique characteristics as the location for future capital and its distinct socioeconomic, administrative landscape. Furthermore, the reliance on self-reported data from interviews introduces potential biases, as participant responses could not be confirmed with observational data to verify actual practices against stated perceptions.

Given the rapidly evolving nature of AI technologies and policies, these findings represent a specific juncture in Indonesia's digital transformation that may quickly evolve as implementation progresses. Additionally, the study's exclusive focus on public officials' perspectives excludes citizen viewpoints, which limits understanding of the demand-side dynamics of AI adoption in public services. As noted in the findings, citizen readiness emerged as a challenge, yet this study could not directly capture citizen perspectives.

6.4.2 Future Research Directions

Acknowledging the limitations of this study reveals several promising directions for future research. First, quantitative studies with larger, samples across multiple Indonesian provinces would enhance generalizability and enable statistical validation of the relationships identified between factors such as generational differences and AI readiness. Such research could develop and validate measurement instruments for assessing AI readiness dimensions in developing country contexts.

Second, comparative studies examining AI readiness across different Indonesian provinces or between Indonesia and other ASEAN countries would illuminate how geographical, cultural, and administrative differences influence adoption patterns. These comparisons could identify transferable implementation strategies while accounting for contextual specificities, extending (Wadipalapa et al., 2024) work on Indonesian digitalization policies.

Third, mixed methods approach combining interviews, surveys, observational data, and system analytics would provide more confirmation of findings. Observing actual human-AI interactions within government settings would complement self-reported perceptions, addressing potential reporting biases identified in our limitations.

Finally, research specifically examining citizen perspectives on AI-enhanced government services in Indonesia would complement this study's organizational focus. Understanding

citizen trust, technology acceptance, and digital literacy levels would provide a more comprehensive picture of the ecosystem in which public sector AI operates, building on insights from Raees et al. (2024) regarding public perceptions of AI.

These future research directions would collectively advance both theoretical understanding and practical implementation of AI in public sector organizations, particularly in developing country contexts where research remains limited.

7 Conclusions

The integration of AI within the East Kalimantan Province Government presents a complex interplay of human perceptions and organizational readiness factors. This study explores the perceptions of public officials regarding human-AI interaction within their work environment and to identify the factors influencing organizational AI readiness within the East Kalimantan Province Government. The findings reveal the ambitious goals of national AI strategies, confronting distinct challenges and opportunities within a specific regional context.

The public officials' perceptions are varied, followed by a tension between technological curiosity and institutional caution. There is a significant generational gap in AI adoption; the younger officials (Gen Z) demonstrating faster acceptance while the older generations (Gen Boomer, Gen X and Gen Y) often hold decision-making authority regarding AI utilization. These differences impact to the preferences human-AI interaction modes, where older officials favour human-centric approaches. It means that AI strictly assists human oversight. On the other hand, younger officials are more open to symbiotic modes involving shared decision-making.

There is an anxious tension about job displacement among all interviewed public officials that creates a significant barrier in AI adoption, concerning the extent of individual job security to broader questions about a major change of public service. This tension also drives the human-centric interaction modes preference, emphasizing human character to minimize perceived job security threats. The absence of formal AI training programs further leads to the emergence of informal community of practice knowledge transfer networks. While these networks facilitate rapid knowledge dissemination and initial experimentation, this process can also result in uneven knowledge distribution and varying quality of understanding across departments. Moreover, such reliance on individual "champions" over systematic capability development highlights a lack of knowledge sustainability.

Leadership commitment and strategic vision alignment are identified as paramount. The departments that have a strong formalized strategic visions and leaders -who personally engage with AI- demonstrate greater readiness, reinforced by tangible budget allocations. On the contrary, the disconnection between verbal support and actual understanding

among leaders creates a barrier to meaningful implementation. Technical readiness faces significant infrastructure and data governance challenges. The geographic constraint in the East Kalimantan's area creates uneven telecommunications development, a gap in telecommunication infrastructures development. The public organizations attempt to plan AI implementation without first establishing proper data foundations, lead to issues with connectivity, fragmented data silos, and difficulties in ensuring the relevance of AI systems to local contexts due to poor quality of data despite the ODP policy compliance. Compounding these issues are structural and cultural factors, notably the hierarchical organization of public administration, where decision-making authority often rests with older officials who may possess limited technological familiarity, thereby hindering AI adoption. Ultimately, successful AI adoption in this context necessitates not just technological transformation but a fundamental institutional transformation that aligns structures and cultures with the collaborative and adaptive requirements of effective organizational AI readiness.

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Annex

A List of Interview Participants

Table A.1 List of interview participants

Participant ID	Activity	Organization	Role
NFID-01	Semi-Structured Interview	Human Resource	Head of Department
NFID-02	Semi-Structured Interview	Information Technology	Head of Department
NFID-03	Semi-Structured Interview	Structural Leadership	Sub-District Head
NFID-04	Semi-Structured Interview	Research, Policy Development	Head of Agency
NFID-05	Unstructured Interview	Human Resource	Team Leader
NFID-06	Semi-Structured Interview	Human Resource	Team Leader
NFID-07	Semi-Structured Interview	Human Resource	Senior Manager
NFID-08	Semi-Structured Interview	Structural Leadership	Regional Representative Council
NFID-09	Semi-Structured Interview	Research, Policy Development	Head of Agency
NFID-10	Semi-Structured Interview	Information Technology	Head of Department
NFID-11	Semi-Structured Interview	Research, Policy Development	Senior Manager
NFID-12	Unstructured Interview	Information Technology	Manager
NFID-13	Unstructured Interview	Socio-political	Team Leader

Source: Author

B List of Interviews Supporting Documents

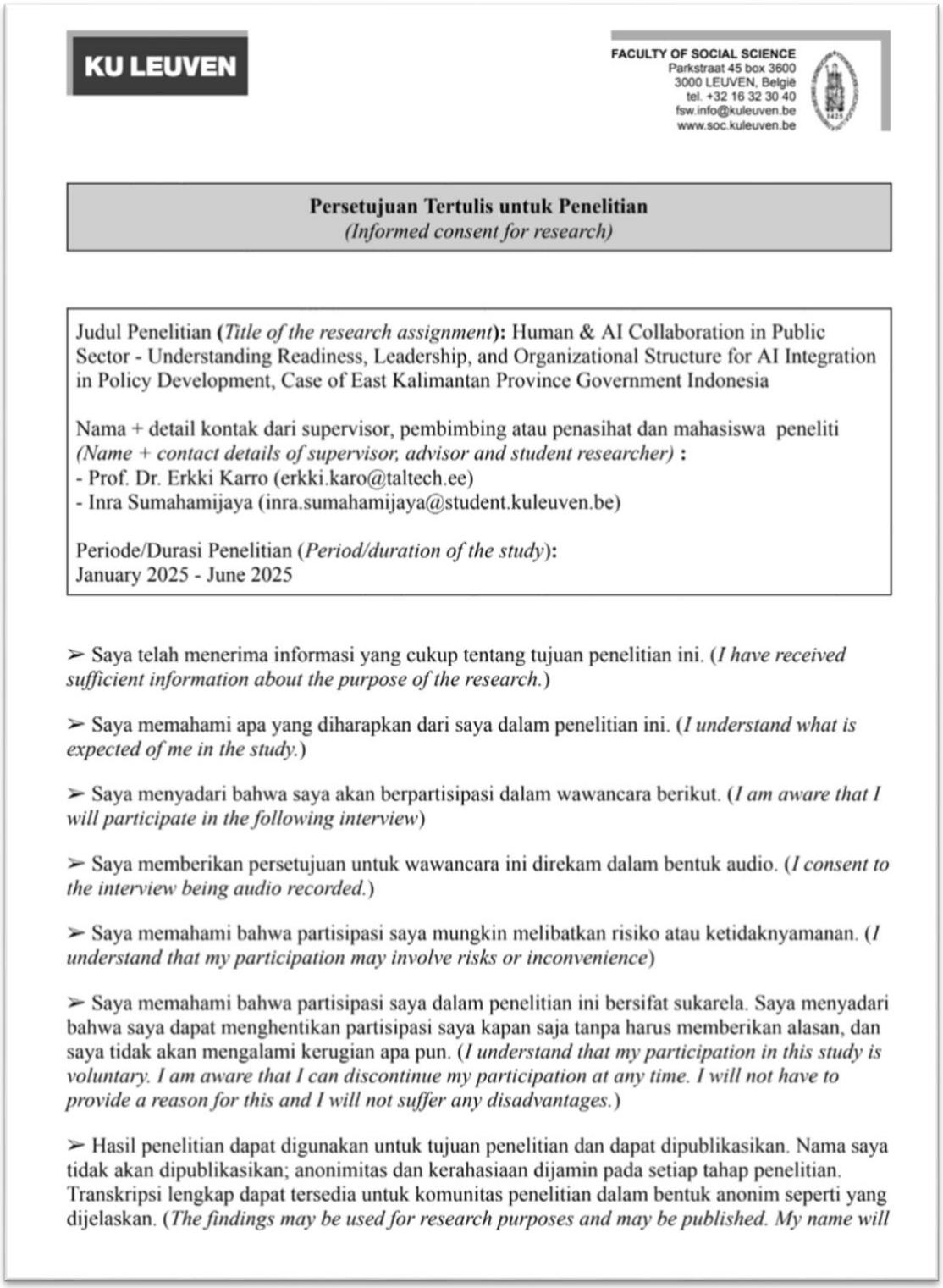
Table A.1 List of interviews supporting documents

Document Name	Author	Document Type
National Long-Term Development Plan (RPJPN)	Government of Indonesia (stipulated by Law)	National Long-Term Development Plan
National Medium-Term Development Plan (RPJMN)	Government of Indonesia (stipulated by Presidential Regulation)	National Medium-Term Development Plan
Regional Long-Term Development Plan (RPJPD)	Regional Government (Province/Regency/City)	Regional Long-Term Development Plan
Regional Medium-Term Development Plan (RPJMD)	Regional Government (Province/Regency/City)	Regional Medium-Term Development Plan
Strategic Plan of Regional Government Work Unit (Renstra SKPD)	Head of Satuan Kerja Perangkat Daerah (SKPD)	SKPD Strategic Plan
Work Plan of Regional Government Work Unit (Renja SKPD)	Head of Satuan Kerja Perangkat Daerah (SKPD)	SKPD Work Plan
National Strategy Artificial Intelligence – Stranas KA	National Research and Innovation Agency	National Strategy
Presidential Regulation No. 39 year 2019 about One Data Policy	Government of Indonesia (stipulated by Presidential Regulation)	Regulation
Presidential Regulation No. 95 year 2018 about SPBE	Government of Indonesia (stipulated by Presidential Regulation)	Regulation

Source: Author

C Informed Consent

The following Figure C.1 and Figure C.2 are the informed consent letter used in this study, written in bilingual, Bahasa Indonesia and English.



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Persetujuan Tertulis untuk Penelitian
(Informed consent for research)

Judul Penelitian (*Title of the research assignment*): Human & AI Collaboration in Public Sector - Understanding Readiness, Leadership, and Organizational Structure for AI Integration in Policy Development, Case of East Kalimantan Province Government Indonesia

Nama + detail kontak dari supervisor, pembimbing atau penasihat dan mahasiswa peneliti *(Name + contact details of supervisor, advisor and student researcher)* :
- Prof. Dr. Erkki Karro (erkki.karo@taltech.ee)
- Inra Sumahamijaya (inra.sumahamijaya@student.kuleuven.be)

Periode/Durasi Penelitian (*Period/duration of the study*):
January 2025 - June 2025

➢ Saya telah menerima informasi yang cukup tentang tujuan penelitian ini. (*I have received sufficient information about the purpose of the research.*)

➢ Saya memahami apa yang diharapkan dari saya dalam penelitian ini. (*I understand what is expected of me in the study.*)

➢ Saya menyadari bahwa saya akan berpartisipasi dalam wawancara berikut. (*I am aware that I will participate in the following interview*)

➢ Saya memberikan persetujuan untuk wawancara ini direkam dalam bentuk audio. (*I consent to the interview being audio recorded.*)

➢ Saya memahami bahwa partisipasi saya mungkin melibatkan risiko atau ketidaknyamanan. (*I understand that my participation may involve risks or inconvenience*)

➢ Saya memahami bahwa partisipasi saya dalam penelitian ini bersifat sukarela. Saya menyadari bahwa saya dapat menghentikan partisipasi saya kapan saja tanpa harus memberikan alasan, dan saya tidak akan mengalami kerugian apa pun. (*I understand that my participation in this study is voluntary. I am aware that I can discontinue my participation at any time. I will not have to provide a reason for this and I will not suffer any disadvantages.*)

➢ Hasil penelitian dapat digunakan untuk tujuan penelitian dan dapat dipublikasikan. Nama saya tidak akan dipublikasikan; anonimitas dan kerahasiaan dijamin pada setiap tahap penelitian. Transkripsi lengkap dapat tersedia untuk komunitas penelitian dalam bentuk anonim seperti yang dijelaskan. (*The findings may be used for research purposes and may be published. My name will*

Figure C.1 Informed consent letter page. 1

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not be published; anonymity and confidentiality is guaranteed at every stage of the research project. The complete transcription can be made available to the research community in the anonymised manner described.)

➢ Saya memahami bahwa saya tidak akan menerima pembayaran apa pun untuk berpartisipasi dalam penelitian ini. (*I understand that I will receive no payment for participating in the research.*)

➢ Apabila saya ingin diberitahu tentang hasil penelitian ini, peneliti mahasiswa dapat menghubungi saya melalui alamat email berikut:

(*I would like to be informed of the results of this research. The student researcher may contact me at the following e-mail address:*)

➢ Saya memahami bahwa saya dapat menghubungi… (*I understand that I can contact…*)
- peneliti mahasiswa (*the student researcher*)
- pembimbing atau penasihat (*the supervisor or advisor*)

…untuk pertanyaan apa pun atau untuk menggunakan hak saya (akses atau koreksi data, ...) setelah berpartisipasi dalam penelitian ini. (*for any questions or to exercise my rights (access to or correction of data, ...) after participating in the study.*)

➢ Untuk keluhan atau kekhawatiran lain tentang masalah etika yang berkaitan dengan penelitian ini, saya dapat menghubungi Komite Etika Sosial dan Kemasyarakatan KU Leuven: smec@kuleuven.be. (*For any complaints or other concerns about ethical issues relating to this study, I can contact KU Leuven's Social and Societal Ethics Committee: smec@kuleuven.be.*)

Saya telah membaca dan memahami informasi di atas dan telah menerima jawaban atas semua pertanyaan saya terkait penelitian ini. Saya setuju untuk berpartisipasi dalam penelitian ini.

I have read and understand the information above and have received answers to all my questions regarding this study. I agree to participate in the study.

Tanggal (*Date*):

( )
Narasumber (*Interviewee*)

( )
Peneliti (*Researcher)*

Figure C.2 Informed consent letter page. 2

D Declaration of Authorship

I hereby declare that, to the best of my knowledge and belief, this Master Thesis titled "**Perception on Human-AI Interaction and Organizational AI Readiness: East Kalimantan Province Government Public Official Case Study**" is my own work. I confirm that each significant contribution to and quotation in this thesis that originates from the work or works of others is indicated by proper use of citation and references.

Jakarta, 2025-06-02

Inra Sumahamijaya

E Consent Form

for the use of plagiarism detection software to check my thesis

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