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Building organisational strategic resilience through leadership, design thinking, and business modelling

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Abstract: This study addresses the increasing need for strategic resilience in volatile, uncertain business environments, and emerging markets. It integrates leadership, design thinking, and business modelling – three areas traditionally studied separately – into a single conceptual framework that supports resilience as a continuous organisational capability. The conceptual study develops the strategic resilience integration framework (SRIF), which combines insights from leadership studies, design thinking methodologies and business modelling literature into a systematic, four-phase cycle of assessment, design, implementation and review. This structure illustrates how cultural alignment, adaptive innovation, and structural coherence interact to build organisational resilience and strengthen competitiveness. Together, these elements position resilience as an organisation-wide capability rather than an ad hoc reaction. Furthermore, this study advances resilience theory by connecting three major management fields that are rarely combined in existing research and offers theoretical insights and practical guidance for executives seeking to embed resilience into their organisational strategy and performance management.

Keywords: organisational resilience; leadership; design thinking; business modelling; competitive advantage; emerging markets; strategic resilience integration framework; SRIF.

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1 Introduction

Organisations today face environments shaped by volatility, uncertainty, complexity and ambiguity, as noted by Bennett and Lemoine (2014), Millar et al. (2018) and Taskan et al. (2022). Recent events show how such conditions may disrupt global systems. For instance, the COVID-19 pandemic exposed weaknesses in global supply chains and placed pressure on networks and individual firms (Ivanov, 2021). The semiconductor shortage in the automotive sector further illustrates how disruptions can persist long after the original shock (Ramani et al., 2022).

Under these conditions, organisations are required to make strategic decisions and adapt under heightened uncertainty, particularly in emerging and institutionally volatile environments. Research conducted in politically and economically unstable contexts suggests that culturally embedded leadership assumptions are associated with entrepreneurial behaviour, underscoring the importance of leadership-related context when examining organisational adaptation in volatile environments (Aziz and Salloum, 2023).

Technological change adds further strain. Rapid advances in artificial intelligence (AI) (Jorzik et al., 2024) are transforming executive decision-making and challenging traditional business models. Research indicates that over 80% of executives view AI as essential for maintaining competitive advantage (Lee et al., 2019), and more than 70% expect it to create opportunities for developing new business models (Lee et al., 2019; PwC, 2024; Soni et al., 2020; Vocke et al., 2019).

In this context, organisations need resilience and adaptability as core capabilities. Resilience concerns the ability to withstand and respond to unexpected interruptions (Annarelli and Nonino, 2016), whereas adaptability involves evolving and identifying opportunities in uncertain environments (Ramesh et al., 2023; Somers, 2009; Välikangas, 2016; Youssef and Luthans, 2007). However, resilience and adaptability do not ensure long-term success, as they require supportive organisational conditions to translate potential into outcomes. Strategic leadership provides direction and cultural alignment, design thinking (DT) supports iterative innovation and business modelling offers structural coherence.

Leadership, DT and business modelling each have established research traditions and are recognised contributors to organisational success, innovation and value creation (Berends et al., 2016; Liedtka, 2014; Teece, 2010; Verganti et al., 2021; Yukl, 2013; Yun et al., 2019). However, they have rarely been systematically combined in resilience literature. As a result, their collective potential to strengthen organisational resilience and

support sustained competitive advantage remains underexplored, despite the demands of today's volatile business environment.

While integrative perspectives such as dynamic capabilities and organisational ambidexterity have significantly advanced understanding of how firms adapt and renew their competitive advantage (Teece, 2007; O'Reilly and Tushman, 2013; Figueiredo et al., 2024), these approaches primarily conceptualise resilience as the configuration or balance of organisational capabilities. They offer limited theoretical insight into how strategic intent, innovation practices, and value-creation logic are jointly constructed and aligned under conditions of persistent uncertainty. In contrast, leadership research emphasises sensemaking and direction; DT focuses on iterative problem framing and learning; and business model theory addresses the coherence of value-creation and capture mechanisms. These domains operate under distinct theoretical logics and are typically examined in isolation. The absence of a framework that explicitly theorises their interdependence leaves a gap in explaining how organisations sustain strategic coherence while continuously adapting. By integrating leadership, DT, and business modelling, this study addresses this gap by conceptualising strategic resilience not as an aggregate of capabilities but as an ongoing process of alignment among direction-setting, innovation, and value logic.

To address this gap, this study introduces the strategic resilience integration framework (SRIF). The SRIF integrates leadership, DT and business modelling into a cyclical, mutually reinforcing system that positions resilience as a continuous organisational capability. This integrated view clarifies why a unified approach is needed and leads to the central research question of this study: how does the integration of leadership, DT, and business modelling operate as a mechanism for building organisational strategic resilience, given that these domains have traditionally been examined in isolation? By addressing this question, this study makes two contributions. First, it advances resilience theory by linking three management domains that are usually studied in parallel, thereby responding to calls for more holistic approaches (Conz and Magnani, 2020; Darkow, 2019; Duchek, 2020; Hillmann and Guenther, 2021). Second, it provides managerial guidance by outlining the SRIF's dimensions and potential applications, helping organisations translate conceptual insights into practice.

2 Literature review

2.1 *Organisational resilience*

Organisational resilience refers to a firm's ability to adapt and perform amid uncertainty and disruption. Annarelli and Nonino (2016) define it as a company's capability to respond to unexpected shocks while sustaining optimal performance and core goals. Lengnick-Hall et al. (2011) underscore the value of learning from adversity to improve future operations, and Hamel and Välikangas (2003) argue that resilience also requires anticipating and adapting to long-term trends that may erode performance. Duchek (2020) conceptualises resilience as a meta-capability comprising anticipation, coping and adaptation.

Prior research on work innovation and technology-based organisational contexts shows that organisational capabilities – such as innovation capability – mediate the translation of strategic orientations into firm-level outcomes, underscoring the importance

of structured mechanisms for effective organisational adaptation (Manigandan and Raghuram, 2024; Pawar et al., 2025). Complementary empirical evidence further shows that organisational agility acts as a mediating mechanism through which structured knowledge management practices contribute to sustained organisational outcomes, underscoring the role of internal capabilities and processes in enabling adaptive performance (Kumar et al., 2025).

Although scholars note that resilience can strengthen organisational effectiveness (Sutcliffe et al., 2003), much research treats resilience as a broad capacity and pays less attention to the specific managerial, methodological and structural enablers that enable its operationalisation in practice.

2.2 Leadership as a resilience enabler

Recent managerial literature synthesising change leadership research highlights the importance of effective leadership and structured change management practices for navigating complex and uncertain organisational change (Jango, 2024).

Leadership theory emphasises the importance of influence, guidance, cohesion, and motivation. Within this broad perspective, Salloum and Dana (2025) describe spiritual leadership as being characterized by shared values of service, interconnectedness, and moral integrity. Complementarily, Yukl (2006) and Northouse (2010) conceptualize leadership as a dynamic process through which an individual influences and guides others toward a shared goal. This process is not innate but develops through a leader's behavioural practice (Daft, 2005; Northouse, 2010). Leaders shape organisational mindsets by setting clear, well-defined objectives to maximise effectiveness (Kolyada, 2023). Empirical evidence from family firms indicates a strong relationship among leadership, performance, and governance, and shows that leadership contributes to performance indirectly by strengthening team cohesion and enabling knowledge-sharing routines that enhance team coordination, learning, and execution (Salloum et al., 2022; Aziz et al., 2020). This supports the view that leadership contributes to resilience not only through direction-setting but also by building relational conditions – such as cohesion, trust, and collaborative learning – that help teams absorb shocks and adapt effectively.

While empirical studies directly linking leadership and resilience are limited, theoretical contributions suggest strong ties. Harland et al. (2005) and Luthans et al. (2003) argue that building resilience is integral to leadership development, and Southwick et al. (2017) emphasise the role of cohesion and collaboration in strengthening organisational resilience.

However, leadership alone cannot guarantee resilience. The literature emphasises that individual-level competencies must be supported by structures and processes to enable effective organisational resilience (Lengnick-Hall et al., 2011). Studies of cultural transformation show that leadership contributes to resilience when it creates conditions that encourage openness, continuous learning and behavioural adaptability. Research on Microsoft, for example, highlights how shifts from 'know-it-all' to a 'learn-it-all' culture under Satya Nadella aligned leadership behaviour with organisational systems, reinforcing resilience as an embedded capability rather than a personal attribute of the leader (Ibarra and Rattan, 2018).

Leadership behaviours that encourage open dialogue, tolerance for failure, and participatory decision-making create psychological safety within teams, which in turn

enables experimentation, collaboration, and iterative learning central to DT (Loderer and Kock, 2025).

2.3 DT as a resilience enabler

DT is a human-centred, iterative approach to problem-solving that supports innovative solutions (Leverenz, 2024; Nakata and Hwang, 2020). It complements analytical methods by providing creative, prototype-driven practices that foster innovation (Mansoori and Lackéus, 2020; Nakata, 2020; Rösch et al., 2023) and help organisations move through uncertainty (Davis, 2017).

A growing body of research underscores DT's relevance for long-term competitiveness and adaptability. Case studies demonstrate that DT practices can strengthen organisational responsiveness to shifting environments (Appleyard et al., 2020). Likewise, Bathla et al. (2025) argue that companies seeking to reshape their business ecosystems rely on DT to foster innovation, improve customer experience and sustain competitive advantage. Razzouk and Shute (2012) further describe DT as a logical and imaginative process that enables refining solutions, reinforcing its value as an adaptive capability.

Recent contributions extend this view. Wang et al. (2023) demonstrate that DT functions as a hands-on methodology that supports creative solution development and plays a key role in product and service innovation. This perspective aligns with research indicating that DT can enhance organisational resilience by facilitating transformation in contexts shaped by digitalisation and participatory leadership (Habicher et al., 2021).

Practical examples also link DT directly to resilience capabilities. For instance, IBM's adoption of enterprise DT contributed to resilience by equipping the organisation with capabilities such as continuous adaptation, distributed authority, feedback orientation and alignment. These DT-driven routines help support ongoing adaptation and renewal (IBM, n.d.).

DT influences business model innovation by providing a human-centred, exploratory, and iterative mindset and methodology through which organisations design, experiment with, and reconfigure value-creation, delivery, and capture mechanisms (You, 2022); this process enables the translation of design-driven insights into strategic business models renewal.

2.4 Business modelling as a resilience enabler

Business models explain how organisations create, deliver and capture value (Teece, 2010; Wirtz et al., 2016a). Amit and Zott (2012) emphasise that they generate total value for all participants, while Foss and Saebi (2017) highlight that they evolve as managers innovate and adjust to shifts in the external environment.

Building on this broader perspective, Kolyada (2024) describes the multilevel nature of business models, which anchor strategic goals and guide the development of alternative strategic paths. Different strategies can emerge from the same architecture, enabling scenario-based adaptation in volatile conditions. To support this process, Kolyada developed a methodological system that compares and forecasts the performance of alternative business model–strategy combinations to help organisations identify viable configurations.

Other prominent business model approaches prioritise qualitative assessment over quantitative forecasting (e.g., Bland and Osterwalder, 2020; Osterwalder and Pigneur, 2010; Ries, 2011, 2017). Despite their differences, these approaches share a core premise: business modelling supports long-term viability by aligning strategic direction, value logic and operations with market conditions – an alignment that has been shown to relate to strategic planning and openness to change, both of which underpin entrepreneurial renewal in volatile environments (Salloum et al., 2021).

Empirical evidence from internationalisation research further suggests that entering foreign markets can drive business model innovation, requiring firms to adjust business model content, structure, and governance in response to different entry modes and operating contexts (Nunes et al., 2024). Complementarily, recent integrative work on business model innovation further highlights why and how firms reconfigure their business models over time (Xavier and Pereira, *in press*).

At the same time, the literature cautions that business modelling alone does not ensure resilience (Teece, 2018; Wirtz et al., 2016b; Doz and Kosonen, 2010). A structurally sound business model may still limit adaptation if leadership fails to mobilise people or if innovative problem-solving practices do not support continuous learning. Studies of technology-enabled business models (Amit and Zott, 2015) highlight this point by showing that resilience often depends on the interaction between modelling, leadership and innovation capabilities. Related studies indicate an interdependent relationship among opportunity identification, resource coordination, and the development of core capabilities, highlighting that their combined interaction supports competitive advantage (Yewei et al., 2025). The evolution of Netflix exemplifies this dynamic: its move from DVD rentals to streaming and, later, to original content reflects how business-model adaptability, supported by leadership and technological innovation, can sustain competitive advantage.

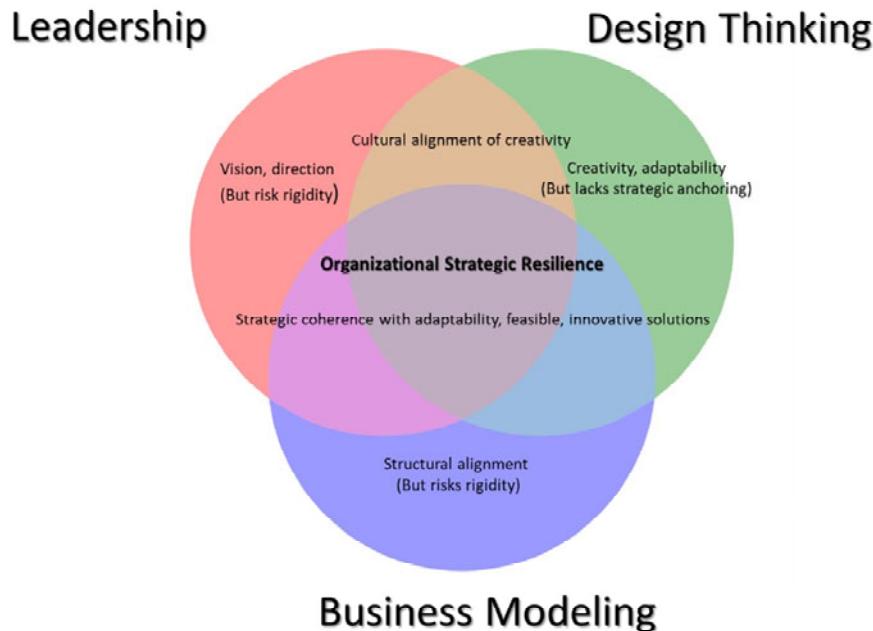
This evidence indicates that business modelling serves as the mechanism through which leadership-enabled and design-driven innovation is stabilised and sustained, thereby contributing to organisational strategic resilience.

2.5 Complementarity and gaps

The literature review shows that leadership, DT and business modelling each contribute to organisational resilience, yet they are rarely examined in an integrated way. Leadership offers vision and alignment but can constrain change without innovation. DT encourages adaptability and creativity but lacks structural anchoring. Business modelling delivers long-term viability but requires human-centred innovation and cultural realignment to avoid rigidity. The weaknesses of one enabler are offset by the strengths of the others, suggesting that resilience improves when these domains work in combination rather than in isolation. Figure 1 shows the complementarity among the three enablers.

To reinforce this point, Table 1 summarises the benefits, limitations and complementarities of the three enablers. It offers a concise synthesis of the literature and highlights the conceptual gap that motivates the development of the SRIF.

Figure 1 Complementary of leadership, DT, and business modelling (see online version for colours)



Source: Author's own elaboration

Table 1 Benefits, limitations, and complementarities of leadership, DT, and business modelling as resilience enablers

Element	Benefits (strengths)	Limitations (weaknesses)	Complemented by
Leadership	Provides vision, direction, trust, and cultural alignment	Risks rigidity without innovation tools	Design thinking + business modelling
Design thinking	Promotes creativity, adaptability, and user-centric innovation	Lacks strategic anchoring without structural support	Leadership + business modelling
Business modelling	Ensures structural alignment, value creation, and sustainability	May become rigid without leadership guidance or creativity	Leadership + design thinking

In practice, these complementarities become evident across a variety of organisational contexts. For example, leadership-driven crisis responses often require DT to explore alternative solutions, while business modelling helps evaluate their feasibility and long-term viability. Similarly, in digital transformation initiatives, leadership alignment and psychological safety enable design-driven experimentation, but sustainable outcomes depend on business model adjustments that capture and scale emerging value. In contexts of market disruption, exploratory innovation guided by DT must be anchored in coherent business models and supported by leadership to balance risk-taking with strategic continuity.

3 Framework development

To address the identified gap, this study proposes the SRIF, a conceptual model that integrates leadership, DT, and business modelling into a unified, systemic approach to organisational resilience. Rather than treating these enablers in isolation, the SRIF emphasises their interaction and positions resilience as a continuous organisational capability.

The framework introduces a theoretical mechanism in which resilience emerges from the combined effects of direction (leadership), adaptability (DT) and value continuity (business modelling). This integration generates results that none can achieve alone: leadership without DT lacks creative adaptability; DT without business modelling produces prototypes that do not scale; business modelling without leadership risks strategic inertia and cultural resistance.

Table 2 Comparative view of leadership, DT, business modelling, and SRIF across key dimensions

Element	Design thinking	Leadership	Business modelling	SRIF
Focus	Innovation and user-centric solutions	Guiding vision, adaptability	Value creation and competitive advantage	Resilience through the integration of all three
Strengths	Empathy, user-focused	Culture-building, agility, influence	Market- and finance-focused logic	Adaptive, systemic, testable, strategic, and behavioural alignment
Weaknesses when separately	Lacks strategic integration	May not guide innovation	Ignores the complexity of implementation	Designed to address the limitations of separate approaches through integration
Measurement	Often qualitative, informal	Behaviour-based assessments	Market, financial, and operational metrics	Conceptual indicators such as surveys, KPIs, and qualitative assessments are proposed for future testing
Application	Product/service/ personnel development	Organisational behaviour	Strategic planning	Strategic, organisation-wide transformation
Outcome	Prototypes, improved services/products	Team performance	Value proposition, superiority over competitors	System-wide resilience and sustained advantage through integration

The SRIF comprises four iterative phases – assessment, design, implementation and review – that form a dynamic feedback loop. These phases ensure that resilience operates as an ongoing cycle of anticipation, response and adaptation. In this way, the SRIF provides both a theoretical structure for scholars and a practical lens for managers seeking to embed resilience across organisational levels.

3.1 Originality and rationale for SRIF

Although existing studies discuss leadership, DT and business modelling as contributors to organisational resilience. This separation limits theoretical development and practical applications. The SRIF addresses this gap by conceptualising resilience as the outcome of interdependent enablers: leadership practices, DT methodologies and adaptive business models.

To demonstrate the distinctiveness, Table 2 contrasts each enabler when examined independently with the SRIF as an integrative framework.

3.2 Potential scope of application

The SRIF can be tested and applied to organisations of different sizes, including individual departments or divisions, particularly those operating in dynamic or volatile markets or undergoing planned change. Suitable testing contexts involve organisations experiencing or anticipating disruptions, such as strategic restructuring, demand shocks, supply chain failures, market shifts or digital transformation.

The application should engage multiple organisational levels. Top management and directors assess strategic adaptability and leadership behaviour. Middle managers evaluate process alignment, implementation of resilience, feedback mechanisms and operational adaptability. Employees and frontline staff provide insight into morale, engagement, perceived adaptability and the organisation's feedback culture.

3.3 Integration logic of SRIF

Leadership, DT and business modelling each support organisational resilience, but none alone creates a lasting capability. Leadership sets direction but risks rigidity without structured framing. DT fosters creative adaptation, yet without a viable business model, innovation remains hard to scale. Business modelling ensures value continuity, but without leadership and flexible problem-solving, it faces cultural pushback and weak implementation.

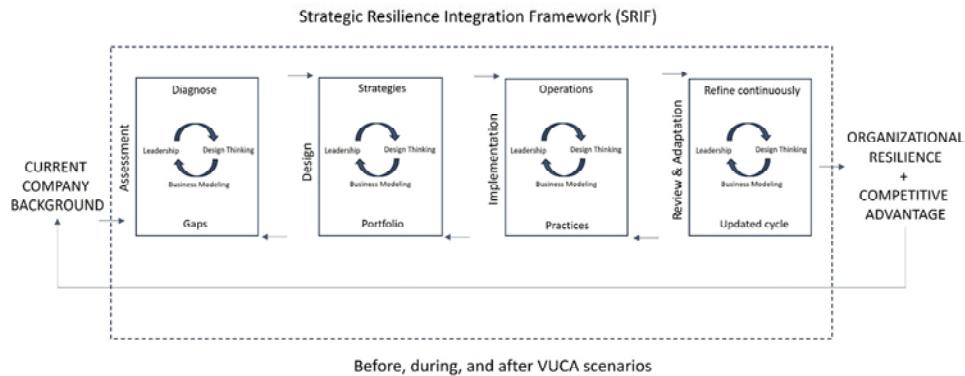
The SRIF holds that resilience emerges only when these three areas work together. Leadership motivates purpose and commitment; DT develops adaptive solutions aligned with the purpose; and business modelling turns those solutions into scalable and economically viable forms. This interaction – direction (leadership) \times adaptability (DT) \times value continuity (business modelling) – transforms resilience from reactive recovery into an ongoing organisational skill. This integrated approach underpins the four repeating phases of SRIF: assessment, design, implementation and review, illustrated in Figure 2.

3.4 How SRIF differs from existing iterative cycles

Although SRIF includes four iterative phases, it differs from traditional continuous improvement cycles, such as plan-do-check-act and other feedback-based models. Iterative cycles focus on performance improvement through repeated problem–solution refinement. In contrast, SRIF theorises resilience as an emergent capability generated by the interdependence of leadership, DT and business modelling. The phases of SRIF are interaction points between strategic direction, adaptive problem-solving and value

continuity, not linear steps for operational refinement. In Table 3, SRIF is compared with other iterative and capability-based frameworks.

Figure 2 Strategic resilience integration framework (see online version for colours)



Notes: The framework consists of four iterative phases – assessment, design, implementation, and review and adaptation – that collectively support the development and reinforcement of organisational strategic resilience. Each phase generates an outcome that informs the next cycle, producing a continuous learning loop that enables proactive anticipation, effective response, and long-term adaptation during disruptions. The framework also accommodates scenario-based implementation to simulate disruptive conditions safely and observe adaptive organisational behaviours without real operational exposure.

Source: Author's own elaboration

3.5 Conceptual structure of SRIF

The SRIF is structured into four iterative phases – assessment, design, implementation and review – that form a continuous learning loop. Together, these phases enable organisations to anticipate disruptions, respond effectively and adapt strategically (as illustrated in Table 4).

3.5.1 Phase 1: assessment

This phase diagnoses organisational vulnerabilities and existing capacities. Leadership encourages openness to evaluation and psychological safety for candid assessments. DT supports stakeholder exploration and sensemaking, and business modelling provides a structural lens for evaluating strategic fit and flexibility. This phase identifies starting conditions for resilience and highlights where integration is most needed. The outcome is a diagnostic report outlining cultural, innovative and structural resilience gaps. The diagnostic insights generated in the assessment phase define the focal problem areas and strategic priorities that guide co-creation, experimentation, and solution development in the subsequent design phase.

3.5.2 Phase 2: design

In this phase, participants co-create resilience strategies. Leadership ensures alignment, DT introduces creativity and iterative problem-solving, and business modelling grounds

ideas in feasibility and value creation. The phase shows how co-creation and prototyping, traditionally associated with product innovation, can support a resilience strategy. The outcome is a portfolio of feasible resilience strategies and prototypes aligned with organisational goals. In the transition to implementation, validated design insights and prototypes are translated into business model reconfigurations by mapping them onto value creation, delivery, and capture mechanisms, thereby converting exploratory concepts into actionable strategic configurations.

Table 3 SRIF compared with other iterative and capability-based frameworks

Framework (author, year)	Emphasis and contributions	Limitations
PDCA cycle (Deming, 1986)	<ul style="list-style-type: none"> • Emphasis: Continuous process improvement through iterative feedback. • Contribution: Clear operational logic for monitoring and refining existing processes. 	Focuses on operational efficiency and problem-solving rather than strategic resilience; does not explicitly address leadership dynamics, innovation practices, or business model coherence; limited applicability for systemic adaptation under disruptive conditions.
Dynamic capabilities (capability-based resilience literature, e.g., Duchek, 2020)	<ul style="list-style-type: none"> • Emphasis: Organisational adaptation through anticipation, coping, and reconfiguration of capabilities. • Contribution: Strong theoretical explanation of how firms adapt to changing environments. 	Conceptual and abstract in nature, it provides limited guidance on how leadership, innovation processes, and business models interact in practice; resilience is treated implicitly rather than operationalised through managerial frameworks.
Strategic resilience integration framework (SRIF) (Gonzalez and Kolyada, in press)	<ul style="list-style-type: none"> • Emphasis: Integration of leadership, design thinking, and business modelling into a continuous resilience cycle. • Contribution: Positions resilience as an emergent organisational capability supported by direction, adaptability, and value continuity. 	Conceptual framework requiring empirical validation across different industries, firm sizes, or cultural contexts. Implementation may vary across organisational contexts and levels of maturity; practical application depends on coordinated engagement across leadership, innovation, and structural domains.

3.5.3 Phase 3: implementation

Resilience strategies move into day-to-day operations. Leadership provides direction and motivation, DT supports experimentation and adjustment, and business modelling ensures coherence with organisational logic and market demands. This phase emphasises behavioural integration across culture, DT and business modelling. The outcome is a set of operationalised resilience practices supported by measurable indicators of adaptability and responsiveness. Data and feedback generated during implementation provide the empirical basis for reflective evaluation in the review and adaptation phase, enabling

organisations to assess performance, identify misalignments, and recalibrate strategies accordingly.

Table 4 Phases of the SRIF: focus, integration logic, and outcomes

Phase	Focus	Integration logic	Expected outcome
Phase 1: assessment	Diagnosing vulnerabilities, leadership readiness, and business model adaptability.	Leadership fosters openness and sensemaking, design thinking introduces exploration tools, and business modelling provides structural analysis.	Diagnostic report identifying resilience gaps across the cultural, innovative, and structural domains.
Phase 2: design	Co-create resilience strategies with stakeholders.	Leadership ensures alignment, design thinking structures ideation and prototyping, and business modelling validates feasibility.	Portfolio of feasible resilience strategies and prototypes aligned with the organisational strategy.
Phase 3: implementation	Embedding resilience strategies into daily operations.	Leadership drives adaptive behaviours, design thinking enables iteration and adjustment, and business modelling ensures structural integration.	Operationalised resilience practices are supported by measurable indicators of adaptability and responsiveness.
Phase 4: review and adaptation	Reflect, evaluate, and adapt resilience practices to the evolving conditions.	Leadership promotes a learning culture, design thinking gathers feedback and insights, and business modelling ensures structural recalibration.	The resilience cycle was updated with refined strategies, ensuring continuous adaptation and sustained advantage.

3.5.4 Phase 4: review and adaptation

The final phase reinforces continuous learning and improvement. Leadership fosters reflection and foresight, DT captures stakeholder feedback, and business modelling enables organisations' structural realignment with emerging conditions. This phase closes the resilience cycle by embedding resilience as an ongoing capability. The outcome is an updated resilience cycle with refined strategies that support continuous organisational adaptation and sustained advantage. Insights derived from the review and adaptation phase inform subsequent assessments, allowing organisations to re-enter the SRIF cycle with updated assumptions, refined priorities, and enhanced strategic awareness.

Table 4 summarises the four phases of the SRIF, highlighting the focus of each stage, the integration of leadership, DT, and business modelling, and the outcomes that reinforce resilience as a continuous organisational capability.

3.5.5 Proposed metrics and validation logic

To enhance the practical relevance and testability of the SRIF, this study outlines illustrative metrics and diagnostic questions to operationalise and empirically assess each phase of the framework. These metrics are not presented as validated instruments or empirical results, but rather as a proposed validation logic intended to demonstrate how

the framework could be examined in future empirical research and applied in managerial settings.

As described previously, the SRIF is structured as a cyclical process comprising four interrelated phases – assessment, design, implementation, and review and adaptation – each requiring distinct forms of diagnosis and validation. Rather than prescribing a single measurement instrument, SRIF allows for multiple complementary indicators to be applied across phases, combining perceptual, behavioural, and performance-oriented measures. Table 5 summarises example diagnostic questions, metrics, and validation steps for each SRIF phase, illustrating how the framework can be operationalised while remaining adaptable across organisational contexts and industries.

Table 5 Proposed operational metrics and validation logic for SRIF phases

SRIF phase	Primary outcome	Illustrative diagnostic questions/metrics	Proposed validation steps
Assessment	Identification of resilience gaps and starting conditions	<ul style="list-style-type: none"> • Leadership adaptability (Likert-scale survey) • Perceived strategic clarity across teams • Business model flexibility and rigidity review • SWOT-based vulnerability assessment 	Baseline survey administration; facilitated diagnostic workshops; triangulation of perceptual and strategic assessment data.
Design	Generation of adaptive solutions and organisational learning	<ul style="list-style-type: none"> • Number and diversity of prototypes developed • Degree of stakeholder participation in DT activities • Learning outcomes derived from experimentation 	Analysis of workshop outputs; qualitative evaluation of prototypes; review of reflective learning logs.
Implementation	Embedding resilience into organisational routines	<ul style="list-style-type: none"> • Time to recovery (TTR) following disruption • Adoption rate of new practices or business model elements • Cross-functional collaboration index 	Pre- and post-implementation performance comparison; operational KPI tracking; process adoption reviews.
Review and adaptation	Continuous learning and strategic recalibration	<ul style="list-style-type: none"> • Frequency of leadership reflection and review cycles • Adjustments in key performance indicator (KPI) trends • Evidence of iterative business model reconfiguration 	Periodic performance reviews; longitudinal comparisons; structured leadership debrief and recalibration sessions.

3.6 *Implementation scenarios*

The SRIF implementation may be introduced through a simulation-based approach in which hypothetical disruptions, such as a sudden drop in demand, supply chain interruption or the entry of a new competitor, are presented. Participants respond using each phase of the SRIF cycle. This approach allows safe testing without exposing the organisation to risks while enabling close observation of adaptive behaviours and decision-making.

The SRIF can also be applied conceptually in pilot contexts, particularly in organisations undergoing transformation, digitalisation or restructuring. These scenarios enable researchers and practitioners to examine how SRIF unfolds in practice, without prescribing strict timelines or procedures. Implementation scenarios, therefore, illustrate how the framework may be tested and refined, rather than serving as operational guidelines.

Organisations may calibrate SRIF adoption based on their readiness for strategic and organisational maturity, applying the framework selectively, iteratively, or as an embedded capability depending on their existing leadership practices, learning capacities, and structural flexibility. In contexts with limited readiness, SRIF can be applied selectively through simplified simulations focused on awareness-building, leadership alignment, and basic sensemaking about disruption. Organisations with moderate maturity may adopt SRIF iteratively, applying the SRIF cycle within pilot units or targeted transformation initiatives to strengthen integration across leadership practices, design experimentation, and business model adaptation. In more mature organisations, SRIF can be embedded as a continuous strategic capability, with repeated cycles informing ongoing business model reconfiguration, leadership development, and organisational learning. This staged calibration allows SRIF to remain flexible and scalable while accommodating differences in organisational readiness and resource availability.

3.7 *Research propositions*

Although empirical testing lies outside the scope of this study, the SRIF opens several avenues for future research:

Proposition 1: Organisations that apply SRIF are expected to sustain resilience as an ongoing capability rather than relying on separate leadership, DT or business modelling practices.

Proposition 2: Integration of leadership, DT and business modelling enhances adaptability outcomes, such as reduced recovery time and improved market responsiveness.

Proposition 3: The SRIF fosters competitive advantage by treating resilience as a proactive strategic capability rather than a defensive response.

These propositions offer a starting point for empirical validation across various industries and organisational contexts.

4 Theoretical contribution of the SRIF

The SRIF does not offer novelty by identifying leadership, DT and business modelling as individual contributors to resilience, since prior studies examined these domains separately (e.g., Buliga et al., 2015; Endaryono et al., 2024; Grego et al., 2024; Nkomo and Kalisz, 2023). Existing frameworks, however, do not explain how these domains interact to produce resilience as a continuous organisational capability. The dynamic capabilities framework (Teece, 2007), for instance, describes strategic renewal through sensing, seizing and transforming but does not specify how leadership behaviours and culture support this renewal. Similarly, Duchek's (2020) resilience cycle outlines anticipation, coping and adaptation but does not show how adaptive capacity embeds itself in the organisational logic. Models of business model innovation (Wirtz et al., 2016b) and design-driven innovation (Liedtka, 2014) highlight creativity and value reconfiguration but overlook the leadership mechanisms that enable such change.

The SRIF is distinct because it combines these domains into a single capability-building mechanism. In SRIF, resilience is theorised as a continuous competence that emerges only when direction (leadership), adaptability (DT) and value continuity (business modelling) operate together across an iterative four-phase cycle. This interaction is absent from existing models and constitutes SRIF's main theoretical contribution.

Furthermore, SRIF also offers a testable conceptual model that invites empirical exploration of how organisations convert resilience from a reactive trait into a proactive, system-wide capability. Beyond theory, it adds managerial relevance by providing a practical pathway for embedding resilience in strategy formulation, organisational design and performance management.

The SRIF also aligns with broader research streams grounded in adaptive systems and complexity perspectives, which conceptualise organisational resilience as an emergent property arising from interactions among interdependent capabilities rather than from isolated elements. In adaptive systems theory, dynamics relevant to resilience – such as nonlinearity, self-organisation, feedback, and learning – arise through ongoing interactions among system components (Holland, 1992). The SRIF shares this foundational logic by theorising resilience as an emergent organisational capability that develops through iterative interactions among leadership practices, DT processes, and business model configurations. By articulating these interactions explicitly within an organisational and strategic management context, the SRIF situates itself within the adaptive systems tradition while offering a focused lens on how emergence unfolds through identifiable managerial domains.

5 Discussion

In response to increasingly volatile, uncertain, complex, and ambiguous environments, a growing body of research has examined how organisations develop resilient strategies to cope with adverse and turbulent conditions across diverse organisational forms, including small and medium-sized enterprises (Singh et al., 2024; Kabbara et al., 2025). Against this backdrop, the SRIF was developed to offer an integrative, process-based approach to organisational resilience.

The SRIF presents a dynamic foundation for understanding how organisations can embed resilience as a continuous, organisation-wide process rather than as an isolated response to disruption. Through its four phases, the framework demonstrates how strategic direction, adaptive problem-solving, and value continuity can be operationalised together, aligning cultural, innovative, and structural drivers of renewal.

The SRIF builds on and extends existing conceptualisations of resilience, particularly Duchek's (2020) view of resilience as a dynamic capability comprising anticipation, coping and adaptation. By embedding leadership, DT and business modelling in these processes, SRIF offers a mechanism for operationalising dynamic capabilities at strategic and operational levels. This integration aligns with the calls of Hillmann and Guenther (2021) and Conz and Magnani (2020) for more holistic approaches to resilience. The SRIF, therefore, helps bridge fragmented research by clarifying how these domains interact within a unified process that supports strategic renewal and sustained performance.

Moreover, the framework's modular structure enhances its applicability across diverse organisational contexts. In small and medium-sized enterprises, SRIF can emphasise rapid design cycles and direct leadership involvement, while in larger firms, the framework can support cross-functional coordination and formalised processes. Its adaptability makes the SRIF suitable for different industries and organisational cultures, though future empirical testing will be crucial for refining these adaptations and ensuring wider relevance.

6 Practical and managerial implications

The SRIF provides organisations with a structured approach to embed resilience deliberately rather than reactively. In practice, it can guide the following actions: leadership routines for resilience, DT as a resilience engine, business modelling for value continuity and integration across departments, strategic planning and governance.

6.1 Leadership routines for resilience

Executives and middle managers can incorporate resilience indicators into performance reviews, strategic updates and routine communication. This ensures that adaptability, learning and cross-functional collaboration become ongoing leadership priorities rather than crisis-driven responses.

6.2 DT as a resilience engine

DT practices, such as problem reframing, rapid prototyping and continuous experimentation, help generate and evaluate response options during uncertainty. The SRIF cycle clarifies when and how these tools fit within the four phases, enabling structured problem-solving rather than ad hoc innovation.

6.3 Business modelling for value continuity

The SRIF supports decision-making by helping managers assess whether new ideas or solutions are economically and strategically viable before scaling. By aligning new

initiatives with the organisation's business model, firms can reduce waste and accelerate strategic renewal.

6.4 Integration across departments

Because SRIF links strategic intent, innovation practices and value capture, it encourages collaboration between leadership, operations, marketing, finance and design-oriented teams. Organisations can create cross-functional SRIF task forces to move adaptive solutions from ideation to profitable execution.

This is particularly important because an effective cross-departmental integration also depends on leadership commitment, inclusive organisational culture, and coordinated change management practices. Managerial literature emphasises that initiatives such as diversity and inclusion are most effective when they are embedded across functions, aligned with overall strategic objectives, reinforced through governance mechanisms, and supported by continuous learning and open communication. Such an integrated approach strengthens coordination across organisational units and supports the cultural alignment required for sustained adaptability and resilience (Valeri and Salloum, 2025).

6.5 Strategic planning integration

The four SRIF phases (assessment, design, implementation and review) can be integrated into annual or quarterly planning cycles, ensuring continuous updating of strategies based on market signals rather than only reactive adjustments.

6.6 Governance, feedback, and learning mechanisms in the SRIF

Governance within SRIF refers to the formal and informal arrangements that assign, coordinate, and monitor responsibility for the resilience cycle across the organisation. Senior leadership typically plays a sponsoring role by setting strategic priorities, allocating resources, and legitimising experimentation, while cross-functional teams execute and iterate through the SRIF phases.

Feedback mechanisms are central to the cyclical logic of SRIF. Insights generated during the design and implementation phases – such as performance data, stakeholder feedback, and learning from experimentation – are systematically captured and incorporated into the review and adaptation phase. These feedback loops enable organisations to evaluate not only immediate outcomes but also the underlying assumptions about strategy, processes, and value creation.

Learning structures institutionalise resilience over time. Organisations can formalise learning by documenting insights from SRIF cycles, integrating them into strategic planning processes, and updating routines, policies, or business model configurations accordingly. Over repeated cycles, these practices contribute to organisational memory, reduce reliance on individual judgment, and strengthen collective adaptive capacity.

6.7 Illustrative scenarios: applying SRIF in practice

Three hypothetical scenarios illustrate how SRIF can guide decision-making in different organisational contexts.

6.7.1 Scenario 1: crisis response in a manufacturing firm

A manufacturer faces a sudden shortage of raw materials. Using SRIF, leadership assesses risks, cross-functional teams use DT to generate alternative sourcing and production options, and the business model lens then evaluates their financial and operational viability.

6.7.2 Scenario 2: digital transformation in a service organisation

A service company introduces automation and AI tools to enhance customer support. The SRIF helps leadership align employee concerns, strategic goals and technological priorities during the transition. DT workshops surface pain points and opportunities for improvement, and the business model perspective ensures revenue sustainability and the protection of existing value.

6.7.3 Scenario 3: innovation during market disruption

A company responding to new low-cost competitors explores new market segments and product lines. Leadership defines the strategic direction, design teams prototype new products based on rapid customer feedback, and business modelling identifies which innovations can be scaled profitably.

7 Implications for research and society

7.1 Implications for research

The SRIF opens new research avenues by conceptualising resilience as an integrated mechanism at the micro and macro levels. Future studies may assess the relationships among leadership, DT and business modelling in resilience outcomes; test the SRIF cycle across sectors, organisational sizes, cultural contexts and types of disruptions; develop diagnostic tools for measuring resilience maturity based on SRIF dimensions; investigate the influence of leadership styles, team structure and organisational culture on SRIF effectiveness; and explore the application of SRIF in digital transformation, sustainability transitions, supply chain management and crisis management.

7.2 Societal impact

Building a resilient society requires understanding how organisations contribute to collective stability, particularly during periods of widespread disruption. Responding to the growing frequency and severity of crises, scholars emphasise the need for improved societal resilience across economic, political, and community systems (Aldrich, 2012; Stark, 2014; Duit, 2015).

Within this broader conversation, the SRIF holds societal relevance because organisational resilience directly influences community stability, public attitudes, and overall quality of life. Crises and disasters deteriorate quality of living, and institutions that maintain essential functions – while preserving protection and legitimacy – play a critical role in sustaining societal resilience during such events (Boin and Lodge, 2016).

Empirical research on public institutions further shows that institutional resilience is closely linked to adaptive capacity, learning, coordination, and leadership quality, particularly in enabling public organisations to anticipate shocks, adjust governance arrangements, and maintain continuity under crisis conditions (Profiroiu and Nastacă, 2021). Complementary case-based evidence demonstrates that resilience in public-sector organisations develops through the interaction of risk perception, leadership-driven adaptation, and organisational mechanisms that support learning, coordination, and strategic reorientation, enabling institutions to respond to crises while adjusting governance and operating models (Tallaki and Bracci, 2020).

The SRIF provides several pathways for organisations to strengthen these broader societal outcomes. First, its leadership component reinforces transparent communication and coordinated decision-making, reducing public uncertainty and supporting trust in organisational responses. Second, its design-thinking element incorporates stakeholder perspectives into problem-solving, enabling services to be redesigned around the needs of citizens, employees, and vulnerable groups. Third, its business-model dimension supports continuity of essential operations – such as access to services, employment stability, and supply-chain reliability – thereby reducing the societal disruption typically associated with crises.

Through these mechanisms, SRIF enables organisations not only to enhance their own performance but also to contribute to societal resilience by stabilising daily life, maintaining public confidence, and supporting community well-being. Organisations that build resilience as a continuous capability are better positioned to manage shocks – such as economic downturns, pandemics, technological shifts, and climate-related events – while protecting jobs, sustaining services, and promoting long-term innovation.

7.3 *Policy implications*

The SRIF also provides insights for public-sector organisations and policymakers aiming to strengthen institutional resilience. Prior research shows that resilience in the public sector depends on adaptive governance arrangements that promote flexibility, distributed decision-making, inter-organisational coordination, and rapid responsiveness to emerging conditions (Janssen and van der Voort, 2016). SRIF aligns with these objectives by demonstrating how leadership mindsets, iterative design processes, and adaptable operating models can be integrated into public-sector routines. Policy frameworks that promote experimentation, inter-agency learning, and citizen-centred service redesign can benefit from the SRIF's structured cycle as a mechanism for continuous review and capability renewal. Therefore, SRIF contributes to ongoing discussions on building resilience not only in firms but also within broader socio-institutional systems.

8 Limitations and opportunities for further research directions

As a conceptual framework, SRIF has not yet been validated across different industries, firm sizes or cultural contexts. Without real-time testing, its comparative advantages cannot be benchmarked against existing resilience approaches. In addition, the strength of interactions among leadership, DT and business modelling may vary with contextual

variables, such as organisational culture, industry dynamics and governance structures, and institutional environments.

These limitations present opportunities for further research. Future studies should test SRIF using qualitative, quantitative or mixed-methods designs to evaluate the interaction of its components and whether they enhance resilience outcomes across diverse settings. Longitudinal case studies could explore how organisations internalise and institutionalise SRIF over time, shedding light on learning dynamics and capability development across the framework's phases. Quantitative approaches, such as survey-based research and structural equation modelling, could be used to test hypothesised relationships among leadership practices, DT routines, business model configurations, and resilience outcomes. Comparative studies may also benchmark SRIF against other resilience or dynamic capability frameworks.

9 Conclusions

This paper introduced the SRIF as a conceptual model explaining how resilience develops as a sustained organisational capability. The framework advances resilience scholarship by demonstrating that resilience does not arise from leadership, DT, or business modelling in isolation but from their interdependence across a continuous four-phase cycle. The SRIF, therefore, synthesises dispersed research into a unified system that helps organisations anticipate disruption, respond effectively, and adapt over time.

By integrating strategic direction, adaptive problem-solving and value continuity, SRIF offers scholars and practitioners a structured approach to treat resilience as an ongoing dimension of strategic management and competitive advantage rather than a reactive intervention.

Declarations

All authors declare that they have no conflicts of interest.

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