

GOVERNMENT ORGANIZATIONAL READINESS IN THE ARTIFICIAL INTELLIGENCE ERA: A DYNAMIC CAPABILITIES ANALYSIS

Rosa Maria Rostandi*, Fadlullah Dimyati
UIN Sunan Gunung Djati Bandung, Indonesia
*Email: rosamrs@uinsgd.ac.id**

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Abstract

The rapid advancement of artificial intelligence (AI) has fundamentally transformed public administration by creating new opportunities to improve public service delivery, evidence-based policymaking, administrative efficiency, and governance innovation. However, despite increasing governmental investments in AI technologies, many public organizations continue to encounter organizational barriers that hinder successful AI adoption. Existing studies predominantly conceptualize AI readiness from technological, organizational, or institutional perspectives, while relatively limited attention has been devoted to understanding organizational readiness as a dynamic capability that enables governments to continuously adapt to technological change. This study aims to develop a comprehensive conceptual framework for government organizational readiness for artificial intelligence adoption through the lens of Dynamic Capabilities Theory. A conceptual literature review approach was employed by critically synthesizing peer-reviewed studies on artificial intelligence, digital government transformation, organizational readiness, and Dynamic Capabilities Theory. The review integrates contemporary theoretical and empirical literature to identify the key dimensions of AI readiness and explain their relationships within a unified conceptual model. The findings indicate that government organizational readiness extends beyond technological preparedness and is shaped by the interaction of six interrelated dimensions: strategic leadership and vision, digital infrastructure and technological capability, human capital and digital competencies, organizational culture and change readiness, governance and ethical preparedness, and interorganizational collaboration. These dimensions collectively strengthen governments' sensing, seizing, and reconfiguring capabilities, enabling continuous organizational adaptation during AI-driven digital transformation. Based on this synthesis, the study proposes an integrated analytical framework that conceptualizes AI readiness as a dynamic organizational capability rather than a static pre-adoption condition. The proposed framework contributes to the literature by extending existing AI readiness models through the integration of Dynamic Capabilities Theory and offers practical guidance for policymakers and public managers in designing adaptive, ethical, and sustainable AI implementation strategies. Future research is encouraged to empirically validate the proposed framework across different governmental contexts to enhance its generalizability and practical applicability.

Keywords: Artificial Intelligence, Government Organizational Readiness, Dynamic Capabilities Theory; Digital Government; Public Sector Innovation.

A. INTRODUCTION

Artificial intelligence (AI) has rapidly evolved from a supporting digital technology into a strategic capability that fundamentally transforms how organizations create value, make

decisions, and deliver services. Recent advances in machine learning, deep learning, natural language processing, computer vision, and generative AI have expanded the role of AI beyond routine task automation toward supporting complex decision-making, predictive analytics, knowledge generation, and organizational learning. Consequently, AI is increasingly recognized not merely as a technological innovation but as a strategic organizational resource that enhances adaptability, operational efficiency, and long-term organizational performance across both private and public sectors (Madan & Ashok, 2023; Mikalef & Gupta, 2021; van Noordt & Tangi, 2023).

Within the public sector, AI has become one of the principal drivers of digital government transformation. Governments worldwide are increasingly adopting AI to improve evidence-based policymaking, optimize administrative processes, strengthen regulatory oversight, and provide more responsive, personalized, and citizen-centric public services. Applications of AI have expanded across diverse policy domains, including taxation, healthcare, education, transportation, disaster management, social welfare, environmental monitoring, and public security. These developments indicate that AI is no longer viewed simply as an emerging technology but rather as an institutional capability that supports public value creation through more adaptive, efficient, and data-driven governance (Straub et al., 2023; van Noordt & Misuraca, 2022; van Noordt & Tangi, 2023).

Despite these opportunities, implementing AI in government organizations is considerably more complex than its adoption in private enterprises. Public organizations operate within institutional environments characterized by legal accountability, democratic legitimacy, transparency, fairness, ethical responsibility, and extensive stakeholder scrutiny. Consequently, AI implementation must satisfy not only technical and operational objectives but also broader public-sector values, including explainability, accountability, privacy protection, algorithmic fairness, and citizen trust. These institutional characteristics make AI implementation an organizational and governance challenge rather than merely a technological issue (Robles & Mallinson, 2023; Straub et al., 2023; Zuiderwijk et al., 2021).

Recent studies increasingly demonstrate that successful AI implementation depends less on technological availability than on governments' organizational capabilities to integrate AI into existing administrative systems and governance processes. Governments possessing advanced digital infrastructure may nevertheless fail to realize the expected benefits of AI if they lack strategic leadership, organizational learning mechanisms, digital competencies, governance capacity, interdisciplinary collaboration, and adaptive institutional arrangements. Accordingly, contemporary public administration research has gradually shifted from asking whether governments should adopt AI toward examining how governments can develop the organizational capabilities required to implement AI responsibly, effectively, and sustainably (Madan & Ashok, 2023; Nzobonimpa & Savard, 2023).

This shift reflects a broader transformation within digital government scholarship from technology-oriented perspectives toward capability-based perspectives. Earlier studies frequently explained digital transformation through technology adoption frameworks such as the Technology Acceptance Model (TAM), the Technology–Organization–Environment (TOE) framework, Diffusion of Innovation (DOI) theory, and Institutional Theory. While these perspectives provide valuable explanations regarding technological adoption decisions and institutional influences, they primarily conceptualize organizational readiness as a relatively static condition existing before technology implementation. Such perspectives provide limited insight into how organizations continuously adapt their structures, competencies, governance mechanisms, and strategic priorities throughout the AI implementation lifecycle (Baker, 2012; Venkatesh et al., 2003).

Organizational readiness has therefore emerged as one of the most influential determinants of successful AI adoption in government organizations. Rather than referring solely to

technological preparedness, organizational readiness encompasses leadership commitment, digital infrastructure, workforce competencies, organizational culture, governance mechanisms, collaborative networks, and institutional learning that collectively enable organizations to respond effectively to technological disruption. Contemporary scholarship increasingly conceptualizes organizational readiness as an adaptive organizational capability that evolves continuously through strategic learning, resource integration, and institutional transformation rather than as a one-time pre-adoption condition.

Although previous studies have significantly advanced scholarly understanding of AI readiness, several important limitations remain. First, much of the existing literature examines organizational readiness through fragmented perspectives by emphasizing individual determinants such as technological infrastructure, leadership, governance, or digital competencies without adequately explaining how these dimensions interact throughout organizational transformation. Second, existing AI readiness frameworks generally assess readiness as a collection of organizational indicators rather than conceptualizing it as a dynamic organizational capability that continuously develops in response to technological change. Third, relatively limited attention has been devoted to integrating strategic management theories particularly Dynamic Capabilities Theory into the study of AI readiness within public-sector organizations, despite the theory's strong explanatory potential for understanding organizational adaptation under conditions of rapid technological change (Pablo et al., 2007; Rosenberg Hansen & Ferlie, 2016).

Dynamic Capabilities Theory provides a particularly relevant theoretical lens for addressing these limitations. Originally introduced by Teece et al. (1997) and subsequently refined by Eisenhardt and Martin (2000) and Teece (2007), the theory explains how organizations sustain long-term effectiveness by continuously sensing environmental change, seizing emerging opportunities, and reconfiguring organizational resources in response to dynamic environments. Unlike conventional technology adoption theories that primarily explain initial adoption decisions, Dynamic Capabilities Theory emphasizes continuous organizational adaptation, strategic flexibility, and institutional renewal. These characteristics make the theory especially appropriate for understanding government organizational readiness in the context of AI-driven digital transformation, where technological innovation, regulatory change, and societal expectations evolve continuously (Eisenhardt & Martin, 2000; Teece, 2007; Teece et al., 1997).

Accordingly, this study seeks to develop an integrated conceptual framework that reconceptualizes government organizational readiness for artificial intelligence as a dynamic organizational capability. Specifically, the study synthesizes contemporary literature on artificial intelligence, organizational readiness, digital government transformation, and Dynamic Capabilities Theory to identify the key dimensions of AI readiness and explain how these dimensions collectively strengthen governments' sensing, seizing, and reconfiguring capabilities. By positioning organizational readiness as an adaptive capability rather than a static pre-adoption condition, this study extends existing AI readiness literature and contributes to the growing body of knowledge on public-sector digital transformation.

Based on this objective, the review addresses the following research questions:

- What organizational readiness dimensions have been identified in the literature concerning artificial intelligence adoption in government organizations?
- How can Dynamic Capabilities Theory explain government organizational readiness for artificial intelligence adoption?
- What integrated conceptual framework can be proposed to strengthen government organizational readiness for AI-driven digital transformation?

Theoretically, this study contributes by extending the application of Dynamic Capabilities Theory to the field of AI-enabled public administration and by proposing a capability-based framework that integrates strategic leadership, technological capability, human capital, organizational culture, governance, and interorganizational collaboration into a unified model of government AI readiness. Practically, the proposed framework offers policymakers and public managers a conceptual foundation for designing adaptive strategies that strengthen institutional capacity, support responsible AI implementation, and enhance sustainable public value creation amid rapid technological change.

B. LITERATURE REVIEW

Artificial Intelligence in Public Administration

Artificial intelligence (AI) has emerged as one of the most transformative technologies shaping contemporary public administration by fundamentally changing how governments design policies, manage public resources, and deliver public services. Advances in machine learning, deep learning, natural language processing, computer vision, and more recently generative AI have enabled governments to move beyond the digitalization of administrative procedures toward intelligent, data-driven governance capable of supporting predictive decision-making and adaptive public management (Madan & Ashok, 2023; Straub et al., 2023; van Noordt & Misuraca, 2022).

The evolution of AI also reflects the broader transformation of digital government. Earlier stages of e-government primarily focused on digitizing administrative processes, improving online service accessibility, and enhancing bureaucratic efficiency through information and communication technologies. In contrast, the current generation of digital government emphasizes intelligent governance, characterized by the integration of large-scale data analytics, algorithm-assisted decision-making, and personalized public services. Within this context, AI functions not merely as a technological tool but as a strategic capability that enables governments to anticipate societal needs, improve policy responsiveness, and create greater public value (Mergel et al., 2019; van Noordt & Tangi, 2023).

Recent empirical studies demonstrate that AI has been increasingly applied across diverse governmental functions. Public organizations employ AI to support tax administration, healthcare management, judicial systems, disaster response, transportation planning, environmental monitoring, social welfare administration, and smart city development. These applications illustrate that AI contributes not only to operational efficiency but also to evidence-based policymaking, resource optimization, and more effective coordination among public institutions (Madan & Ashok, 2023; Straub et al., 2023; van Noordt & Misuraca, 2022).

Despite these opportunities, implementing AI within government organizations differs fundamentally from AI adoption in private enterprises. While private organizations primarily evaluate AI according to productivity, innovation, and competitive advantage, public organizations must simultaneously satisfy democratic accountability, transparency, fairness, legality, privacy protection, explainability, and citizen trust. Consequently, successful AI implementation depends not only on technological performance but also on governance capacity and institutional legitimacy (Robles & Mallinson, 2023; Zuiderwijk et al., 2021; Straub et al., 2023).

This institutional complexity has gradually shifted scholarly attention from technology-centered explanations toward organizational capability perspectives. Earlier studies predominantly emphasized technological infrastructure, data availability, and digital maturity as primary determinants of AI adoption. However, recent research increasingly argues that technological resources alone cannot explain why organizations possessing similar digital infrastructures frequently achieve different implementation outcomes. Instead, organizational leadership, institutional learning, governance mechanisms, digital competencies, and

collaborative capability have emerged as critical determinants of sustainable AI implementation (Mikalef & Gupta, 2021; Nzobonimpa & Savard, 2023; van Noordt & Tangi, 2023).

Although the literature generally agrees that organizational capability plays an essential role in AI implementation, considerable disagreement remains regarding which organizational dimensions are most influential. Some scholars emphasize governance and ethical preparedness as the primary foundation for responsible AI adoption (Robles & Mallinson, 2023; Zuiderwijk et al., 2021), whereas others highlight technological capability and digital infrastructure as the principal enabling factors (Mergel et al., 2019; Vial, 2019). A growing body of research further argues that leadership commitment, organizational learning, and workforce capability constitute the fundamental drivers of long-term AI transformation because these dimensions determine an organization's capacity to continuously adapt to technological change (Madan & Ashok, 2023; Mikalef & Gupta, 2021).

The diversity of these perspectives indicates that government AI readiness cannot be adequately explained through a single organizational factor. Rather, AI implementation represents a multidimensional organizational transformation process involving continuous interactions among technological, managerial, institutional, and human capabilities. Nevertheless, existing studies generally examine these dimensions independently, providing limited theoretical explanation regarding how they collectively enable governments to sustain AI-driven transformation over time. Consequently, there remains a need for an integrative theoretical perspective capable of explaining how organizational capabilities interact dynamically throughout the AI implementation process.

This study argues that Dynamic Capabilities Theory offers such an integrative perspective. By emphasizing organizations' abilities to sense environmental change, seize strategic opportunities, and reconfigure organizational resources, the theory explains AI readiness not as a static condition measured before implementation but as a continuously evolving organizational capability that enables governments to respond proactively to technological disruption while maintaining public value, accountability, and institutional resilience (Eisenhardt & Martin, 2000; Pablo et al., 2007; Teece, 2007; Teece et al., 1997).

Government Organizational Readiness

Government organizational readiness has become one of the central concepts in contemporary public administration research because the success of digital transformation depends not only on technological investment but also on the capacity of public organizations to manage organizational change. Although governments worldwide continue to invest in digital technologies, many transformation initiatives fail because organizations lack the institutional capability required to integrate technological innovation into administrative routines and public service delivery. Consequently, organizational readiness is increasingly recognized as a critical determinant of successful digital transformation in the public sector (Madan & Ashok, 2023).

The concept of organizational readiness was initially developed within the organizational change literature. Weiner (2009) defines organizational readiness as the collective commitment and shared confidence of organizational members to implement change successfully. According to this perspective, readiness reflects not only employees' willingness to embrace change but also their collective capability to execute organizational transformation effectively. Therefore, organizational readiness encompasses both psychological commitment and organizational capacity.

As digital transformation became more complex, the concept of organizational readiness expanded beyond individual commitment toward a multidimensional organizational capability. Recent studies argue that organizational readiness includes strategic leadership, technological resources, organizational culture, governance mechanisms, financial capability, and workforce

competencies that collectively determine an organization's ability to respond to technological change. This broader perspective recognizes that successful organizational transformation depends upon the interaction of multiple organizational dimensions rather than a single organizational factor (Mikalef & Gupta, 2021).

Within the context of public administration, organizational readiness possesses unique characteristics that distinguish government organizations from private enterprises. Public institutions operate within highly regulated administrative environments where technological innovation must remain consistent with democratic accountability, legal compliance, transparency, fairness, and public legitimacy. Consequently, government organizations require broader organizational capabilities than private organizations because technological implementation must simultaneously satisfy operational efficiency and public value objectives (Robles & Mallinson, 2023).

Recent digital government literature further suggests that organizational readiness should not be interpreted as a static organizational condition measured before technological implementation. Instead, readiness continuously evolves as organizations accumulate knowledge, strengthen institutional learning, improve digital competencies, and adapt governance arrangements in response to changing technological environments. From this perspective, organizational readiness represents an ongoing organizational capability rather than a one-time implementation requirement (van Noordt & Tangi, 2023).

The emergence of artificial intelligence further reinforces this dynamic interpretation of organizational readiness. Unlike conventional information systems, AI technologies continuously evolve through advances in algorithms, computational capabilities, and data ecosystems. Governments therefore cannot rely solely on existing organizational routines but must continuously update digital competencies, redesign administrative processes, strengthen data governance, and develop adaptive institutional arrangements capable of responding to rapid technological change (Straub et al., 2023).

Several studies have attempted to assess organizational readiness using technology readiness models, digital maturity frameworks, and AI readiness indices. These approaches have contributed significantly to identifying important organizational dimensions, including digital infrastructure, leadership commitment, governance mechanisms, organizational culture, workforce capability, and data management. However, these frameworks generally evaluate readiness as a collection of organizational indicators without adequately explaining how organizations continuously develop these capabilities over time (Nzobonimpa & Savard, 2023).

This limitation indicates that measuring organizational readiness alone is insufficient for understanding sustainable AI implementation. Governments may demonstrate similar levels of digital maturity while producing substantially different implementation outcomes because of differences in organizational adaptability, institutional learning, leadership capability, and strategic decision-making. Consequently, there is a need for a theoretical perspective capable of explaining how organizational capabilities evolve throughout the AI implementation process rather than merely assessing readiness at a single point in time.

Dynamic Capabilities Theory provides an appropriate analytical perspective to address this limitation. The theory explains that organizations maintain long-term effectiveness by continuously sensing environmental change, seizing strategic opportunities, and reconfiguring organizational resources in response to evolving conditions (Teece, 2007). Applying this perspective to government AI readiness suggests that organizational readiness should be understood as an adaptive capability that enables governments to sustain technological transformation while maintaining accountability, transparency, and public value creation.

Accordingly, this study conceptualizes government organizational readiness as a dynamic organizational capability that integrates leadership, technological capability, organizational

learning, governance, human capital, and collaboration into a continuous process of institutional adaptation. This conceptualization extends existing AI readiness literature by explaining not only what dimensions constitute organizational readiness but also how these dimensions interact to support sustainable AI-driven transformation in public organizations.

Dynamic Capabilities Theory

Dynamic Capabilities Theory has become one of the most influential theoretical perspectives for explaining how organizations maintain long-term competitiveness and adaptability in rapidly changing environments. Unlike traditional resource-based perspectives that emphasize the possession of valuable organizational resources, Dynamic Capabilities Theory focuses on an organization's ability to continuously renew, integrate, and reconfigure internal and external resources in response to environmental change. This perspective recognizes that sustainable organizational performance depends not only on resource ownership but also on the capability to adapt organizational strategies, structures, and processes as technological and institutional conditions evolve (Teece et al., 1997).

The theory was originally introduced by Teece et al. (1997) to explain why organizations possessing similar resources frequently achieve different levels of performance under conditions of rapid technological change. They argued that competitive advantage is sustained through organizational capabilities that enable firms to integrate, build, and reconfigure competencies in response to changing environments. This argument shifted strategic management research from a static resource-based perspective toward a dynamic capability perspective emphasizing continuous organizational renewal.

Subsequent theoretical developments further refined the concept of dynamic capabilities. Eisenhardt and Martin (2000) argued that dynamic capabilities consist of identifiable organizational processes through which managers integrate knowledge, allocate resources, and modify organizational routines. Rather than viewing dynamic capabilities as unique organizational assets, they conceptualized them as repeatable managerial processes that facilitate organizational adaptation. This perspective broadened the applicability of Dynamic Capabilities Theory beyond competitive strategy toward organizational transformation and innovation management.

The most comprehensive refinement of the theory was proposed by Teece (2007), who introduced the three interconnected microfoundations of dynamic capabilities: sensing, seizing, and reconfiguring. Sensing refers to an organization's capability to identify emerging technological opportunities and environmental changes through continuous scanning, organizational learning, and knowledge acquisition. Seizing represents the capability to formulate strategic responses by mobilizing resources, making investment decisions, and developing innovative organizational initiatives. Reconfiguring involves continuously transforming organizational structures, capabilities, governance arrangements, and operational processes to sustain organizational effectiveness under changing conditions. These three capabilities collectively explain how organizations maintain strategic adaptability over time.

Although Dynamic Capabilities Theory was originally developed within strategic management, recent studies have increasingly extended its application to public administration. Government organizations face similarly dynamic environments characterized by digital transformation, changing citizen expectations, regulatory reform, and rapid technological innovation. Consequently, public organizations require adaptive organizational capabilities that enable continuous institutional learning, strategic flexibility, and organizational renewal while simultaneously maintaining democratic accountability and public value (Rosenberg Hansen & Ferlie, 2016).

The growing adoption of artificial intelligence has further strengthened the relevance of Dynamic Capabilities Theory in public administration research. AI implementation requires organizations to continuously acquire new technological knowledge, redesign administrative

processes, develop digital competencies, strengthen governance mechanisms, and integrate emerging technologies into existing institutional structures. These organizational changes cannot be adequately explained through traditional technology adoption theories because AI implementation extends beyond the initial adoption decision and involves continuous organizational adaptation throughout the technology lifecycle (Mikalef & Gupta, 2021).

Technology adoption theories such as the Technology Acceptance Model (TAM), the Technology–Organization–Environment (TOE) framework, and Diffusion of Innovation (DOI) have significantly contributed to understanding factors influencing technology adoption. However, these theories primarily explain why organizations adopt new technologies rather than how they continuously transform organizational capabilities after adoption. Consequently, they provide limited theoretical explanation regarding the adaptive organizational processes required to sustain AI-driven transformation over time (Baker, 2012; Rogers, 2003; Venkatesh et al., 2003).

In contrast, Dynamic Capabilities Theory conceptualizes organizational adaptation as an ongoing strategic process rather than a single implementation event. This distinction is particularly important because government AI readiness cannot be understood solely through the availability of technological infrastructure or digital resources. Instead, governments must continuously strengthen leadership commitment, organizational learning, digital competencies, governance arrangements, collaborative networks, and institutional flexibility to respond effectively to technological disruption. These organizational capabilities evolve continuously as governments accumulate experience and adapt to changing technological and societal conditions (Teece, 2007).

Accordingly, this study adopts Dynamic Capabilities Theory as the principal theoretical foundation for developing a capability-based framework of government organizational readiness for artificial intelligence. Specifically, the study argues that the six organizational readiness dimensions identified throughout the literature—strategic leadership, digital infrastructure, human capital, organizational culture, governance, and collaboration—constitute organizational resources that generate AI readiness only when governments possess the dynamic capabilities required to sense emerging technological opportunities, seize strategic initiatives, and reconfigure institutional resources. From this perspective, AI readiness is conceptualized as a continuously evolving organizational capability rather than a static organizational condition measured before technology implementation.

Dynamic Capabilities Dimensions for AI Readiness in Government Organizations

Although Dynamic Capabilities Theory originated within the strategic management literature, its core propositions provide a valuable analytical lens for understanding organizational transformation in the public sector. Government organizations operate in environments characterized by rapid technological change, increasing policy complexity, evolving regulatory frameworks, and rising public expectations. Under these conditions, organizational readiness for artificial intelligence should not be interpreted as a static condition measured solely by digital infrastructure or technological assets. Instead, readiness reflects an institution's capability to continuously adapt, integrate new knowledge, and transform organizational routines in response to technological change. This interpretation is consistent with the dynamic capabilities perspective developed by (Teece et al., 1997), who argue that sustainable organizational performance depends on the continuous integration, building, and reconfiguration of internal and external competencies in rapidly changing environments.

Within the context of AI implementation, sensing capability represents the government's ability to identify technological developments, monitor changes in the external environment, recognize emerging opportunities, and anticipate potential risks associated with artificial intelligence. This capability requires systematic environmental scanning, strategic foresight, policy intelligence, stakeholder engagement, and continuous organizational learning.

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Governments possessing strong sensing capability are better positioned to recognize how AI may improve public services while simultaneously identifying ethical, legal, and institutional challenges before implementation occurs. (Teece, 2007) emphasizes that sensing is not limited to information acquisition but also involves interpreting technological signals and transforming knowledge into strategic understanding.

The second dimension, seizing capability, concerns the organizational capacity to transform identified opportunities into strategic actions. Within government organizations, this includes developing AI strategies, allocating financial and technological resources, strengthening digital leadership, investing in workforce competencies, establishing governance mechanisms, and coordinating inter organizational collaboration. Successful AI implementation therefore depends upon governments' ability to convert technological opportunities into organizational initiatives supported by adequate institutional commitment. Rather than representing isolated technology projects, AI initiatives become part of broader administrative transformation strategies that align innovation with public-sector objectives and governance principles. The importance of managerial decision processes and organizational routines in mobilizing strategic resources has also been highlighted by (Eisenhardt & Martin, 2000), who conceptualize dynamic capabilities as identifiable organizational processes that enable adaptation under conditions of environmental change.

The third dimension, reconfiguring capability, refers to the organization's ability to redesign structures, processes, competencies, and resource configurations to sustain long-term adaptation. AI implementation frequently requires governments to modify administrative procedures, strengthen data governance, improve interoperability among information systems, redesign public service processes, and establish continuous learning mechanisms. Consequently, AI readiness should be viewed as an ongoing organizational transformation process rather than a one-time implementation effort. Reconfiguring capability enables government institutions to maintain alignment between technological innovation and institutional objectives despite continuous environmental change. (Teece, 2007) identifies this capability as the mechanism through which organizations renew their resource base and maintain long-term effectiveness in dynamic environments.

An increasing number of studies have also demonstrated that Dynamic Capabilities Theory is applicable beyond private-sector organizations. Research in public management argues that public organizations likewise require dynamic capabilities to respond to complex policy environments, organizational reforms, and technological disruption. (Rosenberg Hansen & Ferlie, 2016) contend that strategic management theories, including dynamic capabilities, provide valuable explanatory power for understanding organizational adaptation within public-sector organizations. Similarly, (Pablo et al., 2007) argue that public organizations require dynamic capabilities to manage institutional change, policy implementation, and organizational learning under conditions of uncertainty. These findings support the extension of Dynamic Capabilities Theory from competitive business environments to contemporary digital government transformation.

Building upon these theoretical developments, this study conceptualizes government organizational readiness for artificial intelligence as the interaction of sensing, seizing, and reconfiguring capabilities. Rather than treating AI readiness as a checklist of technological indicators, this research argues that readiness reflects a continuous organizational capability through which governments identify technological opportunities, mobilize strategic resources, and transform institutional arrangements to generate sustainable public value. This conceptualization distinguishes the present study from previous AI readiness research that primarily evaluates digital infrastructure or technology adoption while giving comparatively less attention to adaptive organizational capability. Consequently, Dynamic Capabilities Theory provides a coherent analytical foundation for examining how Indonesian government

organizations prepare for AI-driven transformation in an increasingly complex digital governance environment.

Proposed Analytical Framework

The preceding review demonstrates that government organizational readiness for artificial intelligence cannot be adequately explained through technological readiness alone. Existing studies consistently highlight that successful AI implementation depends on the interaction between organizational capability, institutional governance, strategic leadership, human resource development, and adaptive organizational processes. Nevertheless, previous research has rarely integrated these organizational dimensions into a coherent analytical framework capable of explaining how government institutions continuously prepare for AI-driven transformation.

Building upon Dynamic Capabilities Theory, this study conceptualizes government organizational readiness as a multidimensional organizational capability consisting of three interrelated dimensions: sensing capability, seizing capability, and reconfiguring capability (Teece, 2007). These dimensions collectively explain how government organizations identify technological change, mobilize strategic responses, and transform organizational resources to sustain AI implementation under conditions of uncertainty.

Within this framework, sensing capability refers to the government's ability to continuously monitor developments in artificial intelligence, identify strategic opportunities, anticipate emerging risks, and understand evolving societal expectations regarding digital public services. Effective sensing enables public organizations to recognize technological change before it becomes institutional disruption.

The second dimension, seizing capability, represents the organizational capacity to translate identified opportunities into concrete institutional strategies. This capability includes strategic leadership, policy formulation, resource allocation, workforce development, interagency collaboration, and governance arrangements necessary to support AI implementation.

Finally, reconfiguring capability reflects the government's ability to continuously redesign organizational structures, improve administrative processes, strengthen digital competencies, integrate information systems, and institutionalize organizational learning. This capability ensures that technological innovation becomes embedded within routine public administration rather than remaining isolated pilot initiatives.

The interaction among these three capabilities determines the overall level of government organizational readiness. Higher levels of readiness are expected to improve AI implementation, enhance digital public services, strengthen organizational adaptability, and ultimately generate greater public value through more responsive, transparent, efficient, and evidence-based governance.

Accordingly, this study adopts the analytical framework presented in Figure 1 as the conceptual foundation guiding data analysis and interpretation throughout the research.

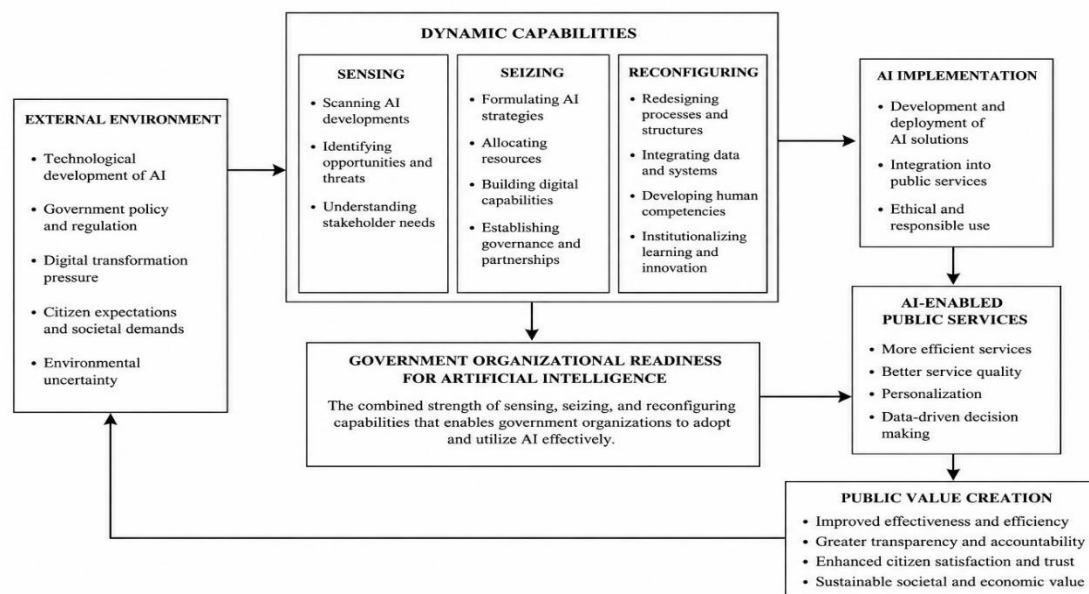


Figure 1. Analytical Framework of Government Organizational Readiness for Artificial Intelligence Adoption

Source: Developed by the authors based on Teece (2007), Teece et al. (1997), Eisenhardt and Martin (2000), van Noordt and Tangi (2023), and Pablo et al. (2007).

Critical Theoretical Synthesis

The preceding discussion demonstrates that organizational readiness for artificial intelligence cannot be adequately understood through a single theoretical perspective. Existing AI adoption research has primarily been informed by technology centered frameworks, including the Technology Acceptance Model (TAM), Technology Organization Environment (TOE) framework, Diffusion of Innovation (DOI) theory, and Institutional Theory. These perspectives have contributed significantly to understanding the determinants of technology adoption by identifying technological characteristics, organizational contexts, environmental pressures, and institutional influences that shape organizational behavior. Nevertheless, most of these frameworks primarily explain why organizations decide to adopt technological innovations rather than how organizations continuously develop adaptive capabilities throughout the implementation process.

The Technology Organization Environment framework, for example, has been extensively applied to examine digital transformation and AI adoption within public organizations because it integrates technological, organizational, and environmental determinants into a single analytical model. Although TOE provides a comprehensive explanation of contextual factors influencing adoption decisions, it conceptualizes organizational readiness largely as a collection of organizational conditions existing before implementation occurs. Consequently, TOE offers relatively limited explanation regarding how organizations continuously transform their capabilities after technological adoption has begun.

Similarly, Institutional Theory explains how coercive regulations, normative expectations, and mimetic pressures encourage governments to adopt technological innovations in response to broader institutional environments. This perspective is particularly useful for understanding public-sector digital transformation because government organizations frequently respond to legal mandates, national digital strategies, and political priorities rather than market competition alone. However, Institutional Theory provides less insight into the internal organizational processes through which institutions renew competencies, strengthen

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organizational learning, and reconfigure administrative resources while implementing artificial intelligence.

Dynamic Capabilities Theory addresses these limitations by shifting analytical attention from static organizational conditions toward continuous organizational adaptation. Rather than emphasizing resource possession or institutional pressures alone, Dynamic Capabilities Theory explains how organizations repeatedly identify environmental change, mobilize strategic responses, and transform organizational resources to maintain long-term effectiveness under conditions of uncertainty. This perspective is particularly relevant for AI implementation because artificial intelligence evolves rapidly through continuous technological innovation, requiring governments to repeatedly update organizational competencies, governance mechanisms, regulatory approaches, and administrative practices.

Consequently, this study proposes that government organizational readiness should be conceptualized as an adaptive organizational capability emerging from the interaction of sensing, seizing, and reconfiguring processes. AI readiness therefore represents not merely an assessment of technological maturity but an evolving organizational capability enabling governments to continuously integrate technological innovation into public administration while preserving accountability, transparency, ethical governance, and public value creation. This theoretical synthesis establishes the conceptual foundation for the research methodology presented in the following section.

Research Questions

Based on the research gap identified in the preceding discussion, this review seeks to examine how government organizations can strengthen their readiness to adopt artificial intelligence from the perspective of Dynamic Capabilities Theory. Specifically, the review addresses the following research questions:

- What organizational readiness dimensions have been identified in the literature concerning artificial intelligence adoption in government organizations?
- How can Dynamic Capabilities Theory explain government organizational readiness for artificial intelligence adoption?
- What conceptual framework can be proposed to enhance government organizational readiness for AI-driven digital transformation?

These research questions guide the entire review process, including the literature synthesis, theoretical analysis, and development of the proposed analytical framework presented in this study.

C. RESEARCH METHODOLOGY

Research Design

This study employs a conceptual literature review to develop an integrated theoretical framework for understanding government organizational readiness for artificial intelligence (AI) adoption through the perspective of Dynamic Capabilities Theory. Unlike systematic reviews that primarily synthesize empirical evidence to answer narrowly defined research questions, conceptual literature reviews seek to integrate existing theoretical and empirical knowledge, identify conceptual relationships, critically evaluate competing perspectives, and develop new theoretical insights that advance scholarly understanding of emerging phenomena (Jaakkola, 2020; Snyder, 2019).

A conceptual review is particularly appropriate for this study because government AI readiness remains an evolving research domain characterized by fragmented conceptualizations across public administration, strategic management, information systems, digital government, and artificial intelligence literature. Existing studies employ diverse theoretical lenses including technology adoption models, organizational readiness frameworks,

institutional theory, and digital transformation perspectives resulting in limited theoretical integration. Accordingly, this review seeks not merely to summarize previous findings but to synthesize existing knowledge into a coherent conceptual framework grounded in Dynamic Capabilities Theory.

Rather than statistically aggregating empirical findings, this study emphasizes theory development through critical comparison, thematic integration, and conceptual synthesis. Consequently, the review focuses on explaining how organizational readiness dimensions interact dynamically to strengthen governments' capabilities to sense environmental change, seize technological opportunities, and reconfigure organizational resources during AI-driven digital transformation.

Literature Search Strategy

The literature search was conducted using a structured and transparent search strategy to ensure comprehensive coverage of relevant scholarly publications. Three internationally recognized academic databases were used:

- Scopus
- Web of Science Core Collection
- Google Scholar

These databases were selected because they index high-quality publications in public administration, information systems, digital government, strategic management, and artificial intelligence.

- The search combined keywords related to four principal concepts:
- Artificial Intelligence
- Government/Public Administration
- Organizational Readiness
- Dynamic Capabilities

The primary Boolean search string was formulated as follows:

- ("Artificial Intelligence" OR AI OR "Generative AI")
- AND
- ("Government" OR "Public Administration" OR "Public Sector")
- AND
- ("Organizational Readiness" OR "AI Readiness" OR "Digital Readiness")
- AND
- ("Dynamic Capabilities" OR "Dynamic Capability")

Additional manual searches were conducted through backward and forward citation tracking to identify seminal theoretical contributions and influential publications that might not have appeared during the initial database search.

Literature Selection Criteria

To ensure the quality and relevance of the reviewed literature, predefined inclusion and exclusion criteria were established before the review process.

Inclusion Criteria

Studies were included when they met the following criteria:

- Published in peer-reviewed academic journals.
- Written in English.

Published between 2015 and 2025, while allowing seminal theoretical works published earlier (e.g., Teece et al., 1997; Eisenhardt & Martin, 2000; Teece, 2007).

- Focused on one or more of the following topics:
- Artificial intelligence in government;

- Government digital transformation;
 - Organizational readiness;
- AI capability;
- Dynamic Capabilities Theory;
 - Public-sector innovation.

Provided theoretical or empirical contributions relevant to organizational capability development.

Exclusion Criteria

Publications were excluded when they:

- focused exclusively on technical AI algorithms without organizational implications;
- discussed private-sector AI adoption without transferable public-sector insights;
- consisted of conference abstracts, editorials, book reviews, or opinion papers;
- lacked sufficient theoretical or empirical relevance to the research objectives.

Literature Screening Process

The literature selection followed a structured four-stage screening procedure adapted from widely accepted review methodologies (Page et al., 2021; Snyder, 2019).

- First, database searches identified potentially relevant publications based on predefined search strings.
- Second, duplicate records were removed.
- Third, titles and abstracts were screened to assess their relevance to government AI readiness and Dynamic Capabilities Theory.
- Finally, full-text articles were evaluated according to the established inclusion and exclusion criteria.

Rather than aiming to produce statistical representativeness, the review prioritized conceptual richness, theoretical relevance, and scholarly influence. Consequently, preference was given to highly cited publications, seminal theoretical contributions, and recent empirical studies published in internationally recognized journals.

Data Analysis and Thematic Synthesis

The selected literature was analyzed through an iterative thematic synthesis process. The analysis consisted of four interconnected stages.

- First, the reviewed studies were systematically coded according to their principal research focus, theoretical perspective, methodological approach, and organizational readiness dimensions.
- Second, similar concepts were grouped into broader analytical categories to identify recurring organizational capability dimensions across the literature.
- Third, these dimensions were interpreted through the analytical lens of Dynamic Capabilities Theory by examining how they contributed to organizations' sensing, seizing, and reconfiguring capabilities.
- Finally, the synthesized findings were integrated into a comprehensive conceptual framework explaining government organizational readiness for AI adoption.

This interpretive approach enabled the study to move beyond descriptive literature summaries toward theory development by explaining the dynamic relationships among organizational readiness dimensions and adaptive organizational capabilities.

Analytical Framework Development

The conceptual framework proposed in this study emerged through an iterative synthesis of the reviewed literature rather than being derived from a single theoretical model.

The framework integrates six organizational readiness dimensions that consistently appear across contemporary AI readiness research:

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- strategic leadership and vision,
- digital infrastructure and technological capability,
- human capital and digital competencies,
- organizational culture and change readiness,
- governance and ethical preparedness, and
- interorganizational collaboration.

These dimensions were subsequently mapped onto the three core components of Dynamic Capabilities Theory sensing, seizing, and reconfiguring to explain how government organizations continuously develop adaptive capabilities during AI-driven digital transformation.

Accordingly, the proposed framework conceptualizes AI readiness as an evolving organizational capability rather than a static organizational condition, providing a theoretical basis for future empirical validation across different governmental contexts.

D. RESULT AND DISCUSSION

Strategic Leadership as the Primary Driver of AI Readiness

The literature consistently identifies strategic leadership as the most influential organizational capability shaping government readiness for artificial intelligence. Unlike conventional digital transformation initiatives that primarily involve technological modernization, AI implementation requires long-term strategic commitment, organizational vision, and continuous institutional adaptation. Consequently, leadership extends beyond administrative supervision toward establishing organizational direction, mobilizing resources, managing uncertainty, and fostering innovation throughout the AI transformation process (Madan & Ashok, 2023).

Strategic leaders play a critical role in defining AI as an organizational priority rather than merely a technological project. They formulate digital transformation strategies, allocate financial and human resources, establish governance mechanisms, and cultivate organizational commitment toward innovation. Governments lacking strategic leadership frequently experience fragmented AI initiatives characterized by isolated pilot projects that fail to generate sustainable organizational transformation (Mergel et al., 2019).

Leadership also functions as an institutional mechanism that reduces organizational resistance during periods of technological change. AI implementation often challenges existing bureaucratic routines, organizational cultures, and decision-making structures. Consequently, leaders must facilitate organizational learning, communicate strategic objectives, encourage experimentation, and strengthen employee confidence in adopting AI-supported administrative processes. Such leadership behaviors enhance organizational adaptability and reduce institutional inertia that commonly constrains public-sector innovation (Robles & Mallinson, 2023).

From the perspective of Dynamic Capabilities Theory, leadership primarily contributes to the organization's sensing capability. Leaders continuously monitor technological developments, identify emerging opportunities, anticipate policy challenges, and recognize changing citizen expectations. These sensing activities enable governments to formulate strategic responses before technological disruptions become institutional constraints (Teece, 2007).

Leadership also supports seizing capability by transforming strategic insights into organizational action. Through investment decisions, policy formulation, interagency coordination, and organizational communication, leaders mobilize institutional resources to implement AI initiatives aligned with public-sector objectives. Effective leadership therefore

bridges environmental awareness with organizational implementation capacity (Eisenhardt & Martin, 2000).

Finally, leadership strengthens reconfiguring capability by redesigning organizational structures, administrative processes, governance arrangements, and institutional routines necessary for long-term AI integration. Rather than maintaining traditional bureaucratic structures, adaptive leaders continuously reorganize institutional resources to ensure that governments remain responsive to technological change while preserving accountability, transparency, and public value creation (Rosenberg Hansen & Ferlie, 2016).

The synthesis suggests that leadership should not be interpreted merely as one dimension of organizational readiness. Instead, leadership functions as the integrative capability that connects all other readiness dimensions by facilitating organizational learning, resource orchestration, institutional adaptation, and strategic decision-making. Consequently, leadership constitutes the primary organizational capability underpinning sustainable AI readiness within government organizations.

Organizational Readiness Dimensions for Artificial Intelligence Adoption

Table 1. Organizational Readiness Dimensions for Artificial Intelligence Adoption Identified in Previous Studies

No	Organizational Readiness Dimension	Conceptual Description	Representative References	Dynamic Capabilities Component
1	Strategic Leadership and Vision	Leadership commitment, strategic direction, innovation orientation, and AI governance vision that guide organizational transformation.	Teece (2007); Mikalef & Gupta (2021); Wirtz et al. (2019)	Sensing
2	Digital Infrastructure and Technological Capability	Availability of digital infrastructure, interoperable systems, cloud computing, cybersecurity, data architecture, and AI technologies supporting implementation.	Vial (2019); Mergel et al. (2019); Sun & Medaglia (2019)	Seizing
3	Human Capital and Digital Competencies	AI literacy, digital skills, analytical capability, continuous learning, and workforce adaptability required for AI adoption.	Wirtz et al. (2019); Mikalef & Gupta (2021)	Reconfiguring
4	Organizational Culture and Change Readiness	Organizational openness toward innovation, experimentation, knowledge sharing, collaboration, and acceptance of technological change.	(Kane et al., 2019); Vial (2019)	Supporting all three capabilities
5	Governance and Ethical Preparedness	Regulatory compliance, transparency, accountability, fairness, privacy protection, and responsible AI governance.	Zuiderwijk et al. (2021); Valle-Cruz et al. (2020)	Seizing & Reconfiguring
6	Interorganizational Collaboration	Cooperation among government agencies, universities, technology providers, and civil society to support innovation and knowledge exchange.	Mergel et al. (2019); (Janssen & van der Voort, 2020)	Sensing – Seizing – Reconfiguring

Sumber; Diolah Peneliti, 2025

The literature consistently demonstrates that organizational readiness for artificial intelligence (AI) adoption is a multidimensional construct that extends beyond technological preparedness. Rather than being determined solely by digital infrastructure or computational resources, AI readiness reflects the interaction of strategic, organizational, human, technological, governance, and institutional capabilities that collectively enable public

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organizations to successfully integrate AI into administrative processes. Although previous studies propose different conceptualizations of readiness, several recurring dimensions emerge across the literature.

Strategic Leadership and Vision

Strategic leadership represents one of the most frequently cited determinants of AI readiness. Government leaders play a central role in articulating organizational vision, allocating strategic resources, managing institutional change, and fostering an innovation-oriented organizational culture. Effective leadership also reduces organizational resistance by communicating the long-term value of AI adoption while aligning technological initiatives with broader public service objectives.

Recent studies emphasize that AI implementation requires transformational leadership capable of encouraging experimentation, organizational learning, and cross-sector collaboration rather than maintaining traditional bureaucratic routines. Consequently, strategic leadership constitutes the primary organizational mechanism through which governments initiate adaptive transformation.

From the perspective of Dynamic Capabilities Theory, strategic leadership primarily strengthens sensing capability by enabling organizations to recognize technological opportunities and anticipate future environmental changes.

Digital Infrastructure and Technological Capability

Adequate technological infrastructure constitutes the operational foundation of AI readiness. Public organizations require reliable digital platforms, interoperable information systems, cloud computing infrastructure, cybersecurity mechanisms, high-quality datasets, and advanced analytical capabilities to support AI deployment.

However, contemporary research increasingly argues that technological capability alone does not guarantee organizational readiness. Numerous government organizations possess advanced information systems but continue to experience implementation failures because technological investments are not accompanied by organizational transformation, governance reform, or workforce capability development.

Accordingly, technological infrastructure should be interpreted as an enabling resource that supports organizational adaptation rather than as the sole determinant of AI readiness.

Within Dynamic Capabilities Theory, technological capability contributes primarily to seizing capability, allowing organizations to mobilize digital resources and implement AI-driven innovations effectively.

Human Capital and Digital Competencies

Human capital remains one of the strongest predictors of AI readiness across public administration literature. AI implementation requires civil servants possessing digital literacy, analytical reasoning, data management competencies, ethical awareness, and continuous learning capabilities.

Recent studies indicate that governments increasingly face shortages of AI-related expertise, particularly in machine learning, data science, algorithm governance, and digital ethics. Consequently, continuous professional development, reskilling, and organizational learning become essential mechanisms for sustaining AI adoption over time.

Rather than replacing public employees, AI is increasingly viewed as augmenting human decision-making. Therefore, organizational readiness depends not only on technological sophistication but also on the ability of employees to collaborate effectively with intelligent systems.

This dimension contributes significantly to reconfiguring capability, enabling organizations to renew competencies and adapt their workforce to evolving technological environments.

Organizational Culture and Change Readiness

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Organizational culture significantly influences the acceptance and sustainability of AI implementation. A culture characterized by innovation, collaboration, openness to experimentation, and knowledge sharing encourages organizational members to embrace technological transformation.

Conversely, rigid bureaucratic structures, risk-averse behavior, and resistance to organizational change frequently hinder AI implementation despite adequate technological resources. Therefore, cultivating an adaptive organizational culture becomes a prerequisite for continuous innovation.

Dynamic Capabilities Theory conceptualizes organizational culture as a supporting mechanism that facilitates the continuous interaction among sensing, seizing, and reconfiguring processes.

Governance, Ethics, and Regulatory Readiness

As AI systems increasingly influence governmental decision-making, governance arrangements become critical dimensions of organizational readiness. Public organizations must establish clear regulatory frameworks, ethical principles, accountability mechanisms, transparency standards, privacy protection policies, and algorithmic oversight procedures.

Unlike private organizations, governments operate within complex institutional environments where public accountability, legal compliance, and citizen trust directly affect technological legitimacy. Consequently, AI readiness extends beyond operational efficiency to include responsible AI governance.

Strong governance mechanisms enhance organizational capability to manage uncertainty while preserving public trust during AI-driven digital transformation.

Interorganizational Collaboration and Knowledge Networks

AI implementation frequently requires collaboration across governmental agencies, universities, private technology providers, and civil society organizations. Such collaboration facilitates knowledge exchange, technological transfer, innovation diffusion, and institutional learning.

Public organizations that actively participate in collaborative ecosystems generally demonstrate higher adaptive capacity because they gain access to diverse expertise and external innovation resources. Collaborative governance therefore strengthens organizational resilience while accelerating AI capability development.

Within Dynamic Capabilities Theory, collaborative networks simultaneously reinforce sensing, seizing, and reconfiguring capabilities by expanding organizational access to information, strategic resources, and learning opportunities.

Synthesis of Organizational Readiness Dimensions

The reviewed literature indicates that government organizational readiness for AI adoption cannot be reduced to a single organizational attribute. Instead, readiness emerges from the interaction of strategic leadership, technological capability, human capital, organizational culture, governance mechanisms, and collaborative networks. These dimensions function as complementary organizational capabilities that collectively determine the capacity of government institutions to adapt to rapid technological change.

Integrating these dimensions through the lens of Dynamic Capabilities Theory provides a more comprehensive explanation of AI readiness than traditional technology adoption models. Rather than viewing readiness as a static organizational condition, the Dynamic Capabilities perspective conceptualizes readiness as an evolving capability through which governments continuously sense emerging opportunities, seize technological innovations, and reconfigure organizational resources to sustain digital transformation. This integrated perspective forms the conceptual basis for the analytical framework proposed in this study.

Dynamic Capabilities as an Explanatory Perspective for Government AI Readiness

Although previous studies have identified numerous determinants of artificial intelligence (AI) readiness, existing research frequently examines these factors as independent organizational attributes rather than as interconnected capabilities that evolve over time. Leadership, technological infrastructure, digital competencies, governance arrangements, and organizational culture are often discussed separately, resulting in fragmented explanations of government preparedness for AI adoption. Such approaches provide valuable insights into individual readiness factors but offer limited understanding of how public organizations continuously adapt to technological disruption.

Dynamic Capabilities Theory offers a more comprehensive explanatory perspective by conceptualizing organizational readiness as a continuous adaptive capability rather than a static organizational condition. Originally developed by Teece, Pisano, and Shuen (1997) and further elaborated by Teece (2007), the theory argues that organizations achieve sustainable performance by continuously sensing environmental changes, seizing strategic opportunities, and reconfiguring organizational resources in response to dynamic environments. This perspective is particularly relevant for AI adoption because artificial intelligence evolves rapidly through continuous technological advancement, regulatory development, and changing societal expectations.

Within the context of government organizations, sensing capability represents the institutional ability to identify emerging AI technologies, monitor technological trends, anticipate policy implications, recognize citizen expectations, and evaluate potential opportunities and risks associated with AI implementation. Governments possessing strong sensing capabilities are more likely to recognize technological disruption at an early stage and develop proactive strategies before external pressures become institutional challenges. Consequently, sensing capability establishes the strategic foundation upon which organizational readiness is built.

The second capability, seizing capability, reflects the organizational capacity to translate identified opportunities into concrete institutional actions. This capability includes strategic planning, resource allocation, leadership commitment, digital investment, workforce development, interagency coordination, and policy formulation that collectively enable AI implementation. Unlike technology adoption models that emphasize technological availability, Dynamic Capabilities Theory highlights the strategic decisions required to mobilize organizational resources and convert technological opportunities into operational improvements.

Finally, reconfiguring capability represents the organization's ability to continuously transform structures, processes, competencies, and governance mechanisms in response to technological change. AI implementation rarely constitutes a one-time innovation; instead, it requires ongoing organizational learning, institutional adaptation, regulatory refinement, and continuous capability renewal. Government organizations demonstrating strong reconfiguring capability are therefore better positioned to sustain AI adoption while maintaining accountability, transparency, and public trust.

Importantly, these three capabilities should not be interpreted as sequential stages but rather as mutually reinforcing organizational processes operating simultaneously. Effective sensing improves strategic decision-making, successful seizing enables organizational transformation, and continuous reconfiguration strengthens future sensing by generating institutional learning and accumulated experience. This cyclical interaction explains why some government organizations successfully institutionalize AI-driven innovation whereas others struggle despite possessing comparable technological resources.

The Dynamic Capabilities perspective also extends existing AI readiness literature by emphasizing organizational adaptability rather than technological maturity alone. Traditional readiness frameworks generally evaluate whether organizations possess sufficient

technological resources before implementation. In contrast, Dynamic Capabilities Theory explains how organizations continuously develop, renew, and integrate capabilities throughout the entire digital transformation process. Consequently, government organizational readiness should be understood as an evolving organizational capability that enables institutions to respond effectively to continuous technological disruption rather than merely as a precondition for technology adoption.

Accordingly, this study argues that Dynamic Capabilities Theory provides a robust conceptual foundation for understanding government organizational readiness in the AI era. By integrating leadership, technological capability, organizational learning, governance, human capital, and institutional collaboration into a single adaptive capability framework, the theory offers a more holistic explanation of how governments can sustain AI-driven digital transformation while creating long-term public value.

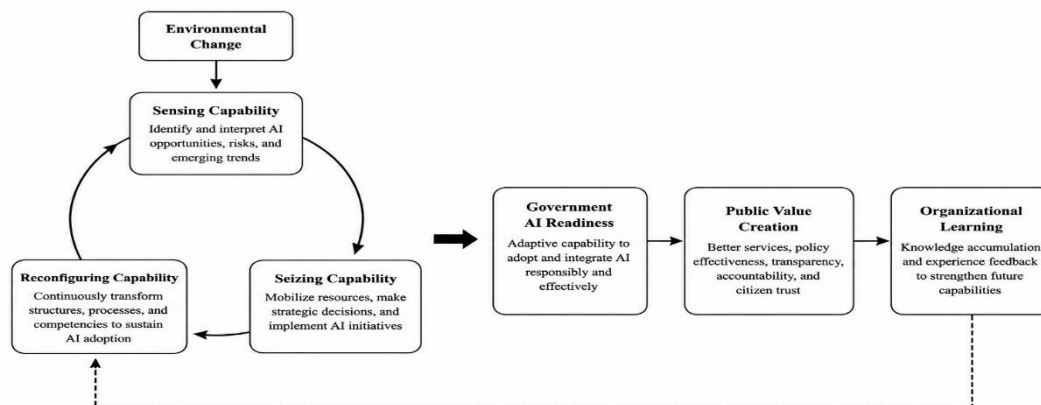


Figure 2. Dynamic Capability Cycle for Government Organizational Readiness
Sumber; Diolah Peneliti, 2026

Figure 2 illustrates the cyclical relationship between Dynamic Capabilities and government organizational readiness for artificial intelligence adoption. Environmental changes, including technological advancements, regulatory developments, and evolving citizen expectations, initiate the sensing process through which government organizations identify emerging opportunities and potential risks. These insights subsequently guide strategic decisions during the seizing phase, where organizational resources are mobilized to support AI implementation. Continuous organizational transformation occurs through reconfiguring activities that renew structures, competencies, governance mechanisms, and administrative processes. Successful implementation contributes to government AI readiness, enhances public value creation, and generates organizational learning. The accumulated learning experiences subsequently strengthen future sensing capability, thereby creating a continuous cycle of organizational adaptation that supports sustainable AI-driven digital transformation.

Proposed Government Organizational Readiness Framework for Artificial Intelligence Adoption

The synthesis of previous studies indicates that government organizational readiness for artificial intelligence (AI) adoption should not be interpreted as a collection of isolated organizational factors. Instead, readiness represents a dynamic organizational capability emerging from the interaction between leadership, technology, human resources, governance, organizational culture, and collaborative networks. Building upon this synthesis, the present study proposes an integrated conceptual framework that positions Dynamic Capabilities Theory as the central explanatory mechanism through which government organizations continuously develop their readiness to adopt AI.

Unlike conventional technology adoption frameworks that primarily assess technological maturity or organizational preparedness before implementation, the proposed framework

conceptualizes AI readiness as an adaptive and continuous organizational process. Government organizations are expected to repeatedly identify emerging technological opportunities, strategically mobilize organizational resources, and continuously reconfigure institutional arrangements in response to evolving technological, regulatory, and societal environments. Consequently, readiness becomes an evolving organizational capability rather than a one-time organizational assessment.

The proposed framework integrates six interrelated organizational readiness dimensions identified throughout the literature: strategic leadership and vision, digital infrastructure and technological capability, human capital and digital competencies, organizational culture and change readiness, governance and ethical preparedness, and interorganizational collaboration. These dimensions collectively influence the organization's ability to perform the three dynamic capabilities of sensing, seizing, and reconfiguring, which subsequently determine the effectiveness and sustainability of AI implementation within government institutions.

The framework further suggests that Dynamic Capabilities operate as an iterative cycle rather than as a linear sequence of organizational activities. Through sensing, governments continuously monitor technological developments, policy changes, citizen expectations, and emerging risks associated with AI. During the seizing stage, organizations transform identified opportunities into strategic initiatives by allocating resources, strengthening digital competencies, establishing governance mechanisms, and implementing AI-supported innovations. Subsequently, reconfiguring enables governments to redesign organizational structures, administrative processes, workforce competencies, and institutional arrangements to ensure that AI adoption remains sustainable despite continuous environmental change.

An important contribution of this framework is its emphasis on organizational learning as a continuous feedback mechanism. Rather than considering AI implementation as the final objective, the framework argues that each implementation cycle generates new organizational knowledge that strengthens future sensing, improves strategic decision-making, and enhances institutional adaptability. Continuous learning therefore reinforces organizational resilience while enabling governments to respond proactively to subsequent technological disruptions. This recursive learning process distinguishes the proposed framework from existing AI readiness models that generally portray organizational readiness as a static pre-adoption condition.

Furthermore, the proposed framework recognizes that successful AI adoption in government organizations should ultimately contribute to public value creation. AI readiness is therefore evaluated not only through operational efficiency or technological sophistication but also through improvements in transparency, accountability, responsiveness, service quality, evidence-based policymaking, and citizen trust. This perspective aligns AI implementation with the broader objectives of public governance, emphasizing that technological innovation must support democratic values and sustainable public-sector transformation.

Overall, the proposed framework extends existing AI readiness literature by integrating organizational readiness dimensions with Dynamic Capabilities Theory into a coherent explanatory model. The framework provides both theoretical and practical guidance for understanding how government organizations can continuously strengthen their adaptive capacity while navigating the opportunities and challenges associated with artificial intelligence. Accordingly, it offers a comprehensive conceptual foundation for future empirical research examining AI readiness across different governmental contexts.

Research Gaps and Future Research Agenda

The review reveals that research on government organizational readiness for artificial intelligence (AI) has expanded considerably over the past decade. Nevertheless, the literature remains fragmented in several important respects, limiting the development of a comprehensive understanding of how governments can sustainably adopt AI technologies.

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Addressing these gaps is essential for advancing both theoretical knowledge and practical implementation in the public sector.

The first major gap concerns the fragmented conceptualization of organizational readiness. Existing studies frequently examine technological infrastructure, leadership, governance, digital competencies, organizational culture, or regulatory issues as separate determinants of AI adoption. Although these studies provide valuable insights into individual readiness factors, they rarely explain how these dimensions interact as an integrated organizational capability. Consequently, current knowledge remains compartmentalized, making it difficult to understand how governments develop long-term adaptive capacity for AI-driven transformation.

A second gap relates to the limited application of Dynamic Capabilities Theory within AI readiness research. Most previous studies rely on technology-oriented perspectives such as the Technology Organization Environment (TOE) framework, the Technology Acceptance Model (TAM), Diffusion of Innovation (DOI) theory, or Institutional Theory. While these frameworks successfully explain technology adoption decisions, they provide less insight into the continuous organizational adaptation required after AI implementation begins. The Dynamic Capabilities perspective complements these approaches by emphasizing organizational learning, resource reconfiguration, and strategic adaptation under conditions of continuous technological change.

The third gap concerns the limited attention devoted to AI governance within readiness research. Existing literature increasingly recognizes the importance of ethical AI, transparency, accountability, privacy protection, and algorithmic fairness; however, these governance dimensions are often discussed independently from organizational readiness. Future research should therefore investigate how governance capability can be integrated into broader organizational readiness frameworks, particularly in government institutions where legal legitimacy and public trust are fundamental determinants of technological success.

Another important gap is the geographical concentration of existing evidence. Much of the current literature originates from developed economies with relatively advanced digital government ecosystems. Comparatively little empirical evidence is available from developing countries, where governments face different institutional environments, digital infrastructure limitations, regulatory capacities, and human resource challenges. Comparative cross-national studies would provide valuable insights into how contextual factors influence organizational readiness across diverse administrative settings.

Furthermore, the rapid emergence of generative artificial intelligence introduces new research challenges that remain largely unexplored. Recent advances in large language models, intelligent decision-support systems, and autonomous AI applications are fundamentally changing the nature of public administration. Future studies should therefore investigate how government organizations can develop adaptive capabilities to manage emerging risks associated with generative AI, including algorithmic transparency, misinformation, cybersecurity, public accountability, and responsible AI governance.

Building upon these research gaps, this study proposes that future investigations should move beyond static assessments of organizational readiness toward dynamic, capability-based perspectives. Empirical research may validate the conceptual framework proposed in this study through quantitative, qualitative, or mixed-methods approaches across different governmental contexts. Longitudinal studies are particularly recommended because they can capture how government organizations continuously develop sensing, seizing, and reconfiguring capabilities as AI technologies evolve over time.

Ultimately, future research should recognize that government AI readiness is not solely a technological issue but a multidimensional organizational phenomenon requiring continuous adaptation, institutional learning, ethical governance, and strategic leadership. Advancing

research in these directions will contribute to a more comprehensive understanding of how governments can effectively harness artificial intelligence while maintaining democratic values, public trust, and sustainable public value creation.

The findings demonstrate that previous AI readiness studies generally acknowledge the importance of leadership but frequently conceptualize it as an independent organizational factor. Existing readiness frameworks often assess leadership commitment through indicators such as executive support, digital vision, or managerial commitment without adequately explaining how leadership continuously enables organizational adaptation during AI implementation (Mikalef & Gupta, 2021).

This study extends previous literature by positioning leadership within the analytical framework of Dynamic Capabilities Theory. Rather than functioning solely as a managerial attribute, leadership becomes an adaptive organizational capability that integrates sensing, seizing, and reconfiguring activities across the entire AI implementation process. This perspective provides a more dynamic explanation of government AI readiness than existing technology adoption models, which primarily focus on pre-adoption organizational conditions.

The implication is that governments seeking sustainable AI implementation should prioritize the development of adaptive strategic leadership alongside technological investment. AI readiness therefore depends not only on acquiring advanced technologies but also on cultivating leaders capable of continuously interpreting technological change, mobilizing organizational resources, and redesigning institutional arrangements in response to evolving public-sector challenges.

E. CONCLUSION

This study examined government organizational readiness for artificial intelligence (AI) adoption through the perspective of Dynamic Capabilities Theory. By synthesizing contemporary literature on AI implementation, digital government transformation, organizational readiness, and strategic management, the study demonstrates that AI readiness should not be understood solely as technological preparedness. Rather, it represents a multidimensional organizational capability encompassing strategic leadership, digital infrastructure, human capital, organizational culture, governance mechanisms, and interorganizational collaboration. These dimensions collectively shape governments' ability to respond effectively to the opportunities and challenges associated with AI-driven transformation.

A central contribution of this study is the integration of Dynamic Capabilities Theory into the discourse on government AI readiness. While previous studies have largely explained AI adoption through technology-oriented frameworks such as the Technology Organization Environment (TOE) framework, the Technology Acceptance Model (TAM), Diffusion of Innovation (DOI) theory, and Institutional Theory, this review argues that these perspectives provide only a partial explanation of organizational readiness. The Dynamic Capabilities perspective extends existing scholarship by conceptualizing readiness as a continuous process of sensing, seizing, and reconfiguring, enabling government organizations to adapt strategically to evolving technological, institutional, and societal environments. This theoretical integration constitutes the primary conceptual contribution of the study.

The proposed analytical framework further contributes to the literature by positioning organizational readiness as an adaptive capability rather than a static organizational condition. Instead of focusing exclusively on technological resources, the framework illustrates how governments continuously develop organizational learning, strategic decision-making, governance capacity, and institutional transformation throughout the AI adoption process. This perspective offers a more comprehensive understanding of public-sector digital transformation and provides a theoretical foundation for future empirical investigation.

From a practical perspective, the findings highlight that successful AI adoption requires governments to invest not only in digital technologies but also in leadership development, workforce capability enhancement, ethical governance, organizational learning, and collaborative innovation ecosystems. Policymakers should therefore adopt integrated AI readiness strategies that simultaneously strengthen technological, managerial, institutional, and governance capacities. Such an approach is expected to improve service quality, policy effectiveness, transparency, accountability, and citizen trust while ensuring that AI implementation remains aligned with broader public values.

Despite these contributions, this study has several limitations. As a conceptual review, the proposed framework has not yet been empirically validated across different governmental contexts. Furthermore, the reviewed literature predominantly reflects experiences from countries with relatively advanced digital government ecosystems, which may limit the transferability of findings to developing countries with different institutional capacities and technological infrastructures. These limitations provide opportunities for future empirical research to examine the applicability of the framework across diverse administrative settings.

Future studies are encouraged to operationalize the proposed readiness dimensions into measurable indicators and empirically test the relationships among organizational readiness, Dynamic Capabilities, AI governance, and public-sector performance. Comparative studies across countries, longitudinal investigations, and mixed-methods research designs would further enrich understanding of how government organizations continuously strengthen their adaptive capabilities in response to rapid developments in artificial intelligence. As AI technologies continue to evolve, advancing knowledge in this area will be essential for supporting sustainable digital transformation and responsible public-sector innovation.

REFERENCES

- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they? *Strategic Management Journal*, 21(10–11), 1105–1121. [https://doi.org/10.1002/1097-0266\(200010/11\)21:10/11<1105::AID-SMJ133>3.0.CO;2-E](https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E)
- Janssen, M., & van der Voort, H. (2020). Agile and adaptive governance in crisis response: Lessons from the COVID-19 pandemic. *International Journal of Information Management*, 55, 102180. <https://doi.org/10.1016/j.ijinfomgt.2020.102180>
- Kane, G. C., Nguyen Phillips, A., Copulsky, J. R., & Andrus, G. R. (2019). *The Technology Fallacy*. The MIT Press. <https://doi.org/10.7551/mitpress/11661.001.0001>
- Madan, R., & Ashok, M. (2023). AI adoption and diffusion in public administration: A systematic literature review and future research agenda. *Government Information Quarterly*, 40(1), 101774. <https://doi.org/10.1016/j.giq.2022.101774>
- Mikalef, P., & Gupta, M. (2021). Artificial intelligence capability: Conceptualization, measurement calibration, and empirical study on its impact on organizational creativity and firm performance. *Information & Management*, 58(3), 103434. <https://doi.org/10.1016/j.im.2021.103434>
- Nzobonimpa, S., & Savard, J. (2023). Ready but irresponsible? Analysis of the Government Artificial Intelligence Readiness Index. *Policy & Internet*, 15(3), 397–414. <https://doi.org/10.1002/poi3.351>
- Pablo, A. L., Reay, T., Dewald, J. R., & Casebeer, A. L. (2007). Identifying, Enabling and Managing Dynamic Capabilities in the Public Sector*. *Journal of Management Studies*, 44(5), 687–708. <https://doi.org/10.1111/j.1467-6486.2006.00675.x>

- Rosenberg Hansen, J., & Ferlie, E. (2016). Applying Strategic Management Theories in Public Sector Organizations: Developing a typology. *Public Management Review*, 18(1), 1–19. <https://doi.org/10.1080/14719037.2014.957339>
- Straub, V. J., Morgan, D., Bright, J., & Margetts, H. (2023). Artificial intelligence in government: Concepts, standards, and a unified framework. *Government Information Quarterly*, 40(4), 101881. <https://doi.org/10.1016/j.giq.2023.101881>
- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- van Noordt, C., & Misuraca, G. (2022). Artificial intelligence for the public sector: results of landscaping the use of AI in government across the European Union. *Government Information Quarterly*, 39(3), 101714. <https://doi.org/10.1016/j.giq.2022.101714>
- van Noordt, C., & Tangi, L. (2023). The dynamics of AI capability and its influence on public value creation of AI within public administration. *Government Information Quarterly*, 40(4), 101860. <https://doi.org/10.1016/j.giq.2023.101860>