

Exploring the relationship between IT Alignment and Digital Transformation: a systematic literature review

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Abstract

This paper seeks to review and synthesize the literature that investigates the relationship between strategic IT alignment and organizational digital transformation published between 2015 and 2025, using the PRISMA 2020 methodology. Analysis indicates that these two concepts are highly interdependent. IT alignment acts as both a precursor and a facilitator in successful digital transformation processes, while the chance of success is highly dependent on the prevailing IT governance maturity in an organization. This dynamic relationship calls for continuous adaptation since different organizational contexts critically affect the outcomes. Although there is meaningful insight from established theoretical frameworks, substantial research gaps can be identified. These findings therefore indicate further longitudinal studies that are sector-specific in enhancing understanding. To practitioners, resultant insights underline the critical need to develop coherent, integrated strategies where the use of digital transformation initiatives secures continued competitive advantage. An organization should, hence, align investments in technology with business objectives but with strong governance structures in place to ensure the effectiveness of transformation and long-term value creation within organizations.

Keywords: Strategic Alignment, Information Technology, Digital Transformation, Systematic Literature Review.

JEL classification codes: M15, O33, O32

استكشاف العلاقة بين مواءمة تكنولوجيا المعلومات والتحول الرقمي: مراجعة منهجية للأدبيات

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الملخص:

تقدّم هذه المراجعة المنهجية تركيبيًا للأدبيات المنشورة بين عامي 2015 و2025 التي تناولت العلاقة بين المواءمة الاستراتيجية لتكنولوجيا المعلومات والتحول الرقمي داخل المنظمات، وذلك استنادًا إلى منهجية PRISMA 2020. وتشير نتائج التحليل إلى أن هذه المفاهيم مترابطة بدرجة عالية؛ إذ تُعد المواءمة الاستراتيجية لتكنولوجيا المعلومات عاملاً تمهيدياً ومُمكنًا لنجاح التحول الرقمي، في حين تعتمد احتمالات النجاح بدرجة كبيرة على مستوى نضج حوكمة تكنولوجيا المعلومات داخل المؤسسة. كما يتسم هذا الارتباط بالديناميكية، ما يستلزم تكيفاً مستمراً، نظرًا لتأثير السياقات التنظيمية المختلفة، سواء في القطاعين العام أو الخاص، بشكل حاسم على النتائج. وعلى الرغم من توفر رؤية مهمة مستندة إلى أطر نظرية راسخة، لا تزال هناك فجوات بحثية كبيرة. وتسلط هذه النتائج الضوء على الحاجة إلى دراسات طولية إضافية موجهة نحو قطاعات محددة لتعميق الفهم. أما بالنسبة للممارسين، فتؤكد النتائج ضرورة تطوير استراتيجيات مترابطة ومتكاملة، بحيث تضمن مبادرات التحول الرقمي الحفاظ على الميزة التنافسية المستمرة. وعليه، ينبغي أن توائم المؤسسة استثماراتها التكنولوجية مع أهداف الأعمال، مع وجود هياكل حوكمة قوية لضمان فعالية التحول وتحقيق قيمة طويلة الأمد داخل المنظمات.

الكلمات المفتاحية: مواءمة استراتيجية، تكنولوجيا المعلومات، تحول رقمي، مراجعة منهجية للأدبيات.

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1. INTRODUCTION

Over the past four decades, technology has dramatically changed the way organizations conduct business and compete in the marketplace (Bharadwaj et al., 2013; Porter & Heppelmann, 2014). Once an enabling function, Information Technology has emerged as a strategic enabler to achieve efficiency and fuel innovation, creating new market opportunities (McAfee & Brynjolfsson, 2012). Increasingly, today, organizations realize that substantial investment in IT is vital to attain and sustain competitive advantage in this increasingly digital world (Kane et al., 2015). Y However, merely investing in technology is not adequate. The key to success lies in something far more crucial: the organization's ability to align the IT initiatives with its overall business strategy. Without this strategic alignment, technology investments fall short of their mark and fail to deliver real value to the organization. (Luftman et al., 2017).

It was toward the end of 1993 that Henderson and Venkatraman originally presented their innovative Strategic Alignment Model, SAM, in the IBM Systems Journal (Henderson & Venkatraman, 1993). This model provided a framework through which IT strategy could be systematically integrated with the organization's objectives to provide, in effect, a road map or guide that linked technology to business objectives. Since that time, SAM has remained the foundational framework that scholars and practitioners rely on when aiming to maximize the contribution of IT toward overall organizational performance (Chan & Reich, 2007; Coltman et al., 2015).

However, truly disruptive technologies have emerged and evolved at an incredible pace, meaning that organizations must also be in a state of constant adaptation if they want to remain competitive (Vial, 2019). With this disruption, digital transformation moved beyond being merely a nice-to-have initiative to a business imperative. Yet digital transformation means so much more than just

the adoption of new technology. It requires organizations to fundamentally reimagine business models, restructure processes, and reshape organizational culture in order to capitalize on digital opportunities. The critical insight is this: organizations need both. They cannot successfully pursue digital transformation without first establishing strong IT-business alignment, and they cannot maintain that alignment without the ongoing evolution that digital transformation demands. It is a two-way street that requires continuous organizational adaptation and learning. (Westerman et al., 2014).

2. BACKGROUND

2.1 Defining IT Alignment

IT alignment (also called strategic alignment) refers to the degree to which an organization's technology strategy and capabilities support and enable its overall business strategy. Henderson & Venkatraman, 1993 At its core, alignment asks: "Are our IT investments moving us toward our business goals?" (Henderson & Venkatraman, 1993).

The basic framework to get insight into this concept is the Strategic Alignment Model (SAM), proposed by Henderson and Venkatraman in 1993. Instead of considering alignment as an event, SAM views it as an ongoing process of continuous adaptation on how IT and business strategies co-evolve. Within SAM, the two critical dimensions along which alignment occurs are: "strategic fit", where external market demands are compared with internal capability, and "functional integration", where business strategy and IT strategy inform each other.

Building on the SAM's foundation, researchers have elaborated such maturity models that provide an organization with practical means of measuring and improving alignment across key areas: communication, competency, governance, partnership, scope (Luftman, 2000; Luftman et al., 2017). More recent research stresses that alignment is not a static process-it represents a continuous,

complex process where constant readjustments are necessary due to continuously changing technologies and variable market conditions (Coltman et al., 2015; Jonathan & Watat, 2020). Drawing from contingency theory, resource-based view, and dynamic capabilities theory, scholars provide more insight into why and how alignment matters in contemporary digital contexts (Kosasi et al., 2024).

2.2 Digital Transformation in Organizations

Digital transformation (DT) is far more than the simple adoption of new technology. It represents a comprehensive organizational overhaul—a fundamental reimagining of how companies operate, compete, and create value (Wessel et al., 2021). According to researchers, DT is "the use of new digital technologies—social media, mobile, analytics, or embedded devices—to enable major business improvements—such as enhancing customer experience, streamlining operations, or creating new business models" (Vial, 2019, p. 118). This transformation touches everything: products and services, core processes, customer interactions, even business models themselves.

The key distinction is that digitization, which is the mere conversion of analog information to digital format, is not the same as digital transformation. Digitization is essentially a technical task. In contrast, digital transformation is fundamentally all about organizational change—restructuring processes, reshaping culture, and rethinking how the organization competes (Jonathan et al., 2022).

Interestingly, the experience of digital transformation varies greatly between organizations. Public sector organizations are said to have very dissimilar challenges than private companies (Mergel et al., 2019). Public organizations are characterized by complex stakeholder environments, budgetary constraints, and rigid regulatory frameworks, among other factors that confront their attempts to create public value rather than purely economic returns.

2.3 Relating IT Alignment to Digital Transformation

IT alignment and digital transformation are not mutually exclusive. In fact, they have a bidirectional influence on each other, with one reinforcing the other. The success of a digital transformation requires prior conditions of strong IT-business alignment, where technology investments actively support organizational strategy. At the same time, however, digital transformation initiatives often disrupt and profoundly reshape how alignment works. (Gajardo & La Paz, 2019; Jonathan & Watat, 2020).

Surprisingly, the Strategic Alignment Model by Henderson and Venkatraman remains relevant to digital contexts of today. The model continues to offer a useful framework for organizations trying to dynamically realign strategy and technology as transformation unfolds (Coltman et al., 2015). There is a growing body of research showing that successful digital transformation depends directly on existing levels of IT-business alignment maturity (Mendes-da-Silva & Albertin, 2024). organizations that have already developed strong, integrated IT and business strategies are far better placed to deploy digital technologies toward competitive advantage and market innovation.

3. METHODS

This systematic literature review adheres to the PRISMA 2020 Statement, which enhances transparency and methodological rigor in the reporting of systematic reviews (Page et al., 2021). Therefore, this review follows an integrative approach and synthesizes findings from various study designs, including empirical research, systematic reviews, conceptual papers, and case studies.

3.1 Search Strategy

A comprehensive search strategy was developed to ensure maximum coverage and reduce publication bias, consistent with the PRISMA 2020 recommendations (Page et al., 2021). The literature search was conducted in

ten major academic databases and scholarly portals: ACM Digital Library, Emerald Insight, Google Scholar, IEEE Xplore, JSTOR, ProQuest, ScienceDirect, Scopus, SpringerLink, and Taylor & Francis Online. These sources were selected for two primary reasons: (1) availability and institutional access, and (2) the need to achieve a comprehensive and exhaustive retrieval of studies across disciplines relevant to information systems, management, and digital strategy. Prior studies indicate that single-database searches risk missing key studies, particularly in interdisciplinary areas such as IT alignment and digital transformation. (Keathley-Herring et al., 2016; Webster & Watson, 2002).

The search strategy combined Boolean operators and controlled vocabulary, using the following query string:

("IT alignment" OR "business-IT alignment" OR "strategic alignment") AND ("digital transformation" OR "digitalization" OR "digital strategy").

Search filters were applied to reflect the modern evolution of Digital Transformation as a stream of research by limiting results to peer reviewed publications within a date range from 2015 to 2025 (Vial, 2019). The reference list of selected articles was also snowballed to identify other relevant studies not captured through database searches.

3.2 Inclusion and Exclusion Criteria

Clear inclusion and exclusion criteria were defined prior to the screening process to enhance methodological rigor, reduce bias, and ensure transparency in study selection (Tranfield et al., 2003). The review included studies that explicitly examined both IT alignment and digital transformation, as identified in the title, abstract, or keywords, to ensure conceptual relevance and avoid peripheral mentions. Only peer-reviewed journal articles and conference proceedings were considered, reflecting established recommendations for ensuring academic quality in systematic reviews (Snyder, 2019).

Further, studies were required to be published in English and provide full-text accessibility, enabling consistent evaluation and data extraction. To maintain relevance to contemporary digital transformation developments, studies were restricted to the 2015–2025 publication period, a timeframe that aligns with the rapid evolution of digital technologies and organizational responses (Vial, 2019). Lastly, eligible studies had to be placed within organizational or technological contexts; thus, broader societal or infrastructural discussions were excluded.

Conversely, several exclusion criteria were applied to refine the dataset. Studies were excluded if they were purely technical in nature—such as those focused solely on algorithms, system architectures, or engineering prototypes—without an organizational or strategic perspective. Opinion pieces, editorials, and commentary articles lacking empirical data or theoretical contribution were also removed, consistent with guidance on evidence-based review standards (Boell & Cecez-Kecmanovic, 2015). Records identified in more than one database were excluded during screening; so, too, were studies in which IT alignment or digital transformation was only marginally or indirectly addressed, to maintain conceptual focus. In this way, only methodologically sound and substantively relevant studies provided input for the final synthesis, raising the review's overall credibility and depth of analysis.

3.3 Selection Process

Study selection was done through the structured PRISMA 2020 stages (Page et al., 2021). Identification involved the retrieval of records from all selected databases. In the screening phase, the titles and abstracts were assessed for relevance to discard irrelevant studies and duplicates. In the eligibility phase, the full texts of the remaining articles were assessed for alignment with the predefined criteria. The final inclusion phase resulted in the identification of studies for qualitative synthesis.

To increase reliability, the records were reviewed by two independent reviewers. Discrepancies were resolved through discussion until consensus was reached - an approach recommended as a way to minimize the bias of reviewers in systematic reviews (Snyder, 2019). Data extraction and documentation procedures were recorded to allow for transparency and replicability.

3.4 Quality Assessment

A formal quality assessment of the included studies was performed based on established guidelines for evidence-based management reviews (Tranfield et al., 2003). The review assessed four main dimensions of quality: methodological, theoretical, conceptual clarity, and contribution to knowledge. Studies were analyzed according to a set of predetermined criteria to ensure that consistency, transparency, and replicability were maintained throughout the review.

First, methodological rigor was measured by appropriateness regarding the design of the research, sampling strategy, data collection, and analytical techniques. Studies utilizing strong empirical methods, such as longitudinal analyses, mixed methods, or measurement instruments, were rated higher compared to those studies with limited or ambiguous methodological descriptions. This approach follows calls for methodological transparency and internal validity within systematic reviews themselves (Snyder, 2019).

Secondly, theoretical grounding was assessed by determining whether the studies leveraged established frameworks, clearly enunciated conceptual models, or offered new theoretical development. Since IT alignment and digital transformation research is typically interdisciplinary, conceptual strength based on recognized models, such as the Strategic Alignment Model or dynamic capability theory, was deemed a necessary condition for grounding in this regard (Webster & Watson, 2002).

Thirdly, research clarity was assessed through analyzing coherence among research

questions, methods, findings, and conclusions. Studies with evident congruence among the objectives and the reported output were preferred in concurrence with suggestions to improve reporting quality in organizational studies (Page et al., 2021).

Finally, contribution to knowledge was assessed based on three criteria: novelty, practical relevance, and the extent to which findings informed understanding about the relationship between IT alignment and digital transformation. Those studies that presented new insights, sector-specific implications, or directions for future research were considered to provide more value to the synthesis. This criterion reflects an important aspect of cumulative knowledge building in both management and information systems research. (Boell & Cecez-Kecmanovic, 2015).

Overall, the quality assessment ensured that only conceptually relevant and methodologically sound studies were included in the final review, thereby strengthening credibility and the depth of analysis of the findings.

3.5 Data Extraction and Synthesis

Data extraction captured the following data elements: authors, year, title, objectives, theoretical framework, methodology, key variables, findings, and limitations. Synthesis combined the use of narrative synthesis with thematic analysis to identify patterns, relationships, and gaps.

The literature reviewed was methodologically diverse. Systematic literature reviews mapped large sets of articles describing the research landscape. Mixed-methods research combined qualitative data, through semi-structured interviews, with quantitative surveys, using Partial Least Squares Structural Equation Modeling (PLS-SEM). Single and multiple case studies provided in-depth organizational explorations. Action design research involved collaborations with organizations over several years. Conceptual and theoretical papers synthesized knowledge

to propose novel conceptualizations and identify future research directions.

By systematically applying the mentioned methodological procedures, this review synthesized current literature in order to uncover empirical patterns and theoretical

insights. The section on results shows the key findings that emerged from this comprehensive analysis, organized thematically in such a way as to highlight the dynamic interplay between IT alignment and digital transformation.

4. RESULTS

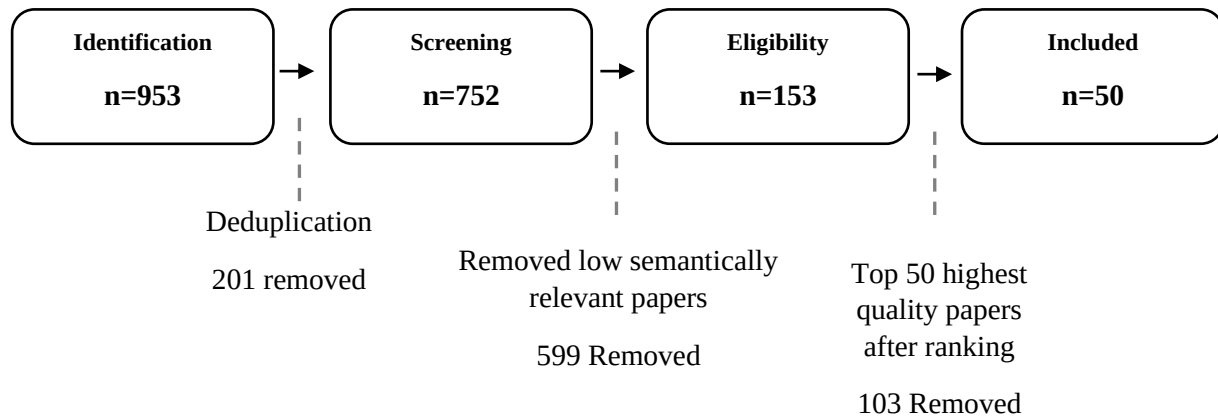


Figure 1 : Flow diagram of the systematic search and selection process

This review covered relevant peer-reviewed articles between the years 2015 and 2025 and yielded important findings on an empirical and theoretical level concerning the interaction between IT alignment and digital transformation. Key findings are summarized below, categorized by major theme.

4.1 IT Alignment: a prerequisite for Digital Transformation

Literature also shows that strategic alignment of IT is a critical success factor for digital transformation, since aligning an IT strategy with business goals improves the transformation outcomes in industries such as manufacturing, financial services, health, and public administration (Mendes-da-Silva & Albertin, 2024; Vial, 2019).

When the IT strategy is aligned with organizational strategy, it creates the required infrastructure and cultural base for pervasive digital transformation. Alignment not only enables technology investments but also brings in proper governance structures, effective prioritization of resources, and stakeholder commitment. The result is a stronger

organizational capability to manage digital transformation successfully.

4.2 Bidirectional and Synergistic Relationships

The relationship between IT alignment and digital transformation is not one-way; it is a two-way relationship. Strategic alignment allows digital transformation to be successful, but the transformation initiatives themselves also reshape organizational capacity for ongoing alignment. This creates a kind of self-reinforcing positive feedback loop (Gajardo & La Paz, 2019; Jonathan & Watat, 2020).

Digital transformation requires changes in organizational structure, process redesign, and cultural evolution. These changes, in turn, reinforce the organization's capacity for IT-business alignment. This positive feedback opens up possibilities for virtuous improvement cycles in mature organizations. Improved alignment will enable more ambitious transformation initiatives, which then further develop the alignment capabilities of the organization.

By contrast, poor relationships between these two elements are organizations that do not manage this relationship well. Misaligned organizations often face vicious cycles where failed transformation attempts further deteriorate alignment and organizational digital maturity (Haffke et al., 2016).

4.3 Theoretical Framework Integration

Research across diverse theoretical standpoints explains the dynamics of IT alignment-digital transformation. The Strategic Alignment Model remains the base framework; indeed, several of the reviewed studies either refer directly or build on the work of Henderson and Venkatraman (Coltman et al., 2015). This framework has also been extended to include concepts such as organizational agility, dynamic capabilities, and technology-enabled innovation, all providing far richer explanations in contemporary digital settings.

Various other theoretical perspectives have become particularly useful in making sense of this intricate relationship. For instance, organizational ambidexterity frameworks—which focus on the balance between exploration and exploitation—offer insight into how organizations can maintain alignment while pursuing transformational innovation. Resource-based view theory (O'Reilly & Tushman, 2008), meanwhile, demonstrates that IT capability and alignment constitute valuable, rare, and difficult-to-imitate competitive resources (Barney, 1991). Dynamic capabilities theory emphasizes organizations' capability to sense disruptive changes, thereby reconfiguring resources and transforming business models (Kosasi et al., 2024; Teece, 2014).

4.4 Critical Success Factors and Implementation Challenges

The reviewed literature identifies several critical success factors that enable organizations to effectively integrate strategic IT alignment with digital transformation initiatives. Central among these is executive leadership commitment, which provides visible sponsorship and strategic direction, ensuring that digital transformation is prioritized and

adequately resourced across the organization (Westerman et al., 2014). Closely linked is the development of a clear business case and well-articulated strategic objectives, which help align technology investments with organizational value creation and prevent fragmented or technology-driven initiatives (Bharadwaj et al., 2013). An organizational culture that supports innovation, learning, and change also plays a pivotal role, as transformation frequently requires experimentation, risk-taking, and the abandonment of legacy practices (Kane et al., 2015).

Successful implementation further depends on securing adequate financial and human resources, including talent with digital and strategic capabilities (Henderson & Venkatraman, 1993), and establishing cross-functional collaboration mechanisms that break down traditional departmental silos and promote shared ownership of digital initiatives (O'Reilly & Tushman, 2008). Effective stakeholder engagement and transparent communication help build alignment at all organizational levels, reducing uncertainty and increasing commitment to transformation outcomes. Evidence also points out that phased implementation approaches, characterized by clear milestones and incremental value delivery, support organizational readiness and reduce transformation-related risks (Coltman et al., 2015). Complementary to these factors are robust change management processes, ongoing performance monitoring, and an organizational learning orientation that enable continuous adaptation and capability development over time (Teece, 2014).

These enabling conditions notwithstanding, organizations regularly face significant implementation obstacles. Typical barriers involve resistance to change, which occurs when transformation jeopardizes entrenched routines, identities, or power arrangements (Haffke et al., 2016). Constraints from legacy technology and high integration of systems tend to restrict flexibility and hinder the pace of digital development, while shortcomings in skills and gaps in talent dampen the organization's capacity to deploy and scale

emerging technologies (Vial, 2019). Other structural impediments, such as organizational silos, misaligned incentive systems, and fragmented governance arrangements, further hinder alignment and coordinated execution. Additional layers of complexity infect public sector organizations: rigid bureaucratic structures, narrow flexibility in budgeting, and varied demands by a broad set of stakeholders impede decision-making and limit innovation (Mergel et al., 2019). Taken together, these challenges reinforce that realizing enduring alignment-transformation integration necessitates not just clarity in strategy but also systemic organizational change capability.

4.5 Technological and Organizational Innovations

The emerging technologies and approaches fundamentally reshape the IT alignment-digital transformation relationships. Recent studies have underlined cloud computing, big data analytics, artificial intelligence, and Internet of Things as transformative in particular. These represent far more than technical innovations; they catalyze the fundamental reimagining of how organizations operate and compete.

These enabling technologies distribute computing across organizational boundaries, democratize data access, and bring in autonomous decision-making capabilities, introducing novel alignment approaches. In this regard, agile and DevOps methodologies have become increasingly central to the organizational structures, shifting away from the traditional alignment models that emphasize static periodic alignment toward dynamic

continuous alignment practices (Coltman et al., 2015).

4.6 Sectoral and Contextual Variations

The alignment-transformation relationship varies significantly across sectors and organizational contexts. The financial services organization has emerged as a transformation leader by demonstrating high transformation intensity and emphasis on alignment. This aggressive digital push is being driven by the fintech disruption and regulatory pressures that call for rapid innovation.

Health organizations report a very different pattern, with moderate digital maturity and substantial alignment challenges rooted in complex stakeholder ecosystems and entrenched clinical hierarchies. Manufacturing firms have placed growing emphasis on alignment and transformation imperatives driven by Industry 4.0. Public sector organizations have generally lagged in terms of digital transformation maturity, although recognition and investment in alignment has grown substantially in recent years (Mergel et al., 2019). Organization size also significantly influences outcomes. Large enterprises (>5,000 employees) demonstrate superior alignment and transformation capacity but face greater inertia. Small and medium-sized enterprises (SMEs) show greater agility but lack the resources and formal alignment mechanisms of larger organizations. These empirical findings and sectoral variations bring to light some important insights into the mechanisms through which IT alignment enables digital transformation. We interpret these findings,

Table 1 : Summary Table of key included studies

Study Title	Authors	Methodology / Sample	Key Findings / Insights
Advances in Digital Transformation Strategy Through IT-Business Alignment in Growth Enterprises	Onifade et al. (2023)	Review of case studies in growth enterprises	IT-business alignment is critical for digital transformation; leadership, collaboration, and adaptability are key.
Digital strategy aligning in SMEs: A dynamic capabilities perspective	Canhoto et al. (2021)	43 SME case studies across 5 sectors (UK, IE, IT, ES)	Identifies five phases of digital alignment; leadership and

			micro-behaviors are crucial in SME digital strategy.
Information technology investment and digital transformation: the roles of digital transformation strategy and top management	Zhang et al. (2023)	Survey (n=180, Chinese enterprises), PLS-SEM	Digital transformation strategy mediates IT investment and transformation; top management strengthens these links.
Digital Transformation in Public Organisations: IT Alignment-Related Success Factors	Jonathan et al. (2022)	Case study (public org.), interviews, documents	IT alignment improves digital transformation success; key factors include structure, culture, agility, leadership.
Aligning with new digital strategy: A dynamic capabilities approach	Yeow et al. (2017)	Longitudinal B2B/B2C case study	Alignment is enacted through dynamic capabilities (sensing, seizing, transforming); tensions arise during alignment.
The Impact of Dynamic Capability on Enterprise Agility: The Intervening Roles of Digital Transformation and IT Alignment	Al Jabri et al. (2024)	Survey (n=236, UAE firms), PLS-SEM	Dynamic capabilities enhance agility via IT alignment; digital transformation moderates this effect.
Strategic Alignment During Digital Transformation	Jonathan & Kuika Watat (2020)	Qualitative study in two countries	Strategic alignment actions depend on technology adoption and business process reconfiguration.
How does digital transformation affect sustainable innovation performance?	Lin & Mao (2023)	Survey (Chinese agriculture firms)	Digital transformation boosts sustainable innovation via tech-business alignment; effect weaker under high uncertainty.
The digital transformation of Swiss SMEs: insights from digital tool adoption	Kraft et al. (2022)	Multiple-case study, survey (n=1,593, Swiss SMEs)	Alignment between managers' understanding and tool adoption is limited; potential for performance gains exists.
The role of human resource practices in the implementation of digital transformation	Nicolás-Agustín et al. (2021)	Survey (n=184, Spanish manufacturing firms), PLS	HR practices mediate between strategic alignment and digital transformation; employee engagement is vital.
Achieving stakeholder alignment in digital transformation: A frame transformation perspective	Hoblos et al. (2023)	Case study (Australian city council), interviews	Stakeholder alignment achieved through frame transformation in planning, implementation, and communication.
Effects of digital transformation on firm performance: The role of IT capabilities and digital orientation	Barba-Sánchez et al. (2024)	Survey (n=246, various firm sizes), PLS-SEM	IT capabilities improve performance via digital orientation and transformation.

IT Alignment: A Management Paradigm for Digital Transformation in Public Organisations	Jonathan (n.d.)	Interviews, survey (n=421, public sector)	IT alignment increases digital transformation success; model identifies key organizational and managerial factors.
IT Alignment: A Path Towards Digital Transformation Success	Jonathan et al. (2023)	Interviews, survey (n=426, public sector)	Improving IT alignment leads to digital transformation success; five determinant factors identified and ranked.
A Systematic Review of the Literature on Digital transformation: Insights and Implications for Strategy and Organizational Change	Hanelt et al. (2020)	Systematic review (279 articles)	DT requires malleable designs and ecosystem thinking; conventional change frameworks only partially cover DT.
Digital transformation: a review, synthesis and opportunities for future research	Nadkarni & Prügl (2020)	Systematic review (58 studies)	Identifies technology and actor dimensions; highlights underdeveloped areas like pace, culture, and middle management.
A Meta-Analysis of the Relationship Between Digital Maturity and Digital Transformation	Wahdaniyah et al. (2025)	Bibliometric/meta-analysis (67 articles)	Digital maturity is a strategic enabler for transformation; proposes a three-phase framework; empirical gaps remain.
Exploring the Relationships between Dynamic Capabilities, Digital Transformation, and IT-Business Alignment	Kosasi et al. (2024)	Survey (n=198, digital businesses), SEM-PLS	Dynamic capabilities are key for alignment; direct link between digital transformation and alignment not always proven.

In light of existing theoretical frameworks, explore their practical implications for organizations, and identify promising directions for future research in the discussion section that follows.

5. DISCUSSION

The systematic synthesis reveals that IT alignment and digital transformation are

intertwined organizational phenomena that require an integrated strategic management approach. Whereas IT alignment traditionally concerned synchronizing IT strategy with the business strategy, digital transformation necessitates a radical rethinking of how organizations use technology to compete and generate value. This broader framing demands theoretical and practical innovation.

Table 2 : Key claims and support evidence identified relevant publication

Claim	Evidence Strength	Reasoning	Papers
IT alignment enables successful digital transformation	Strong	Supported by multiple systematic reviews and empirical studies across industries	(Njanka et al., 2020; Zhang et al., 2018; Hanelt et al., 2020; Kohli & Melville, 2019; Tallon et al., 2019; Aghakhani et al., 2024)
Misalignment hinders digital transformation outcomes	Strong	Empirical evidence links misalignment to failed or suboptimal transformation initiatives	(Albino & Souza, 2019; Favoretto et al., 2021; Dikert et al., 2016; Avila & Garcés, 2017)
Traditional alignment models may limit agility and innovation	Moderate	Recent studies highlight the need for dynamic, flexible alignment approaches in fast-changing environments	(Ciampi et al., 2021; Nwaiwu, 2018; Ashrafi et al., 2024; Singh et al., 2024)
Cybersecurity and legacy systems are major barriers to alignment	Moderate	Systematic reviews identify these as persistent challenges during digital transformation	(Saeed et al., 2023; Gökalp & Martinez, 2021; Aghakhani et al., 2024)
Leadership and culture are critical for sustaining alignment	Moderate	Leadership commitment and a culture of learning facilitate ongoing alignment and transformation	(McCarthy et al., 2021; Bouwmans et al., 2024; Tallon et al., 2019)
Overemphasis on alignment can stifle creativity and adaptability	Moderate	Some studies report paradoxes where rigid alignment impedes necessary innovation	(Singh et al., 2024; Ashrafi et al., 2024; Nwaiwu, 2018)

5.1 Theoretical Implications

Findings support and advance existing theoretical frameworks. The Strategic Alignment Model remains relevant but requires extension. Contemporary organizations are in dynamic environments where technology catalyzes business model innovation, and continuous alignment rather than periodic alignment would be required (Coltman et al., 2015).

The dynamic capability perspective adds to the understanding by underlining a focus on the capacity of organizations to sense disruptive changes, reconfigure resources, and transform business models (Teece, 2014). The bidirectional relationship between alignment

and transformation suggests that organizational learning processes are central: successful transformations create organizational capabilities and institutional memories that enhance subsequent alignment (Kosasi et al., 2024).

Institutional theory emphasizes that alignment and transformation represent power dynamics, cultural values, and legitimacy concerns in particular ways, especially within regulated sectors (Meyer & Rowan, 1977).

5.2 Practical Implications for Practitioners

The guiding principle of strategic alignment should be foundational, not supportive, for any organization undertaking a digital

transformation. The commitment of the executive leadership should not only involve resource allocation but also demonstrated engagement that communicates the priorities of the organization. Change management processes will also need to address cultural and structural impediments, not just technical implementation. Organization's cross-functional governance structures should allow shared ownership and reduction of decision silos. Continuous learning mechanisms, such as after-action reviews, communities of practice, and knowledge sharing platforms, support the organizational capability development. Importantly, alignment and transformation require phased approaches recognizing organizational constraints. Quick wins that build momentum and stakeholder confidence prove critical for sustaining multi-year transformation initiatives.

5.3 Implications for Digital Leaders

Organizations that achieve superior alignment and transformation outcomes share similar characteristics. They create a well-defined strategic vision that links technology investments to business value. They also invest heavily in the development and retention of talent, understanding that true transformation needs people to adapt to new roles and capabilities. They embrace experimentation and tolerate calculated risks, understanding that innovation inherently entails failure. They foster organizational cultures of continuous learning, customer-centricity, and collaborative problem-solving. Financially, digital leaders balance investments in transformation with operational excellence, avoiding false dichotomies between innovation and efficiency. Structurally, they established permeable organizational boundaries to enable external partnerships, participation in ecosystems, and the absorption of innovations from external sources.

5.4 Limitations and Research Gaps

This systematic literature review also underlines several limitations in the extant body of research that provide significant opportunities for future investigation. First, a

strong geographical bias remains, with the majority of studies coming from North America, Western Europe, and other developed economies. The perspectives of emerging markets and the Global South remain underrepresented, despite evidence that institutional environments and levels of digital maturity differ significantly across regions (Al-Kahtani et al., 2022; Ly, 2023). Hence, future research should integrate broader global sampling in order to strengthen contextual relevance and external validity.

Second, the review points out limitations on the research design front: most of the empirical studies are based on cross-sectional methodologies. Such designs provide useful snapshots, but make inference of causal links on IT alignment and digital transformation problematic. As other scholars have stressed, reaching an appropriate understanding of how alignment changes over time and affects transformation outcomes could be achieved through longitudinal, process-oriented approaches (Sarker et al., 2019). Filling that gap would provide much-needed evidence on temporal dynamics and feedback mechanisms.

Third, measurement inconsistency remains a challenge. Studies differ in how they operationalize the constructs of both IT alignment and digital transformation through the use of diverse constructs, scales, and proxies. The fragmentation makes comparisons across studies problematic and inhibits meta-synthesis, a problem noted in the broader information systems research as well (Chan & Reich, 2007; Queiroz et al., 2020). The development of standardized measurement frameworks together with the use of validated instruments is thus an important avenue of research.

Fourth, the literature still underrepresents SMEs. Whereas large organizations dominate existing samples, SMEs do face specific structural constraints, resource limitations, and decision-making logics that likely modify alignment–transformation dynamics (Mittal et al., 2018). Since SMEs are vital in virtually every national economy, it becomes even more critical that greater empirical attention be

directed at this sector in order to theoretically generalize better. Fifth, the findings indicate limited attention to implementation fidelity and long-term outcomes. Much of the current research focuses on strategic intent, adoption readiness, or early implementation phases rather than on sustained transformation results measured over several years. Prior studies have emphasized that digital transformation is an iterative rather than a discrete process and therefore requires longitudinal tracking of outcomes (Vial, 2019). Future research should, therefore, investigate how alignment influences durability, scalability, and value realization. Finally, the speed of technological change creates a currency gap.

Academic literature is sometimes published after the fact and therefore fails to capture immediate developments facilitated by the rise of artificial intelligence, cloud-native architectures, and data-intensive platforms (Jonathan & Kuika Watat, 2020). Ongoing attention to the rate of technological change and associated alignment implications is required to maintain theoretical currency with practice. Collectively, these gaps indicate the need for more diverse contexts, stronger methodological designs, consistent measurement approaches, and longitudinal, practice-oriented research to advance the field.

Table 3 : Revealed Research Gaps

Topic/Theme	Large Enterprises	SMEs	Manufacturing	Services	Public Sector
IT alignment frameworks	12	3	4	2	1
Digital transformation outcomes	10	5	3	2	1
Dynamic/bidirectional interactions	7	2	1	1	GAP
Sector-specific challenges	4	2	2	1	GAP
Empirical/longitudinal studies	6	1	1	1	GAP

Drawing these insights together, this systematic literature review synthesized extant research to develop an integrated understanding of how IT strategic alignment and digital transformation interact in contemporary organizations. The following concluding remarks synthesize key findings, describe implications for scholars and practitioners, and highlight a clear research agenda for furthering this important area of inquiry.

6. CONCLUSION

Strategic IT alignment and digital transformation are two interrelated phenomena crucial to competitive success in increasingly digital markets. Evidence from systematic literature review covering the period between 2015 and 2025 indicates that alignment is a necessary condition for transformation success, while transformation efforts concurrently change organizational capabilities to effect continued alignment. This leads to possible

virtuous circles of improvement for those organizations with high change management and learning capabilities. Key findings create a foundation on which successful IT alignment-digital transformation integration requires executive leadership commitment, strategic clarity, adequate resourcing, cross-functional collaboration, organizational culture that fosters innovation, and strong change management. Implementation challenges also persist, such as resistance to change, constraining legacy technology, talent inadequacy, and organizational silos, but are manageable through structured methods that incorporate phased implementation, stakeholder engagement, and continuous learning.

The theoretical contributions are threefold: first, enhancing the Strategic Alignment Model through lenses of dynamic capability and organizational learning; second, establishing bidirectional causality between alignment and

transformation; third, showing how institutional factors present critical contextual moderators on implementation outcomes. Practical implications suggest organizations should treat alignment as foundational rather than supportive to transformation, establish governance mechanisms facilitating cross-functional decision-making, invest substantially in talent development, and cultivate organizational cultures supportive of continuous learning and calculated risk-taking. Future research should stress longitudinal studies that trace the dynamics of alignment-transformation over several years, expand their analyses to emergent markets and a variety of organization types, work out more standardized measures that allow for comparative analysis, investigate models of transformation specifically suited to SMEs, study implementation fidelity and sustained outcomes, and monitor emerging technological and organizational innovations that continue to shape these relationships. Finally, research into the overlap of alignment-transformation with environmental sustainability, equity, and social responsibility is one important frontier insofar as organizations increasingly intertwine purpose-driven missions with competitive imperatives.

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