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Leading digital transformation in incumbent firms: A strategic entrepreneurship framing

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1 | INTRODUCTION

Today's business landscape is undergoing a profound shift as digital technologies reshape and even create entirely new industries around digital disruptors. Although the unique properties and affordances of digital technology are bound to create many entrepreneurial opportunities for new types of innovation (Nambisan et al., 2017; Yoo et al., 2012), seizing those opportunities requires that firms undertake a *digital transformation* (Furr et al., 2022). Building from recent reviews of the topic (Hanelt et al., 2021; Vial, 2019), we define digital transformation as substantive strategic, organizational, and ecosystem changes through which firms seek to leverage digital technology to pursue new strategies, business models, and capabilities.

Research suggests that digital transformation should be especially challenging for established or legacy organizations—so-called incumbents (Eggers & Park, 2018). Because many incumbent firms have architectural systems refined and optimized for analog environments, digital technologies often render their existing competencies obsolete (Tushman & Anderson, 1990). Digital technologies also challenge established paradigms of how value is created and captured in the larger business ecosystem (Ansari et al., 2016). Thus, contrary to de novo entrepreneurial firms, most incumbents need to acquire and assimilate substantially different resources and adapt new organizational processes and structures to embrace digital transformation (Bradley & O'Toole, 2016). Incumbents also face significant socio-cognitive barriers to change when they need to undergo digital transformation, including inertia in cognition and capabilities (Eggers & Park, 2018), organizational identity struggles (Anthony & Tripsas, 2016; Kammerlander et al., 2018), and political resistance (König et al., 2013).

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While the emergent scholarship on digital transformation has generated valuable insight, less attention has been devoted to understanding the specific role of strategic leaders in incumbents' attempts to embrace, adopt, and harness digital transformation (Kurzahls et al., 2020). This is problematic, notably, because digital transformation is widely recognized as a "strategic imperative on leadership agendas" (Warner & Wäger, 2019, p. 52). Furthermore, research shows that the processes and outcomes of digital transformation are anchored in leadership capabilities (e.g., Firk et al., 2021; Helfat & Peteraf, 2015; Kor & Mesko, 2013). However, despite a rich literature on incumbent firms' responses to discontinuous technological change (Eggers & Park, 2018), the specific entrepreneurial responses and processes that digital transformation entails for strategic leaders—CEOs, top management teams, boards, and in some cases, middle managers (Hambrick, 1989)—presents numerous opportunities to advance theory and research.

Because digital transformation straddles strategic and entrepreneurial domains (Simsek et al., 2017), a strategic entrepreneurship framing promotes a theoretical understanding of how strategic leaders can recognize and harness digital transformation. Thus, the purpose of this *Special Issue* is to elucidate the role of strategic leaders in whether, how, when, and to what ends incumbent firms engage in digital transformation. The *Special Issue* constitutes four papers that offer new directions and research insights into how strategic leaders in incumbent firms can embrace digital transformation opportunities and surmount the associated challenges. Because three of the papers are inductive, they offer a deep, fine-grained understanding of how digital transformation unfolds across time and of how the tensions and conflicts it engenders are resolved across distinct contexts. The papers illustrate both the strategic and entrepreneurial roles of leaders—entrepreneurial in recognizing opportunities, experimenting with new technologies, and navigating new forms of uncertainty; and strategic in mobilizing and orchestrating multiple strategic initiatives, developing new capabilities and mental models, and realigning the organization and its ecosystem to commercialize opportunities.

In this introductory article, we discuss a strategic entrepreneurship framing that allows us to interrelate the central insights of the four accepted studies at the nexus of digital transformation and strategic leadership. By advocating this framing, we aim to illuminate the synergies and common threads that bind these diverse studies, fostering a richer understanding of the entrepreneurial opportunities and strategic challenges of digital transformation in incumbent firms. The framing also enables us to reflect on and distill critical insights from the entirety of the special issue experience to inform future research.

2 | EDITORIAL PROCESS AND FRAMING

Following the call for proposals, which was advertised from late 2019 through mid-2021, we received a total of 50 submissions. In terms of process, each editor independently evaluated the submissions on their relative merit according to three criteria (1) alignment with SEJ's publication guidelines, (2) fit with the topic and theme of the special issue, and (3) our collective judgment as to whether the manuscript would render a positive evaluation from reviewers and make it through the review process within the set timeframe. Based on our initial evaluation, 25 manuscripts (50%) were sent forward to the review process, 19 manuscripts were desk rejected (36%), and 9 manuscripts were redirected to the regular SEJ review process. In total, four manuscripts were accepted for publication and form part of the Special Issue. This represents an acceptance rate of 8%, which is consistent with the general acceptance rate of the SEJ.

Building from the themes that emerged from the four papers (see Table 1 for a summary), along with our review of the extant work on digital transformation, we present the strategic entrepreneurship framing in Figure 1 for understanding digital transformation in incumbent firms. The framing builds on several building blocks and linkages that, we contend, together help to interrelate strategic leadership and digital transformation in incumbent firms. The framing emerged abductively during the development of the *Special Issue*, including the editorial process and the insights from the four accepted articles. The core insight is that strategic leaders represent a critical force in



TABLE 1 A summary of Special Issue papers.

Authors	Conceptualization of digital transformation	Strategic leadership focus	Role of strategic leaders	Method	Key findings/conclusions
Reuter and Floyd (2024)	Digital transformation entails an ecosystem challenge: it requires firms to consider how to complement their value offerings with (prospective) partners' offerings	Strategic leaders who have overall responsibility for establishing and orchestrating a firm's ecosystem strategy (e.g., CEOs, TMT members, directors, general managers)	<i>Sensing and shaping:</i> Develop a vision for the firm's ecosystem strategy by envisioning complementarities between the firm and (prospective) ecosystem partners	Deductive theorizing	<ul style="list-style-type: none">• Strategic leaders' cognitive motivations in terms of need for diversity and need for openness jointly shape leaders' propensity to initiate particular social interaction patterns with ecosystem partners (i.e., participatory, selective, collaborative, and reclusive interactions)• The four possible interaction types with ecosystem partners each distinctively induce changes in leaders' ecosystem mental models, shaping the level and types of complementarities that strategic leaders envision between their firm and (prospective) ecosystem partners
Browder et al. (2024)	"Digital transformation refers to a process in which firms to use digital technologies 'to enable major business improvements (such as enhancing customer experience, streamlining operations, or creating new business models'" (Fitzgerald et al., 2014, p. 2)	Strategic leadership as top management team, mainly functional executives. Strategic leaders as strategic entrepreneurs	<i>Linking and leveraging capabilities:</i> Strategic leaders upgrade a firm's ability to adapt to adversity	Multiple-case design	<ul style="list-style-type: none">• Resilience-seeking following a crisis requires that strategic leaders search for a match between unique crisis conditions and available resource endowments to facilitate organizational adaptation• Strategic leaders must ensure that firms can access these endowments to use them to adapt and solve problems
Putra et al. (2024)	Digital transformation is concerned with implementing corporate entrepreneurship initiatives, specifically developing new businesses enabled by emerging digital technologies	Top management teams and middle managers	<i>Sensing and shaping:</i> Providing guidance on what, where, and how to explore <i>Navigating strategic tensions:</i> Framing contradictory demands, stimulating paradoxical thinking,	Single case design	<ul style="list-style-type: none">• Top management teams and middle managers play complementary roles in fostering digital transformation.• Whereas top managers "frame strategic boundaries to manage

(Continues)



TABLE 1 (Continued)

Authors	Conceptualization of digital transformation	Strategic leadership focus	Role of strategic leaders	Method	Key findings/conclusions
Gomes et al. (2024)	Digital transformation exploits digital technologies to develop novel business models, product offerings, and processes	Top management teams, middle managers, entrepreneurs	<p>and creating a liminal space between exploitation and exploration</p> <p><i>Sensing and shaping:</i> Strategic leaders must engage their firms in new forms of learning and experimentation to adapt to digital opportunities and challenges</p> <p><i>Linking and leveraging:</i> Distributing responsibilities for digital opportunities throughout the firm and orchestrating external ecosystems to adapt to digital opportunities</p>	Multiple-case design	<p>technology generativity and direct exploration of digital opportunities;" middle managers play role in working around these boundaries to "navigate exploration tension"</p> <ul style="list-style-type: none">• Middle deliberately create strategic ambiguity, and ensure that exploitation initiatives that fit with the firms strategy are prioritized (convergent exploration) whilst also championing divergent exploration by conceptualizing them in ways that fit with the strategy• Develops the concept of entrepreneurial judgment governance (EJG) adaptation judgment, a process by which strategic leaders grant, organize, and coordinate decision rights to allocate resources, and transform opportunities into valuable innovations• Embracing digital transformation requires that strategic leaders learn to deal with new forms of uncertainty.• Derives a model of EJG adaptation that includes three broad phases—recognizing, distributing, and orchestrating

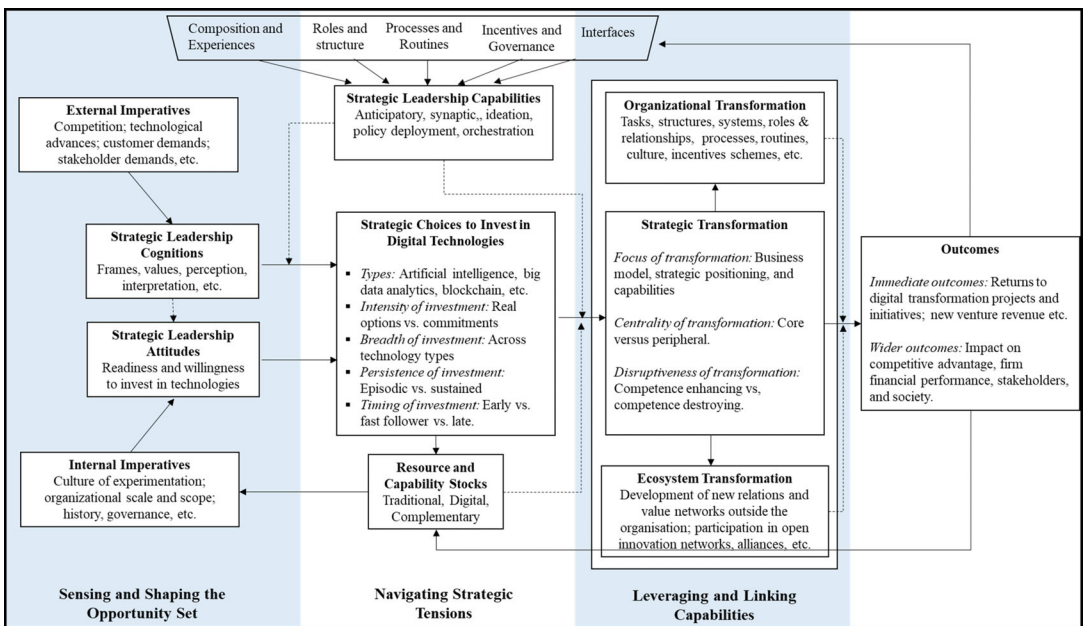


FIGURE 1 A strategic entrepreneurship framing for understanding digital transformation in incumbent firms.

mediating the influence of internal and external drivers of digital transformation on the firm's commitment to invest in digital technologies, and, subsequently, the impact of these commitments on digital transformation.

Investing in digital technologies represents a significant undertaking that, allied with digital transformation, can better explain inter-firm differences in incumbent outcomes. However, as we witnessed in several papers in the *Special Issue*, merely investing in digital technologies is no guarantee that they will be leveraged to produce a strategic, organizational, or ecosystem transformation. Such choices can be characterized in terms of a number of sub-dimensions (i) the *types* of digital technologies in which firms invest; (ii) the *intensity* of investments, defined as the amount of resources a company commits on an annual basis to digital technologies; (iii) the *breadth* of investment, in terms of whether the focus is on developing deep specialization in a single technology or across multiple technologies; (iv) the *persistence* of investment, whether episodic or sustained, and (v) the *timing* of investments, whether the firm is an early mover or a late adopter (e.g., König et al., 2013).

These choices, both individually and in combination, have implications not only for the nature of the transformations in which firms attempt to engage but also for firms' resources and capabilities. Such investments shape digital capabilities, the value of traditional capabilities, and the potential for complementarities between the two. One of the more significant responsibilities for strategic leaders, thus, lies in fostering an organization-wide commitment to what is often a multi-year process of investing, deploying, and customizing digital technologies, fraught with implementation difficulties and radical tensions between legacy and digital systems and processes. Aligning the organizational-wide commitments and synergies by shifting the trade-offs toward a common vision and strategy falls to strategic leaders.

2.1 | Commonalities and variations

The concept of digital transformation remains lacking precision and consistency. It, for example, has been defined as the "...adoption of novel strategies and business models that are enabled by a myriad of new information

technologies” (Furr et al., 2022). Even as integrative reviews point to several variants of that definition (e.g., Hanelt et al., 2021; Nadkarni & Prügl, 2021; Vial, 2019), the concept remains fuzzy. For instance, some formulations equate digital transformation with adopting digital technologies and tools. However, as Hanelt et al. (2021, p. 2) argue, digital transformation encompasses “organizational change that is triggered and shaped by the widespread diffusion of digital technologies.” Vial (2019, p. 118) offers a more detailed variant, “a process where *digital technologies* create *disruptions* triggering *strategic responses* from organizations that seek to alter their *value creation paths* while managing the *structural changes* and *organizational barriers* that affect the *positive* and *negative* outcomes of this process.” Some of our papers in the Special Issue take an even more expansive viewpoint. Putra et al. (2024), for example, suggest that digital transformation entails corporate entrepreneurship, explicitly developing new businesses as enabled by digital technologies. Digital transformation has similarly become a ubiquitous but elusive term among practitioners (e.g., Westerman et al., 2014).

To achieve greater construct clarity, we envision digital transformation variations along substantive strategic, organizational, and ecosystem changes through which firms seek to leverage digital technology to pursue new strategies, business models, and capabilities. Because digital transformation differs from other types of organizational change in several ways, extant research offers an incomplete understanding of the various forms, dynamics, and outcomes of digital transformation of incumbent firms (Bonnet & Westerman, 2020). First, given the idiosyncratic generative, malleable, and combinatorial characteristics of digital technologies, digital transformation challenges established business paradigms in unique and encompassing ways (Hanelt et al., 2021). Second, given the systematic and encompassing implications of these technologies, digital transformation entails change at a significantly wider scope as firms must fundamentally redesign their entire architectures rather than merely digitizing their operations (Nadkarni & Prügl, 2021). Third, one way in which digital transformation is unique is that it requires continuous and speedy change because—as exemplified by the recent rise of generative artificial intelligence (Gen AI)—digital technologies develop at an unprecedented pace. Finally, although incumbents are at a disadvantage given their legacy architectural choices, they are at the same time paradoxically well-positioned to benefit from digital transformation because—unlike most startups—they tend to have the potential to accumulate digital assets should they decide to structure their data and invest in analytics capabilities (Verhoef et al., 2021). Indeed, for some incumbents, it is the recognition of the value of their proprietary structured and unstructured datasets and the decision to invest in capturing, analyzing, and commercializing those data that are at the heart of digital transformation.¹

Recognizing these unique aspects of digital transformation as distinct from other transformations, we conceptualize three common types of changes that digital transformation engenders for incumbents—strategic, organizational, and ecosystem transformation. By *strategic transformation*, we refer to new ways of creating and capturing value enabled by digital technologies, involving creating new business models and/or strategies, developing new capabilities, and/or upgrading existing capabilities (cf., Browder et al., 2024). Such strategic transformation varies along three underlying dimensions—the focus of transformation (whether the focus of transformation is business models, the broader strategy, or underlying capabilities), the centrality of transformation (whether the changes are core or peripheral to the organization), and the disruptiveness of transformation (whether they enhance or destroy existing assets, knowledge, and relationships). Combining these dimensions is suggestive of different profiles of digital transformation appropriate for different types of firms and with varying outcomes. Thus, firms make different choices with respect to the focus, level, and disruptiveness of digital transformation. This conceptualization reflects the dynamic nature of digital transformation, which may begin on the periphery of the organization and scale up over time through the culmination of multiple strategic initiatives.

The type, centrality, and disruptiveness of strategic transformations may also lead to *organizational transformation* of systems, structures, processes, and/or cultures, or, indeed, to *ecosystem transformation*, the web of inter-organizational relationships in which a firm is embedded. Concerning organizational transformation, artificial intelligence and blockchain may, for example, have widespread implications for the design of organizational processes and routines. Automating tasks and designing smart contracts to execute processes offers interesting prospects for organizational design, where humans and technology are conjoined (Murray et al., 2021). Likewise, an



increased reliance on algorithmic intelligence will require rethinking the interfaces between strategy formulation and implementation and the interstitial spaces where human and technological agency may interact. Given the complementary strengths of AI and human decision-making, organizational transformation concerns building the organizational physiology (e.g., job design and decision rights) that capitalizes upon their complementarities. Although strategic transformations can precipitate organizational changes, the reverse can also occur. Novel modes of organizing may lay the groundwork for new capabilities, business models, and strategies that enable digital transformation (Kretschmer & Khashabi, 2020).

Externally, digital transformation has implications for the firm's ecosystem (i.e., Adner, 2021). Reuter and Floyd (2024), in this special issue, suggested that digital transformation entails an ecosystem challenge, requiring firms to complement their value proposition with partners' offerings. Thus, a key strategic choice is whether firms will choose to compete independently or deepen and/or widen their participation in external ecosystems. Furr et al. (2022) suggest the relevance of ecosystems in the context of digital transformation. With trends toward connectivity associated with blockchain and smart connected products, firms depend on a broader set of capabilities, many of which reside outside the firm. Indeed, as firms pivot from pipeline-based value chains to multi-sided platforms, there are pressures to extend the range of complements in one's ecosystems to generate positive network effects (Autio et al., 2018). These ecosystems also allow for novel distributed forms of organizing, such as crowdsourced digital innovation (Yoo et al., 2012). However, there are also countervailing forces that increase the costs of cooperation across firms, including diverse regulatory regimes across geographies; the difficulty of orchestrating ecosystems for complex products; and the unfamiliar roles that executives must learn (Furr et al., 2022). Ecosystem transformation thus requires overcoming bottlenecks, or "components that constrain the overall growth or performance of the ecosystem due to poor quality, weak performance, or scarcity" (Hannah & Eisenhardt, 2018, p. 3164).

To us, the term digital transformation should thus be bounded to instances where there is a substantive transformation of the firm's business model, strategy, or capability set—one that is enabled by digital technology. Organizational and ecosystem transformation thus only become of interest in the context of changes to the firm's strategy, business model, or capabilities. Without this qualification, digital (strategic) transformation becomes conflated with a range of other organizational changes and is less likely to explain significant variance in firm performance.

2.2 | The role and influence of strategic leaders

We envision three ways in which strategic leaders may influence digital transformation. First, because executives interpret external stimuli through their experiential lenses (Hambrick & Mason, 1984), strategic choices concerning investment in digital technologies are influenced in the first instance by leaders' cognitive structures that shape how they attend to, notice, perceive, and interpret these technologies. Second, strategic leaders' attitudes toward digital technologies' prospects, and perils also shape strategic choices. Skewed attention toward the bright sides and functionalities of some digital technologies (see Grewal et al., 2021), or an emphasis on extremes/polar outcomes (see Kaplan & Haenlein, 2020), can cause systematic distortions in strategic leaders' attitudes toward digital transformation. Finally, the influence of strategic commitments toward digital technology on subsequent transformation processes and outcomes hinges squarely upon leaders' capabilities to sense, seize, and reconfigure/transform assets, activities, and capabilities (i.e., Helfat & Peteraf, 2015). Building on these multifaceted influences, as well as some of the key findings of the articles in our special issue, we identify three essential roles and corresponding capabilities of strategic leaders in digital transformation—*sensing and shaping the opportunity set*; *navigating strategic tensions*; and *leveraging and linking capabilities*.

Sensing and shaping the opportunity set: Presented with a range of stimuli for digital transformation, strategic leaders sense and shape the opportunity set for firms to create and capture value from digital technologies. Strategic leaders are thus likely to envision digital technologies differently through the prism of their firms' existing business model and strategic commitments (Tripsas & Gavetti, 2000) and their own idiosyncratic experiences and

predilections (Hambrick & Mason, 1984). Therefore, sensing opportunities arise from *anticipatory capabilities*, defined as the “capacity of top managers to maintain proactive alertness to events and developments, of both direct and indirect consequences to organizations” (Heavey & Simsek, 2023, p. 51).

Beyond simply sensing opportunities for digital transformation, strategic leaders shape emerging insights into first-person opportunities for their firms by combining unique vectors of value creation possibilities at the intersection of external trends and internal capabilities. By conducting experiments, exploring emerging business models, and iterating among hypotheses, strategic leaders can both narrow and deepen the opportunity set created by the multifaceted affordances of digital technologies. This shaping process is likely to be anchored in a strategic leadership team's *ideation capability*, defined as the ability of strategic leaders to “envision and construct novel strategies, business models, and resource allocation patterns” (Heavey & Simsek, 2023, p. 52). Ideation capabilities embrace an experimental, hypothesis-driven logic whereby leaders iterate and evaluate a set of alternative business models or strategies, using techniques such as prototyping or real options “to effectively balance risk and reward” (Warner & Wäger, 2019: 332).

Sensing and shaping *r* requires that all leaders across levels are alert to and capable of evaluating opportunities afforded by digital technologies. The article in our Special Issue by Gomes et al. (2024) “*Entrepreneurial judgment governance adaptation for digital transformation in established firms*” addresses the challenges of distributing sensing and shaping capabilities throughout the organization. The authors define entrepreneurial judgment governance as the process by which strategic leaders grant, organize, and coordinate decision rights to allocate resources and transform opportunities into valuable innovations. One of the biggest challenges of digital transformation is that it presents strategic leaders with new forms of uncertainty, which may not match well with a firm's repertoire of prior experiences for managing uncertainty. Thus, new learning processes and experimentation are needed for firms to grasp digital opportunities. Using an inductive study based on six case studies, Gomes et al. (2024) developed a model of entrepreneurial governance adaptation entailing recognizing, distributing, and orchestrating.

Clearly, then, it is a core task of strategic leaders to form and execute a vision for ecosystem development strategically. In this regard, the Special Issue article by Reuter and Floyd (2024), entitled “*Strategic leaders' ecosystem vision formation and digital transformation: A motivated interactional lens*,” makes a valuable contribution by developing novel theory about why and how strategic leaders differ in the digital ecosystems they envision. The authors conceptualize ecosystem visions as mental models of the firm's multilateral complementarities with (prospective) partners, which are developed through leaders' social interactions with the ecosystem. The paper highlights the crucial role of leaders' cognitive motivations—in particular, their need for diversity and need for openness—in shaping their social interactions and perceived complementarities with ecosystem partners.

Navigating strategic tensions: As leaders consider and evaluate the opportunities presented by digital technologies, the inexorable tensions between exploitation and exploration are likely to surface (March, 1991). This is not merely an issue of ensuring balanced resource allocation or creating real options—it is about connecting investments in digital assets and capabilities with existing operations to improve competitive standing. But it first requires repelling the inertial forces of exploitation to create space for exploratory initiatives. The first paper in our Special Issue, “*Strategic Leadership in Liminal Space: Framing Exploration of Digital opportunities at Hierarchical Interfaces*” authored by Putra et al. (2024) considers this intriguing dilemma.

Drawing on an in-depth study of a telecom multinational, the authors discuss how exploratory business units set up to examine digital technologies operate in a liminal space between those initiatives that exploit existing assets and clients and relationships and those that involve new business models and client relationships. Top management teams engage in paradoxical framing, encouraging imagination whilst placing constraints around that imagination by requiring disciplined growth. But such an approach runs the risk that divergent initiatives get selected out due to their low strategic fit, and therefore, the firm potentially misses out on promising opportunities. To avoid this, middle managers use liminal framing to create ambiguity concerning the boundaries of exploration set by top managers—while aligning convergent projects with strategic imperatives, they maintain some divergent protections by offering alternative interpretations and by negotiating their strategic rationale with top managers.



Navigating these tensions, including the need to align convergent and divergent strategic initiatives, calls for what we term *synaptic capabilities*, which refer to the ability of strategic leaders to identify, assimilate, and ultimately reconcile the tensions, contradictions, and trade-offs created by digital technologies, a capability inspired by the concept of paradoxical cognitions (Smith & Tushman, 2005). Inspired by the anatomical concept of synapses, or the connections between neurons in the brain, synaptic capabilities represent the ability of strategic leaders to identify connections between existing and new assets, technologies, and knowledge, and more complex and nuanced connections between exploitation and exploration, as well as other tensions that digital transformation entails (i.e., most notably automation vs. augmentation, see Raisch & Krakowski, 2021). An absence or deficiency of synaptic capabilities is evident when leaders fail to bridge the connections between convergent and divergent initiatives, such as when they dismiss digital technologies because of their competence-destroying elements without exploring how they could be leveraged in conjunction with the firm's core operations, assets, and knowledge.

Leveraging and linking capabilities: For us, this last insight illustrates the important role that strategic leaders play in ensuring that exploratory digital transformation initiatives remain reasonably connected to the firm's core operations, assets, and technologies. Indeed, digital transformation entails not only the development of new digital resources and capabilities but also leveraging and linking these capabilities with non-digital resources and capabilities. The paper in our Special Issue entitled “*Upgrading adaptation: How digital transformation promotes organizational resilience*” by Browder et al. (2024) offers novel insights into this process.

Based on a longitudinal study of two firms in the grocery industry before, during, and after the COVID-19 pandemic, the authors offer a unique insight into how digital capabilities enabled adaptation during the crisis and led to advantages after the crisis. The story begins in the years before the pandemic when grocery firms began to explore digital technologies—a competitive imperative necessitated by Amazon's entry into grocery retailing with the acquisition of Whole Foods Stores in August 2017. By tapping into the capabilities underpinning these digital resources, animating these capabilities, and combining them, both firms maintained resilience in the face of adversity. The authors identified five digital capabilities that promoted resilience—virtual access, virtual collaboration, data-driven decision-making, algorithmic re-programmability, and assisted decision-making. Interestingly, in addition to providing a source of resilience during the pandemic, these capabilities provided an ongoing source of competitive advantage.

For strategic leaders, this leveraging and linking process requires *orchestration capabilities*, defined as the ability of strategic leaders to “invest in the appropriate resources, link resource bundles in value-creating ways, and deploy resources in product-market domains” (Heavey & Simsek, 2023, p. 53). Digital transformation calls for more than just the recombination of resources—it often requires reengineering organizational processes to facilitate new types of interactions conducive to conjoined agency (i.e., Murray et al., 2021). It also calls for bridging the contributions of diverse participants within and outside the firm, especially as the firm navigates external ecosystems. Thus, orchestration represents a heightened capacity to recombine resources in new ways, rework organizational processes to facilitate new ways of working, and build new connective tissue within, across, and outside the organization so that combinations of digital and non-digital resources can be facilitated.

2.3 | Outcomes

The third component of the proposed framing is the outcomes of digital transformation. A fundamental question is whether digital investment and transformation improve firm performance, as well as other economically and socially relevant outcomes (Usai et al., 2021). We offer two critical observations to inspire future research on this important topic.

First, it is essential to differentiate between the myriad of immediate outcomes of digital transformation initiatives and their wider, longer-term impact on firm outcomes. While anecdotal evidence abounds, there has been less attention to the returns to investments in digital technologies. Of course, a pertinent question in this respect is what success represents and how it should best be measured. The key is to develop theories and measures that capture

the multidimensional impacts of digital transformation on cost savings, productivity improvements, and revenue enhancements. A more thorny issue is how to study the longer-run impacts on the firm's competitive positioning, including its wider ecosystem.

Second, it is crucial to consider non-financial outcomes, including the firm's sustainability performance and its relationships with customers and stakeholders. A central challenge is how firms balance the unequivocal economic advantages of digital technologies while meeting societal expectations. Using artificial intelligence to cut costs makes the firm look better to shareholders but also risks disenfranchising other stakeholders, not just those displaced by new technologies, but customers, partners, and even the government. Given the inevitable restructuring of organizational processes that will arise from AI and smart contracts, a key issue is how firms maintain the commitment of their non-displaced stakeholders. We submit that the best performers will be the ones who get the balance right—leveraging the advantages of digital technologies to attain new strategic advantages while fulfilling their responsibilities to salient stakeholders. This, in turn, requires that strategic leaders in incumbent firms embrace a mindset wherein digital transformation is viewed as a strategic imperative, not merely as a technological upgrade.

3 | CONCLUSION

Our mission for this *Special Issue* was to initiate a conversation in the literature concerning the role and influence of strategic leaders in the digital transformation of incumbent firms. Even as we are inspired by the contributions of our Special Issue authors, they also point to the need for added development. Because digital transformation straddles strategic and entrepreneurial domains, we discussed a strategic entrepreneurship framing to organize past work and inspire future research. We contend that effectively steering the digital transformation of incumbent firms demands a fusion of strategic and entrepreneurial mindsets and capabilities, or strategic entrepreneurship. Achieving this equilibrium poses a persistent challenge for strategic leaders within the complex and ever-evolving landscape of digital transformation. Interestingly, the intelligent use of digital tools, frameworks, and analytical capabilities involving propriety big datasets may prove instrumental for navigating this central leadership challenge.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

ENDNOTE

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