



# Creating effective strategy implementation: a systematic review of managerial and organizational levers

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## Abstract

Strategy implementation is a complex process with many strategies failing during the implementation process, posing challenges for both private and public organizations worldwide. This paper assesses the existing research on strategy implementation through a systematic literature review of 160 papers. Based on the review, a conceptual framework for effective strategy implementation has been developed. This framework encompasses the managerial and organizational levers that influence the strategy implementation processes, demonstrating that a well-structured and competent management team skilled at utilizing the appropriate organizational levers, can drive successful strategy implementation. Contextual factors that may influence strategy implementation are discussed, including new ways of working, increased workforce diversity, openness of strategy, and technological changes. Furthermore, current methodological gaps are identified and significant managerial implications for strategy implementation are outlined.

**Keywords** Strategy implementation · Strategy execution · Strategic change · Strategic management

**JEL Classification** M10

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# 1 Introduction

Strategy implementation is often seen as a complex “black box” characterized by uncertainty and complexity (Tawse and Tabesh 2021). Similarly, research on strategy implementation tends to be eclectic, drawing on diverse perspectives (Noble 1999b). Despite its complexity and eclectic nature, strategy is a foundational component of organizational development and operations that concerns the organization of human activity (Evered 1983). While organizing human activity may appear simple, it is often claimed that most strategies fail (Wery and Waco 2004). Although the 70–90% failure rate of strategies fail may be exaggerated, the high rate of failure remains an undesirable situation for organizations worldwide (Cândido and Santos 2015).

While a significant amount of research has focused on the preliminary and early stages of strategy work—including strategy formulation, strategic planning, positioning, and development—the strategy implementation process remains under-researched, reinforcing its reputation as a black box (Tawse and Tabesh 2021). This paper adds to the current research exploring strategy implementation (see Friesl et al. 2021; Tawse and Tabesh 2021) through a systematic review of contemporary literature.

Organizations must be able to adapt and implement strategies to remain competitive and react to changes in their external environments (Sudarsanam and Lai 2001). When implementing new or revised strategies, the success of an organization depends on its ability to execute decisions and key processes efficiently, effectively, and consistently (Miller 2020). Consequently, the effective formation and deployment of resources is an essential aspect of strategy implementation. (Safdari Ranjbar et al. 2014).

Strategy implementation is also highly influenced by human dynamics, which can affect strategic plans and processes as well as create resistance against them (Lê and Jarzabkowski 2015). As stated by Hrebiniak (2006), the biggest obstacle to strategy implementation is the “inability to manage change effectively and overcome resistance to change.” Since strategy is neither created nor implemented in a vacuum, both managers and employees must balance external and internal influences during strategy implementation. While strategy implementation involves the entire organization, research on the topic often focuses on managers (Mistry et al. 2022; Watkins 2007). For example, Tawse and Tabesh (2021) identified several conditions for effective strategy implementation, emphasizing managerial capabilities. Building on this foundation, they identified the managerial actions required to ensure effective strategy implementation. Their framework reflects a clear link between strategy implementation and managerial actions. However, it is essential to broaden the scope to consider both managerial and organizational factors, as both managers and employees play a role in shaping the implementation process and its potential outcomes.

To illuminate the comprehensive intricacies of strategy implementation, emphasizing holistic perspectives beyond the managerial perspective, this paper aims to explore the following research questions:

1. What are the managerial levers of strategy implementation?
2. What are the organizational levers of strategy implementation?

Through a systematic review of contemporary literature on strategy work, we build on the seminal research of Noble (1999), who emphasized the importance of wide and deep involvement across organizational levels. As shown by Tawse and Tabesh (2021) and Friesl et al. (2021), the field of strategy implementation is still evolving, and further exploration of the multiple levels of analysis in strategy implementation is needed. Consequently, we contribute to contemporary themes in strategy implementation research by echoing the call of Tawse and Tabesh (2021) for further research exploring the various factors influencing strategy implementation processes. In doing so, we emphasize a holistic overview of the complex relationships between the managerial and organizational aspects of strategy implementation. This study advances strategy implementation research, making three key contributions derived from the systematic review. First, we present an overview of the current state of the art in strategy implementation literature using a transparent, reproducible, and systematic review methodology. Second, we develop a conceptual framework that offers an easily accessible overview of the managerial and organizational levers that should be considered when implementing strategy. Third, we propose a future research agenda.

## 2 Theoretical underpinnings

The seminal work by Mintzberg et al. (1998) which outlines 10 schools of thought for understanding strategy, illustrates the conceptual diversity of strategy as a phenomenon. This diversity contributes to the vast nomenclature that characterizes the field of strategy work often obscuring the insights into the variety of activities involved in strategy implementation.

Strategy implementation is a multilevel phenomenon that can be examined from various theoretical perspectives. Overall, strategy implementation can be regarded as a particular type of strategy work (Friesl et al. 2021), often described as occurring in phases of design, planning, positioning, formulation, implementation, execution, control, evaluation, and continuous adjustments. While strategy tools may present this process as linear and straightforward (Munive-Hernandez et al. 2004), it is typically a gradual development characterized by continuous incremental changes (Amoo et al. 2019; Quinn 1989). In line with this view, we adopt the definition of strategy implementation proposed by Yang et al. (2010), who argued that “as a dynamic, iterative, and complex process, strategy implementation comprises a series of decisions and activities by managers and employees—affected by a number of interrelated internal and external factors—to turn strategic plans into reality in order to achieve strategic objectives.” Given the lack of a clear distinction between strategy implementation and execution (MacLennan and Markides 2021), this paper will use “strategy implementation” to cover both terms.

Although significant time, resources, and effort are dedicated to strategy formation, the implementation process tends to receive less attention (Vänttinen and Pyhäntö 2009), even though it is often the most challenging aspect of strategy work (Yang et al. 2010). Strategy implementation involves the actions that transition an organization from strategic decision-making regarding positioning or planning to executing the strategy (Friesl et al. 2021). A synthesis of contemporary definitions of

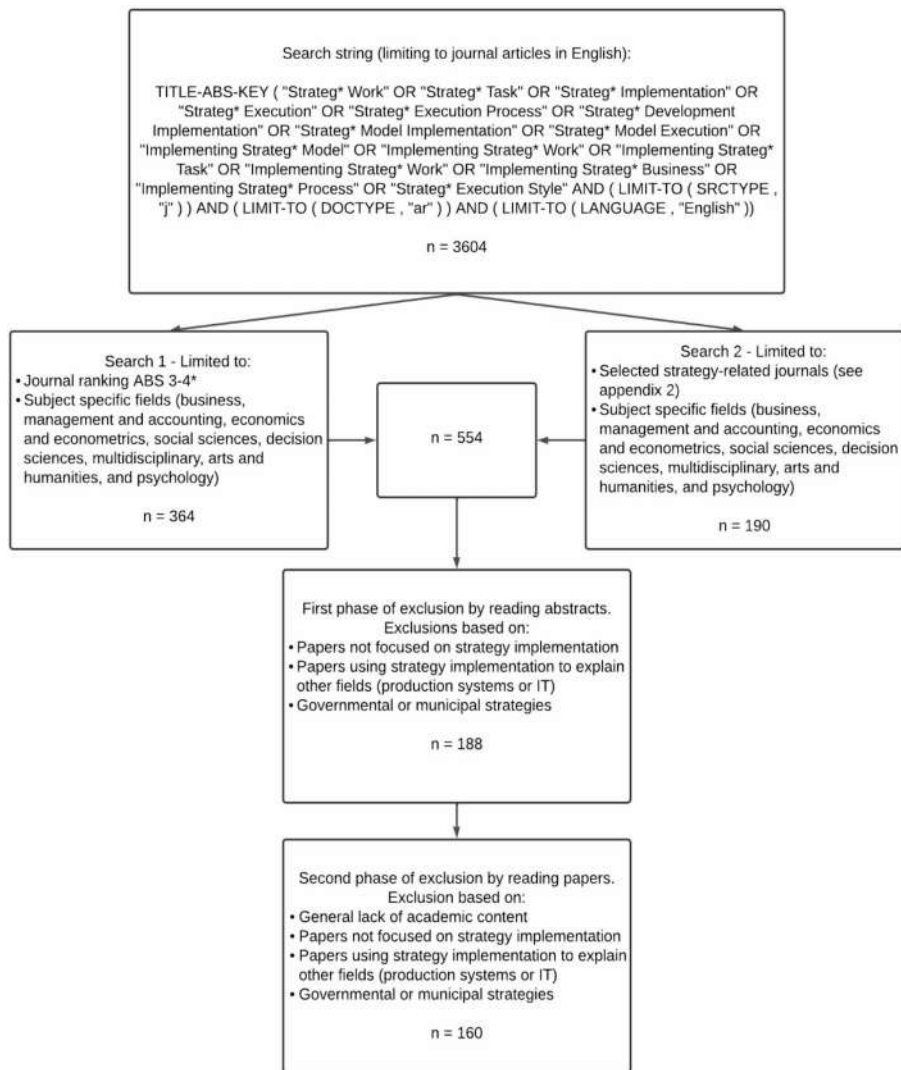
strategy implementation by Amoo et al. (2019), highlighted two recurring factors in strategy implementation: organizational structures and managerial skills. While these factors align with several studies on strategy implementation, Weiser et al. (2020) recently called for a more adaptive approach to strategy implementation. They highlighted the importance of viewing strategy implementation as a dynamic interaction among diverse organizational stakeholders, requiring coordinated action through both structural and social mechanisms. Given its complexity, this literature review enhances the conceptual understanding of the field by exploring both managerial and organizational factors.

### 3 Methodology

The section outlines the methodology, ensuring reproducibility and transparency (Kraus et al. 2022). The review builds on existing frameworks for conducting systematic literature reviews (Sauer and Seuring 2023; Tranfield et al. 2003). The initial sampling of contemporary research was conducted using Elsevier's database, Scopus, which compiles several indexed journals (Anand et al. 2021). As shown in Fig. 1, we excluded editorials, conference proceedings, and book reviews, focusing instead on peer-reviewed journal articles, which represent the highest academic methodological standards and reflect the leading contributions, thoughts, and opinions of researchers, investigators, and experts in each field (Anand et al. 2021). To further narrow the scope, the search was limited to specific subject areas: business, management and accounting, economics and econometrics, social sciences, decision sciences, multidisciplinary, arts and humanities, and psychology.

Following the identification of keywords, two searches were conducted using the same keywords. The first search string was based on the Association of Business School (ABS) UK ranking, with journals ranked 3, 4, and 4\* selected to gain a broad insight into the existing literature on topics such as management, organizational studies, and strategy (see Anand et al. 2021; Budhwar et al. 2019). The second search string focused on strategic management-focused journals not ranking 3–4\* on the ABS list (e.g., *Strategic Direction*, *European Management Journal*, *Journal of Strategy and Management*, etc., see Appendix 2). Both search strings looked for the keywords in the publication's title, abstract, and keywords sections. (See Appendices 1 and 2 for full search strings.)

Limiting the search to ABS 3–4\* journals and selected strategy-focused journals resulted in 554 papers, as shown in Fig. 1. The abstracts of the 554 papers were read to identify relevant studies for further analysis. Exclusion criteria encompassed papers not focused on strategy implementation, those using implementation as a framework to explain other fields (e.g., production systems or the adoption of IT systems), and those concentrating solely on governmental or municipal governing strategies. This reduced the number of papers to 188, which were read in full to identify the mechanisms of strategy implementation. During this phase, further exclusions were made based on the aforementioned criteria as well as a general lack of academic content characterized by insufficient contextualization within contemporary research and inadequate transparency in data collection and analysis. Based on this process,



**Fig. 1** Summary of systematic review

the final literature review is based on a total of 160 papers from 48 journals (see Appendix 3 for a list of journals).

We adopted a manual coding process, as applied in several research articles (see Fulco et al. 2025; Moritz et al. 2024). While there are several software options for coding—such as NVivo, Atlas.ti, Petal.org, and elicitor.org (Kraus et al. 2024)—we used manual coding using Microsoft Excel. This involved reading the articles, screening for critical information, examining research gaps, and interpreting the reviews to contribute to the future body of knowledge, allowing us to capture the depth of the qualitative information present in the literature. A coding protocol was established to identify themes within the 160 publications. The protocol was used to

code publication content in the following areas: methodology, theory, antecedents for strategy implementation, outcomes of strategy implementation, type of strategy, managerial or organizational focus, sample, geography of sample, and industry context. The coding provides an overview of recurring themes, the theoretical foundation of the field, the settings in which the papers' research was conducted, and the methodological approaches used to examine strategy implementation. Based on this coding, the papers were clustered by topic (see Appendix 4 for the clustering based on the primary coding). The qualitative coding and clustering enabled the identification and synthesis of recurring mechanisms within the field of strategy implementation. The mechanisms were then synthesized into managerial and organizational levers of strategy implementation. This synthesis was based on the recurrence of mechanisms across contemporary research within the field.

## 4 Findings: levers of strategy implementation

The review process described in Sect. 3 enabled the identification of managerial and organizational levers that play a crucial role in the strategy implementation process within organizations. These levers represent clusters of mechanisms that support strategy implementation and enable organizations to transform strategy into results. The levers encompass both managerial and organizational aspects of the strategy process, with interdependencies potentially existing within and between them.

**Managerial levers** are the abilities, skills, knowledge, and mindset required at the managerial level to achieve the desired outcome in the strategy implementation process. They also involve how managers embrace challenges and adapt to changing needs during the strategy implementation process.

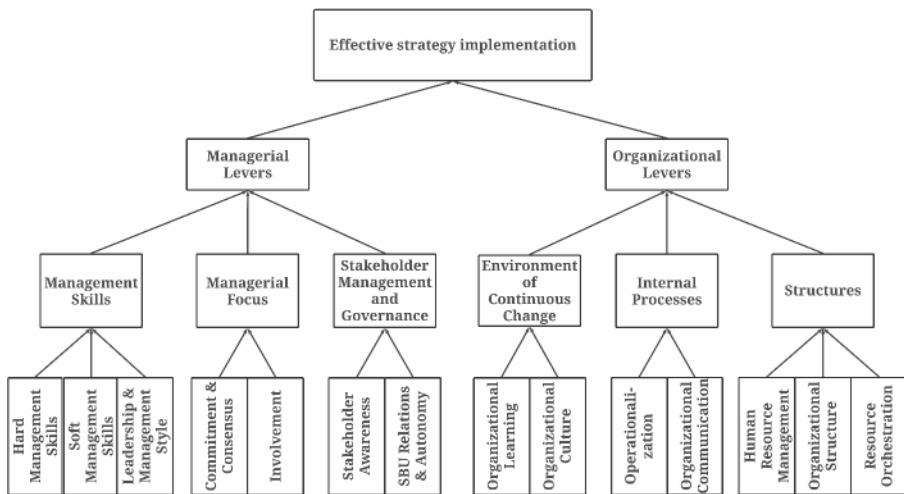
**Organizational levers** encompass various organizational factors that can promote or impede effective strategy implementation. These factors include systems, structures, resources, activities, and other elements that influence how strategy is implemented within the organization.

Based on contemporary research findings in strategy implementation, we argue that a well-structured and competent management team, adept at leveraging appropriate organizational levers, can help organizations successfully realize their strategy through the implementation process. The model in Fig. 2 outlines the managerial and organizational levers that are essential for effective strategy implementation.

### 4.1 Managerial levers

Managerial levers are divided into three main categories: Management skills, managerial focus, and stakeholder management and governance.

Management skills include the abilities that contribute to a more effective strategy implementation process. These skills are further divided into soft management skills, hard management skills, and leadership and management style. Managerial focus refers to the key areas on which managers should concentrate, including commitment and consensus and involvement. Stakeholder management and governance encom-



**Fig. 2** Managerial and organizational levers of strategy implementation

pass managers' stakeholder awareness as well as the relationships and autonomy of business units.

#### 4.1.1 Management skills

Having the right management skills, both soft and hard, is essential for an effective implementation process (Beer and Eisenstat 1996; Rausch et al. 2001; Saunders et al. 2008; Teh and Corbitt 2015). Skills for establishing and maintaining organizational focus and employee motivation are particularly crucial (Crittenden and Crittenden 2008). Therefore, implementing a new strategy may require upgrading the skills of current managers or, if necessary, recruiting new managers to fill the skills gap (Kerr and Jackofsky 1989). The skill development of current managers is most effective when the aim is to ensure alignment and integration with implementation functions, while recruitment is better suited for addressing mechanical needs (Kerr and Jackofsky 1989). However, external recruitment demands time and resources (Waldersee and Sheather 1996) and carries the risk of negatively impacting motivation, flexibility, and overall management development (Gupta 1986).

##### Hard management skills

Hard management skills can be systemic or analytical in nature, encompassing skills such as resource/financial planning, risk assessment, and understanding business drivers (Saunders et al. 2008). These skills are crucial for strategy implementation as they enable managers to address essential aspects of the implementation process (Saunders et al. 2008). This encompasses multiple aspects, including the ability to choose appropriate measures and rewards, control and monitoring, and action planning (Crittenden and Crittenden 2008; Saunders et al. 2008). These skills often rely on the ability to apply relevant frameworks, such as strategy maps for migration management (Getz et al. 2009) or strategy-to-process maps (de Salas and Huxley 2014) to support the implementation process. Such frameworks can contribute to more effec-



tive and efficient decision-making (Pollanen et al. 2017; Thomassin Singh 1998), facilitate information exchange across functional and organizational levels (Singh et al. 2002), and provide early indicators of environmental changes (Narayanan and Fahey 2013). While frameworks and tools offer guidance for strategy implementation, managers must be trained to avoid inherent risks such as assumptions of linear causality and data asphyxiation (Evans 2005; MacLennan and Markides 2021).

While certain hard management skills are universally applicable, specific technical skills may be required, depending on the individual manager's area of responsibility (Kerr and Jackofsky 1989). Examples include skills in innovation management, financial analysis or technical knowledge.

### **Soft management skills**

Soft management skills, which can be either behavioral or cognitive in nature, and include abilities such as communication, influencing attitudes, promoting cooperation, and achieving buy-in, all of which are essential for strategy implementation (Saunders et al. 2008). Developing soft management skills allows managers to establish trust within the organization, build relationships, and foster cooperation throughout the implementation process (Saunders et al. 2008). Therefore, managers should be able to understand social and emotional factors to enhance the implementation process. However, these socio-emotional factors and social capital are often overlooked in contemporary research on strategy implementation (Ahearne et al. 2014; Huy 2011). As demonstrated by Huy (2011), actions taken by senior executives at the organizational level can influence individual middle managers and their group-focused emotions, which in turn shape their social identities. Top managers must understand and acknowledge these group-focused emotions, as they can foster greater organizational commitment and help reduce resistance. By understanding the emotions employees experience when introduced to the strategy (e.g., frustration, joy, bitterness, etc.), managers can adjust specific aspects of the implementation plan to mitigate challenges in the implementation process (Raimond and Eden 1990). For instance, addressing issues such as a lack of employee buy-in or misaligned values between employees and managers requires political skills and tools, such as focusing on higher-order issues and persuasion. These political skills enable general managers to secure commitment and overcome resistance from middle managers (Guth and Macmillan 1986). Middle managers are essential to strategy implementation, as they act as the "translators" of the strategy (Van Rensburg et al. 2014). To effectively implement strategies, middle managers should develop soft management skills to enhance their role as translators, enabling them to exert both upward and downward influence within the organization (Ahearne et al. 2014).

Developing soft management skills in managers, particularly middle managers, can help organizations overcome a key barrier to strategy implementation: resistance stemming from human dynamics (Lê and Jarzabkowski 2015).

### **Leadership and management styles**

Leading and managing strategy implementation is a demanding task. To improve implementation, managers must apply specific management and leadership styles to support the needs of the specific strategy (Bourgeois and Brodwin 1984; Håkansson et al. 2012; Slater and Olson 2000). Various leadership styles can support implementation, such as architectural leadership (Kollenscher et al. 2017), visionary leadership



(Ateş et al. 2020), transformational leadership (Doeleman et al. 2022; Weller et al. 2020), democratic leadership, and collective leadership (Verma et al. 2020). High levels of hierarchy can impede strategy implementation especially in rapidly changing environments (Cunha et al. 2011). Additionally, some leadership styles, such as coercive leadership, may hinder effective strategy implementation. Therefore, organizations must develop managers' leadership and management styles to ensure effective strategy implementation.

Regardless of leadership style, managers should display integrity, as this can improve the implementation process (Wei et al. 2020). However, the leadership style of middle managers is only effective for the implementation process if there is alignment between top management and middle management (Ateş et al. 2020). Hence, to create effective strategy implementation, top management must ensure alignment between the leadership style and values of top and middle management.

#### 4.1.2 Managerial focus

As previously noted, managers are key initiators of the strategy implementation process (Mistry et al. 2022; Watkins 2007). During implementation, there are key focus areas that managers must address to promote effective strategy implementation, including commitment and consensus toward the strategy as well as the involvement of central actors within the process.

##### **Commitment and consensus**

An important focus for managers in improving strategy implementation is fostering commitment and consensus (Dooley et al. 2000; Ho et al. 2014; Lee and Miller 1999). Creating decision commitment, for example through decision consensus, can be an extensive undertaking that can increase the time required to implementation. On the other hand, a higher level of commitment increases the likelihood of successful implementation (Dooley et al. 2000). Therefore, managers should assess and balance the pace of implementation with the level of commitment to ensure effective strategy implementation.

Furthermore, the ability to foster shared organizational values and strategy ownership can enhance strategy implementation more effectively than merely improving the sophistication of the strategy (Badovick and Beatty 1987; Giles 1991; Morris and Pitt 1994).

##### **Involvement**

The involvement of staff, managers, and stakeholders can facilitate effective strategy implementation by increasing organizational commitment to the strategy and providing ongoing input throughout the strategy implementation process (Elbanna et al. 2016; Elbanna and Fadol 2016; Johnson and Sohi 2017; Mantere and Vaara 2008; O'Shannassy 2001). Involvement is critical to facilitate commitment from both the top-down and bottom-up perspectives (O'Shannassy 2014). Involvement supports strategy implementation (Cadwallader et al. 2010), but as organizations grow larger, involvement becomes more difficult. However, involvement is even more crucial for the effective utilization of strategic processes in larger organizations (Harrington 2006; Ogbeide and Harrington 2011). Involvement, combined with a democratic management style, characterized by transparency, inclusion, and shared decision-

making, can increase organizations' chances of engaging both internal and external stakeholders in the strategy process (Adobor 2020). This highlights the connection between involvement as a managerial focus and the lever of leadership and management styles.

#### 4.1.3 Stakeholder management and governance

Strategy implementation affects and is affected by multiple internal and external stakeholders, ranging from employees and shareholders to subsidiaries and politicians (Kim and Mauborgne 1991; Mitchell 2022). Effectively managing the varied interests represented by these groups is crucial for the implementation process.

##### **Stakeholder awareness**

Stakeholders play an important role in strategy implementation, and their support can significantly enhance the process (Mitchell 2022; Saunders et al. 2008). Corporate boards play a key role in supporting strategy implementation by setting, aligning, and defining strategic goals in line with stakeholders' interests (Ramakrishnan 2012). Managers should engage in stakeholder management to promote strategy implementation (Bhimavarapu et al. 2020) and continuously involve stakeholders to gain ongoing commitment (O'Shannassy 2001). Various stakeholders support different phases of the implementation process, and organizations should identify the relevant stakeholders for each specific phase (Mitchell 2022). Thus, for successful implementation, managers must effectively manage the organization's various stakeholders including employees, boards, and politicians.

##### **Strategic business unit relations and autonomy**

Corporations and multinationals implement strategies across different strategic business units (SBUs), which can complicate strategy implementation and necessitate adaptations to diverse cultures and regional differences (Davis 2012; Fryxell et al. 2004). Due to these cultural differences, localizing expatriate managers can foster a stronger understanding of the local environment and culture, thereby enhancing implementation in SBUs (Fryxell et al. 2004).

The relationship between a corporate headquarters and its SBUs should be a priority for managers, as strong relationships create a robust foundation for strategy implementation across the organization. Headquarters must understand business units and grant managerial autonomy, ensuring procedural justice by providing appropriate decision-making rights and equitable resource allocation to the SBU's management team (Kim and Mauborgne 1991; Lin and Hsieh 2010). Achieving managerial autonomy entails reducing control over managers within various organizational units. Failing to understand SBUs and imposing overly stringent control systems can reduce strategic performance and impede strategy implementation in business units (Golden 1992). However, given the risk of strategic diversion, top management must monitor business units and consider structural adjustments to mitigate divergence from the strategic plan and ensure effective implementation (Brauer and Heitmann 2013).

## 4.2 Organizational levers

Organizational levers are divided into three categories: structures, internal processes, and environment of continuous change.

Structures encompass the structural aspects of strategy implementation including resource orchestration, organizational structure and the role of human resources (HR) departments in the implementation process. Organizational processes cover organizational communication and operationalization, which are critical to creating awareness of the strategy. Lastly, the Environment of continuous change includes organizational culture and organizational learning which can create conditions that facilitate strategy implementation.

### 4.2.1 Structures

Strategy and structures are inextricably linked, making the importance of structural elements in strategy implementation a recurring theme in contemporary research (Noble 1999b). Structures reflect the configuration chosen to ensure the effective operation of a company (Crittenden and Crittenden 2008). This includes resource orchestration, organizational structure, and the role of HR departments.

#### Resource orchestration

Organizational resources are essential for strategy implementation, and managers can leverage resources to drive strategic differentiation (Arbab Kash et al. 2014) and facilitate the implementation of, for example, circular strategies (Bui et al. 2022). Allocating resources to the specific parts of the organization requiring change is essential to provide the necessary support and focus for strategy implementation (Crittenden and Crittenden 2008; Köseoglu et al. 2020; Li and Xu 2020). Organizational resources must also be agile to accommodate changes in market structures (Sull et al. 2015). For example, by allocating resources to improve market orientation, organizations can gain a competitive edge by more effectively aligning their strategies with market needs or customer preferences (Dobni 2003; Homburg et al. 2004; Voola and O'Cass 2010). Therefore, it is crucial to monitor resource allocation to ensure that organizations prioritize resources according to strategic objectives and detect any signs of strategic drift (Schmidt and Brauer 2006).

#### Organizational structure

Organizational structure include factors such as the design of the organization and the organizational hierarchy, accountability, and responsibility of teams or individuals (Cunha et al. 2011; Noble 1999a). The organizational structure plays a crucial role in supporting the implementation process, ensuring the seamless transfer of information throughout the organization and the delegation of decision-making rights to the appropriate departments (Olson et al. 2005). While structural reorganization alone is not enough to accomplish strategy implementation, it remains an important factor to consider in the process (Neilson et al. 2008).

Deploying reduced hierarchical structures can enhance organizational effectiveness, particularly in smaller enterprises or those operating within smaller teams. However, dispersing authority can lead to ambiguity and the contradiction of conventional organizational norms regarding leadership roles and expectations (Cunha

et al. 2011; Thorpe and Morgan 2007). When the implementation process includes structural changes, centralization should be employed carefully, as it can also impede implementation (Krush et al. 2016). Furthermore, to improve strategy implementation, structural changes should be aligned with the behavioral norms of the organization (Olson et al. 2005). This is particularly important, as changes to organizational structures can affect extant intraorganizational networks, whether formal or informal, which can hinder strategy implementation (Lynch and Mors 2019). On the other hand, structural changes can also break down counterproductive political networks and power structures that might work against the change (Okumus 2001).

### **Human resource management**

The role of human resource management (HRM) has been highlighted due to the extensive insight HR departments have into current personnel and their ability to ensure an appropriate fit between tasks and competencies (Becker and Huselid 2006; Lorange 1998; Ulrich 1998). Although strategic HRM is not enough to ensure effective strategy implementation, it can act significantly improve and support the implementation process (Beer and Eisenstat 1996). HR can support strategy implementation by aligning processes and fostering a culture that aligns with the chosen strategy, as illustrated by innovation strategy and innovation-focused HR policy (Lin et al. 2016; Oke et al. 2012). This also serves as an example of the interdependencies that can exist between organizational levers. These interdependencies are important to consider, as they can significantly contribute to the implementation process. In addition, HR departments can support managers by providing their knowledge of organizational culture, competencies, processes, and reward systems to identify what changes are required to facilitate strategy implementation (Ulrich 1998) and support the development of new employee competencies and culture (Harrison and Bazzay 2017; Michlitsch 2000). The introduction of HR analytics has equipped HR departments with a new tool that enhances their relevance in strategy implementation (Levenson 2018). HR analytics provides critical insights into organizational elements such as employee or organizational capabilities, team design, and cultural factors. These insights can be leveraged for more effective strategy implement, enabling analyses of competitive advantages, enterprise analytics, and human capital (Levenson 2018).

### **4.2.2 Internal processes**

Throughout the reviewed literature, two internal processes consistently emerged: organizational communication and operationalization. These processes are essential for multiple reasons including creating awareness about the necessity of change (Pechlaner and Sauerwein 2002) and translating strategy into tangible actions (Bhimani and Langfield-Smith 2007).

### **Organizational communication**

Organizational communication is a crucial aspect of strategy implementation, and the lack of communication is one of the biggest barriers to implementation (Alexander 1985; Heide et al. 2002; Köseoglu et al. 2020). Communication fosters strategic consensus (Rapert et al. 2002) and strategic embeddedness (Pretorius 2016). Effective organizational communication plays a pivotal role in enhancing training, knowledge dissemination, and learning throughout the strategy implementation process

(Peng and Litteljohn 2001). Furthermore, it serves to inform employees of the necessity of change and its potential impact on stakeholders (Pechlaner and Sauerwein 2002). Communication through different systems and dashboards, such as balanced scorecard or marketing dashboards, can provide decision-makers and employees with focused and useful information (Hu et al. 2017; Krush et al. 2015). However, this is not merely about quantitative communication metrics; instead, managers must focus on ensuring the quality of communication and verifying that recipients understand the messages (Sull et al. 2015). Organizations must create an environment that encourages critical and transparent communication between employees and senior management. This enables managers to acquire accurate insights into their employees' perceptions, thus improving organizational alignment (Tourish 2005). Honest communication should also be established between managerial levels to improve decision-making and reduce uncertainties in the overall strategy as well as the strategic actions (the so-called "gray areas") of the strategy (Campbell et al. 2010). Therefore, the methods used to communicate strategy are crucial. As argued by Chimhanzi (2004), interpersonal communication between departments can be a more effective tool than written communication and can decrease interdepartmental conflicts. Conflicts appearing during strategy implementation should be used constructively to uncover differences in perceptions, align decisions, and critically assess information between managers (Lê and Jarzabkowski 2015).

At the micro level, managers should carefully monitor organizational discourses, as they can both impede and promote participation, increase employee satisfaction, signal employee dissatisfaction, and reduce challenges in strategy implementation, depending on the nature of the discourse (Jonczyk Sédès 2019; Mantere and Vaara 2008). Narratives can be a critical tool in enhancing the understanding of the strategy (Carriger 2011).

### **Operationalization**

To align strategy with employees' day-to-day jobs, it should be translated into concrete activities through both structures and systems (Bhimani and Langfield-Smith 2007; Sabourin 2015). By breaking strategy down into clear activities, managers can create accountability, increase alignment, and make it more tangible for employees (Bhimani and Langfield-Smith 2007; Hrebiniak 2006; Ketokivi and Heikkilä 2003; Mittal and Sridhar 2020).

Employees should be assigned responsibilities based on clearly defined projects or activities (Sabourin 2015), and decision rights and mandates should be transparent throughout the organization (Neilson et al. 2008). Without clear accountability, organizations risk undermining intraorganizational coordination, which is crucial for implementation (Hrebiniak 2006).

Managers can utilize performance measurement and management (PMM) to operationalize the strategy. PMM provides several advantages, such as increased accountability (Mittal and Sridhar 2020; Schneier et al. 1991), SBU alignment, effective coordination across firms (Micheli et al. 2011), and the promotion of specific strategies through the use of key performance indicators (Micheli and Mura 2017). Although PMM can improve the implementation process, managers should exercise caution to avoid creating overly complex management control systems, which can be counterproductive and overwhelming for employees (Mittal and Sridhar 2020).

PMM should focus on both organizational and personal goals (Mirvis 1985) while maintaining an equilibrium between empowerment and control (Sheehan 2006; Simons 1995).

To support the operationalization of the strategy, strategy maps can be used to create actionable steps that serve as a foundation for decision-making, and organizational alignment (Evans 2005; Getz et al. 2009; Kaplan and Norton 2008; MacLennan and Markides 2021). Within the strategy implementation literature, Kaplan and Norton's (2008) balanced scorecard is a widely recognized framework for creating an overview of strategic priorities and translating strategy into actions.

### 4.2.3 Environment of continuous change

Fostering an environment of continuous change is essential to promote strategy implementation (Franken et al. 2009). Such an environment is strongly influenced by organizational culture, including fostering a growth culture (Lorange 1998) and promoting organizational values that support the strategy (Harrison and Bazy 2017). Organizational learning plays a crucial role in creating this environment. As mistakes in the strategy implementation process are inevitable, the ability to use these mistakes to continuously learn and adapt at the organizational level remains vital (E. Lee and Puranam 2016).

#### Organizational culture

Organizational culture was one of the most frequently mentioned concepts in the reviewed papers highlighting the influence of culture in implementation processes. Changes in strategy can require cultural changes as well (Narayanan and Fahey 2013). Culture is crucial for strategy implementation as it can affect the process both positively and negatively (Crittenden and Crittenden 2008; Okumus 2001; Schmelzer and Olsen 1994; Tawse and Tabesh 2021). In fact, Dobni (2003) argued that "Changes to strategy are best effected by a change in culture."

Fostering a specific culture—such as one of continuous change (Franken et al. 2009), interdepartmental collaboration (Chimhanzi 2004), or innovation (Oke et al. 2012)—can help achieving specific strategic goals. As an example of the connections between the levers, HR departments can play an important role in fostering specific cultures (Harrison and Bazy 2017), which can increase employees' willingness to work, thereby contributing to the retention of the workforce necessary for effective strategy implementation (Michlitsch 2000). To promote strategy implementation, decision-making should be aligned with the organizational culture (Harrison and Bazy 2017; Lorange 1998; Mirvis 1985).

#### Organizational learning

Despite the vast efforts invested in formulating and planning strategies, transitioning strategies from the C-suite to the rest of the organization always introduces some level of fallibility (E. Lee and Puranam 2016). Organizational learning allows organizations to learn from failures (Argyris 1989) and, if utilized properly, can improve strategy implementation by changing organizational procedures (Welch and Steen 2013), increasing strategic flexibility (Santos-Vijande et al. 2012), and gathering feedback to improve the strategy (E. Lee and Puranam 2016). Managers should focus not only on single-loop learning, where errors are detected and fixed, but also strive

New Ways of Working	Workforce Diversity	Openness of Strategy	Technological Change
<ul style="list-style-type: none"> <li>•Soft Management Skills</li> <li>•Leadership and Management Style</li> <li>•Communication</li> </ul>	<ul style="list-style-type: none"> <li>•Leadership and Management Style</li> <li>•Soft Management Skills</li> </ul>	<ul style="list-style-type: none"> <li>•Involvement</li> <li>•Leadership and Management Style</li> <li>•Stakeholder Awareness</li> </ul>	<ul style="list-style-type: none"> <li>•Resource Orchestration</li> <li>•HRM</li> </ul>

**Fig. 3** Contextual factors and the affected managerial and organizational levers

for double-loop learning, where the organizational strategy and objectives are critically assessed and changed based on identified errors (Argyris 1977; Okumus 2001). Defensive routines may be established to avoid upsetting others or avert potential trouble. These routines should be identified and deconstructed, as they inhibit learning and slow strategy implementation (Argyris 1989).

## 5 Discussion

Strategy implementation is a complex social process involving both managerial and organizational aspects. Building on the review by Tawse and Tabesh (2021), which identified three critical managerial dimensions of strategy implementation, we emphasize the complementarity of managerial and organizational levers in influencing strategy implementation processes. Effective strategy implementation enables organizations to respond and adapt to rapid external changes, ensuring a competitive advantage (Laamanen 2017). However, the implementation process itself is also influenced by changes in the environment (Barney and Zajac 1994). Thus, strategy implementation does not occur in an organizational vacuum but is also affected by contextual factors.

### 5.1 Contextual factors impacting the strategy implementation process

The reviewed literature identifies four contextual factors that impact strategy implementation processes: new ways of working, workforce diversity, openness of strategy, and technological changes. Examples from the literature illustrate how these factors influence and interact with managerial and organizational levers (see Fig. 3). While not exhaustive, this overview provides a foundation for future research on the relationships and interactions between contextual factors and managerial and organizational levers.

#### New ways of working

While the role of middle managers has been a central theme in strategy implementation since the '80s (Gupta 1986), the required competencies, training, and development for middle management are constantly evolving, with the advent of hybrid work



environments and self-managing teams creating new challenges. The COVID-19 pandemic altered workplace routines and increased the prevalence and popularity of hybrid work arrangements (Babapour Chafi et al. 2021). Hybrid work has improved self-leadership and digital competencies among employees, which might benefit strategy implementation through greater autonomy, flexibility, and empowerment. This has contributed to new ways of working, which can enhance efficiency and promote innovation within organizations (Gerards et al. 2021). However, it poses a challenge for organizational communication, especially when delivering complex information, as it relies on asynchronous information flows that provide employees with less immediate feedback on their daily activities (Babapour Chafi et al. 2021).

Middle managers are commonly perceived as the “doers” of strategy implementation (O’Shannassy 2014), a role that entails different managerial tasks than those of top management. Middle managers often rely more heavily on soft management skills, such as interpreting and communicating strategy, facilitating sense-making, and coordinating initiatives to bridge the gap between top management and employees (O’Shannassy 2014; Van Rensburg et al. 2014). Exploring the roles and competencies for managing and bridging strategy implementation from a middle management perspective is an important avenue for future research.

This is especially relevant for organizations with self-managed teams. Without middle managers to connect top management and employees, organizations may create a gap in the implementation process that must be addressed through other skills. This increases the demand for soft managerial skills among employees and managers, along with new leadership and management styles. Thus, an educational gap exists in preparing self-managed teams to implement new strategies. Research is also needed to explore how organizations develop a configurational fit of organizational levers to support implementation in this unique work environment. Therefore, future research should address how organizations can facilitate strategy implementation within self-managed teams.

### **Increased workforce diversity**

Managing workforce diversity in a globalized world is a key challenge for organizations worldwide. Understanding diversity is a crucial consideration for managers, as a lack of consideration or action might lead to misguided strategic initiatives (Kumar and Suresh 2018). However, the opportunities and potential challenges of managing a diverse workforce in the strategy implementation process are currently overlooked. In their exploration of gender diversity among managers during strategy implementation, Schaap et al. (2008) found that female managers are more likely to manage through a transformational or interactive leadership style, which can help motivate employees during the implementation process, thus increasing commitment to the strategy (Doeleman et al. 2022; Schaap et al. 2008). While research on gender differences in strategic management remains inconclusive, some studies have suggested that female managers are more likely than their male counterparts to emphasize “people” components, such as affiliation (Schaap et al. 2008). This highlights how distinct managerial traits can emerge with greater diversity and should be factored into team composition and the development of soft management skills. With only one paper in the current sample addressing workforce diversity, the field lacks a thorough examination of workforce diversity and its potential effects on strategy

implementation. This analysis should extend beyond gender to encompass a broader spectrum of diversity. Future research should thus investigate how workforce diversity influences strategy implementation and how it can be effectively managed during the process.

### **Openness of strategy**

With the rise of the knowledge-based economy, hierarchies appear to be losing significance while openness is becoming more prevalent (Adobor 2020). Encouraging participation in the strategy process enhances its implementation, as adopting an open strategy approach can increase strategic knowledge among employees (Stadler and Scheidegger 2024). However, given the extensive focus on stakeholder management in the strategy implementation process, a wide range of organizational stakeholders must be involved to ensure comprehensive insight. An open strategy process should involve diverse stakeholders, both internal and external, expanding the strategy's scope to include the business and ecosystem levels. Increasing involvement in the implementation process can require managers to adopt more participative management and leadership styles. Consequently, while open strategy practices can improve the implementation process, they might also necessitate changes to existing management practices.

While the open strategy concept has gained momentum and is widely explored, strategy implementation still tends to focus predominantly on internal processes. This challenge may arise because involving external stakeholders is often simpler during strategy ideation and formulation than implementation. Therefore, understanding how various contexts and configurations can and should influence the implementation process across different scenarios remains crucial (Doeleman et al. 2022).

### **Technological changes**

Artificial intelligence (AI) and machine learning are advancing technologies that offer organizations unprecedented data processing capabilities. According to Laamanen (2017), AI will change future strategy processes, though the extent of its impact remains uncertain. To incorporate AI in strategy implementation processes, organizations must be technologically mature and possess the necessary resources. Technologically mature organizations are better equipped to operationalize data and establish data-driven practices that can inform strategic decision-making. One example where AI can be operationalized within strategic processes is through HR analytics. Levenson (2018) found that HR analytics can identify capabilities essential for strategy implementation, such as technical skills and innovation capabilities. Thus, AI can be relevant to integrate into HR analytics to further improve such tools. However, integrating new technology into organizational support can be a lengthy process. Further research is needed to identify best practices and address potential barriers and challenges in the implementation process.

## **6 Current trends and future research agenda**

This section presents the state of the current empirical research to identify gaps and potential areas for future research. Understanding the complexity of strategy implementation requires a broader and more diverse approach to studying the phenomenon

in practice. While this study contributes to understanding the complexities of strategy implementation, further research on organizational levers is needed to examine how managers leverage them to drive effective strategy implementation.

Methodologically, the field of strategy implementation is dominated by quantitative surveys (26.3%) and conceptual exploration (22.5%), representing almost half the reviewed papers. Only 9.6% of the reviewed papers included empirical case studies. To gain insight into strategy implementation processes, more qualitative empirical explorations, such as case studies, are needed to explore the deeper structures and context of the phenomenon (Bryman 2004). In addition, longitudinal explorations of strategy implementation processes would be beneficial to examine how these processes change and adapt over time (Harrington 2006). Studying strategy implementation through empirical case studies offers explanatory insights into the phenomenon. As argued by Frederiksen and Kringelum (2020), such empirical examples can offer explanatory value that extends beyond individual cases, providing insights into broader mechanisms influencing the strategy implementation process. In the following section, we discuss current area of focus in the empirical exploration of strategy implementation and identify areas for further research.

### **Broadening the level of analysis**

Strategy implementation is predominantly explored from the perspective of top management, with 40% of the reviewed literature focusing on the management of strategy implementation. In contrast, only 21% of the papers focus purely on organizational analysis, and 17% employ a combination of managerial and organizational analysis. Analysis that focuses primarily on top management carries the risk of prioritizing long-term strategic planning and formulation—a common trend in strategy literature—while potentially overlooking critical tactical and operational aspects of strategy implementation. In addition, top management often holds a biased positive perception of strategy work, including implementation (Kringelum et al. 2022). Therefore, future research on strategy implementation should adopt a holistic approach that incorporates the perspectives of both middle managers and employees. This would address a key bias in strategic management literature: the focus on top managers while overlooking the organization as a whole.

### **Multilevel perspective**

The organizational complexity of strategy implementation, combined with the influence of various contextual factors, as shown in Sect. 5.1, can challenge both empirical and theoretical explorations of the process. Among the reviewed literature, 72% of the papers focus exclusively on a single level of analysis, either within or outside the organization. The remaining 28% include at least two different levels, such as top management and middle management or management and employees. Only 7% of the papers examine strategy implementation across more than two levels of analysis, either internally or externally. Given that strategy implementation is a complex process involving multiple organizational levels, the field would benefit from future research adopting a multilevel perspective to better address this complexity. This approach can help to explain higher-level forces and the interactions between organizational levels that influence the strategy implementation process (Hitt et al. 2007).

### **Contextual specificities**

When reviewing the context of the empirical research on strategy implementation, the literature is significantly skewed toward the private sector, with 71% of the papers focused on this domain. In comparison, only 9% of the papers study public-sector organizations. Future research should address sector-specific nuances, considering both managerial and theoretical implications of contextual specificities. This is crucial because the circumstances influencing strategy implementation in the public sector differ significantly from those in the private sector (Bhimavarapu et al. 2020). Additionally, current research mainly addresses the phenomenon in large companies, often neglecting to include limitations or barriers significant for small or medium-sized companies.

Furthermore, approximately one-third of the papers did not focus on a specific industry, instead examining a mix of different industries. The most frequently studied industries were the manufacturing industry, which was included in 15% of the papers, and the hospitality industry, examined in 12% of the papers. For further details, see Appendix 5.

In general, research on strategy implementation is conducted in diverse empirical contexts in terms of both industries and countries. However, the most examined contexts in the reviewed empirical literature are English-speaking countries (USA, 21; UK, 7; Australia, 4). As cultural differences can affect implementation, future research should broaden the focus to different cultural contexts, such as Scandinavian, African, and Latin American contexts.

## 7 Contributions

This review adds to the developing field of strategy implementation and can serve as a reference for other researchers engaging with the field (Kraus et al. 2022; Sauer and Seuring 2023). It demonstrates that effective strategy implementation requires competent and well-structured management teams that can effectively utilize organizational levers. Our research serves as a conceptual foundation, encouraging researchers to undertake additional exploration of the identified levers through in-depth and longitudinal empirical studies.

Although strategy implementation processes vary depending on the size and scope of the organization, the interplay between managerial and organizational levers demonstrates the complexity that must be considered when studying the phenomenon in practice. This is particularly important in cases where research focuses narrowly on one aspect, potentially overlooking any synergistic effects.

### 7.1 Theoretical implications

This paper contributes to the strategy field by undertaking a broad review of the factors affecting the implementation process from both managerial and organizational perspectives. Most research on strategy implementation is theoretically rooted in strategic management and is often quite monodisciplinary. As stated by Nienaber (2019), “few of these studies attempted to use theories outside of the strategy literature to explain this seemingly elusive phenomenon.” By including the organizational

level of analysis, we emphasize that strategy implementation is not a monodisciplinary process, but one that requires support across the entire organization. This entails integrating different theoretical fields—such as leadership, psychology or data science—into strategy implementation to gain a deeper understanding of the various aspects of the process. As shown in the discussion, new technological aspects and work methods increasingly influence strategy implementation processes. Therefore, future research should adopt an interdisciplinary research design to explore and understand the phenomenon from different disciplinary perspectives.

The discussion explores potential avenues for future research to advance the field of strategy implementation, building upon the theoretical foundations of strategic management. This not only offers insights into expanding knowledge about the levers of strategy implementation but also contributes to a broader understanding of the phenomenon.

## 7.2 Managerial contribution

We argue that managers involved in strategy implementation should consider both managerial and organizational levers to promote strategy implementation. The overview provided in Fig. 2 can serve as a foundation for managers to include potentially overlooked aspects of strategy implementation, thus enhancing the overall process. Enabling organizations to implement strategies more effectively can help them adapt to environmental changes, thereby sustaining a competitive advantage (Laamanen 2017). This swift reaction can also prove beneficial in crisis situations, when actions and effective implementation can make the difference between success and failure (Sudarsanam and Lai 2001). Improving strategy implementation enables managers to minimize resource waste and, more importantly, leverage strategic initiatives to drive organizational change and attain goals.

## 7.3 Limitations

The systematic review presented in this paper is, as stated in Sect. 3, based on high-ranking journals as well as selected strategy-focused journals. This has undoubtedly affected the scope of the papers reviewed and created an emphasis on strategic management in implementation processes. Due to the selection of keywords, the review might be skewed to represent strategy process concepts rather than strategy-as-practice and strategizing concepts, thus overlooking certain aspects of the implementation process. For a detailed review of strategy-as-practice in relation to strategy implementation, see Friesl et al. (2021).

Furthermore, limiting the review to peer-reviewed journal papers excludes gray literature, which often reflects managerial practices used in management consultancies and can provide valuable insights into how strategy implementation is planned and executed in practice.

As the model of managerial and organizational levers of implementation is derived from theoretical, conceptual, and empirical papers alike, it is not possible to prioritize the different factors according to their importance for implementation or identify any causal relationships between the levers. However, certain links between managerial

and organizational levers have been highlighted and should be examined further. In addition, the methodology does not enable the identification of significant contextual differences across sectors or industries in how strategy implementation differs over time and space. Thus, future studies should empirically investigate how strategy implementation unfolds across diverse contexts.

## 8 Conclusion

This paper examined strategy implementation through a systematic review of 160 peer-reviewed papers to identify the factors that influence strategy implementation in organizations. It identified both managerial and organizational levers of strategy implementation that are essential for improving the strategy implementation process. Additionally, it provided a conceptual framework that outlines key issues for strategy implementation and assists managers in systematically implementing strategies, ensuring that both managerial and organizational factors are considered.

Four contextual factors that affect strategy implementation were identified: new ways of working, workforce diversity, openness of strategy, and technological change. These contextual factors should be considered as they can affect both managerial and organizational levers. Managers can use this awareness to tailor their strategy work to their organization's specific circumstances, increasing the likelihood of successful implementation.

The ability to implement strategies effectively can make the difference between success and failure (Sudarsanam and Lai 2001), help organizations obtain and sustain a competitive advantage (Safdari Ranjbar et al. 2014), and facilitate reactions to market changes (Laamanen 2017). Therefore, strategy implementation is an essential activity that managers should consider as an integrated part of the strategic management process.

## Appendix 1

Search string which is limited to ABS 3–4\* journals afterward:

TITLE-ABS-KEY ( "Strateg\* Work" OR "Strateg\* Task" OR "Strateg\* Implementation" OR "Strateg\* Execution" OR "Strateg\* Execution Process" OR "Strateg\* Development Implementation" OR "Strateg\* Model Implementation" OR "Strateg\* Model Execution" OR "Implementing Strateg\* Model" OR "Implementing Strateg\* Work" OR "Implementing Strateg\* Task" OR "Implementing Strateg\* Work" OR "Implementing Strateg\* Business" OR "Implementing Strateg\* Process" OR "Strateg\* Execution Style" ) AND ( LIMIT-TO ( SRCTYPE, "j" ) ) AND ( LIMIT-TO ( DOCTYPE, "ar" ) ) AND ( LIMIT-TO ( LANGUAGE, "English" ) ) AND ( LIMIT-TO ( SUBJAREA, "BUSI" ) OR LIMIT-TO ( SUBJAREA, "SOCI" ) OR LIMIT-TO ( SUBJAREA, "ECON" ) OR LIMIT-TO ( SUBJAREA, "PSYC" ) OR LIMIT-TO ( SUBJAREA, "DECI" ) OR LIMIT-TO ( SUBJAREA, "ARTS" ) OR LIMIT-TO ( SUBJAREA, "MULT" ) ).

## Appendix 2

Search string with strategic management-focused journals:

TITLE-ABS-KEY ( "Strateg\* Work" OR "Strateg\* Task" OR "Strateg\* Implementation" OR "Strateg\* Execution" OR "Strateg\* Execution Process" OR "Strateg\* Development Implementation" OR "Strateg\* Model Implementation" OR "Strateg\* Model Execution" OR "Implementing Strateg\* Model" OR "Implementing Strateg\* Work" OR "Implementing Strateg\* Task" OR "Implementing Strateg\* Work" OR "Implementing Strateg\* Business" OR "Implementing Strateg\* Process" OR "Strateg\* Execution Style" ) AND ( LIMIT-TO ( SRCTYPE, "j" ) ) AND ( LIMIT-TO ( SUBJAREA, "BUSI" ) OR LIMIT-TO ( SUBJAREA, "SOCI" ) OR LIMIT-TO ( SUBJAREA, "ECON" ) OR LIMIT-TO ( SUBJAREA, "DECI" ) OR LIMIT-TO ( SUBJAREA, "ARTS" ) OR LIMIT-TO ( SUBJAREA, "MULT" ) ) AND ( LIMIT-TO ( LANGUAGE, "English" ) ) AND ( LIMIT-TO ( EXACTSRCTITLE, "Strategic Direction" ) OR LIMIT-TO ( EXACTSRCTITLE, "Journal Of Business Strategy" ) OR LIMIT-TO ( EXACTSRCTITLE, "Journal Of Strategy And Management" ) OR LIMIT-TO ( EXACTSRCTITLE, "European Management Journal" ) OR LIMIT-TO ( EXACTSRCTITLE, "Business Horizons" ) OR LIMIT-TO ( EXACTSRCTITLE, "Strategy And Leadership" ) OR LIMIT-TO ( EXACTSRCTITLE, "Journal Of Management Development" ) OR LIMIT-TO ( EXACTSRCTITLE, "Academy Of Strategic Management Journal" ) OR LIMIT-TO ( EXACTSRCTITLE, "Strategy Leadership" ) OR LIMIT-TO ( EXACTSRCTITLE, "International Journal Of Business Performance Management" ) OR LIMIT-TO ( EXACTSRCTITLE, "Journal Of Management And Organization" ) OR LIMIT-TO ( EXACTSRCTITLE, "Business Strategy And The Environment" ) OR LIMIT-TO ( EXACTSRCTITLE, "Journal Of Strategic Information Systems" ) OR LIMIT-TO ( EXACTSRCTITLE, "Strategic Organization" ) OR LIMIT-TO ( EXACTSRCTITLE, "Thunderbird International Business Review" ) OR LIMIT-TO ( EXACTSRCTITLE, "Scandinavian Journal Of Management" ) OR LIMIT-TO ( EXACTSRCTITLE, "Business Strategy And Development" ) ).

## Appendix 3

Journals and the number of papers in the reviewed literature.

Journal	Number of articles included from journal
Strategic Management Journal	13
Journal of Strategy and Management	10
Long Range Planning	10
Journal of Business Research	8
Journal of Business Strategy	8
International Journal of Hospitality Management	7
Strategy & Leadership	8



Journal	Number of articles included from journal
Business Horizons	6
Journal of Management & Organization	5
International Journal of Contemporary Hospitality Management	5
European Journal of Marketing	4
Harvard Business Review	4
European Management Journal	4
Public Management Review	4
Industrial Marketing Management	4
British Journal of Management	4
Journal of Management	4
Journal of the Academy of Marketing Science	3
Organizational Dynamics	3
California Management Review	3
Human Resource Management	3
Journal of Management Development	3
International Journal of Operations and Production Management	3
R&D Management	2
Human Resource Management	2
Journal of Management Studies	2
European Journal of Operational Research	2
European Management Review	2
Decision Support Systems	2
Journal of World Business	2
Human Relations	2
Business Strategy and the Environment	2
International Journal of Production Economics	2
Business Strategy & Development	1
Accounting, Organizations, and Society	1
Small Business Economics	1
International Business Review	1
Journal of Business Ethics	1
Management Accounting Research	1
Scandinavian Journal of Management	1
Organization Science	1
Strategic Direction	1
Corporate Governance: An International Review	1
International Journal of Production Research	1
Production Planning and Control	1
Information and Management	1
Decision Sciences	1
Total	160

## Appendix 4

### Coding of papers.

Coding	Category	Managerial levers
<b>Motto-abilities and relational dynamics</b>		
Emotional factors affect on SI	Raimond & Sören (1996)	
Corporate strategy implementation and control	Frans & Showna (1993)	
Motto and flow to produce and understand situations	Medhurst & Ashman (1998)	
Multiple managers group focus emotions	Fry (2013)	
Middle managers' social capital	Meegan, Lann & Kraus (2014)	
<b>Management Skills</b>		
Competencies as a part of SI	Rosch, Hoffelt, Schuman & Wochsch (2003)	
Structure and skills in SI	Critchfield & Critchfield (2006)	
Soft and hard skills as a requirement for SI	Saunders, Mann & Smith (2009)	
The right skills is a necessity to implement successful strategy	Ten & Corbett (2010)	
<b>Leadership and management styles</b>		
Different management styles based on scenarios	Bourgeois & Brodwin (2004)	
Matching managers to strategies	Gupta (1988)	
Manager development and selection	Kerr & Juchinsky (1981), Waldman & Swisher (1998)	
Different strategies requires different management styles	Stake & Olson (2000)	
Participative management style	Ogden & Harrington (2011)	
Aligning management style to strategy	Hilkenson, Burton, Orlat & Lundgren (2012)	
Architectural leadership	Kellenschen, Eden, Rosen & Farjoun (2017)	
Perceived integrity of managers	Wai, O'Neill & Zhou (2020)	
Middle managers' visionary leadership	Ates, Tarsakli, Pinar, van Knippenberg & Gerssen (2020)	
Transformational leadership	Welter, Sall, Everschik & von Wangenheim (2020)	
<b>Commitment and Consensus</b>		Managerial focus
Political tactics create commitment	Guth & Monahan (1990)	
Shared organizational culture	Bedford & Beatty (1987)	
Ownership	Giles (1982), Morris & Pitt (1994)	
Emotional drivers to create commitment	Subasinghe (2020)	
Employee engagement to drive SI	Niemster (2016)	
Decision consensus and decision commitment	Dooley, Forayell, Judge (2000)	
Organizational commitment towards employees	Law & Miller (1988)	
<b>Involvement</b>		
Involvement tactics	Harrington (2006)	
Employee participation in service innovation	Cebalofator, Jans, Bittner, Oshman (2016)	
Bottom-up leadership	Carlson, Thomas (2013)	
Involvement to provide SI	Ethanas, Andrews & Palamara (2016), Sharma & Pabai (2016), Johnson & Solt (2017)	
Opening up the strategy process to prepare and motivate to SI	Arbore (2018)	
3 practices to open strategizing and SI	Breideman, van Don & van Meeren (2022)	
<b>Stakeholder awareness</b>		Stakeholder management and governance
SI should always be examined in relation to the strategy content and competitive context	Sammy & Zippa (1994)	
External stakeholders as SI	O'Harra (2011)	
Market orientation	Deane & Luffman (2002), Homburg, Kuchner & Workman (2004), Vronta & O'Casey (2010)	
<b>SRU relation and autonomy</b>		
Procedural justice in subordinates	Kim & Macpherson (1995), Lin & Hsieh (2009)	
Localizations of managers	Fransell, Butler, Choi (2004)	
Marketing strategy focus differs as SRU is based on strategy	Stoner, Holt & Olson (2010)	
Simple marketing as SRU focus	Chen (2014)	
Strategic divergence	Brewer & Macdonald (2013)	

	<b>Resource Orientation</b> availability of resources as a prerequisite for SI Marketing capabilities to support export strategy Resource based view to healthcare industry Resource allocation based on specific operations strategy Org. Resources and capabilities scrutinized and made clear to managers	Wierthman (1985) Morgan, Karttunen & Vartiainen (2012) Arshad Khan, Saeed, O. G. G. G. & Johnson (2014) Li & Wu (2018) Bul, Turgut, Yilmaz, Hui, Tong & Liu (2022)	
	<b>Organizational structure</b> Corporate decentralization Structural changes in response to Hierarchical change model Structural changes are important but not the most important change Hierarchical structures and SI Structural and relational embeddedness in structural changes <b>Human resource management</b> Strategic human resource management Connection between planners and HR HR as a partner in innovation Designing the right workforce and culture Work less between HR and SI HRM focusing on the specific traits of the strategy Workforce analysis	Gohmen (1992) Tashir (2018) Thorpe & Morgan (2007) Narveson, Martin, Powers (2008) Corley, Rago & Clegg (2006) Smith & Miles (2013) Beer & Eisenstat (1996) Jennings (1998) Ulrich (1998) Michels (2008), Harrison & Batty (2017) Barber & Maxwell (2004) Chik, Wai-Ling & Myers (2012), Lin, Sanders, Sun, Shipton & Mui (2018) Lewinsohn (2008)	<b>Structural moderators</b>
	<b>Communication</b> General org. Communication to promote SI Lack of communication as a barrier Communicating change and consequences Vertical communication and strategic consensus Intra-organizational communication between departments Critical feedback from ground level to top management Consensus in SI Defining areas of strategy Narratives to create understanding Communication to clarify values in strategy <b>Operationalization</b> Public should serve both org. and personal aims Performance appraisal, goal setting, CSR Role-use measurement and accountability Pay alignment Linking goals to activities Creating short-term objectives and incentives and control Translating implementation into tangible and identifiable goals Using balanced scorecard to support SI Aligning SI with SI Public and private of different strategies Execution levers to determine relevant actions Strategy execution maps/casual maps	Peng & Litzgels (2005), Kinnings, Akin, Chan & Aladang (2004) Kralic, Gifford & Johnson (2003) Pothuizen & Sussman (2007) Rapier, Vanquaque & Garmann (2002) Chonko (1994) Evers (2005) Morahan & Viana (1998), Longrich, Sarker (2018) Campbell, R. B. & Friedman (2018) Garmann (2015) Pothuizen (1994) Miles (1985) Reed & Buckley (1988) Schuler, Shaw & Bailey (1993) Shaw, Gupta & Delery (2002) Kretzschmar (2008) Wehrhann (2008) Bhattacharya & Sen (2007) Burns (2005), Kaplan & Norton (2008), Smith & Sussman (2014) Michels, Miles & Aggarwal (2011) Michels & Miles (2011) Mittal & Sridhar (2010) McCann & Markley (2012)	<b>Internal processes</b>
	<b>Organizational learning</b> Organizational learning and defensive routines Org. learning to enhance strategic flexibility Org. learning to create innovative and innovative work in subsidiaries Second order learning through strategic planning of stable system model Implementing/improved strategies to facilitate learning <b>Organizational culture</b> Culture as a driver for SI Matching org. structure and behavioral norms	Alpar (1998) Santos-Vijande, Lopez-Sanchez & Trespalacios (2012) Welch & Steen (2018) Espinosa, Barrios, Martinez, Guzman (2012) Lee & Purnawan (2010) Schmalzer & O'Keefe (1994), Debra (2008) Olson, Slater & Holt (2005)	<b>Environment of continuous change</b>
	<b>Board level</b> Boards using SI scorecard Analyzing resource allocation to detect strategic shifts High performing boards Board governance to promote SI <b>Alignment</b> Aligning the organization with the strategy Aligning structures and "strategies into action" Group coaching as a way to obtain alignment Fit between business strategy and marketing strategy Operational alignment to support business SI Aligning priorities through different factors Aligning strategic orientation and innovation portfolio management <b>Conflict</b> Conflict can be decreased through joint reward and written communication Confirmed to uncover different perspectives, critically assess information and align decisions <b>Middle managers</b> Middle managers are seen as "hands-on" practitioners of strategy Consistency between middle managers' goals and strategic goals Different roles of middle managers <b>Barriers</b> Time, discrepancy (lack of) of resources, knowledge other problems Sustainability strategies Linking cross functional collaborations, agility, communication Barriers in family business	Satchell (2002) Schmidt & Brauer (2008) Karim-Rahman (2012) Mayrhofer & Schmalzer (2012) Starling (2017) Steve Smith (2008) Nishi de Vries (2013) Chan, Steen, Hall & Chan (2008) Viana, Sharma & Chan (2008) Almansoori & Obersteiner (2011) Kink & Garmann (2017) Chatterjee & Morgan (2008) Li & Jacobson (2015) O'Shaughnessy (2014), O'Shaughnessy (2011) Jucker & B. Smith (1992) Van Rossum, Chan & Venter (2014) Alexander (1985) Morrow & Mowen (2015) Sull, Hoshino & Sull (2012) Chatterjee, Chan, De Maess, Mahesh & Sharma (2014)	
	<b>Framework and tools</b> Balanced scorecard and McKinsey 7S model Migration management Expanding balanced scorecard with risk management Strategy to process maps Decision support systems and cognitive aid Executive information system Sprint or control When day-to-day technology supports strategy BSC, input/output for decision making Performance information system for decision making Measurement model of strategy execution Marketing dashboards <b>Others</b> Implementation of general manufacturing strategy premises Specialized manufacturing strategies SI should be thought through during the planning phase SI failure rate Business models as a tool to guide SI Org. policies and trust in top management Stakeholder support during SI Firms not recovering from distressed times are less focused on SI Reducing SI Third joint problem-solving involving SI SI research in hospital industry Outcomes of strategy execution Implementation of mission statements Implementing digital strategies Strategy execution in the public sector Reconfiguring organizational routines Closing gaps between manufacturing strategy and implementation Fit between variables of strategy and implementation Second SI in the service sector SI factors for strategy execution Capabilities for strategy execution Key factors for SI in Latin America Different management styles between gender Consensus between managers and subordinates	Kaplan (2002) Gatti, Davis & Lerner (2008) Sheehan (2015) de la Torre & Hunkeler (2014) Chatterjee, Narayanan & Mahesh (2014) Thompson-Singh (1994) Singh, Wilson & Wilson (2002) Sheehan (2006) Leonard (2005) Hu, Leopold, Wiedner & Strohhecker (2017) Peterson, Adams, Mahesh, Chatterjee & Mahesh (2017) De Oliveira, Campos & Edwards (2018) Knapp, Agostini & Trautner (2018) Tran (2008) Narayanan & Patten (2013) Cavalcanti & Santos (2018) Cortimiglia, Ghisari, Patti (2014) Lamas & Pineda (2018) Mitchell (2002) Sudrajat & Lu (2011) Tawon, Patrick & Vira (2018) Morris, Kishor, Hill & Bortol (2012) Chien & Roper (2018), Aladang, Kinnings, King & Mahesh (2018) Jones (2015) Ray & Banerjee (2016) Correas, De Maess, Forster, Petrucci & Nohria (2010) Bhattacharya, Kim & Tong (2018) Chan, Patti & O'Shaughnessy (2014) Hsu, Park & Yu (2010) Okunaka (2005) Noble (2015), Tawon & Vira (2018) Sahitji, Rong, Akbarov, Shiroi & Lohkar (2014) Frankel, Edwards & Lambert (2016) Bortol, Mary & Mahesh (2018) Schwab, Stohum & Yamamoto (2018) Ho, Wu & Wu (2014)	<b>Others</b>

## Appendix 5

Data on contextual examination.

### Level of analysis (160 papers included)

The level of analysis in the reviewed literature has been examined as well. The level of analysis that has been focused on primarily is the managerial level with 40% focusing on the view of managers in the strategy implementation process. In contrast, only 20.6% of the papers has taken a pure organizational level of analysis and 16.9% a combination of managerial and organizational analysis.

Besides this empirical view, a conceptual view of the phenomenon has been taken in 14.4% of the papers. The remaining literature has been divided between intra-organizational focus, pure focus on employees or students.

### Different sectors (96 papers included)

Looking into the empirical research, the papers are greatly skewed towards the private sector with 71% of the papers examining this sector compared to the public organizations which only covers 9%. The rest has been divided into cross sector examinations, third sector and also cases where the sector has not been determinable.

### Different industries (96 papers)

In general, the papers cover a wide range of industries. Although not all the papers provide information on the specific industries, some insights into the industries can be drawn. Close to every third paper (32.3%) examines multiple industries. The second most examined industry with 14.6% of the papers focusing on these, has been the manufacturing industry (which to some extent includes manufacturers that are vertically integrated into the value chain). Furthermore, the hospitality industry covers 11.5% of the empirical papers.

### Differences in size (96 papers)

The organizations in the study have primarily been larger companies or subsidiaries within larger corporations as these cover 40.6% of the total examined companies with data available on size. 16.7% are examining various sized organizations where the number of employees spans from 1 to 50.000 employees. 7.3% has been explicitly focusing on medium to large companies and 14.6% focused on small and medium sized enterprises. 17.7% of the companies have not been able to be identified in relation to size, as this has not clearly been stated in the papers.

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**Author contributions** All authors contributed to the conceptualization, analysis, drafting and revision of the paper.

## Declarations

**Conflict of interest** None of the authors have a conflict of interest to disclose.

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