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Proceedings of The International Conference on Advanced Research in Business, Management and Economics, Vol. 2 Issue. 1, 2026, pp. 01- 19
DOI: https://doi.org/10.33422/icabme.v2i1.2008
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ISSN: 3030-0665 online



Diamond Scientific Publishing

Rethinking Digital Transformation: Towards an AI-Driven Strategic Experience Model for Organisational Competitiveness

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Abstract

Digital transformation has evolved from a technology adoption imperative into a strategic priority for organisations seeking to remain competitive in increasingly data-driven and experience-oriented environments. Despite significant investments in artificial intelligence (AI), many organisations continue to operate within fragmented digital ecosystems that limit value creation, strategic agility, and customer engagement. This study develops a conceptual understanding of how AI may be strategically integrated into organisational digital ecosystems to support competitiveness through experience-driven transformation. A scoping literature review was conducted, drawing on interdisciplinary literature published between 2019 and 2026 across strategic management, information systems, digital innovation, and business model transformation. The findings identify five key themes shaping AI-enabled transformation: AI capabilities, strategic agility, business model innovation, ethical governance and Enterprise Architecture. The study proposes an AI-Driven Strategic Experience and Sustainable Competitiveness Model that positions AI-enabled transformation as a coordinated organisational ecosystem integrating technological capabilities, governance structures, strategic agility, and resilience outcomes. The model frames ethical governance and data stewardship as guiding principles that support sustainable and responsible innovation. The study contributes to strategic management and digital transformation literature by proposing a theoretically grounded framework that integrates AI capability development, digital experience ecosystems, and governance into a unified strategic model. The paper also offers practical insights for organisations seeking to move beyond fragmented digital initiatives towards integrated, intelligent, and experience-centred digital ecosystems.

Keywords: Artificial Intelligence in Organisations; Customer Experience Management; Data Governance; Digital Capability; Innovation Strategy

1. Introduction

Digital transformation continues to reshape organisational structures, operations, and competitive strategies (Volberda et al., 2021; Plekhanov et al., 2022). Technologies such as AI, cloud computing, and predictive analytics have changed how organisations create and capture value (Enholm et al., 2021), with AI a particularly influential force improving decision-making, automating processes, and enhancing customer engagement (Kitsios &

Kamariotou, 2021), while supporting a shift towards data-driven management and smart service ecosystems.

Despite growing investment in AI-enabled technologies, many organisations continue to experience fragmented digital transformation initiatives that prioritise technology deployment over strategic alignment and customer experience (Jose, 2026). Consequently, organisations often struggle to translate digital investments into sustainable competitive advantage. Recent studies further suggest that organisations must increasingly balance AI-driven innovation with broader environmental, social, and governance (ESG) responsibilities, including concerns relating to transparency, accountability, carbon footprint, and digital inclusion (Sætra, 2022; Domingo, 2025).

In information systems, Enterprise Architecture (EA) has become a key mechanism for tackling fragmentation by aligning strategy, governance, and technology infrastructure. Organisations with advanced EA capabilities better translate technological investment into strategic outcomes (Alghamdi, 2024), and African evidence similarly shows that transformation depends on coordinated governance and strategic alignment rather than technology adoption alone (Bachoo, 2018; Cumbe, 2025). Although AI adoption, EA, strategic agility, governance, and business model innovation have each attracted attention, existing research largely examines these constructs in isolation, with no integrative framework explaining how they interact to enable sustainable competitiveness.

This challenge is pressing in digitally connected environments, where organisations increasingly compete by delivering seamless experiences and integrating ecosystems. Digital business ecosystems emphasise ongoing interaction and value creation among stakeholders (Senyo et al., 2019; Morgan-Thomas et al., 2020), and the rise of predictive and Generative AI enhances their strategic potential by supporting both analytical intelligence and flexible interaction. This paper addresses this challenge by introducing the AI-Driven Strategic Experience and Sustainable Competitiveness Model, integrating AI capabilities, Enterprise Architecture, digital experience ecosystems, strategic agility, governance, and organisational resilience within a single framework, grounded in a literature review spanning strategic management, information systems, digital innovation, AI governance, and organisational transformation.

1.1 Research Objectives and Questions

This study aims to conceptualise and develop an AI-Driven Strategic Experience and Sustainable Competitiveness Model. This model integrates AI capabilities, Enterprise Architecture, digital experience ecosystems, strategic agility, governance, and organisational resilience within a single framework. The research is guided by the following questions:

1. How can AI capabilities support integrated digital experience ecosystems within organisations?
2. What strategic capabilities enable AI-driven organisational competitiveness?
3. How can governance, ethical stewardship, and sustainability principles be integrated into AI-enabled digital transformation frameworks to support responsible organisational competitiveness?

This study consolidates interdisciplinary research on AI-enabled transformation and identifies five themes essential for sustainable competitiveness. It proposes a conceptual model that positions Enterprise Architecture as an integration mechanism and strategic agility as a mediating capability, embedding governance and ESG stewardship as overarching boundary conditions.

2. Literature Review

Organisations operate in complex settings marked by technological disruption, evolving customer expectations, sustainability pressures, and heightened competition (Verhoef et al., 2019). Although digital technologies offer opportunities for innovation and value creation, many organisations struggle to align technological investments with their strategy and governance, resulting in fragmented efforts and missed business opportunities (Cosa, 2024).

As introduced above, Enterprise Architecture (EA) facilitates alignment between organisational strategy, business processes, governance structures, information systems, and technology infrastructure, enabling integration across domains rather than functioning as a standalone capability (Alghamdi, 2024; Bakar & Jamil, 2025). As organisations adopt AI-enabled technologies, EA provides a structural foundation for managing ecosystem complexity. Recent South African evidence shows that public-sector EA adoption faces limited management support, restricted organisational capacity, and a poor shared understanding of EA, hindering digital transformation in government (Tshuma et al., 2024).

Artificial intelligence is now a key element of digital transformation and business model innovation. Predictive AI supports organisations through forecasting, pattern detection, customer insights, and decision-making support (Ojeda et al., 2025), enhancing responsiveness and strategic choices. Generative AI has expanded AI's strategic importance by enabling conversational interfaces, content creation, and personalised interactions at scale (Kanbach et al., 2023; Tytarenko, 2025). Together, predictive and Generative AI offer complementary functions supporting analytical intelligence and engaging experiences.

The increasing use of AI has led to digital experience ecosystems where organisations compete through ongoing engagement, personalisation, and seamless customer journeys (Tytarenko, 2025), using data insights and intelligent communication to build stronger relationships and organisational value (Kaartemo & Helkkula, 2025). These ecosystems extend beyond individual channels into broader organisational strategies aimed at stakeholder engagement. AI has enabled organisations to redesign business models and develop new value-creation mechanisms (Åström et al., 2022; Sjödin et al., 2021), reinforcing its role as a strategic rather than purely operational capability. Huang and Rust (2021) offer a strategic framework differentiating mechanical, thinking, and feeling AI within the marketing research-strategy-action cycle, explaining how AI facilitates the standardisation, personalisation, and relationship-building crucial to digital experience ecosystems.

Dynamic capability theory explains how organisations use AI-enabled technologies: they must continuously monitor shifts, capitalise on opportunities, and reconfigure resources to adapt (Ellström et al., 2021). Strategic agility helps firms turn AI-derived insights into action (Enholm et al., 2021), though African evidence shows this is conditional on governance structures and digital infrastructure rather than automatic (Mdhluli, 2026). Strategic agility increasingly mediates the relationship between AI capabilities and sustained competitiveness (Liu et al., 2025), with organisational resilience emerging as a related strategic outcome (Shatila, 2025).

Three complementary lenses further sharpen the model's mechanisms. The Technology-Organisation-Environment (TOE) framework explains adoption as jointly shaped by technological, organisational, and environmental conditions (Baker, 2012), clarifying why AI capabilities alone rarely translate into value without corresponding organisational (e.g., EA) and environmental (e.g., regulatory) conditions. TOE-based analysis of Saudi Arabian SMEs confirms that organisational and environmental readiness, not technology availability, determines whether AI adoption improves performance (Badghish & Soomro, 2024).

Service-dominant logic (SDL) reframes AI-enabled offerings as processes of value co-creation rather than discrete outputs, treating digital experience ecosystems as sites of ongoing, relational value creation (Vargo & Lusch, 2004). Socio-technical systems thinking underscores that transformation is jointly produced by technical and social/organisational subsystems, so governance cannot be an add-on to technology deployment (Morgan-Thomas et al., 2020). Together with dynamic capability theory, these lenses anchor the model's adoption conditions (TOE), value-creation logic (SDL), and governance logic (socio-technical systems).

The rapid growth in AI adoption has heightened governance, ethics, and sustainability concerns. Responsible AI governance spans transparency, accountability, fairness, privacy, cybersecurity, and regulatory compliance (Joel et al., 2024; Papagiannidis et al., 2025), while AI infrastructure carries significant environmental implications (Gabriel et al., 2024; Soori et al., 2024) and governance must also guard against strategic injustice (Pindelski, 2025). Conversely, well-managed AI can enhance ESG performance through green innovation and transparency (Xie et al., 2025; Qi et al., 2025), underscoring the need to weigh the broader societal and environmental implications of AI-enabled transformation (Mistar & Makó, 2025).

The literature also highlights tensions between AI-driven efficiency and broader stakeholder interests: productivity gains must not undermine social inclusion, employee wellbeing, or trust (Pindelski, 2025), requiring organisations to balance innovation and efficiency with responsible governance and long-term value creation.

3. Methods

This study employed a conceptual research design, guided by a scoping literature review methodology consistent with the principles of PRISMA-ScR (Tricco et al., 2018). A scoping review was appropriate given the interdisciplinary and rapidly evolving nature of research on artificial intelligence, digital transformation, Enterprise Architecture, governance, customer experience, and organisational competitiveness. The review aimed to identify, map, and synthesise key concepts, strategic capabilities, governance mechanisms, and organisational outcomes linked to AI-enabled transformation.

The systematic search was conducted between March and May 2026 across six databases: Scopus, Web of Science, SpringerLink, IEEE Xplore, Emerald Insight, and Google Scholar (used supplementarily to capture grey literature and recent preprints). The review covered literature published between 2019 and 2026, with one exception for a foundational African Enterprise Architecture study predating this window. The search combined four thematic blocks using Boolean operators:

(“artificial intelligence” OR “generative AI” OR “AI capabilities”) AND (“digital transformation” OR “digital experience” OR “strategic agility” OR “organisational resilience” OR “organisational competitiveness”) AND (“Enterprise Architecture” OR “IT governance” OR “AI governance” OR “ESG” OR “customer experience”).

Records retrieved from all databases (more than 1,000 in total; an exact per-database count was not preserved) were collected in Zotero. The single reviewer identified and removed duplicate records manually based on title, DOI, and author-year matching. Because the review was initially an exploratory scoping review, intermediate screening counts were not recorded contemporaneously; during revision, the search and screening process was reconstructed and verified, enabling transparent reporting in Figure 1. Title and abstract screening narrowed the initial pool to 80 articles for full-text assessment; full-text assessment excluded 49 articles, yielding a final systematic corpus of 31 sources.

Inclusion criteria comprised peer-reviewed journal articles, conference proceedings, and recognised conceptual studies addressing the strategic, organisational, governance, and experiential dimensions of AI adoption. Studies focused exclusively on technical algorithm development without organisational implications were excluded, as were sources that did not address at least one of the five thematic areas identified during the review process.

Table 1: Inclusion and Exclusion Criteria for the Scoping Review

Criterion	Inclusion	Exclusion
Publication type	Peer-reviewed journal articles; conference proceedings; recognised conceptual/theoretical studies	Editorials, opinion pieces, blog posts, and non-peer-reviewed commentary (except the single vetted grey-literature source)
Topical relevance	Addresses at least one of the five thematic areas (AI capabilities, strategic agility, business model innovation, governance/ESG, Enterprise Architecture)	Studies focused exclusively on technical algorithm development with no organisational, strategic, or governance implications
Timeframe	Published 2019-2026 (one pre-2019 foundational African Enterprise Architecture study included by exception)	Published before 2019, other than the single stated exception
Language	English-language, full text available	Non-English text; abstract-only or otherwise inaccessible full text
Grey literature	Eligible only where it addresses a gap with no peer-reviewed coverage, is authored by an identifiable, affiliated researcher, and meets all other criteria	Grey literature not meeting all three conditions; sources without a traceable, credentialed author
Geographic scope	No geographic restriction: South African and other Global South sources actively retained where identified	None applied on geographic grounds

Source: Author, adapted from PRISMA-ScR guidance (Tricco et al., 2018)

One grey-literature source, a Zenodo-hosted preprint (Jose, 2026), was included in the corpus. Grey literature was eligible for inclusion only where it (a) addressed a thematic area directly relevant to the review for which no equivalent peer-reviewed coverage was identified during screening, (b) was authored by an identifiable, traceable researcher with an institutional affiliation, and (c) was assessed against the same inclusion and exclusion criteria applied to peer-reviewed sources.

The screening process yielded 31 sources (Figure 1). During peer review, four additional sources were purposively selected to strengthen coverage of South African SME and public-sector contexts and theoretical grounding for the AI-personalisation discussion: Akoh (2024), Tshuma et al. (2024), Mbae et al. (2025), and Huang and Rust (2021). These are treated as supplementary literature rather than systematic-corpus members, consistent with scoping-review guidance permitting targeted supplementation (Tricco et al., 2018); the combined literature base therefore comprises 35 sources (31 systematic, 4 supplementary). Separately, four systematic-corpus sources were flagged during revision for rigour concerns: Sharma (2025) was removed, while Dzreke (2025a), Hafis et al. (2026), and Roy et al. (2025) were each replaced by Cosa (2024), Kaartemo and Helkkula (2025), and Ojeda et al. (2025) respectively, without changing corpus size.

Within the 31-source corpus, publication year distribution shows a strong concentration in recent years (approximately 58% in 2025-2026); of these, approximately 52% were conceptual/framework papers, 32% empirical studies, and 16% reviews, spanning strategic management, information systems, digital innovation, AI ethics, and ESG. Geographically, the literature remains predominantly European, North American, and East Asian; the four supplementary sources partially extend coverage into South African contexts, discussed further below.

A brief quality appraisal assessed the 31 corpus sources on three dimensions: methodological transparency, thematic relevance, and source credibility, rated high/moderate/low rather than a composite score, consistent with a scoping review's exploratory purpose; no source rated low on more than one dimension. As a sensitivity check, the 12 most recently published sources (2025-2026) were re-screened against the inclusion criteria given their limited citation history; all were confirmed eligible, and the thematic pattern was unchanged when considered separately. Because a single reviewer (the author) conducted the screening, the process remains susceptible to selection bias, as discussed in the Conclusion; however, the transparent screening trail (Figure 1) and inclusion/exclusion criteria (Table 1) make the process auditable, though they do not eliminate the risk.

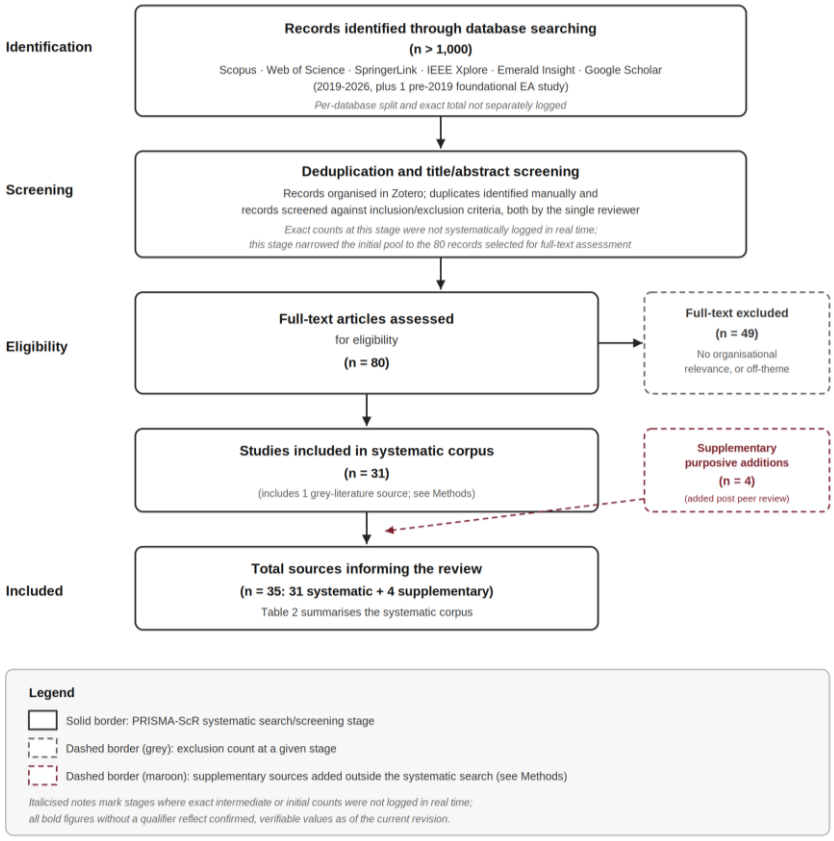


Figure 1: PRISMA-ScR flow diagram illustrating the literature identification, screening, eligibility assessment, and inclusion process for the scoping review.

Source: Author

4. Results and Discussion

4.1 Thematic Findings

The thematic synthesis revealed five interconnected themes demonstrating how organisations can use AI-enabled transformation to boost competitiveness, resilience, and sustainable value creation, serving as the conceptual basis for the proposed model. Table 2 summarises key studies included in the thematic synthesis.

Table 2: Summary of Key Studies Included in the Thematic Synthesis

Study	Context	Purpose	Method	Key Contribution	Primary Themes
Enholm et al. (2021)	Multi-sector AI	Business value of AI	Systematic review	AI creates value through process optimisation; strategic agility converts AI insights into competitive advantage.	AI Capabilities; Strategic Agility
Kanbach et al. (2023)	Business model innovation	Generative AI	Conceptual	GenAI enables scalable value creation and personalised interactions.	AI Capabilities; Business Model Innovation
Alghamdi (2024)	Cross-sector	Enterprise Architecture	Empirical survey	Mature EA reduces fragmentation and aligns strategy with technology.	Enterprise Architecture
Papagiannidis et al. (2025)	Information systems	Responsible AI governance	Systematic review	Responsible AI governance depends on transparency, accountability and compliance.	Governance & ESG
Liu et al. (2025)	B2B firms; industrial marketing	AI-enabled systems, strategic agility, and decision-making performance	Empirical survey	Strategic agility mediates the relationship between AI-enabled systems and innovation performance.	Strategic Agility
Shatila (2025)	Strategy; organisational resilience	AI and organisational resilience: mediating role of agility and innovation	Empirical; conceptual mixed	Strategic agility and innovation translate AI adoption into organisational resilience.	Strategic Agility
Sjödin et al. (2021)	Business model innovation	How AI capabilities enable business model innovation	Conceptual; qualitative case study	AI enables business model innovation through continuous strategic alignment and value creation.	Business Model Innovation
Sætra (2022)	AI ethics sustainability	AI-ESG protocol for evaluating AI implications	Conceptual; framework development	Responsible AI deployment requires structured ESG governance and disclosure.	Governance & ESG
Senyo et al. (2019)	Digital ecosystems	Digital business ecosystem: literature review and framework	Systematic review	Digital ecosystems enable stakeholder value co-creation through continuous engagement.	AI Capabilities
Volberda et al. (2021)	Strategic management; cognition	Strategising in a digital world: overcoming barriers	Conceptual; theoretical	Digital transformation requires cognitive reconfiguration to build strategic agility.	Strategic Agility; Business Model Innovation

Source: Author

Note: Table 2 summarises representative studies from the 31-source systematic corpus underpinning the five themes. Supplementary studies added during revision are discussed in the text where relevant.

4.1.1 Theme 1: AI Capabilities and Digital Experience Ecosystems

The literature consistently emphasises AI capabilities as crucial drivers of digital transformation (Ojeda et al., 2025; Kanbach et al., 2023). Predictive AI supports decision-

making through forecasts, pattern identification, and recommendations, enhancing efficiency and strategic agility. Generative AI has broadened AI's functions, enabling conversational interaction, tailored content, and dynamic engagement (Tytarenko, 2025). Organisations increasingly combine both to develop intelligent digital experience ecosystems emphasising continuous engagement and seamless touchpoints.

4.1.2 Theme 2: Strategic Agility and Organisational Resilience

The literature emphasises strategic agility as an essential organisational skill that enables companies to translate AI-driven insights into effective strategic decisions (Shatila, 2025; Liu et al.,2025). While AI offers intelligence, automation, and analytics, organisations need agility to interpret this information, modify their business processes, reallocate resources, and respond effectively to changing environmental circumstances.

The findings indicate that strategic agility acts as a mediating capability rather than a direct result of AI adoption (Shatila, 2025). Organisations that effectively utilise AI tend to exhibit stronger adaptive learning, innovation focus, responsiveness, and decision-making skills. Resilience, closely linked with agility, is increasingly seen in the literature as a vital strategic outcome of AI-driven transformation. While agility signifies an organisation's ability to adapt quickly to change, resilience denotes its capacity to withstand disruptions, recover from uncertainty, and maintain performance over time. Therefore, AI-driven transformation enhances not only competitiveness but also long-term organisational resilience.

4.1.3 Theme 3: Business Model Innovation and Value Creation

The literature consistently shows that AI helps organisations redesign traditional business models and develop new ways to create and capture value (Sjödin et al., 2021). Findings reveal that organisations increasingly use AI not only to boost operational efficiency but also to generate new value through improved customer experiences, digital platforms, and ecosystem engagement. Predictive AI enhances decision-making and resource use, while Generative AI enables scalable engagement, knowledge creation, and personalised services (Ojeda et al., 2025; Kanbach et al., 2023). The studies indicate that a sustainable competitive advantage comes when AI capabilities are strategically integrated into business models, rather than used only as operational tools.

4.1.4 Theme 4: Governance, ESG and Responsible Innovation

Governance emerged as a recurring theme across the reviewed literature (Joel et al., 2024; Gabriel et al.,2024). Organisations increasingly recognise that successful AI adoption requires appropriate governance mechanisms to address transparency, accountability, fairness, privacy, cybersecurity, and regulatory compliance. The findings further underscore the growing importance of the AI-ESG nexus. While AI adoption raises concerns about energy consumption, digital infrastructure requirements, and environmental sustainability, recent evidence also suggests that AI can positively contribute to ESG performance by supporting green innovation, improving information transparency, and enabling more sustainable decision-making (Xie et al., 2025; Qi et al., 2025). The literature, therefore, presents governance as extending beyond compliance and risk management towards responsible innovation. Organisations must balance efficiency objectives with broader stakeholder interests, including social inclusion, employee wellbeing, environmental sustainability, and long-term value creation. Responsible governance consequently serves as a critical enabler of sustainable AI-enabled transformation.

4.1.5 Theme 5: Enterprise Architecture as an Integration Enabler

As introduced earlier, a consistent theme highlights mechanisms aligning strategy, governance, processes, and technology (Alghamdi, 2024), with Enterprise Architecture (EA) a key integration tool. EA provides the structural support to manage AI-driven transformation complexity, reducing fragmentation and aligning investments with strategic goals; it is not a standalone capability but a mechanism facilitating the seamless operation of AI capabilities, governance, and digital ecosystems.

4.2 Discussion

The thematic synthesis reveals that sustainable AI-enabled transformation is an integrative organisational challenge rather than a technological one. Fragmentation remains the central obstacle: organisations invest in AI without aligning these efforts with strategy, governance, customer experience, and sustainability objectives. Enterprise Architecture addresses this structurally, while strategic agility addresses it dynamically; together, they translate AI capabilities into the digital experience ecosystems through which competitive differentiation is achieved. The complementary roles of predictive and Generative AI reinforce this: analytical intelligence informs decision-making; interactional intelligence builds stakeholder engagement. Governance and sustainable stewardship do not constrain this process but rather legitimise it, ensuring that gains in competitiveness are durable rather than extractive. These insights are particularly pertinent in emerging economy contexts such as South Africa, where infrastructure heterogeneity, digital inequality, and regulatory complexity demand frameworks that prioritise integration and responsible innovation over adoption velocity alone. The model, grounded in a scoping review, is a conceptual proposition that requires empirical validation across industries, organisational contexts, and levels of digital maturity.

A key feature of the reviewed literature is its geographical focus. Most studies originate from developed countries, especially in Europe, North America, and East Asia, with minimal representation from Africa or other parts of the Global South. This pattern mirrors a broader imbalance in AI and digital transformation research, in which frameworks are primarily developed and tested in technologically advanced, resource-rich settings. Applying these frameworks to emerging economies like South Africa requires careful consideration. South Africa’s unique context includes significant digital inequality, diverse infrastructure, skills shortages, and complex regulations, even as AI adoption grows in sectors such as finance, telecommunications, healthcare, and public administration. The proposed AI-Driven Strategic Experience and Sustainable Competitiveness Model addresses this reality by emphasising governance and sustainability, positioning resilience as a key goal, and grounding principles in resource-constrained, institutionally complex environments. Future empirical studies should test and adapt this model within African and Global South organisations to verify its applicability across different levels of digital maturity and socio-economic development. Recent South African evidence begins to fill this gap; manufacturing SMEs show low AI adoption, mainly due to resource, skills, and framework challenges (Akoh, 2024). Similarly, public-sector organisations encounter structural barriers to enterprise architecture (EA) and digital-service adoption (Tshuma et al., 2024). Moreover, Botswana's public sector has documented comparable e-service delivery obstacles (Mbae et al., 2025). Beyond Africa, TOE-based evidence from Saudi Arabian SMEs shows organisational and environmental readiness, not technology access, as the binding constraint on AI-enabled performance (Badghish & Soomro, 2024), suggesting this pattern is characteristic of resource-constrained emerging economies more broadly. These studies collectively expand understanding to include SME and public-sector contexts, though they still represent a much smaller portion than the numerous studies focused on large firms in developed economies.

This study advances digital transformation research by proposing an integrative AI-enabled transformation model that moves beyond examining AI, Enterprise Architecture, governance, and strategic agility as isolated constructs. Instead, it specifies how these constructs interact within a unified organisational ecosystem to enhance competitiveness and resilience, while offering testable propositions for future empirical validation. First, it redefines AI-enabled transformation as an organisational ecosystem instead of merely a technology adoption process. Second, it highlights Enterprise Architecture as the framework that connects AI capabilities with organisational strategy. Third, it identifies strategic agility as the mediating factor through which AI-enabled ecosystems foster resilience and sustainable competitiveness.

5. Proposed AI-Driven Strategic Experience and Sustainable Competitiveness Model

5.1 The Model

Drawing on the thematic findings, this study proposes the AI-Driven Strategic Experience and Sustainable Competitiveness Model, comprising six interconnected components as illustrated in Figure 2. It conceptualises AI-enabled digital transformation as a holistic organisational process in which technological capabilities, structures, governance, and strategic skills work together to achieve competitiveness and resilience. Rather than viewing digital transformation solely as a technology-focused effort, the model positions AI-enabled change as a coordinated ecosystem that aligns business goals, governance, customer experiences, and organisational capabilities.

The model comprises six interconnected elements: AI capabilities, Enterprise Architecture, digital experience ecosystems, strategic agility, governance and sustainable stewardship, and competitiveness and resilience outcomes. Collectively, these elements provide a comprehensive view of how organisations can transform AI investments into lasting organisational value.

5.1.1 AI Capabilities

The model's technological foundation comprises predictive AI, encompassing forecasting, pattern recognition, customer intelligence, and decision support, and Generative AI, which enables conversational engagement, personalised content, and dynamic stakeholder interaction. While predictive AI contributes analytical intelligence, Generative AI contributes interactional intelligence. Together, these complementary capabilities provide the basis for AI-enabled transformation.

5.1.2 Enterprise Architecture as an Integration Mechanism

As established in Theme 5, Enterprise Architecture is the model's organisational integration mechanism, embedding AI within broader transformation initiatives rather than operating as a standalone capability. Its precise boundary relative to IT and data governance is set out in the Construct Definitions section below.

5.1.3 Digital Experience Ecosystems

Integrated AI capabilities support digital experience ecosystems characterised by continuous engagement, personalisation, responsiveness, and ecosystem connectivity. These interconnected environments extend beyond individual channels, enabling organisations to create value through intelligent stakeholder interactions and compete through seamless, multi-touchpoint experiences.

5.1.4 Strategic Agility as a Mediating Capability

Strategic agility serves as the mediating capability through which AI-enabled insights and interactions translate into organisational value. Encompassing adaptive learning, innovation orientation, workforce adaptability, and resource reconfiguration, strategic agility is the critical link between AI-enabled ecosystems and competitive outcomes — since AI capabilities alone do not confer advantage without the organisational capacity to interpret and act on them.

5.1.5 Governance and Sustainable Stewardship

Governance and sustainable stewardship serve as overarching boundary conditions throughout the model, encompassing responsible AI governance, transparency, accountability, fairness, cybersecurity, and regulatory compliance, as well as ESG considerations such as sustainability, digital inclusion, and stakeholder well-being. These mechanisms ensure that AI-driven competitiveness remains aligned with broader societal interests and long-term value creation.

5.1.6 Competitiveness and Resilience Outcomes

The cumulative outcome of the model's interactions is enhanced organisational competitiveness and resilience. Competitiveness outcomes include improved customer engagement, innovation capacity, and operational effectiveness, while resilience reflects the ability to absorb disruption and sustain performance over time. Organisations that successfully integrate AI capabilities, Enterprise Architecture, digital ecosystems, strategic agility, and governance are best placed to achieve both short-term advantage and long-term durability.

The proposed model provides a holistic framework for AI-enabled transformation, integrating technological capabilities, organisational alignment, governance, and resilience within a single structure that addresses fragmentation and grounds future empirical investigation. Figure 2 illustrates the model. The model operationalises Dynamic Capability Theory by explaining how AI capabilities are sensed, integrated through Enterprise Architecture, transformed into digital experience ecosystems, and reconfigured through strategic agility to achieve organisational resilience.

5.2 Construct Definitions, Boundary Conditions, and Testable Propositions

Because the model treats governance as a single boundary condition, it is important to clarify how EA, IT governance, and data governance interrelate. EA is the most comprehensive, providing the structural framework that aligns strategy, processes, systems, and infrastructure (Alghamdi, 2024; Bakar & Jamil, 2025). IT governance is narrower, concentrating on decision rights and oversight of IT resource allocation as a component managed within EA. Data governance is even more specialised, covering policies and stewardship practices that ensure data quality and proper use, serving as both a technical input to EA and a boundary condition for ethical and regulatory issues. In essence, EA provides overall coordination, IT governance provides authorisation, and data governance ensures data integrity, with EA at the core and IT/data governance as related but separate practices.

Table 3 below sharpens each construct with a working definition, key dimensions, and its distinguishing boundary relative to adjacent constructs, together with illustrative measures for future empirical validation.

Table 3: Construct Definitions, Boundaries, and Possible Measures

Construct	Working Definition	Key Dimensions	Distinguishing Boundary/ Possible Measures
AI Capabilities	Organisational capacity to deploy predictive AI (forecasting, pattern recognition, customer intelligence) and Generative AI (conversational interaction, content generation, personalisation).	Forecasting & pattern recognition; customer intelligence; conversational & generative interaction; personalisation at scale.	Distinct from IT infrastructure (the capability to use AI, not the tools). Measures: AI capability maturity indices (Enholm et al., 2021).
Enterprise Architecture	Structural mechanism aligning strategy, governance, processes, systems, and infrastructure to reduce fragmentation.	Business-IT alignment; architecture governance; standardisation; interoperability.	Broader than IT/data governance, which it coordinates. Measures: EA maturity models (Alghamdi, 2024).
Digital Experience Ecosystems	Interconnected, multi-stakeholder digital environments, enabled by integrated AI and EA, characterised by continuous engagement and seamless multi-touchpoint interaction.	Ecosystem connectivity; personalisation; responsiveness; stakeholder co-creation.	Emergent outcome of AI-EA integration, not a standalone capability. Measures: engagement and touchpoint-integration indices.
Strategic Agility	Organisational capacity to sense AI-derived insights and reconfigure resources, processes, and workforce capabilities in response.	Adaptive learning; innovation orientation; workforce adaptability; speed of resource reconfiguration.	Mediates rather than directly producing outcomes; distinct from resilience (a downstream outcome). Measures: agility scales (Liu et al., 2025).
Governance and Sustainable Stewardship	Overarching principles and mechanisms, including IT governance, data governance, AI ethics, and ESG stewardship, that determine whether AI-enabled gains are legitimate and durable.	Transparency; accountability; fairness; privacy & cybersecurity; regulatory compliance; sustainability & digital inclusion.	A moderating boundary condition, not a sequential stage; sets the rules EA-integrated structures must satisfy. Measures: responsible-AI governance indices (Papagiannidis et al., 2025).
Competitiveness and Resilience Outcomes	Cumulative outcomes: competitiveness (engagement, innovation, operational effectiveness) and resilience (absorbing disruption, sustaining performance).	Customer engagement; innovation capacity; operational effectiveness; disruption-absorption capacity.	Competitiveness (short/medium-term) and resilience (long-term) are related but separable. Measures: firm performance and resilience indices.

Source: Author

Based on these construct definitions, the model produces the following propositions that can be tested empirically in the future:

P1: AI capabilities (predictive and generative) are positively associated with the maturity of digital experience ecosystems.

P2: Enterprise Architecture positively moderates the relationship between AI capabilities and digital experience ecosystem maturity, such that organisations with more mature EA convert AI capabilities into ecosystem value more effectively than those with fragmented EA.

P3: Strategic agility mediates the relationship between digital experience ecosystem maturity and competitiveness/resilience outcomes.

P4: Governance and sustainable stewardship moderate the strategic-agility-to-outcomes pathway, such that weak governance attenuates gains in competitiveness and resilience even when AI capabilities and strategic agility are strong.

P5: The strength of the AI-capability-to-competitiveness pathway varies with institutional digital-infrastructure readiness, a boundary condition of relevance to emerging-economy applications of the model, including South Africa.

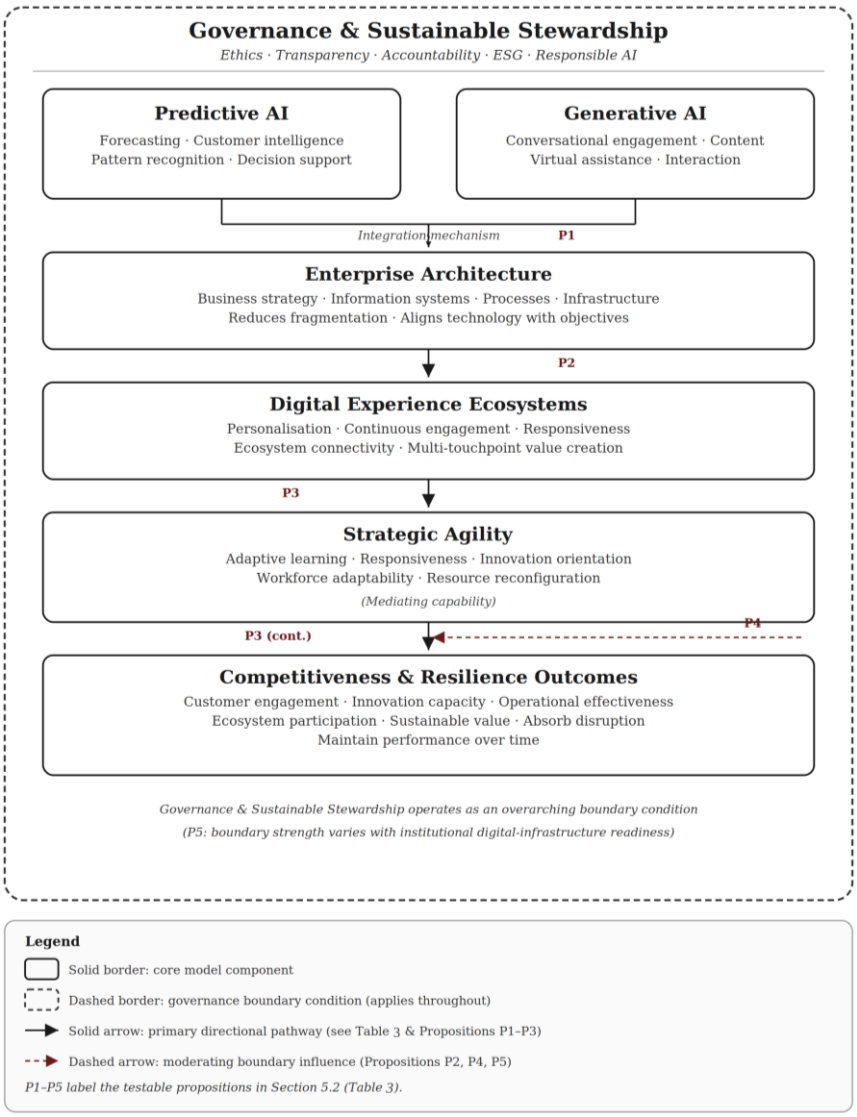


Figure 2: AI-Driven Strategic Experience and Sustainable Competitiveness Model

Source: Author

To operationalise the propositions above for future empirical testing, Figure 3 presents an indicative measurement model that maps each construct to illustrative observable indicators and visually distinguishes mediated paths (P1, P3), moderation effects (P2, P4), and the boundary condition (P5).

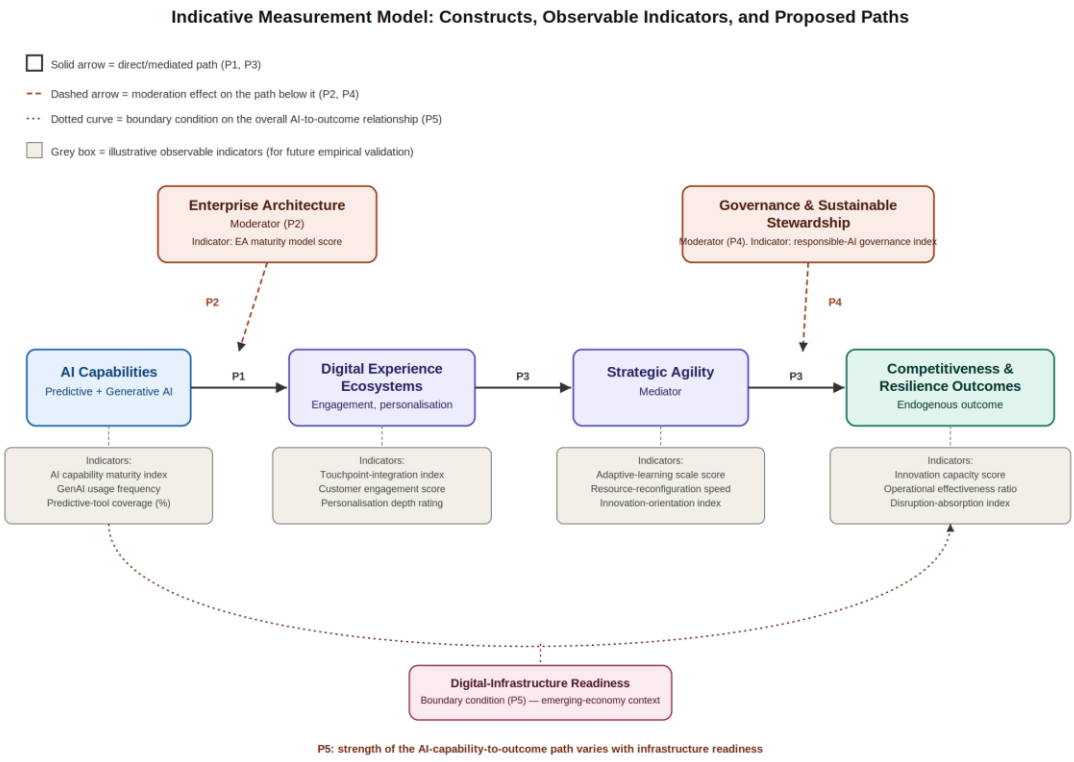


Figure 3: Indicative Measurement Model with Observable Indicators

Source: Author

5.3 Towards Practice: An Implementation Roadmap and Illustrative Vignette

While the model above is conceptual, organisations require a practical pathway for implementation. Table 4 proposes a three-phase maturity roadmap aligned with the model's six components, followed by an illustrative vignette grounded in the South African context.

Table 4: Implementation Roadmap

Phase	Indicative Timeframe	Focus Activities	Primary Model Components
1. Foundational	0–6 months	Inventory existing AI use cases; audit EA maturity; establish a minimum viable data-governance and AI-ethics framework; identify quick-win experience touchpoints.	AI Capabilities; Enterprise Architecture; Governance and Sustainable Stewardship
2. Integrated	6–18 months	Formalise EA to link AI initiatives with strategy; design digital experience ecosystem architecture; establish cross-functional agility mechanisms; embed governance checkpoints into project approval.	Enterprise Architecture; Digital Experience Ecosystems; Strategic Agility; Governance and Sustainable Stewardship
3. Adaptive	18+ months	Institutionalise continuous sensing-and-reconfiguration cycles; scale digital experience ecosystems; monitor outcomes against formal metrics; conduct periodic governance audits.	Strategic Agility; Competitiveness and Resilience Outcomes; Governance and Sustainable Stewardship

5.3.1 Illustrative Vignette: Ubuntu University (fictional)

Ubuntu University (UU), a fictional mid-sized South African higher education institution, illustrates the model's application. At the Foundational phase, UU's AI use was fragmented: a predictive learning-analytics dashboard for at-risk students was confined to one faculty, and a Generative AI chatbot operated as a standalone Student Services pilot, neither connected to the SIS nor the LMS. An EA audit found low alignment and no formal data-governance policy, prompting UU to establish a minimum-viable data-governance and AI-ethics framework, including guidelines on AI use in assessment, and to catalogue AI use cases across faculties.

In the Integrated phase, UU's EA team took responsibility for coordinating AI initiatives, linking the dashboard and chatbot to the SIS and LMS via a shared student data layer, and mapping the end-to-end student journey. A cross-functional 'AI response team' was established to reallocate resources quickly as new AI-enabled opportunities or risks emerged, for example, by adapting assessment design in response to students' use of Generative AI, an early expression of strategic agility. Data-governance checkpoints were added to EdTech procurement.

In the Adaptive phase, UU treats AI-enabled transformation as a continuous cycle: student engagement, retention, and accreditation readiness are tracked as joint indicators of competitiveness and resilience, with quarterly governance reviews informing digital strategy renewal. This progression from fragmented pilots to an adaptive, governance-embedded ecosystem illustrates how the model's six components work together in a resource-constrained, institutionally complex emerging-economy setting.

6. Conclusion

AI is transforming how organisations craft digital experiences, engage stakeholders, and compete, yet many still pursue fragmented transformation efforts that fail to align technological investment with strategy, governance, and sustainability. This study addresses that gap by exploring how AI-driven change can be embedded within a cohesive organisational framework that promotes competitiveness, resilience, and responsible innovation.

The synthesis shows that sustainable AI-enabled transformation requires integrating technological capabilities, strategic agility, Enterprise Architecture, and responsible governance within a unified framework - successful digital change demands organisational alignment and strategic skill, not just technology adoption.

In response, the study proposes the AI-Driven Strategic Experience and Sustainable Competitiveness Model, integrating six components into a framework applicable across levels of digital maturity and relevant to emerging economies navigating AI-enabled innovation alongside responsible governance.

As a conceptual study grounded in a scoping review, the proposed model has not yet been empirically validated. Furthermore, a single reviewer conducted the literature screening and selection process, which may introduce selection bias despite the transparent application of the PRISMA-ScR methodology and predefined inclusion criteria. Future empirical research should validate the proposed relationships across industries, organisational contexts, and varying levels of digital maturity, particularly within emerging economies.

The model provides a foundation for future empirical research to validate and refine these relationships across industries, organisational contexts, and levels of digital maturity.

Acknowledgment

The author would like to acknowledge the contribution of the reviewed scholarly literature and ongoing discussions in digital transformation and AI adoption in organisations.

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