Iida Lehtonen

Role of Management Control Systems in Organizational Transformation

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Author: Iida Lehtonen
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ABSTRACT:

The aim of the study is to examine what is the role of management control systems (MCSs) in organizational transformation. Traditionally, MCSs are seen to have an important role in strategy implementation and primarily reflect the outcome of the organizational strategy. Even though prior research has increasingly started to acknowledge the dynamic two-way relationship between MCSs and strategy, limited empirical insights exists on how MCSs and particularly different control mechanisms are used and adapted in practice during large-scale transformation- and strategic renewal process. Therefore, this study focuses especially on the relationship between MCSs, different levers of control and strategy process.

The literature review focuses on management control systems in organizational transformation context and further combines MCS and strategy relationship literature. As a result, theoretical framework illustrates the role of MCSs within strategy process that comprises strategic initiative, strategy formulation, strategy implementation and finally, strategic learning and outcomes. Primary data for empirical part was collected through semi-structured interviews in a multinational listed company that has recently undergone a major strategic renewal and organizational transformation. The analysis follows thematic abductive approach as it is theoretically informed by the Simons Levers of Control framework but applies also a data structure inspired by the Gioia method.

The findings show that MCSs are used as a traditional tool to implement strategy defined at top-management level, but at the same time it has an interactive and iterative role that supports making strategic adjustments and learning during transformation. Furthermore, the findings demonstrate heavy focus on organizational design that determines responsibilities, decision rights and information flows, and confirms that the interaction between MCSs and structure is an important driver of strategic change. Aligning with prior literature, the study shows heavy emphasis on diagnostic and interactive control systems, however without belief systems and new organizational culture, the transformation would not have been successful. The findings also highlight the practical complexity of MCS adaptation as it requires extensive changes to master data, reporting processes and systems integration.

This study extends prior literature on the relationship between MCSs and strategy and provides empirical insights into the evolving role of MCSs in strategic change and organizational transformation context. It also offers practical implications for managers on the role of MCSs in supporting successful strategic renewal and how MCSs are adapted and reconfigured during the transformation.

KEYWORDS: Management control systems, MCS, Organizational transformation, Strategy process, Strategic change, Levers of Control

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1 Introduction

Today's complex and uncertain business environment requires organizations to adapt and respond quickly to challenges arising from global crises such as COVID-19 pandemic, Russian invasion of Ukraine and other supply chain disruptions, navigate in intense global competition and exploit emerging opportunities from technological advancements. Therefore, embracing organizational agility and flexibility towards change has become an important topic in theory and practice, meaning that companies should have the capability to identify opportunities that can lead to better financial performance and competitive advantage while mitigating risks and building resiliency towards threats (e.g. Malawani et al., 2025). Sometimes adapting to the changing market environment can require major organizational transformation and strategic renewal, and Management Control Systems (MCSs) have an important role within the whole process from systematic decision-making to pursue the transformation to evaluating the success of the change afterwards. Management control itself is defined by the pioneer Anthony (1965, p. 17) as "the process by which managers ensure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives". Simons (1995, p. 5) defines MCSs as "*the formal, information-based routines and procedures managers use to maintain or altern patterns in organizational activities"*.

Traditionally, management accounting research and MCSs were seen primarily to implement strategies and act as an outcome of organizational strategy (Anthony, 1965; Chenhall, 2003; Langfield-Smith, 2008) however, more recently, the literature has started to acknowledge the two-way relationship between MCSs and strategy by understanding the importance of MCSs also in firms' strategic decision making and strategy formulation (Kober et al., 2007; Sharma & Lowe, 2023; Skærbæk & Tryggestad, 2010; Simons, 1995). Even a stream of management accounting research has tried to explain the role of MCSs in strategic and organizational change (e.g. Chenhall & Euske, 2006; Davila, 2005; Huikkola et al., 2017; Simons & Dávila, 2021). On the other hand, some studies also suggest that there might be a conflict between formal accounting controls and successful strategy development (e.g. Aaltola, 2019; Abernethy & Brownell, 1999, Roberts, 1990). In

light of the current research scheme around MCS and its relationship to strategy, it is important to develop deeper understanding of the MCS role in organizational transformation and especially in light of the Simons Levers of Control framework that illustrates how MCSs comprise four levers, including diagnostic control systems, belief systems, boundary systems and interactive control systems (Simons, 1995).

Despite the growing body of literature related to MCSs in strategic and organizational change context, important gaps remain in understanding their role during organizational transformation process. Earlier studies have highlighted uncertainty regarding the role of MCSs in bringing intended strategies to realization (Langfield-Smith, 1997, p. 229) while more recent research has emphasized their potential in systematic facilitation of organization's strategic renewal (e.g. Huikkola et al., 2017). Although prior literature has started to acknowledge the two-way relationship between MCSs and strategy, there is still limited understanding of how this relationship is enacted during large-scale organizational transformation and how MCSs are used and adapted in practice. Even though it is known that technical developments have had a major impact on the increased flexibility of MCSs (Ahrens & Chapman, 2004, p.280), but for example, Skærbæk & Tryggestad's (2010) study that demonstrates the role of accounting devices in performing strategy could not answer what strategic reframing requires in terms of concrete implementation efforts. Similarly, Malmi & Brown (2008, p. 297) question that within environments that face constant change, which control elements have to fit best within the MCS as whole and which are less essential within the change and gaining superior performance.

In particular, there is a lack of empirical insight on how different control mechanisms are used, combined and reconfigured across the strategy process during organizational transformation. Prior studies have not sufficiently investigated the role of accounting analytical system capabilities interplay between different levers of MCSs or the nature of the interplay in practice (Varma et al., 2025, p. 1). Furthermore, Yanine et al. (2016, pp. 861–862) have stated that research on the relationship between MCSs,

organizational flexibility and stability remain underexplored, even though one of the key questions within MCSs design is how to balance between providing the needed control and stability of resources but at the same time provide enough flexibility towards change. Therefore, further empirical investigation is needed to develop a more comprehensive understanding of how MCSs are used and adapted throughout the strategic change process to support strategy formulation, implementation and learning and evolution during organizational transformation.

The purpose of this study is to address this research opportunity by answering the following research question:

What is the role of management control systems in organizational transformation?

This study aims to explore the role of MCSs in strategic renewal and organizational transformation as deeper understanding on the MCS and strategy relationship is limited in the current literature. The study will be conducted by using a qualitative research method, and the primary source for data collection is a multinational listed company that has recently undergone a major organizational transformation and strategic change. The empirical data is collected by semi-structured interviews and in order to obtain a comprehensive overview of the change implementation, the interviewees represent different positions and roles within the organization, with particular focus on finance and HR related functions.

The contribution of this study is threefold. First, this study contributes to the management control and strategy literature by extending prior research on the relationship between management control systems and strategy process. Earlier studies have emphasized the importance of MCSs in strategy implementation and decision making (e.g. Chenhall, 2003; Kober et al., 2007; Simons, 1995) or even in facilitating the strategic renewal (Huikkola et al., 2017), however less attention has been paid to how different levers of control impact the intersection of MCSs and strategy process in organizational

transformation. By focusing on the MCSs role and adaptation process during organizational transformation and strategic reframing, this study addresses an identified gap in the current literature (Langfield-Smith, 1997; Malmi & Brown, 2008; Skærbæk & Tryggestad, 2010; Varma et al., 2025; Yanine et al., 2016). Secondly, this study provides valuable insights from an organization that has recently undergone a major organizational change. Through the interviews, valuable empirical insights into how MCSs evolve in practice during the transformation are presented and it responds to the need of more empirical research on the relationship between MCSs, levers of control and strategy process. Thirdly, this study provides an important practical contribution for organizations that are planning to undergo an organizational transformation. MCSs are essential for companies as they act as a backbone for business and operational objectives, ensure that enterprise policy standards are met, and provide information for all decision-making processes, which means that MCSs control the evolution of the business (Yanine et al., 2016, p. 877). Thus, understanding the role of these systems in facilitating and implementing organizational transformation and how they adapt to new organizational design and strategic requirements is highly relevant for practitioners.

This thesis includes five chapters. After the introduction chapter, theoretical framework for the topic will be presented. The first part of the theoretical framework focuses on organizational transformation as a context for the study, and the second part focuses on management control systems, more specifically on different types of controls, MCSs and strategy relationship, and lastly on the adaptation and development context. Third theory chapter combines the transformation and MCSs by discussing about the role of MCSs in strategic change. Finally, the theoretical framework is presented in subchapter 2.4. Next, chapter 3 focuses on reviewing the research methods used in the study. In chapter 4, research findings are presented, and followed by concluding discussion chapter 5 which summarizes theoretical and empirical contributions of the study, discusses limitations and suggests future avenues for research.

2 Theoretical background

This section discusses the two main elements of the theoretical background of the study. Chapter 2.1 focuses on the organizational transformation, which is the context of the study, and then chapter 2.2 focuses on management control systems, illustrating different types of control, their relationship to strategy and how they can be adapted and developed. Chapter 2.3 incorporates both transformation and MCSs aspects together and discusses about the role of MCSs in strategic change process. To conclude the theoretical background, a theoretical framework is presented at the end of this section, in chapter 2.4.

2.1 Organizational transformation

Organizations' survival depends on the ability of top management to anticipate and respond to opportunities and challenges. Change or transformation means that an object of change shifts from one state to another. The speed of changes and intensity of competitive environment have increased significantly during the last decades, and organizations need to increasingly adapt their strategies and designs to reflect these changes. Organizational transformation can be understood as either planned or emergent. Planned change is typically initiated by top management and it has clear and articulated intentions which are deliberately implemented, while emergent change usually is imposed by a change in the environment or consistent actions within the organization that are not intended (Mintzberg & Waters, 1985). However, it is noted that in reality, the change is usually something between planned and emergent and includes characteristics of both (Mintzberg & Waters, 1985). When a transformation is needed, new strategy should determine where the organization is going and what it seeks to achieve, while the organizational design determines how responsibilities, decision rights, and information flows are structured to support strategy implementation. Strategic change is evidently the most studied form of organizational transformation, however the scope of transformation can vary significantly across organizations. Quattrone & Hopper (2001, p.

408) illustrate organizational transformation as a process of changing the organizational structure and operations or changing the MCSs by implementing a new information system such as ERP, or just changing the accounting system by for example altering cost allocation base. Furthermore, Simons (2005) argues that organization's design is the most important determinant of successful strategy implementation within large organizations. Therefore, by adjusting organizational design, it is possible to achieve desired results determined in the organization's new strategy and respond to changes within the competitive environment. According to Abernethy & Brownell (1999, p. 190), management literature tends to treat strategic and organizational change synonymously. It is natural as changing strategy also requires that the organizational design must change as successful organizational designs consider the business strategy, lifecycle of the organization, competitive environment and other relevant factors (Simons, 2005, p. 3). Thus, organizational transformation incorporates both constructs, strategic change and organizational design change.

Organizational transformation is usually linked to changes within the operative environment, but the catalyst for strategic change often starts with the appointment of a new CEO (Simons & Davila, 2021, p. 587). Thus, in organizational transformation, decisions about new strategy and organizational design usually start from the very top management level and then flows down to lower management levels. When the transformation proceeds, Simons (2005, p. 2) explains that anyone who has responsibility within the organization to reach goals has to assign resources and make decisions on how their subordinates work together, and most importantly, they have to understand the implications of the design choices they make. Furthermore, while the organizational design should reflect the business strategy, it also has to foster learning and flow of new ideas, and Simons (2005, p. 9) describes this as a two-way flow between strategy and structure. Additionally, according to Chenhall & Euske (2007), the way how MCS is implemented in an organization determines its success.

Strategic change defines the direction of transformation by specifying new objectives and competitive positioning. Agarwal & Helfat (2009, p. 282) define strategic renewal as the *"- - process, content, and outcome of refreshment or replacement of attributes of an organization that have the potential to substantially affect its long-term prospects."* They have distinguished strategic renewal from strategic change, however literature generally refers to both terms interchangeably and the same applies to this thesis. They further divide strategic renewal as two basic types including discontinuous strategic transformations and incremental renewal. The first one refers to major changes within the environment an organization operates that require fundamental alteration of the strategy or it can be related to situations where organizations seek for new growth opportunities as the primary market has matured or declined. Incremental strategic renewal, on the other hand, is a proactive approach whereas organizations seek for persistent advantage by continual adaptation, they are coping with changes as they happen or even shape the external environment by themselves. This can be achieved by doing experiments outside core business, altering core business or through innovations. One common example of incremental strategic renewal is acquisitions. Some authors use terms 'revolutionary' and 'evolutionary' to describe these two types of strategic renewal/change (e.g. Simons, 1994) while Davila (2005, p. 42) distinguishes between incremental and radical type of innovation that defines strategic change. Despite the path to the renewal, either might lead to a situation where the strategy and organization differ significantly from the starting point and have important consequences from the individual firm level to entire industries and economies.

2.1.1 Organizational design change

There has been a growing interest in the management control literature related to the role of MCSs in planned organizational change (e.g. Burns & Vaivio, 2001; Chenhall & Euske, 2006, p. 601). Similarly, as the MCSs role to facilitate strategic renewal has been studied, previous research has tried to explain the role of MCSs in facilitating organizational change. According to Chenhall & Euske (2006), literature has focused on either

prescriptive approach that emphasizes rational and technical change principles, or social and political interpretation approach. These perspectives further illustrate how the role of MCSs in organizational change context extends beyond technical systems to include the integration of change across organizational units and the development of employee commitment (Chenhall & Euske, 2006, pp. 603-607). However, relatively little attention has been given to how MCSs shape the underlying organizational design through which change is enacted. Organizational design is expected to reflect the chosen strategy (Simons, 2005, p. 9), and therefore, changes in strategy, organizational design and MCS design are closely intertwined. In this sense, MCSs design can be seen as one of the primary mechanisms for operationalizing and implementing new organizational design in practice. A central challenge in organizational design concerns how it enables both stability and flexibility in organizational activities (Yanine et al., 2016). For the purpose of this thesis, this chapter focuses on practical examples of how MCSs are used to assist in shaping organizational design. A central issue related to this topic is how MCSs design balances the need for control and stability but at the same time provides enough flexibility towards change.

Simons (2005, p. 17) defines organizational design as *"the formal system of accountability that defines key position in an organization and legitimates rights to set goals, receive information, and influence the work of others"*. Therefore, central to organizational design is who receives information derived from the business environment, to whom it is forwarded, and who takes the action (Simons, 2005, p. 9). All of this is defined through three key concepts within organizational design, including accountability, positions, and formal rights (Simons, 2005, pp. 17-18). Accountability means that every employee is accountable for certain performance measurement and that they report to someone higher in the organizational hierarchy. Position is an important part of holding the accountability and providing a road map for every role, and it remains even though people in the position change. Lastly, formal rights are required to legitimate authority, and rights bring responsibility. From MCSs perspective, these three key concepts are not independent of control systems but instead shaped through MCSs. As previously stated,

MCSs define what is measured, how performance is evaluated and how information is communicated, and thus they directly influence the structures of accountability, the distribution of decision-making authority, and the flow of information in the organization. This is consistent with Malmi & Brown (2008) who consider organizational design and structure, governance structure (who they are accountable) and policies and procedures as part of administrative controls within their MCS package framework. Similarly, Simons & Davila (2021) have identified that intentional interaction of MCSs and organizational structure act as important drivers of strategic change.

Common practical components related to changing organizational design are related to the span of control and decision rights (Simons & Davila, 2021, p. 588). Changes in span of control can mean for example acquisitions, divestitures and restructuring, and change in decision rights relates to changes in supervisors and job descriptions. Related to decision making, organizations have to determine the span of accountability as illustrated in figure 1. In centralized decision structure, Simons (2005, pp. 88-92) explains that top managers have very wide span of accountability, and they are expected to consider various trade-offs to achieve their objectives such as increased market value or increased share price. Employees lower in the hierarchy are accountable for only narrow measures such as cost of raw material in certain production line. On the other hand, in decentralized decision structure, the span of accountability is wide even in relatively low levels of the organization.

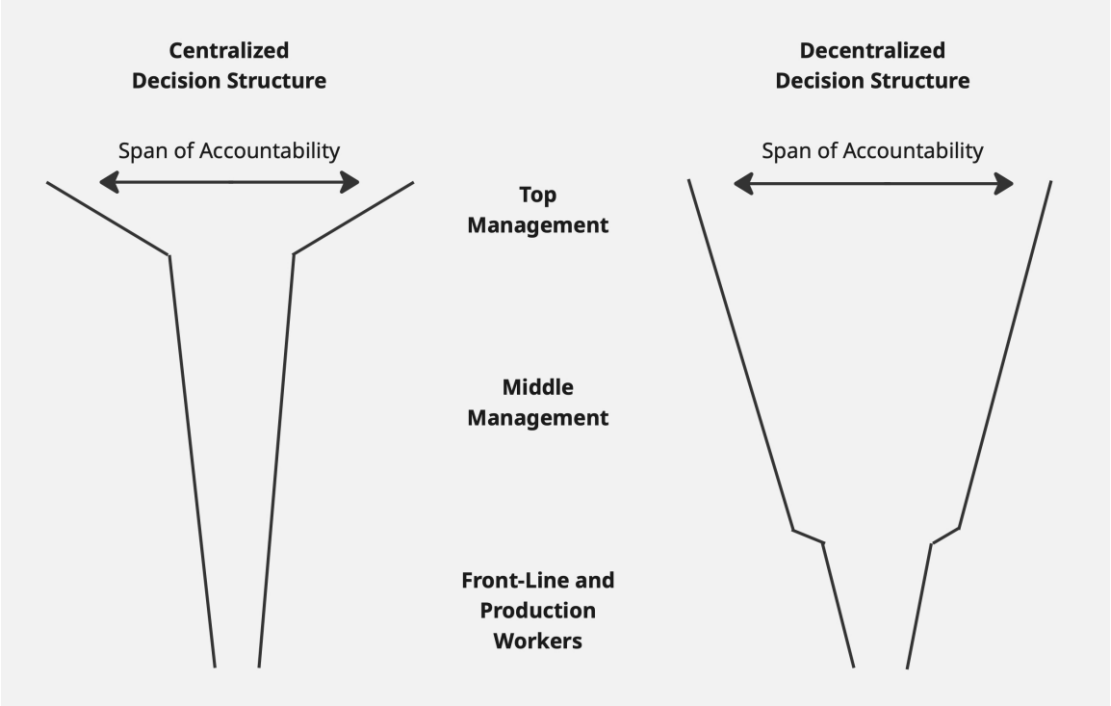

Figure 1. Span of accountability and decision making. Adapted from Simons (2005, p. 92).

Another interesting concept within the definition of organizational design is related to the influencing the work of others. Two practical examples of widening the span of influence are allocation of indirect costs and building interactive networks. Simons (2005, pp. 135-136) illustrates that charging indirect costs (e.g. R&D, depreciation) across units widens the span of influence for the receiving unit managers as they get interested in how much overhead costs are coming to their budgets. In addition, building interactive networks that are formed by members across organizational units and bypassing traditional reporting structures can lead to enhanced information exchange and creation of new improvement programs (Simons, 2005, p. 123). These examples illustrate how MCS mechanisms can extend managerial influence beyond formal hierarchical boundaries.

The flexibility of organizational design is closely linked to the design and use of MCSs. Literature usually conceptualizes MCSs flexibility in terms of level of control tightness. One of the core questions regarding MCSs is related to the balance between control tightness and flexibility for ensuring that employees act based on the organization's objectives but at the same time provide enough flexibility for changes and room for

improvement and innovation (Yanine et al., 2016, pp. 861-862). From organizational design perspective, this balance is reflected on how decision rights are allocated, how strictly performance is monitored, and how much discretion is granted to the members of the organization. Tighter control systems are often associated with clearer accountability, while more flexible control systems support decentralized decision-making and coordination across organizational units. Merchant & Van der Stede (2023, p. 216) suggest that organizations apply tight controls on areas that are related to the critical success factors and looser control over the areas that require innovation, entrepreneurship and autonomy.

Ahrens & Chapman (2004) further develop this idea by proposing a framework for MCS design that supports organizational efficiency and flexibility at the same time. It requires four system design principles, including repair, internal transparency, global transparency and flexibility. Repair principle provides capabilities for the MCS users for fixing existing control processes, however it requires two other principles internal transparency and global transparency. The first refers to the understanding of how local processes work and the latter refers to how the local processes fit into the perspective of the whole organization. In addition, flexibility principle means the employees discretion over the MCSs use. Therefore, it means that flexibility is not achieved by reducing control but rather designing control systems in way that they enable adaptation and learning.

2.2 Management control systems

Management control systems (MCSs) are central mechanisms through which organizations influence that managerial actions and organizational activities are aligned with strategic and operational objectives. Simons (1995, p. 5) defines MCSs as "*the formal, information-based routines and procedures managers use to maintain or altern patterns in organizational activities"*. The field of MCS research has been accused of fragmented landscape with inconsistencies in conceptualizations and definitions (Strauß & Zecher, 2013), and the term MCS is sometimes used interchangeably with related terms such as

Management Accounting (MA), Management accounting systems (MAS) and Organizational controls (OC). MA can be distinguished to refer to certain accounting practices such as budgeting, while MAS refers to systematic use of the MA practices and OC can be used in referring to activities and processes such as just-in-time management or quality related controls (Chenhall, 2003, p. 129). MCS is a broader term whose definition has expanded over time beyond the narrow focus on merely financial control and accounting information and performance measurement. Thus, today's MCSs encompass MAS practices and provide a broad set of formal and informal, financial and non-financial information related to markets, customers, competitors, personnel and production processes, and provides support mechanisms for planning, monitoring and decision-making through various controls (Chenhall, 2003, p. 129). The term integrated MCS can be used for these enterprise-wide MCSs that hold large potential to improve organizational performance and efficient business processes (Elbashir et al., 2020, p. 1779). Similarly, Otley (1999, pp. 365–366) has conceptualized MCSs as integrated framework through which organizational objectives, strategies and plans, performance targets and measures, rewards, and information flows and feedback mechanisms can be examined. Additionally, the timeline of the provided information can be seen as an important part of MCSs that encompass real-time data (present), historical data (past) and abilities for predictive analysis (future) (Huikkola, et al., 2017). All in all, in a holistic approach, MCSs include a wide range of information and control practices that influence organizational behavior.

There is a long tradition between contingency-based research and MCSs studies, and according to Chenhall (2003, p. 128), "*the conventional, functionalist contingency-based approach to research assumes that MCS are adopted to assist managers achieve some desired organizational outcomes or organizational goals. The appropriate design(s)of MCS will be influenced by the context within which they operate*". Chenhall (2003) has identified six main contextual variables within contingency based literature that are central to understanding how MCSs are constructed, including external environment, technology, structure, size, strategy and culture. This view aligns with Davila's (2005, pp. 44-45) interpretation that MCSs are designed as part of the organizational structure to

provide a framework for day-to day actions, which guides employees to make actions and decisions that align with the strategy that top management has defined. In contrast, without any control systems, employees would follow their personal interests instead of the organization's objectives. Therefore, MCSs play a key role in effective organizational design, and failures in these controls can result in serious damage to the organization (Merchant & Van der Stede, 2023, p. 3). Consequently, no universally applicable MCSs exists as different organizations have different objectives, and appropriate controls should be determined based on specific environment an organization operates in (Otley, 1999). Chenhall & Moers (2015, p. 2) have also referred to the sensitive relationship between external environment and the design and use of MCSs in later study.

In contrast to contingency-based approach, more recently, literature has started to acknowledge the broader organizational role for MCSs, including their capacity to support learning, adaptation and even facilitate strategic reframing. For instance, Chenhall (2003), Skærbæk & Tryggestad (2010), Simons (1995) and Kober et al. (2007) have suggested that MCSs can have a proactive role in influencing strategy. Simons' (1995) Levers of Control framework was one of the first frameworks within MCS literature that highlights alongside the diagnostic controls, the ability of MCSs to stimulate organizational learning and interactive relationship between MCS mechanisms and strategy. Building on the idea of Simons's LOC framework, Kober et al. (2007, pp. 447-448) demonstrate that the design and use of MCSs have a close relationship with strategy as MCS mechanisms can be used in an interactive manner to help facilitate a strategic change but simultaneously their design can be also changed to match new strategies. Therefore, authors state that MCS both shapes and is shaped by strategy. Other studies have further examined the role of MCSs in strategic change and organizational transformation (e.g. Chenhall & Euske, 2006; Davila, 2005; Skærbæk & Tryggestad, 2010), and most recently, research has adopted a dynamic perspective on MCSs, focusing on their role to support organizational renewal and adaptability (e.g Huikkola et al., 2017; Sharma & Lowe, 2023; Simons & Davila, 2021). Furthermore, innovation context related to MCSs is popular within the research landscape (e.g Chenhall & Moers, 2015; Bisbe & Otley, 2004; Biswas

& Akroyd, 2022). As in today's complex business environment, the need for innovations is pervasive, and therefore, contemporary MCSs are also required to help managers accomplish innovation (Chenhall & Moers, 2015, p. 2).

MCSs have various functions within organizations that are related to performance, strategic thinking and strategic change. With performance targets and systems employees can be directed to improve desired KPIs (Chenhall & Langfield-Smith, 2003). According to Merchant and Van der Stede (2023, p.218) much of the effectiveness of MCSs is dependent on how employees perceive the controls as the benefits of MCSs are derived on the impact on people's behavior. Strauß & Zecher (2013, p. 264) review on different MCS frameworks confirm this view that the intend of MCSs is to influence organization members' behavior. Consequently, MCSs function as an important link between strategy, organizational processes and human behavior which highlights the need to examine different types of control and their use in organizational contexts, relationship between MCSs, strategy, organizational design and finally how MCSs support flexibility and adapt to changes in practice.

2.2.1 Types of Control

According to Chenhall & Moers (2015, p.2), from the early studies within the MCS field that was based on simple notions of control based on cybernetic processes that were part of formal closed-type systems, MCSs have developed to include various complex and open controls that respond to the needs of today's organizations that have to operate in increasingly uncertain and challenging environments. As previously stated, on a high-level, controls can be distinguished into formal and informal controls, as well as between financial and non-financial controls. Langfield-Smith (1997, p. 208) defines formal controls as rules, standard operating procedures and budgets that typically represent the visible and objective part of MCSs. They include output or result controls that are often financially oriented feedback type of controls, but also feedforward controls that include administrative controls, meaning standard operating procedures and rules,

personnel controls meaning human resource management policies, and finally behavior controls that are used for ongoing monitoring of organizational activities and decisions. Informal controls include unwritten policies of the organization rooting from the organizational culture (Langfield-Smith, 1997, p. 208). In similar manner, Merchant & Van der Stede (2003) distinguish four different types of MCSs, including result controls, action controls, personnel controls and cultural controls. Result controls define performance dimensions and measurement, and are used to motivate employees to better performance through incentives or rewards. Action controls direct employees to behave according to organization's interests, and they include behavioral constraints, pre-action reviews, action accountability and redundancy mechanisms. Personnel controls clarify expectations, ensure sufficient capabilities and create commitment. Cultural controls encourage mutual monitoring and govern employees' behavior through written and unwritten rules, norms, values, attitudes and ideologies.

Malmi & Brown (2008) have introduced the "MCSs as a package" framework which approaches the control types from complete system view that emphasizes employee behavior aspects. According to them, management controls include *"all the devices and systems managers use to ensure that the behaviors and decisions of their employee are consistent with the organization's objectives and strategies but exclude pure decision systems"* (pp. 290-291). From their framework, as seen in figure 2, we can identify the following controls: cultural controls which include clans, values and symbols, cybernetic controls that include budgets, financial-, non-financial- and hybrid measurement systems, and administrative controls that include governance structure, organization structure and policies and procedures. In addition, planning and reward and compensation are part of the framework as functions that direct employee's behavior towards desired organizational objectives.

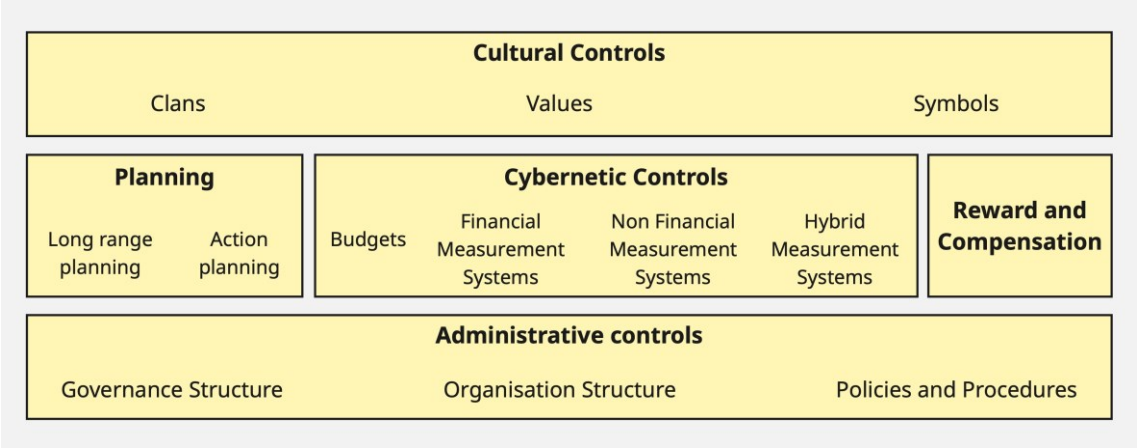

Figure 2. MCS as a package. Adapted from Malmi and Brown (2008, p. 291).

Evidently, prior research has provided several frameworks to categorize different types of MCSs. Perhaps the most important and one of the first frameworks within MCSs literature that links MCSs and strategy is the Simons (1995) Levers of Control (LOC) framework that is based on the idea of positive and negative control systems that manage the tensions "between freedom and constraint, between empowerment and accountability, between top-down direction and bottom-up creativity, between experimentation and efficiency" (Simons, 1995, p. 4). The framework focuses on formal routines and procedures, and Simons defines four levers, two positive that include belief systems and interactive control systems, and two negative that include boundary systems and diagnostic control systems. As seen in the figure 3, at the centre of the framework is the business strategy that means the way the firm competes and positions itself in respect to its competitors. The framework also includes four key strategic constructs: core values, risks to be avoided, critical performance variables and strategic uncertainties. Simons (1995) argues that each construct is highly interdependent, and in order to implement strategy successfully, top management needs to understand each construct and consider them together. Furthermore, each of the four levels of controls connected to these constructs are designed to manage them and all have different purposes, though the collective power comes from the tension generated by each lever (p. 5).

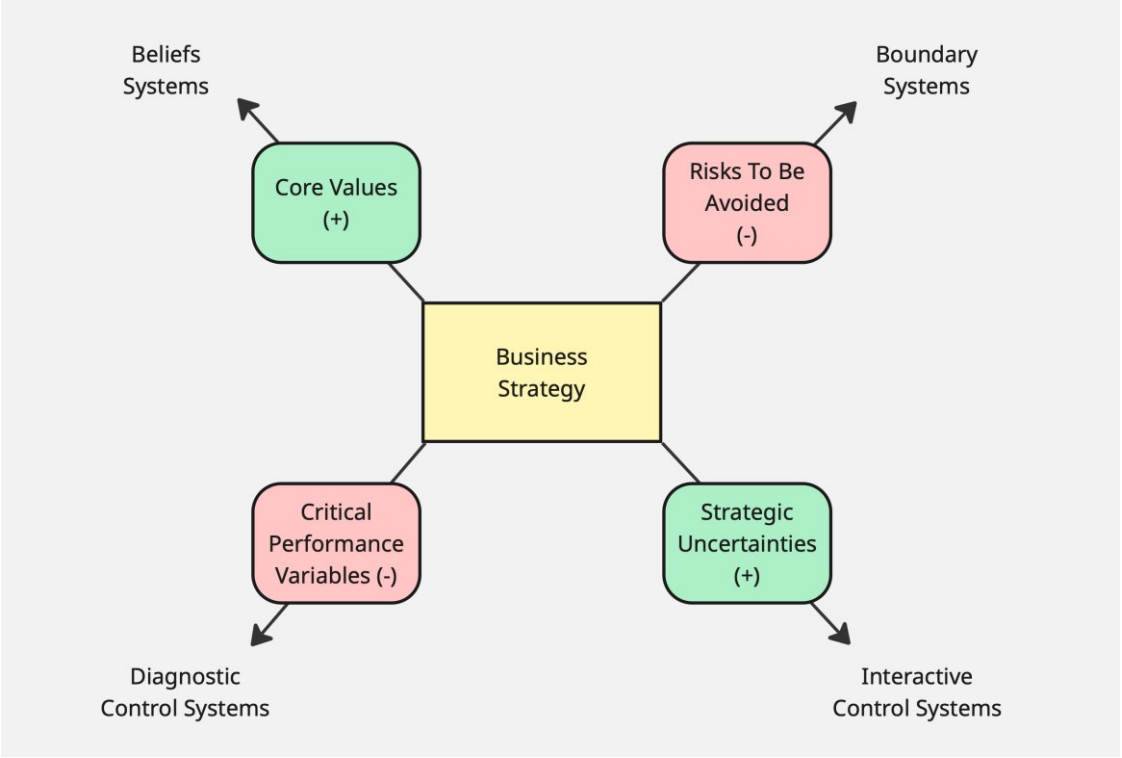

Figure 3. Levers of Control Framework for controlling business strategy. Adapted from Simons (1994, p. 173).

Beliefs systems are *"the explicit set of organizational definitions that senior managers communicate formally and reinforce systematically to provide basic values, purpose, and direction for the organization"* (Simons, 1995, p. 34). They communicate the core values of the company and answers to the questions how organization creates value, what is desired level of performance, how employees should manage internal and external relationships, and primarily, it's purpose is to inspire and motivate employees to find new value-creation opportunities but also tackle problems as it helps to determine the most important problems to tackle. Examples of formal beliefs systems are mission statements, vision and goals.

Boundary systems *"delineate the acceptable domain of activity for organizational participants --, and establish limits based on defined business risks to opportunity seeking"* (Simons, 1995, p. 39). They are needed because by nature, individuals are opportunity-seekers who search value, new ways of working or overcome obstacles by their own way.

In order to sustain the invention of new opportunities, managers cannot dictate how individuals should do their work, but they can set minimum standards and give instruction on what they should not do. This allows employees to create value within the agreed boundaries. Despite the negative terms, boundary systems are the prerequisite for organizational freedom and entrepreneurial behavior (Simons, 1995, p. 41). Codes of conduct are common example of the boundary system.

Diagnostic control systems are *"formal information systems that managers use to monitor organizational outcomes and correct deviations from preset standards of performance"* (Simons, 1995, p. 59). They are feedback type of systems that act as the foundation for traditional management control and communicate the critical performance variables. They have three different purposes: measure outputs of a process, compare predefined standards to actual results, and correct deviations from desired performance (p. 59). Diagnostic controls allow maximum autonomy for employees, however it requires that managers have set and negotiated clear goals, ask and receive updates exception reports, and finally, follow up on exceptions and deviations from critical performance variables (pp. 70-71). Common examples of diagnostic control systems include budgets and profit plans, cost centres, project monitoring, goals and objective systems, human resource plans and cost accounting systems.

Interactive control systems are *"formal information systems that managers use to involve themselves regularly and personally in the decision activities of subordinates"* (Simons 1995, p. 95). They focus on strategic uncertainties, stimulate opportunity-seeking and the emergence of new strategic initiatives. Simons (1995, p. 94) defines strategic uncertainties as *"the uncertainties and contingencies that could threaten or invalidate the current strategy of the business"*. It is important to note that unique interactive control system does not exist, instead leaders have to choose using a control system interactively, which means that the system requires frequent and regular attention and the data generated is recurringly assessed by the top management, discussed in interactive meetings across different organization levels, and the system acts as a catalyst for

continual challenge (Simons, 1995, p. 97). Furthermore, Simons (1995, p. 119) argues that interactive controls should be linked with subjective and contribution-based rewards.

Beliefs and boundary systems must work in tandem that creates dynamic tension between commitment and punishment (Simons, 1995, p. 41, 57). Control staff (accountants, internal auditors, IT experts etc.) have an important role in belief and boundary systems as they maintain them by sharing and communicating related materials and measure employee awareness, but also police boundaries by looking for evidence of unwanted activities that would take the business outside the boundaries (Simons, 1995, pp. 56-57). It is also worth to mention the role of internal controls, which can be seen as the foundation for effective control and sub-dimension of diagnostic controls, including detailed and procedural checks and balances that are meant to safeguard assets and ensure reliable accounting records (Simons, 1995, pp. 84-85). In practice, internal controls define levels of authorizations, restrict access, and ensures relevant, timely and adequate documentation and audit trail. They are used mostly by accountants, controllers and auditors. However, Simons (1995, p. 6) does not consider controls systems used lower in the organization that are used to coordinate and regulate operating activities, such as quality control procedures and other controls related to repetitive operations.

Surprisingly, the popularity of the framework has even increased during the 21st century, and the application of the framework has been extended to new organizational topics and issues year after year. For instance, MCS and organizational change context. However, the framework has also received critique. The main weakness of the framework is argued to be too vague and ambiguous concepts, and amidst of calls to investigate the four levers more thoroughly, diagnostic and interactive controls systems have received more attention than belief and boundary control systems (Tessier & Otley, 2012, p. 172). In their study, Tessier & Otley (2012) develop the original framework and shift the focus from structural design to how the systems are used. They argue that control systems are not inherently diagnostic or interactive, rather their function depends on how managers

choose to use them. For example, budgets can be used both diagnostically and interactively. Furthermore, they extend the framework by incorporating employee's perception of controls, which is shaped by managerial practices and organizational context, and their refined framework suggests that employees may experience them as enabling or constraining, and their attitude towards controls can be negative, positive or neutral. Another critique has related to the notion of balance between different levers which is a central concept in the LOC framework (e.g. Kruis et al., 2015; Mundy, 2009). Kruis et al. (2015, p. 28) claim that it remains unclear how the notion of balance or dynamic tension is produced and reflected in the control system.

2.2.2 MCSs and strategy relationship

According to Langfield-Smith (1997, p. 209), strategy has been operationalized multiple ways in both strategy and MCS literature. Generally, strategy is understood to be a long-term, goal-oriented plan which aligns an organization's activities with its external environment in order to achieve sustainable competitive advantage. The fundamental categorization of strategy formation is based on Mintzberg's (1978) study which distinguishes between intended and realized strategies. Strategy can be formulated through a conscious process before making decisions, or it may form gradually and unintentionally through a pattern of decisions over time. As illustrated in figure 4 below, there are three possible combinations. Intended strategies may remain as an unrealized strategy or if it is realized as planned, it will become a deliberate strategy. Realized strategies that were not intended are defined as emergent strategy. This distinction is relevant within MCS context as different strategies may require different controls as discussed later on. In addition, strategy literature further distinguishes between strategy formulation and strategy implementation, whereas the latter refers to processes when strategic intentions are translated into organizational actions.

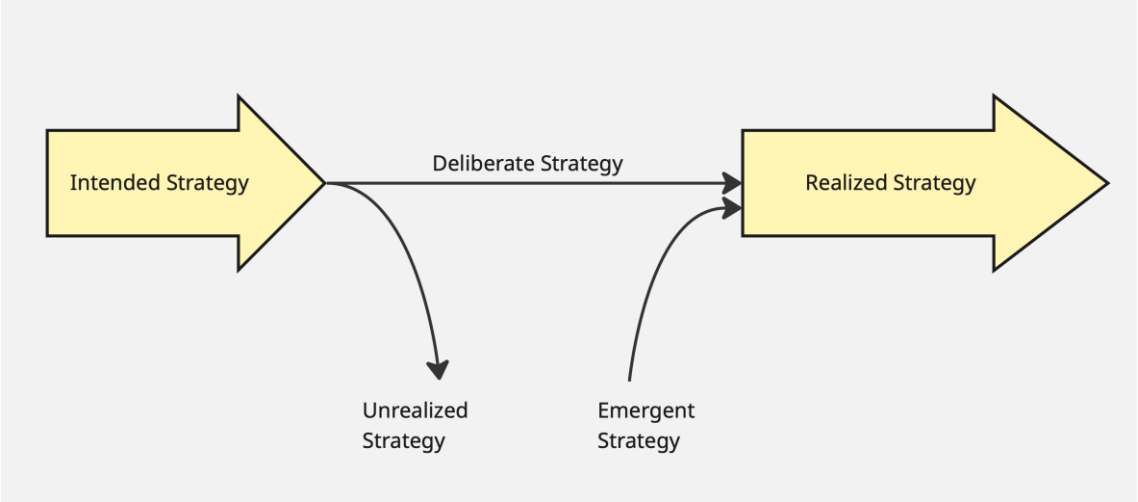

Figure 4. Types of strategies. Adapted from Mintzberg (1978, p. 945).

In the end of the 20th century, there was a clear consensus that the relationship between MCSs and strategy should be given more attention and studied in a thorough manner. For example, Huff & Reger have stated already in 1987 (p. 221) that "how organizations use formal control, incentive, and information systems to implement strategy and how these subsequently affect performance are largely unexplored areas in strategy research". Traditionally, MCSs are seen to be an outcome of organizational strategy (Kober et al., 2007, p. 426), and many prior studies focus on exploring the effects of strategy on MCSs, more specifically on the importance of achieving a clear fit between the MCSs and the chosen strategy (Frigotto et al., 2011, p. 634). In this contingency stream, MCSs are considered to be merely strategy implementation systems and the last step in the strategic management process (Henri, 2005, p. 530). However, as previously stated, more recent literature has started to acknowledge the two-way relationship between MCSs and strategy, focusing on exploring the effects of MCSs on strategy. This stream of literature recognizes MCSs role in strategy formulation, continuous implication in strategic management process (Henri, 2005, p. 530), and emphasizes that strategic capabilities are grounded in day-to-day organizational activities: "*the emphasis on the daily routine of strategy-making is suggestive of a very different role for MCS than the previously predominant model of straightforward implementation of strategy"* Chapman (2005, p. 4). Simons (1995) LOC framework was one of the first studies to illustrate the interactive

relationship, and similarly in 2003, Chenhall (p. 151) suggested that MCSs could assist managers to formulate strategy in terms of markets, products, technologies and organizational structures, and then used in implementation and monitoring these strategies. In this perspective, MCSs can continuously provide feedback for strategy implementation and simultaneously can be used interactively to formulate new strategies. Merchant & Van der Stede (2023, p. 7) argue that improving MCSs is usually even more important than improving strategy as without good execution the strategy will fail.

Strategy, based on Mintzberg's (1987) categorization, is generally distinguished into four different areas of strategy, including strategy as a plan, strategy as a pattern, strategy as a position or strategy as perspective. As Simons (1995) proposes, these different areas of strategy are controlled by different levers, and they influence the types of strategies presented earlier. In table 1, this connection between different strategy areas and control systems is illustrated. In addition, the key strategic constructs and examples of control are presented. Even though the different areas and control systems have their own purpose in controlling the strategy, effective implementation needs balance among all levers, which then results in the ability of simultaneous management of strategy as a plan, pattern, position and perspective (Simons, 1995, p. 10).

Table 1. Connection between strategy areas and control systems. Adapted from Ferry et al. (2017, p. 225) and Simons (1995, p. 156).

Area of Strategy	Control System	Strategic Constructs	Examples of Control
Plan	Diagnostic systems	Critical performance variables	Budgets, KPIs
Pattern in action	Interactive systems	Strategic uncertainties	Meetings
Position	Boundary systems	Risks to be avoided	Scope of business activity, codes of business conduct

Perspective	Belief systems	Core values	Vision, policy and mission statements, leadership behavior, traditions

Furthermore, these areas of strategy and control systems have a close connection also to the types of strategies presented earlier: intended, emergent and realized strategy. Strategy as a plan, which has emphasis on diagnostic control, address how intended strategies are turned into realized strategies by answering to the managers whether strategy implementation is on track (Kruis et al., 2015, p. 28). Without diagnostic control systems, it is impossible to determine whether intended strategy was realized as it requires measuring results and comparison to prior plans and goals (Simons, 1995, p. 155). Strategy as a pattern, which has heavy emphasis on interactive control, allows identifying new opportunities for emerging strategies (Kruis et al., 2015, p. 28). Strategy as position has emphasis on boundary controls which helps to recognize unwanted behavior and keep desired position (Kruis et al., 2015, p. 28). The intention is to ensure that realized strategies stay within the acceptable strategic domain (Simons, 1995, p. 156). Lastly, strategy as a perspective has emphasis on beliefs control and focus is on deep ingraining of vision and organizational culture (Kruis et al., 2015, p. 28). Belief systems inspire both intended and emergent strategies (Simons, 1995, p. 155).

Based on LOC conceptualizations, Henri (2005, pp. 531-533) combined both diagnostic and interactive use perspectives of MCSs when he studied how they contribute to the creation and maintenance of four main organizational capabilities including innovation, organizational learning, market orientation and entrepreneurship. Diagnostic use refers to the traditional feedback-type of role in supporting intended strategy implementation by directing and monitoring performance against predefined targets. Interactive use refers to the active MCSs role which involves constant dialogue and managerial attention around control information that can ultimately stimulate innovation and new emergent strategies. Consequently, balanced use of both diagnostic and interactive controls can create a dynamic tension that can contribute positively to organizational performance

(Henri, 2005, p. 548). However, finding the right balance between prediction and innovation has been constantly criticized as an unclear concept within the literature (Kruis et al., 2015). Bisbe & Otley (2004) found some evidence that in high innovating firms, low use of interactive control systems resulted in increased product innovation, and in contrast, in low innovative firms, higher use of interactive control systems can increase performance and the number of innovations. Furthermore, when comprising all four levels to the question of balance, Kruis et al. (2015) support Simons' original theorizing, however they emphasize that balance within LOC framework occurs through multiple combinations that depend on the organization's contextual and strategic challenges. Nevertheless, according to Mundy (2009, p. 500), the role of balance in developing the dynamic tension between controlling and enabling use of MCS is lacking research. Finding a balanced role can be difficult for organizations for a various reason. The main reason relates to the inability to know in advance of what constitutes balance, and individual and organizational attributes such as trust, autonomy, power relations and professionalism plays a key role in the capacity of balancing controlling and enabling use of MCS (Mundy, 2009).

2.2.3 Adaptation and development of MCSs

There are various reasons why organizations need to adapt and develop their MCSs, but it is usually related to changes in organizational needs and capabilities or changes within the environment the organization operates on. Chenhall (2003, p. 130) pointed out in the beginning of the century, that MCSs that are valid today may lose validity over time, and this has been evident with the developments especially in information technology. According to Huikkola et al. (2017), when developing MCSs and its linkage to strategy, the starting point is to evaluate the current status of the firm's MCS, i.e. how accurate and interactive the systems are. Though technical developments have significantly increased the flexibility of MCSs from technical perspective (Ahrens & Chapman, 2004, p. 280), adapting existing MCSs can be complex and demanding process in practice. Otley (1999, p. 381) argues that re-designing control systems without a comprehensive

knowledge of how the business works may lead to a disaster. Prior research has provided limited information of the issue. For example, Skærbæk & Tryggestad's (2010) study about the role of accounting devices in performing corporate strategy could not answer what strategic reframing requires in terms of work, investments and needed equipment. In addition, they note that further work is needed to understand links between accounting systems and between systems and users. However, Fagerlin et al. (2025) have recently studied MCSs adaptation in sustainability innovation strategy implementation context whereas they followed the journey of introducing and repurposing control mechanisms to address emerging strategic and operational needs. Instead of building a fully new control infrastructure, their case company adapted the existing MCS by reshaping the role, use and meaning of its mechanisms without altering the formal design or structure of MCS (p. 2). It allowed the organization to integrate new metrics and priorities while preserving its control structure which is noted to be potentially critical aspect when strategic reorientation needs to be rapid, but resources or time constraints does not allow for a radical control redesign (p. 8).

Accounting information system (AIS), or business intelligence (BI) systems and accounting analytic capabilities play important role in enabling the design and development of MCS, especially through interactive controls as together they direct behavior and performance (Varma et al., 2025). These capabilities are related to the use of advanced data optimization, simulation and visualization of multiple data sources, and the quality of them has strong impact on organization's performance (Varma et al., 2025). AIS also strengthens internal controls that can be seen as an enabling lower sub-level of MCSs control levers, and thus these must be given attention within the MCS adaptation and development context. AIS provide financial and non-financial information required in decision-making, and therefore, Varma et al. (2025, p. 10) found direct positive relationship between information system investment and firm performance. Similarly, Elbashir et al. (2020, p. 1777) define business intelligence systems as critical enabling technology for integrated MCS, and which lead to better information and thus, organizational performance. BI systems can provide real-time information for MCSs related to for example

budgeting, KPIs, activity-based management and product costing, and they facilitate the integration of other databases and information systems such as ERPs into integrated MCS and supporting business analysis (Elbashir et al, 2020, p. 1777). Thus, they illustrate this use of business intelligence system's capabilities within MCS context as BI-enabled MCS (p. 1780). In addition, quality of business intelligence systems and capabilities to the use of artificial intelligence, machine learning and big data improves the diagnostic and interactive dimensions of MCSs (Varma et al., 2025). However, key challenge among organizations remains as identifying and applying appropriate techniques and tools and the interplay of humans and machines as well as building competences among finance function to develop their analytical competences (Möller et al., 2020). Important finding that can be connected to MCS development is that the key to maintaining competitive performance during uncertainty lies in the ability of the managers to process vast amount of data and ideas, and controlling the flow of relevant information (Varma et al., 2025).

Dynamic capability theory can be closely connected to the MCSs development and adaptation context as organizations need different capabilities to configure and use their MCSs effectively. Teece et al. (1997, p. 516) have defined dynamic capability as "the firm's ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments". Elbashir et al. (2020, p. 1778) argue that the interaction of the organization's information systems and BI-enabled MCS generates dynamic capabilities which enables them to integrate, build and reconfigure activities to address changing business environment, allowing MCS information to be assimilated into routines and processes. In the end, the extent of the capability generation and integration determines the variation in organizational performance.

Regarding the MCSs development, it is important to acknowledge that different systems complement each other through data synergies, information systems such as ERPs provide large amounts of data for BI systems that make sense of the data through processing and visualizing it, and finally provide value for integrated MCSs and operative decision-

making (Elbashir et al., 2020). Elbashir et al. (2020, p. 1808) note that achieving desired level of value of IT related investments, management must make clear strategic choices that drive the synergies between different technologies and systems. The same can be seen to apply to adapting MCSs within organizational transformation, management must make choices that what capabilities and functions of various systems will be adapted and developed to answer the changed business needs. Additionally, it is evident that digitalization level of the organization and their systems impact the value creation potential. Möller et al. (2020) have raised a question in their editorial related to digitalization in MA and controlling, that which MCSs can be used in a digitalized business model context or how MCSs should be adapted in a digital context.

Prior studies have not investigated the role of accounting analytic systems' capabilities interplay with individual levers of MCSs or the nature of the interplay (Varma et al., 2025, p. 1). At the same time, studies also suggest a potential conflict between formal accounting controls and successful strategy development (e.g. Aaltola, 2019; Abernethy & Brownell, 1999, Roberts, 1990). Aaltola (2019, p. 325) found that MCSs and accounting can restrict individual strategic thinking and even discourage them to use accounting to assist in strategy formation or quantifying strategic intentions. As illustrated in figure 5, Aaltola (2019, p. 339) identifies both potentials and pitfalls related to the use of accounting and control systems in strategy formation and business development context. Accounting data can be useful in constructing the strategist's world picture by enhancing understanding of the organization's financial position, strategic resources and competitive environment, however at the same time it can hinder strategic mindset by creating overemphasis on financials and short-term returns which might reduce innovations and create a barrier towards suggesting new strategic initiatives. Accounting contributes also to analytical thinking and to the need for conviction through analyzing the feasibility of strategic plans and choices. Accounting data is also needed in communicating the strategic initiatives. Pitfalls are related to the inability to quantify the outcomes of planned strategic initiatives in advance and short-sightedness that too strong focus on numbers can create, resulting in refrainment from strategic development actions. Furthermore,

numbers are often used selectively based on one's intentions, as positive effects are usually over estimated and negative effects underestimated. Overall, according to Aaltola (2019), accounting is a paradoxical force within strategy work, as it has dual role in enabling and constraining development. Managing this duality is essential for organizations that seeks to adapt and evolve their strategy and MCSs. From a LOC perspective, this duality may reflect the tensions between different control mechanisms.

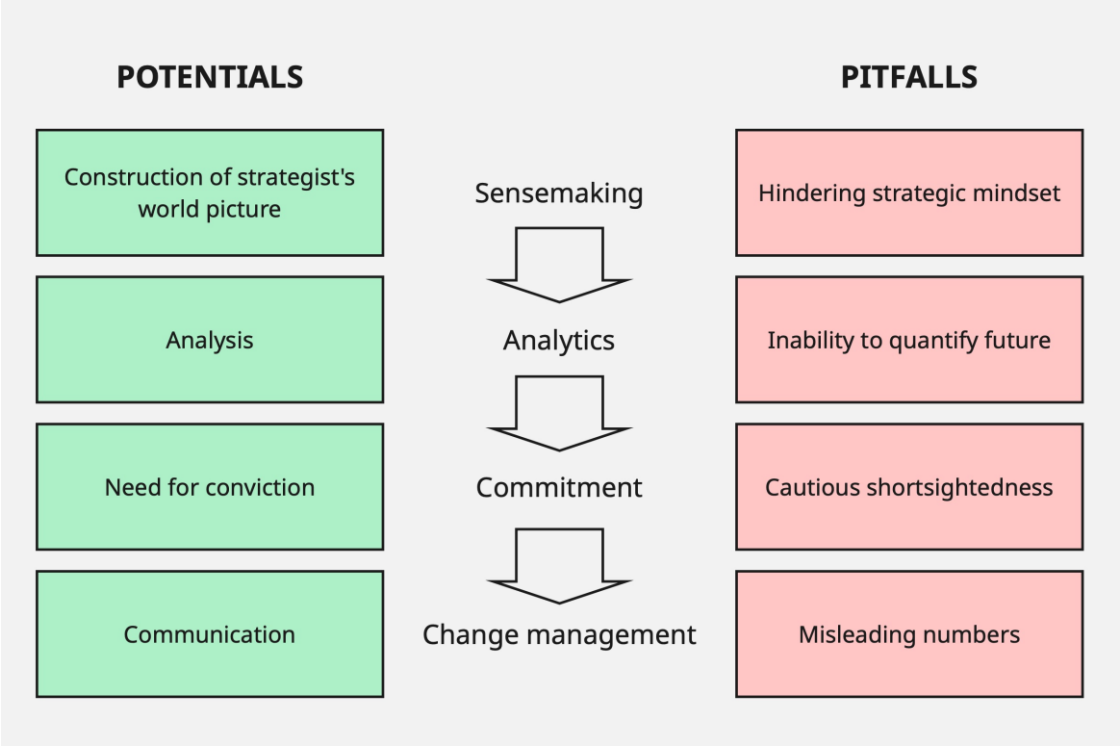

Figure 5. Potentials and pitfalls of accounting in strategic thinking. Adapted from Aaltola (2019, p. 339).

2.3 MCSs role in strategic change

There is a stream of management accounting literature that has studied the role of MCSs in strategic change (e.g. Abernethy & Brownell, 1999; Abernethy et al., 2021; Biswas & Akroyd, 2022; Coller et al., 2018; Davila, 2005, Huikkola et al., 2017; Kober et al., 2007; Sharma & Lowe, 2023; Simons, 1994; Simons & Davila, 2021). Already in 1994, Simons raised a question of how top managers use formal control systems to formulate and

implement new business strategies. After that, various studies have focused on the complex and dynamic role of MCSs that provide the ability to learn about possible alternatives, ultimately meaning that MCSs can facilitate strategic change effectively from formulation to implementation. As seen in figure 6, Huikkola et al. (2017) have illustrated how MCS generated financial intelligence can support firm's creation of dynamic capabilities which are central to the strategic renewal. MCSs provide the means to access and analyse historical data, real-time data and create predictive analysis about the future. This creates dynamic capabilities that allow for sensing and seizing new business opportunities and also reconfiguring and modifying resources. Furthermore, Davila (2005) explains that MCSs have an important role in providing structural framework for refining current strategy, as within the framework, employees' day-to-day actions can embrace incremental innovations. In addition, MCSs provide the context for creation and growth of radical innovations and support building new competences needed in strategic change (Davila, 2005, p. 47). However, MCSs must be designed in a way that they capture learning. Abernethy & Brownell (1999) studied how management accounting related diagnostic and interactive control systems can act as learning machines in formulation and implementation of strategic change. They focus on the relationship between diagnostic and interactive style of budget use and strategic change, and found enhanced performance if budgeting is used interactively as it serves better the needs for learning and adaptation during strategic change (p. 199).

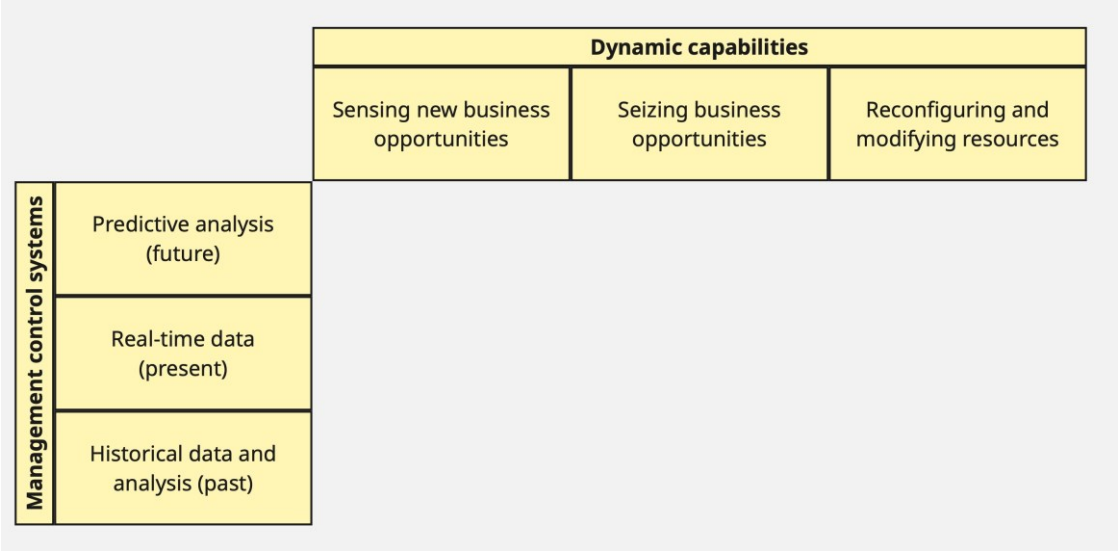

Figure 6. How MCSs and financial intelligence facilitate a firm's strategic learning and renewal process. Adapted from Huikkola et al. (2017).

MCS implementation, which generally means how intentions and plans are put into action, has important role in strategic change. More specifically Coller et al. (2018, p. 154) define MCS implementation as the process where MCS is made active and effective through developing, adapting and bringing MCS into use in a specific setting over time. Anderson (1995) has defined six different phases of implementation, including initiation, adoption, adaptation, acceptance, routinisation and assimilation. Coller et al. (2018, pp. 143-144) further elaborate that two first phases consider how MCS is designed and what are the most appropriate MCSs in the specific organizational context. In initiation phase, organization's internal needs and competitive external environment must be understood. In adoption phase, chosen solution with appropriate control mechanisms that fit the strategy will be adopted to the organization. Next, adaptation phase allows the organization to adjust the original design as they encounter unforeseen aspects and learn during the process. Acceptance phase includes routinization of MCS use and maintenance. Finally, assimilation phase is reached when MCSs are used and integrated to other systems. Coller et al. (2018) have taken software development life cycle approach which is further divided into waterfall and agile MCS implementation that have differences on the implementation phases. Agile MCS implementation is a flexible and continuous process to transform the design and distinguishing between phases is difficult. In contrast,

waterfall implementation is linear and usually only minor changes are done to initial MCS and strategy design along the process, and it is typical to contingency approach. Therefore, the authors describe that it may result in loss of relationship between MCS and strategy as refinements to the designs are done separately (p. 157). On the other hand, agile implementation emphasizes tight relationship between MCS and strategy whereas constant confrontation creates coordinated evolution and continuous redesign of strategy and MCS together, reflecting each other in all phases. Furthermore, what the Coller et al. (2018) study did not answer is what determines which implementation approach organizations display.

Sharma & Lowe (2023) have studied how strategic objectives can be mobilised through MCS practices and what extend are they implicated in strategy process. They found in their study related to privatisation that MCSs reduced tribal loyalty as it encouraged employees to behave according to their KPIs that were derived from the newly induced BSC (pp. 243-245). They highlight the importance how the process of strategy change through MCSs is influenced by the change agents including the CEO and personnel from other levels who introduce different MCS practices (p. 249). As said, new appointments of employees in key positions are common part of organizational transformation. New managers are often equipped with fresh new ideas, visions and strategies. MCSs have an important role in implementing their new agendas. As seen in table 2, Simons (1994) studied how newly appointed managers use formal control systems as levers of strategic change and renewal. Managers were divided into two clusters, first one included those who intended to make fundamental and revolutionary changes to existing strategy, and the second one included those who sought to maintain parts of the current strategy but saw some evolutionary changes to be made. From the table, it is possible to distinguish the way how new managers in two different scenarios used MCSs during the transformation. Despite the different paths and challenges, it became evident that MCSs had an instrumental role in advancing the strategic renewals, and they can act as an agent for intended and emergent changes (Simons, 1995, p. 185).

Table 2. How newly appointed managers use formal control systems as levers of strategic change and renewal. Adapted from Simons (1994).

Phase	Cluster 1: Revolutionary	Cluster 2: Evolutionary
Initial situation	Previous strategies had failed, need for radical change	Continue a trajectory of profitable growth, however changes are needed to remain competitive
Early months	See everything within the company, travels, meetings, etc. Little changes to the design or use of formal systems at this point	In depth economic analyses, understanding strengths and weaknesses of the business
First year	Three main demands for MCSs: **Overcoming organizational inertia** • Replace key persons whose behavior does not fit with the new strategy • Belief and boundary systems used to create impetus for new agenda (e.g. new mission statements, codes of conduct) • Specify behavior that is not tolerated anymore through boundary systems (e.g. planning guidelines and monitoring systems) • Strong communication of the beliefs and boundaries, workshops, meetings and monitoring the compliance **Structuring and communicating performance expectations** • Gain support from superiors by using diagnostic control systems (e.g. formal measurement and feedback systems) to structure	Three main demands for MCSs: **Forcing the organization to feel uneasy with current performance** • Communicating the agenda through speeches, newsletters, audiovisuals • Established new diagnostic financial control targets at more demanding levels (generic, not related to the strategy) • Reinforce a sense of urgency through incentive compensation systems that focus on the new diagnostic control system targets • Adjusting the diagnostic control systems to be able to monitor new performance targets • Heightening expectations to force organization to rethink strategies capable of achieving the results **Teaching the agenda of strategic renewal for the organization**

	and communicate the agenda • Monitoring new KPIs as a top priority, hired consultants to design and implement new control systems and hired new CFO to monitor these • Use of renewed diagnostic control systems to demand accountability from subordinates **Gaining organizational allegiance to the new agenda** • Alteration of remuneration and incentive system	• Educating the organization formally and informally about new strategy • Introducing personally by the new managers greater formality to diagnostic planning process, e.g. new planning processes, lengthening planning horizon • Requesting subordinates to create new developing activities in supporting new strategic agendas **Testing to ensure that agendas were being altered to allow the implementation of new strategic directions** • Change diagnostic control system processes to allow the managers to test their subordinates if the themes of strategic renewal were incorporated to the implementation plans
Second year	• Focus on gaining deeper understanding of what achieving new strategic objectives requires • Managers focused their personal attention to one control system that became highly interactive (related to their vision of future). E.g. installing a new profit planning system, reviewing and discussing about the data monthly from bottom to top • Vision, strategy and formal control systems were	• Shift in challenges, concerns became similar as with cluster 1 • Focus personal attention to interactive control systems similarly with cluster 1

	refined and reinforced, mostly based on what was learned through the interactive control systems. Diagnostic measurement systems were refined based on the first year's results	
Main differences with MCSs usage	• Can claim past strategy as a failure • Incentives subjective in order to capture allegiance to new strategy	• Not able to criticise past strategies • Rely on pursuing more demanding financial targets • Incentives linked to financial results
Main similarities	• Systematic attempts to foster learning and unlearning • Interactive systems created for deeper learning about strategic uncertainties	• Systematic attempts to foster learning and unlearning • Interactive systems created for deeper learning about strategic uncertainties

Kober et al. (2007, p. 427) found in their study that interactive control systems not just help to facilitate the strategic change, but they also change to match the strategy, and thus *"MCS both shapes, and is shaped by strategy"*. Similarly, Simons (1995, p.117) states that change in strategy should result in a change of interactive control systems, and it is important to define as soon as possible which systems will be used, otherwise the organization's innovation and ability for the adaptation will suffer. During the change, also a lack of strategic vision may cause issues with choosing the interactive controls and lead to confusion among employees. Biswas & Akroyd (2022) have studied the design and use of MCSs, more specifically which tools top management uses to support strategic change and their effect on organization members operational practices in a context of strategic change from closed to open innovation. In their case study, they found that the MCSs were designed and used to deal with challenges arising from the strategic change, and even though in their case the implementation of strategic change was not successful and the design and use of MCSs by managers does not always result in effective change implementation on the operational level, they noticed that MCSs can still assist in changing the perspectives of employees over time especially if high levels of resistance towards

strategic change appears. Even though the strategic change implementation failed, the organization was able to enhance their old practices related to closed innovation and that still contributed to achieving organizational goals. Similarly, Abernethy et al. (2021) studied the influence of performance measurement in enacting effective strategic change. They found that performance measurement is a critical construct of effective implementation of strategic change as it helps to translate new strategic priorities into operational change across the organization (p. 653).

2.4 Theoretical framework

The literature review in previous chapters discussed organizational transformation, management control systems and strategy research. In figure 7, conceptual framework about the MCSs role in organizational transformation is constructed. MCSs have a central role in the framework together with the strategy process perspective which illustrates the idea that MCSs both shape strategy and is shaped by strategy (Kober et al., 2007). The framework serves as a guide to understanding the role of MCSs in a real transformation case and uses the Simons' LOC framework as a foundation for the analysis.

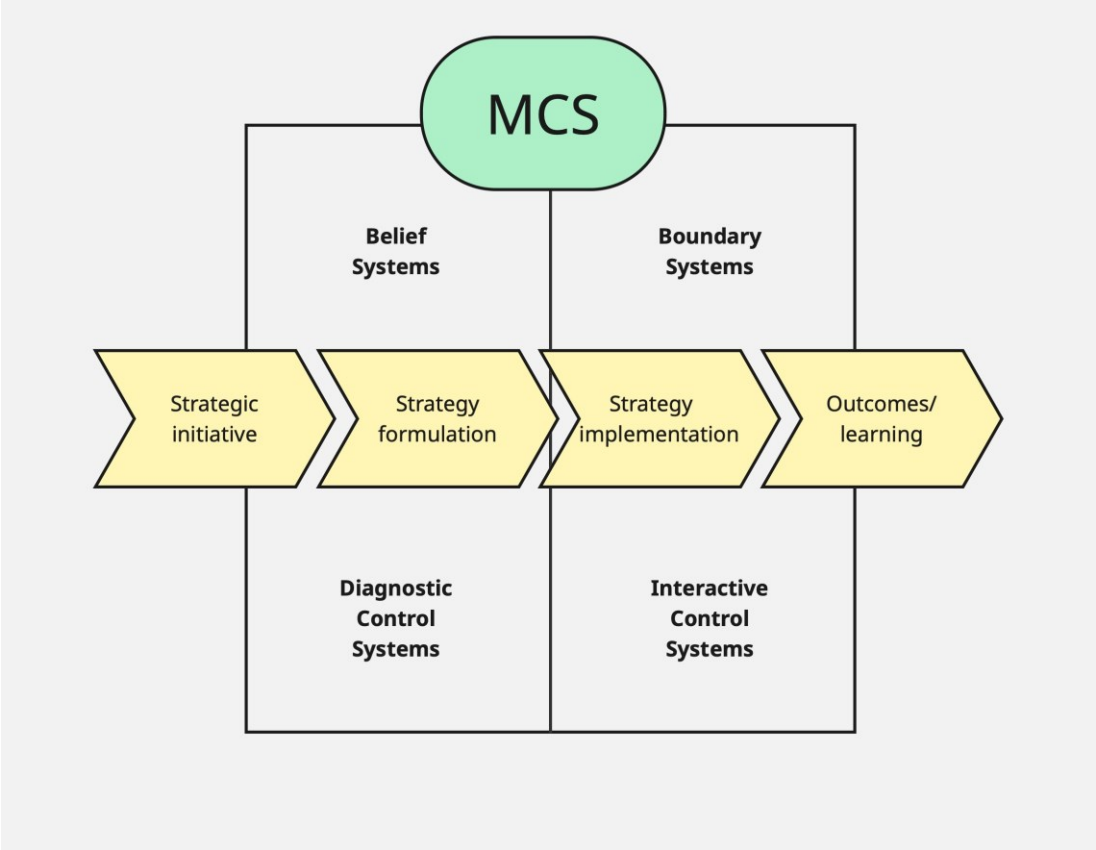

Figure 7. Theoretical framework on the role of MCSs in organizational transformation.

3 Methodology

This section introduces the methodological choices of this thesis. Chapter 3.1 discusses the research approach and answers why qualitative case study has been chosen as the research method. In chapter 3.2, case company and methods for data collection are described. Chapter 3.3 provides information about the data analysis methods for conducting qualitative content analysis and lastly, chapter 3.4 discusses the quality and validity of the data.

3.1 Research approach

According to Gioia et al. (2013, p. 19), good research approach depends on a well-specified and rather general research question. This study attempts to answer what is the role of management control systems in organizational transformation by using qualitative data as primary data source. Qualitative research data uses non-numerical data, and it can be collected in various formats such as speech, text or videos (Saunders et al., 2007, p. 145). Therefore, qualitative research method, and case study more specifically, is especially suitable for exploring and understanding complex social phenomena as it allows the researcher to preserve and investigate the special characteristics of a real-life event (Yin, 2009, p. 4). Furthermore, single case study approach is chosen because the target is to understand the dynamics present within a single setting (Eisenhardt, 1989, p. 534), specifically, what is the role of MCSs in organizational transformation within a large, multinational listed company. Single case approach is especially suitable for exploring organizational transformation as it is unlikely that any other organization would operate in exactly same environment with the same organizational design and management control systems. However, this specific context-based approach is also acknowledged to be one of the case studies' weaknesses as the results are not usually generalizable, however, it needs to be noted that the goal is to expand and generalize theories instead of creating statistics (Yin, 2009, p. 15).

There are three different acknowledged approaches for theory development, including inductive, deductive and abductive approaches. In inductive research approach, the idea is to build theory from cases, and the approach is especially suitable when there are no existing theory or research that provides a sufficient answer to the research question and there is a need to gather qualitative data to offer insights into complex social processes (Eisenhardt & Graebner, 2007, p. 26). In contrast, deductive approach tests existing theories, and within this research setting, it would not reveal alternative explanations due to its rigid methodology (Saunders et al., 2007, p. 119). While inductive approach provides realistic interpretation of how the interviewees perceive their experiences and what kind of meaning they attach to events related to the organizational transformation and MCS role within it, however the analysis of this study is theoretically sensitized by the existing Simons' LOC framework rather than being purely inductive (Braun & Clarke, 2006, p. 86). Therefore, abductive approach can be seen as a hybrid logic which combines elements of both inductive and deductive approaches and uses them as an iterative process whereas the researcher can simultaneously combine theory and empirical insights (Dubois & Gadde, 2002, p. 554). Consequently, this study is inspired by the Gioia-style data structuring approach for inductive theory building, but at the same time, the analysis follows an abductive thematic logic (Timmermans & Tavory, 2012) that combines inductive coding with iterative theoretical engagement (Dubois & Gadde, 2002).

3.2 Case company and data collection

The case company of this study is a listed multinational technology and manufacturing company. The company's headquarters are in a Nordic country. In order to ensure confidentiality and anonymity, neither the case company's nor interviewees' names and exact roles are revealed. The organization has recently undergone a major organizational transformation that included strategic renewal and organizational restructuring. The restructuring considered the reduction of over 1000 white-collar roles globally, and the goal was to improve profitability and competitiveness. Though the implementation of new strategy and organizational design has progressed steadily, the process is still

continuing especially related to tuning the design of MCSs to align with the new strategy and structure. It was seen from Simons (1994) study that the strategic renewal process takes time and different focus areas within MCSs are considered when moving forward in the transformation.

Renewed strategy was presented for the years 2025-2028, and it has been actively communicated across the organization, and new management teams have focused on getting to know their subordinates and defining new ways of working. The most significant changes in the new strategy are related to implementing two new business segments that each have their own missions and strategic priorities. In addition, new financial targets have a strong role within the organizational transformation.

In qualitative research, data can be divided into primary and secondary data. Primary data for the study was collected through semi-structured interviews. According to Eisenhardt & Graebner (2007, p. 28), interviews allow for efficient and rich gathering of empirical data, especially suitable for episodic and infrequent phenomena. However, they note that the main challenge within interviews is related to the data bias due to the retrospective sensemaking. It is suggested that interviewees are diversely chosen to represent different hierarchical levels, functions, geographies and groups within the organization to mitigate this bias (Eisenhardt & Graebner, 2007, p. 28). Interviewees were chosen based on recommendations and researcher's own interpretation of suitable candidates within the organization. Interviewees' roles were confirmed to have a sufficient level of decision-making authority within the organizational transformation process, and ability to impact the design of MCSs. They represent finance and HR functions on top management level but still have different positions in hierarchy, and they differ in age, background and gender. Total of six interviews were conducted, and all lasted about one hour. The division, roles and the length of the interviewees are presented in Appendix 1.

Furthermore, semi-structured manner of the interviews creates flexibility to ask questions that arise during the interview when the informants can lead the researcher in the

investigation (Gioia et al., 2013, pp. 19-20). Leaving room for discussing emerging aspects is important as the concept of management control systems is very broad and the interviewees could interpret the role of it from different viewpoints. In addition, if they are not familiar with the MCS concepts, the conversation likely reveals relevant information in an inconsistent manner. At the beginning of the interview, the interviewer briefly defined what MCSs are and provided the most common examples of control levers during the interview. The interviews followed the predetermined set of questions, however additional questions were asked based on interviewees' responses and some questions were skipped in order to avoid possible repetition in the answers. The list of interview questions can be found in Appendix 2. The interviews were conducted in Finnish language through Microsoft Teams calls as it ensures reliable quality for the interview recordings and efficient transcription method. Two of the interviews were conducted face-to-face, but Teams was still used to generate the transcripts. Permission to record was received from all interviewees. The interviews took place from April to May 2026. Transcripts were carefully reviewed and edited word-by-word by the author to correspond with the video recordings. Microsoft Copilot was used to translate the transcripts from Finnish to English language in order to use quotes in the findings section of the study.

Secondary empirical data sources such as externally published materials related to the strategic renewal and restructuring program were used to verify timespan and milestones of the organizational transformation.

3.3 Data analysis

Data analysis process is conducted by using a Gioia-style data structuring method, which is essentially an interpretive, systematic inductive approach that captures experiences from the people living the experience (Gioia et al., 2013, p. 16). The method relies on the assumptions that the organizational world is socially constructed and people constructing those realities are "knowledgeable agents" who can explain what they do, why

they do and how they do it (p. 17). This allows the researcher an opportunity to discover new concepts in contrast to just confirm existing knowledge. Essentially, by using the method, data analysis is conducted structurally, and researcher can identify patterns in the data, formulate those in theoretically relevant terms and it enables systematic evidence presentation and demonstrates connections between data and emerging concepts (Gioia et al., 2013, p. 17). As previously discussed, the analysis of this study combines this inductive coding logic with iterative theoretical engagement, and even in the Gioia method, it is acknowledged that researchers are never completely uniformed about earlier work (Gioia et al., 2013, p. 21).

According to Gioia et al. (2013, p. 20) and as represented in figure 8, 1st order concepts are categories that have emerged from the interviews, and which are labelled in a way that retains terminology used by the interviewees. Next, 2nd order themes are constructed based on analysis of the emerged 1st order concepts and grouped at a more abstract and theoretical level that describes the observed phenomena. Finally, the 2nd order themes are even further combined as high-level aggregate dimensions. All in all, these form the data structure of the study that systematically illustrates the research findings and quotes presented in chapter 4. In chapter 4.4, summary of the findings is presented in a table based on the data structure and connecting interview quotes as a proof of analysis.

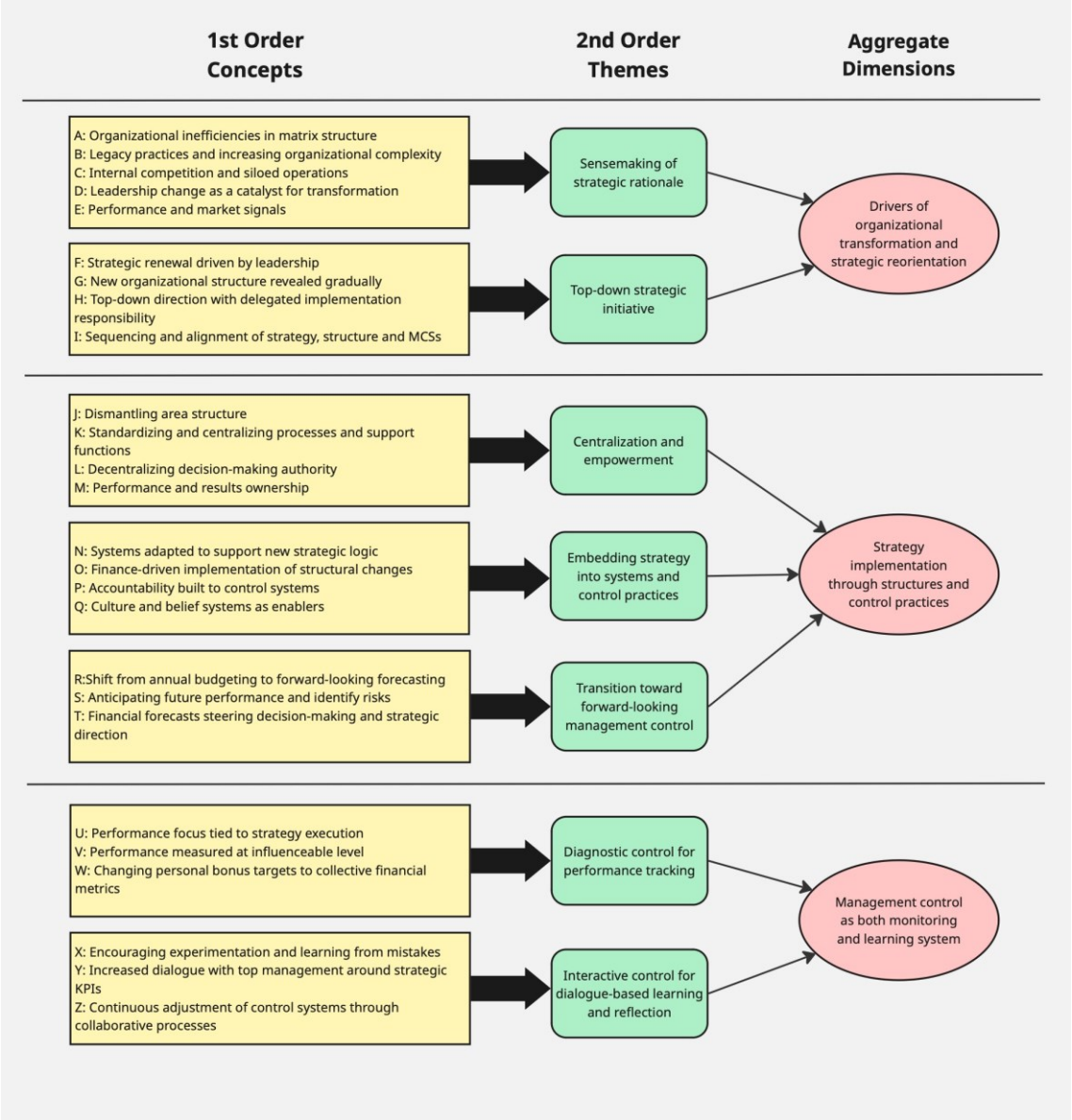

Figure 8. Data structure for the study**.** Adapted from Gioia et al. (2013, p. 21).

3.4 Assessment of the quality of the data

Reliability of the research means that the study provides consistent, transparent findings and is repeatable, meaning that a different researcher should be able to reach similar results with same methodological approach (Saunders et al., 2007, p. 149). On the other hand, semi-structured interviews conducted in a certain time are not necessarily supposed to be repeatable as the situations and data evolves. Nevertheless, transparent and

logical research process increase the reliability of the study. All interviews were recorded and littered word by word. Clear chain of evidence is presented in the findings section by using direct quotes to illustrate interpretations. Even though semi-structured interview process was followed, every interview followed the same structure in terms of themes and questions. However, some questions were occasionally skipped to avoid repetition, and additional questions were asked based on the responses. All of the interviewees were provided the same general instruction about the topic.

There are also other aspects that can affect the reliability and quality of the data such as different forms of subject or participant bias and interviewer or interviewee bias. Participant bias is significant problem as it means that the interviewees might respond in a way that they think their bosses want them to say, or how they have been taught to discuss about the subject (Saunders et al, 2007, p. 149). Interviewer bias is related to interviewer's comments, tone and non-verbal behavior that might impact how the interviewee responds, or how the interviewee interprets responses (Saunders et al., 2007, p. 318). The fact that the author is employed by the case company, can result in a bias caused by her own interpretations and observations of the organizational transformation. On the other hand, the employment might allow the interviewees to express their thoughts and opinions more freely compared to an external interviewer.

Interviewees received the interview questions in advance and were able to interpret a basic understanding of the theme of the interview. However, most of the interviewees did not prepare for the interview but the interviews were long enough for them to explain and think back the whole transformation process. Interviewee bias might affect in a way that interviewees do not wish to reveal all relevant information due to sensitivity or lack of empowerment (Saunders et al., 2007. p. 318). Credibility of the interviews was ensured by convincing the interviewees about sustaining their anonymity and providing privacy notice letter for them. This enhanced the interviewees' ability to express freely their thoughts, opinions and insights. Some of the interviewees referred to non-disclosure agreements (NDAs) signed in the beginning of the organizational transformation,

but it did not seem to impact their responses related to the studied topic. However, it is acknowledged that the interviewees might have left out some information based on the signed NDAs.

4 Findings

This chapter describes the findings of the study based on the data gathered from the interviews. The subchapter section logic follows the data structure presented in chapter 3.3. Firstly, the findings are presented in relation to the first aggregate dimension, drivers of organizational transformation and strategic reorientation. The following subchapters are constructed based on the 2nd order themes. Similarly, findings related to second aggregate dimension, strategy implementation through structures and practices, and third aggregate dimension, management control as both monitoring and learning system are presented with the corresponding 2nd order themes as subchapters. Lastly, summarizing chapter illustrates the findings and data structure together as a table.

4.1 Drivers of organizational transformation and strategic reorientation

The analysis of interviews identified drivers of organizational transformation and strategic reorientation as a central category. Across the interviews, transformation was consistently framed as strategic response to organizational inefficiencies and changing leadership priorities. It became evident that both employees and investors thought that the change was needed. The findings reveal two key themes, sensemaking of strategic rationale and top-down strategic initiative. Together these themes illustrate how employees interpreted and legitimized the need for the transformation based on their own experiences and how the whole transformation process went through the organization on different hierarchical levels.

4.1.1 Sensemaking of strategic rationale

Interviewees actively engaged in sensemaking process to construct explanations why the transformation was necessary. Sensemaking theme arose as interviewees emphasized

that they are speculating and interpreting the need for transformation from their own point of view alongside with the publicly announced reasoning.

Across the interviews, the organizational transformation was consistently named to be driven by the need of clearer accountability, faster decision-making and improved strategic focus. The organization was previously structured as a matrix, and the interviewees described that it had been heavy, fragmented and slow, particularly due to overlapping responsibilities between regions and business lines.

> *"When we previously operated in a matrix, where we had area organizations and business line organizations, the organization was quite big and quite heavy - - decision-making speed and clarity, was not necessarily at the best possible level." Interviewee 1.*

> *"The existing structure was seen from different stakeholder point of view as somewhat rigid and slow in responding to current business needs." Interviewee 4.*

> *"Overall, the matrix organization was very inefficient. So the original idea there was that in the areas there would be only sales capability. But that has deteriorated over the years, and there had become delivery capability and all kinds of other things there as well. So then the question of who is responsible for what, and who has authority to make which decisions – that had become blurred over the years." Interviewee 5.*

Maturity of the organization and the long history of previous top management team were common reasoning for the organizational inefficiency that had been developed over time. Practices and processes had been the same for years, which has led to a situation where renewal and organizational agility had stagnated. In addition, during the years, the size of the company had been growing significantly both organically and through acquisitions, however, the structure had stayed the same.

> *"Well if we think about these kinds of practices then, it is that the company has operated for a long time in a certain way, and strong processes and ways of working have been developed, every year strategy has been done in a certain way, every year annual planning has been done in a certain way, decisions, so in a certain way the whole control system has been done in a certain way for ten years, so that of course slows down that strategic change." Interviewee 6.*

> *"There had been some acquisitions - - but those were integrated on top of the existing structure as pieces. - - The company has basically doubled in size, and there have been also many smaller acquisitions. So the structure had started to become more complex and, in a way, somewhat bloated. And especially in the current market situation and at this level of company maturity, a different structure was needed." Interviewee 4.*

Interviewees also explained that within the old organization, the competition between different business lines and regions had affected the overall efficiency and internal potential exploitation negatively. Breaking down silos and applying lifecycle thinking within the organization appeared as the cornerstones for strategic reorientation. So called lifecycle model enables the organization to combine the benefits of new equipment sales with services and maintenance within the same business area and thus, avoids sub-optimization between the parties that serve the customer at different lifecycle phases.

> *"Earlier there was always this competing dynamic between business and region. There were this strange historical tension and competition. - - So basically the fact that [different business lines] had been so separate, so siloed in the previous way of operating, that as a company we weren't really utilizing the full potential." Interviewee 3.*

> *"The idea is that decisions are made from lifecycle perspective – what is best for us and the customer over the entire lifecycle. For example, instead of one organization rejecting a deal because it doesn't make sense for its own business, while another loses future service potential – now the whole picture is considered." Interviewee 4.*

Despite the operational and structural challenges within the old organization, the fundamental driver for the transformation to truly happen was seen to be related to the earlier appointment of the new CEO. Interviewees saw that things had been done in the same manner for a long time and thus, appointment of new CEO started a new chapter for the organization. Bringing the CEO from outside the company was interpreted to be a calculated decision by the board of directors as an outsider was seen to have better competences to act as a change leader.

> *"That is where it started. You get new CEO, they renew the strategy, and through that the organization changes, that is the order in which things actually happened. - - I would argue that whenever the CEO changes, they shape the organization to look like how they want to lead it." Interviewee 1.*

> *"Of course we also had new leadership which usually wants to shake the tree a bit, so to speak" Interviewee 3.*

> *"I believe one reason for bringing in a new CEO from outside was precisely to drive this kind of structural change. It's generally easier for someone external to lead major transformations – they don't have the same historical ties or existing relationships with the leadership team. So in that sense, an outsider can act more freely as a change leader." Interviewee 4.*

Furthermore, one of the interviewees speculated that it is likely that the board of directors had already built a new vision and direction for the organization and then used the new CEO as a tool for the implementation.

> *"I think a new CEO is a tool to implement the board's direction. I don't think it goes the other way around – that someone just decides to change the CEO and then sees what they come up with. Rather, the board likely has a clear view of what is wanted and needed, and then chooses a person who can implement that vision. Of course, it is not completely clear at that point, because the CEO then starts building how the direction is actually implemented." Interviewee 6.*

Another interesting aspect to interpret the strategic and structural reorientation by one interviewee was sensemaking of general trends impacting the organizational transformation. The shift from business unit and region-based matrix structure to business area structure was seen as a common industrial trend that enables organizational structure to fully support the business, customer and product context.

> *"And more broadly, I think organizational models and management approaches also always follow certain trends. That companies are going to certain direction. Like if you look a what companies have been doing recently, many have made similar types of organizational changes. - - at least I feel like there are certain trends that goes through organizations and makes organizations to resemble each other a lot." Interviewee 4.*

Interviewees also linked transformation to performance-related signals, particularly stagnation in growth and profitability. Financial performance is not seen as the sole trigger for the need for the transformation, however as a listed company, one interviewee emphasized that everything ultimately is related to profitability and creating value for shareholders. Additionally, customer feedback regarding slow responsiveness reinforced the perceived need for change.

> *"If you think about what comes out of the control systems, the in practice it culminates, in my opinion, in how the company grows. How the company's profitability develops and what the company's cost level is. And closely related to that as part of control systems are also the estimates, that if we continue with this business structure and these costs, then what kind of profitability level we will reach. And I remember seeing some slides also in external presentations where it was referred to that profitability development had levelled off." Interviewee 1.*

> *"Everything we do is guided by profitability, and also by share value. In that sense, I would say that very strongly the need to renew strategy and make organizational changes comes from there". Interviewee 3.*

Furthermore, it was also mentioned by one interviewee that strategy formulation is influenced by the market situation which is seen to guide investments and the direction of the organization.

> *"But then the new strategy is also influenced by the market – what needs are and where it is seen worthwhile to invest." Interviewee 6.*

4.1.2 Top-down strategic initiative

After the new CEO was introduced within the organization, in retrospect, the transformation process can be seen to have begun with introducing the concept of psychological safety across the organization. Shortly after, the CEO released that the strategic renewal work will begin. Strategy renewal work was conducted within various leadership teams

focusing on different parts of the business. The strategy work included common tools such as analysis regarding internal and external environment, position and opportunities. Additionally, strategy work team collected feedback and insights from employees through a poll. Consequently, the strategic initiative was closely tied to leadership-driven strategic renewal rather than bottom-up emergence.

> *"That is where it started. You get new CEO, they renew the strategy, and through that the organization changes. That is the order in which things actually happened." Interviewee 1.*

> *"We received a new strategy, and when that new strategy was published, you could already see from it that things would need to be done differently. The strategic focus areas changed as well." Interviewee 3.*

Couple of months after the strategic renewal work was announced to start, the proposed organizational changes related to the structure were published and the need for global restructuring program was announced. The global restructuring program and related change negotiations affected the whole organization and thousands of employees across the world. The change negotiations were held according to regional processes and varied in length. During the process, new organizational structure and nominations were published hierarchically from top to down in multiple phases. Therefore, different people had varying information during the change process. The final structure was published 3 months after the announcement of the restructuring.

> *"We received a new strategy, and when that new strategy was published, you could already see from it that things would need to be done differently. The strategic focus areas changed as well." Interviewee 3.*

> *"Another issue was that ourselves had been looking at the new organization for months. We had Excel sheets where we could drill down into levels and understand the structure. Publicly, only level three or so was shown – nothing detailed. But we already knew the lower levels very well. So for me, everything was clear – who is responsible for what. But for others, for example finance colleagues who joined later, understanding what the change actually meant took time. And because the publication of lower-level organizations with names took a long time, that made things even harder." Interviewee 2.*

The key changes in strategy are related to dismantling the area organization and creating two new separate strategic segments that include different business areas. The business areas consist of a mix of the old business unit, and regions are placed lower in the hierarchy under the business areas. The previous strategy was based on business units and regions, and it included a broader leadership group than the new organizational structure. The new strategy emphasises more global governance, meaning that the businesses own the products that are sold, and those are just delivered to different regions, instead of the earlier regional focus. The aim is to reduce the competitive dynamic between businesses and regions. Furthermore, alongside with the new strategic segments, the strategic focus areas were changed, and both segments have their own strategic missions, priorities and KPIs.

Internally, the transformation process had started from the executive management level and moved forward to lower levels of the organization systematically and illustrating a clear top-down strategic mandate. At the beginning, chosen employees participating in the transformation process had to sign non-disclosure agreements (NDAs). The signing of NDAs and restricted involvement caused also some issues with information sharing and discussing the ideas and decisions. On the other hand, some thought that the necessary people were involved.

> *"Basically it worked like this: there were initial plans at company level, and then the people appointed as business and function leaders brough selected individual into the planning under confidentiality agreements. So not everyone – for example, not all members of business line or market area leadership were involved. Only certain selected people were included. - - Firstly, the planning team, working under confidentiality, developed things to a certain point. Only after that did roles become more clearer, and then the process continued, bringing in more people from lower levels – again under NDA." Interviewee 4.*

> *"I do have to admit that in some cases, changes were agreed with BU head, but later I heard that some things were modified afterwards because feedback came from the regions saying that things couldn't be done that way. At that stage, it wasn't possible to discuss more broadly. Only very small group was involved*

because of the confidentiality agreements. - - "Also the fact that you couldn't really do hands-on sparring because there were so few people you were allowed to discuss things with."" Interviewee 2.

"It was controlled carefully who was included. But in my opinion, if there were good reasons, people were brought in reasonably, so it wasn't like we couldn't move forward because persons X, Y and Z were not involved." Interviewee 1.

Interviewees having Vice President level roles explained that the transformation related work begun from a quite blank slate. At the very beginning, a small group of people were selected to design the future organization, and it did not include all leaders from the old business units. Not all participants at this stage knew yet their own future position either, which was seen to have advantage in a sense that no one could have pursued the benefits of their own organization.

"The CFO had selected a few people to be involved. And then we started designing from a clean slate - -." Interviewee 5.

"In some cases, people had to do initial planning somewhat "blindly" – before they even knew what their own role would be. - - That also helped to make the process more neutral in a sense – people weren't designing things to just benefit their own future roles but focused more objectively what would be best overall." Interviewee 4.

A key pattern across the interviews was that the decision to transform was made at the top-level management and communicate downward, reflecting a common top-down process where strategic direction is defined by senior leadership and implementation responsibility is delegated to lower levels within the hierarchy.

"It went basically so that information came that it has been decided that this will be done, and you plan how it will be implemented." Interviewee 1.

Interviewees having Director level positions experienced that they were able to participate in designing the new organization and MCSs in relation to their own leadership area. They received a very high-level framework from the top management level and based

on that they began to design their responsibility area at more detailed level. It essentially started with designing the organizational structure, including their subordinate's roles and responsibilities. Directors also had an important role in discussing and brainstorming the new design with their superior.

> *"I would say that I was able to create my own leadership area very much independently. What came from above was very high-level framework". Interviewee 3.*

> *"When my superior was announced, we had a lot of discussions. Because (they) didn't know the organization very well, - - I went through people and structures with (them), and we generally thought through what would make sense." Interviewee 2.*

Although the initiative was top-down driven, the implementation required extensive involvement across different organizational levels, particularly in financial and operational roles. Towards the end of the restructuring program, more people were involved and the transformation required major changes to existing reporting structures and master data. It consisted of iterative discussions with business units to finalize structures.

> *"Guidance came from above, but the practical implementation – how we actually built the hierarchy and made it work in the systems - I was very involved in that. - - Once the organization was known – meaning the higher-level structures were defined and HR had agreed on certain hierarchy – we started thinking about cost centre structures and everything else needed to be changed accordingly. I discussed these with BU heads, made proposals, and then we went through them together: would this work like this? - - We went through all our reportable products, profit centres, and the entire finance structure." Interviewee 2.*

Based on the interviews, it is possible to conclude that Director level positions were heavily involved in the master data change process. Adaptation issues were emphasized on the director level interviews as they had to participate in master data level implementation which was deemed to be the most demanding task within the organizational transformation.

> *"We had this kind of working group that did the master data changes. But that complexity of master data does not show to top management, and it does not need to show – but it was something that was clearly quite heavy and demanding." Interviewee 5.*

Another indication of top-down initiative was that core organizational elements including mission, values and leadership principles were defined at the executive level. The executive team and CEO published new principles that guide leadership and set expectations for behavior, responsibility and communication according to the new strategy. Starting from the Vice President level, their role is to cascade the values and principles within the organization.

> *"And that comes directly from top management. And then my role is to cascade it. To take that message forward, but the message itself is not modified along the way. So my role is to act as an example according to those principles." Interviewee 5.*

In addition to describing the top-down nature of transformation process, interviews also demonstrated interesting findings related to the relationship between strategy formulation and MCS design. Interviewees had different opinions whether they were re-designed simultaneously or in isolation of each other. Some responses highlighted that strategy would be defined first, and after that other aspects such as structure and MCSs are adjusted to fit the strategy determined by the executive team.

> *"Well, in my opinion it always goes that strategy is the primary driver. And then governance structures and processes and systems are built after that so that the strategy can be executed." Interviewee 5.*

> *"The strategic direction and vision were done first, then the structure was done and then I have tried or said as well that only after that we started thinking what we do. So in a way what we do [as a company] was thought first, then what kind of organization, and after that only we started thinking how we operate together in this organization, with what kinds of meeting practices and communication." Interviewee 6.*

Those who explained the parallel development, were however mainly focusing on the structure and operative model rather than control systems and practices. It could be

concluded that high-level organizational structure needed to be defined as part of the strategy formulation or as the first step of strategy implementation. Either way, in a large corporation structure plays a key role and all the other implementation work relies on it.

> *"So as I understand it, strategy and organization [structure] were done together – the organization was shaped to fit the strategy. And this was certainly one big way of steering the implementation of the strategy." Interviewee 3.*

> *"I would say that in this case they were developed very much in parallel. We had a quite tight timeline. - - So in practice, they had to be developed at the same time – not so that strategy is finalized first and only after that you start designing the organization and management model. But of course, the primary starting point was still the strategy itself – what we want to achieve. And then the organization and management model are built to support that." Interviewee 4.*

It was also described that the strategy formulation happened in top-down phases and that the strategy has multiple layers. This allowed to define more detailed strategic KPIs after the structure and teams were known. Furthermore, given the scale of the transformation, it was apparent to everyone that changes are expected in all areas, including the strategy, structures, MCSs and ways of working.

> *"And then even within strategy, it is multi-layered. First the top-level strategy is defined, and after that it has been brought to more detailed levels to the strategic initiatives and in a sense cascaded lower and lower down in the organization." Interviewee 4.*

> *"Well, here such a big change has been made, and there has clearly been a decision that now strategy and ways of working and control systems and what not are changed, so this is in a sense a good situation that everything is evaluated at the same time so that they support each other." Interviewee 6.*

4.2 Strategy implementation through structures and control practices

The first chapter considered why the transformation happened, and this chapter focuses on how the renewed strategy is implemented into organizational reality through

structures, roles and management control systems. Rather than remaining at a conceptual level, the strategy operationalization appears around the following central three themes: centralization and empowerment, embedding strategy into systems and control practices, and lastly, transition towards forward looking management control. Together, these findings illustrate how strategy implementation is not a single, straight-forward process, but a multi-layered alignment of organizational design and control systems.

4.2.1 Centralization and empowerment

The first central theme is related to redefining the structures and ownership. The interviews conclude that the renewed strategy and organizational structure are seen as mutually reinforcing elements rather than separate phenomena. The key findings within this theme are related to the centralization of decision-making and empowerment of organizational members through new structure and design.

The shift away from a matrix- and area-focused organization towards a business area driven structure is described as a deliberate response to strategic challenges related to speed, accountability and focus on the lifecycle revenue creating. Removing one layer of management was seen to streamline processes, create better agility and responsiveness, but most importantly, bring business leaders closer to local needs, including customer needs and challenges. Middle management has now more responsibility on the daily business management and strategy execution while top management focuses on strategic discussion and direction. Interviewees see that the new structure acts as an instrument through which the new lifecycle-oriented strategy is enacted rather than just as a rearrangement for purely administrative cost-savings.

> *"So we previously had a matrix organization, where you had geographical areas and business lines. An in practice when the area organization was dismantled, so leadership is now primarily through business areas and regions are also led by them, and the rest of the organization was integrated into that. - - So the biggest changes were dismantling the area organization, changing how the [different business units] were divided into new business areas." Interviewee 1.*

> *"Actually two big changes happened at the same time. So the area organization was dismantled, but also the business line structure was given up. - - So now the idea is that equipment delivery and service business are within the same entity. And the business logic there is that it is viewed from a lifecycle perspective – how profit actually forms over the lifecycle." Interviewee 5.*

> *"Instead, the structure was adjusted more toward customer segments. So this customer-centric structure is another big shift." Interviewee 4*

> *"So in a way there has clearly been a deliberate shift toward giving more responsibility for the daily business management and execution of strategy to the business areas. And then the focus with top management is more on the strategic discussions, and on identifying where support or decisions are needed from the CEO level." Interviewee 4.*

Another major change compared to previous structure was that all support functions, including business finance, HR, legal, supply chain, that were previously part of each BU and region, were separated into their own global organizations which as a unified structure serves all new BA's. For example, CFO now leads the whole finance organization, instead of previously each BU leader had their own finance head reporting for them directly. This creates structural centralization and reduces overlapping tasks. At the same time, interviewees have noticed the impact of having less resources.

> *"In this organizational change, we modified structures so that previously finance teams in different business units and market areas were under their respective business organizations. Now the structure was changed so that all finance personnel were moved under the CFO organization." Interviewee 4.*

> *"Earlier, finance was directly under the business. Now we are in a global pool. From where I sit, it doesn't make a huge difference whether my manager's manager is the CFO or BA vice president. But our finance organization itself has changed. My colleagues – we are now a very small group. Earlier there were many more of us." Interviewee 2.*

At all organizational levels and functions, there were clear shift from regional teams to global teams and centralization of tasks. For example, order management has been centralized under one global leader per BA. Next, global supply function was created in order

to enhance cost efficiency and scalability as previously there had been established various different production facilities and separate procurement teams across the world. In addition, due to dismantling the area organizations, country finance function was established under group finance to handle statutory compliance centrally. These decisions and fundamental changes in organizational design are seen to align with and operationalize the new strategic initiatives.

> *"Well we also had one clear major change – our order management, which was very fragmented, done very differently in different roles in different parts of the organization globally. So that was quite a big effort to make into one global team." Interviewee 6.*

> *"Another important element is the creation of the global supply organization. Manufacturing operations were brough under one organization to gain scale and cost efficiency – instead of all business areas managing its own production independently. This allows for better optimization of the overall manufacturing footprint. And this has also been communicated in the strategy – that significant savings and efficiency benefits are expected from this new model." Interviewee 4.*

> *"So when that area organization was dismantled, then the statutory compliance that was there – we built a new [country finance] function for it under corporate." Interviewee 5.*

Alongside with the structural centralization and simplification, decision-making authority have been decentralized significantly within the organization. Decision-making authority has been intentionally pushed downward in the organization closer to the business and customers and the BAs are now responsible for their own results and strategy execution. Top management and CEO have moved towards more to ownership type of role instead of direct control when comparing to the previous organization.

> *"Many have said that earlier we had quite a centrally led organization. Like, of course there is always central control from top management and group level and so on, but maybe earlier it was somewhat over-emphasized. - - But maybe more what I have understood from this organizational change is that earlier management directly led business operations more strongly than now. Now perhaps it is more in a certain kind of owner role. Like you are kind of an investment portfolio*

owner and then the businesses are led through that. I don't know if that's the best way to verbalize it, but something like that in my opinion." Interviewee 1.

"At least one clear aspect is that, starting from the CEO level, more and more responsibility and mandate have been given to the next organizational levels. That is also aligned with the broader work we have been doing on company culture – related to leadership mindset, psychological aspects, and so on. So business areas are increasingly being made responsible for their own performance strategy, and execution of that strategy." Interviewee 4.

It became evident across the interviews, that there are now clear consensus of increased accountability and performance ownership that comes naturally with the increased decision-making authority. A concrete example of decentralizing decision-making authority is lowering the approval grid on important decisions. On individual level, it means that they are granted more autonomy but also greater responsibility for outcomes at the same time. This is seen to allow more flexibility on how daily work is organized.

"A lot is talked about accountability, and as part of that, even at board and leadership team level, authorization limits have been adjusted – meaning who can decide what kind of things. In practice, those limits have been raised so that not everything needs to go for approval all the way to the CEO level." Interviewee 4.

"So it's specifically about accountability. There is no longer the big boss who dictates what must be done. Instead, you carry the responsibility yourself, define your own targets more, and then you are expected to stick to them. That's probably the biggest change." Interviewee 3.

"So there are a clear structure and hierarchy, but flexibility in how things are handled within that. Also in finance partnering, we now have more freedom to decide how partnering is organized. It doesn't have to be country specific – responsibilities can be grouped more broadly." Interviewee 2.

Even though the new structure and design support accountability and empowerment more than before, there are still identified gaps within the organizational structure that does not align the revenue streams and responsibilities properly, rooting from external reporting requirements. This has resulted in a poor information and feedback sharing in certain areas of the organization, and it sometimes slows down operational work.

> *"Because we are such a result driven company, we did not fully succeed everywhere in aligning revenue streams and responsibility under the same ownership. - - In those cases, decisions have been made from a performance-management perspective – for example, that a certain business is reported under a specific unit, but in practice the people and organization that actually do that business sit somewhere else. And then the people doing the work do not receive the right information. They are not included in the forums where they would understand how their business is actually performing. - - So when responsibility and execution are in one place, but the result is reported elsewhere, it becomes very dysfunctional." Interviewee 3.*

Interviewees also explained that removing one leadership level from the regions has caused some challenges especially in countries with strong power hierarchies. On the other hand, some people got more power than they had before, and it was mentioned that they also need to get used to the role.

> *"- - we had this area director role, - - and when that role was removed, it kind of sharpened and streamlined the work. But it also created a challenge, because now that there is no one single unifying leader, it can have a negative impact on collaboration." Interviewee 6.*

4.2.2 Embedding strategy into systems and control practices

The second theme of strategy enactment involves embedding the strategy into organizational systems, performance metrics and control practices, ensuring alignment between strategic intent and day-to-day operations. It is seen important that the strategy can be linked to daily work, and thus also MCSs needed to be adapted to support this linkage. Communication, culture and belief systems are also emphasized to be an important enabler to make people understand where the organization wants to be and is directly linked to how the operational implementation succeeds. The need for repetition regarding strategic initiatives and core values was emphasized as getting everyone on the same page takes time. Furthermore, personal performance metrics were removed, instead companywide targets were implemented that are entirely based on business-level financial targets and their achievement.

> *"I would start from the fact that strategy should be clear and understandable. And then it should be possible, from top management side, to always link it back to strategy in daily work. In my opinion our management does that quite well." Interviewee 5.*

> *"Communication is, is super important, and articulation – this kind of that it is articulated correctly. But on the other hand also that endurance of repetition. That often it happens that management thinks that this has been talked about to the point of exhaustion, the last ones are only then starting to understand what this is about, so it has to be continuously maintained." Interviewee 6.*

> *"I think communication is probably the most important thing. That people understand where we are going. When the new organization started, there were so-called kick offs - - In those, it was explained what direction we are heading, what the common goal is, and what needs to be done to get there. - - In leadership teams, we follow the same things every month. But I assume those same topics are also discussed in lower-level teams. - - Even though personal targets now longer directly affect bonuses, everyone still has targets. And through those targets, behavior is guided toward where we want to go and what needs to be achieved this year." Interviewee 2.*

In many cases, management control systems were adapted to support the new strategic logic rather than being entirely replaced by new elements. Existing elements such as targets, budgets and reporting systems were modified to answer to the needs of the new strategy and organizational design. New strategic priorities were translated into concrete metrics and reporting structures. The interviewees also highlighted that it depends on a lot how it is defined whether systems or controls are modified or completely new as in general, all large organizations have the same foundational elements in their MCSs. Additionally, one of the interviewees emphasized that not everything was broken, meaning that there were also existing practices that worked well and should not be adapted just for transformative purposes.

> *"It depends a bit on the perspective,– in a way certain components in the management system, they are such that exist everywhere. So you have what our result is. What our estimate is. What our targets are. What our approval limits are. What our code of conduct is. What you are allowed to do and what you are not allowed to do. So we have had mission, visions, values, and so on earlier as well. So I would*

mainly say that earlier ones were more modified. - - So summing up, it probably depends on how you define it. But I would say that the elements all existed earlier, but the question is how they are done, and some of them have changed more dramatically than others." Interviewee 1.

"- - I have also said that we don't fix something that isn't broken. Even though change is being made, not everything has to be changed. There are also things that have worked well." Interviewee 6.

The organizational transformation was largely finance-driven process after the new strategy had been defined. In finance organization, the implementation of the new operative model and reporting structures generally meant a major work related to planning how the transformation is implemented to financial reporting systems and processes. Master data needed to be redesigned and updated, such as profit centre and cost centre structures. The scope of the required changes varied a lot between different business areas as the old reporting model had been fragmented.

"Because we are in finance, there was also the master data side. Everything changed hugely – all tracking, everything." Interviewee 3.

"- - Basically planning how we implement the organizational change in our financial reporting systems and processes. So how we practically define the data structures and hierarchies according to the new organization and that we have all the needed master data. What we need, how it is changed in the systems. In what order things need to be done, how it is implemented and tested, and so on." Interviewee 1.

Adaptability emerges as a central theme in the implementation process, and even though the new strategic rationale was generally welcomed and accepted well, the interviewees describe various challenges related to the organizations' ability to implement and operationalise the new structure particularly at the intersection of organizational design and MCSs. Due to the major master data related changes, historical data became often impossible to compare. This increased the operational workload significantly at the beginning, especially within the budgeting round. Additionally, adaptability requirements were not evenly distributed across the organization as some new business areas

experienced far less disruption than others, due to the fragmented reporting structures of the old organization. This means that organizational transformation can generate fundamentally different experiences depending on the function and business.

> *"And then in practice it happened that restating the history from the old to the new organization was quite a workout. Because when data has been reported in a certain way and then the history should be made comparable with the new organization, it was quite painful work. Because it is not like if data has been reported to parameter one, that it just shifts to parameter two, instead it can be that you have to merge or split data and so on." Interviewee 1.*

> *"For us, this change hasn't been as big as it may have been for others. We had already agreed on many things earlier and were already working toward the same goals. - - We didn't have to touch our history at all, because our structure was basically copied as the model." Interviewee 2.*

Accountability is embedded through so called RACI matrixes that clearly define each employee's or function's responsibilities. It does not just make work meaningful for the employee, but boundary systems are seen essential in ensuring efficiency by common ways of doing similar processes and being able to compare between different organizational units. In the old organization, boundary systems were fragmented, and processes varied a lot globally. In addition, there was a significant change with the allocation policies, and now aligned with the accountability and ownership concept, costs are primarily allocated only on a level that the cost centre owners can influence. Thus, new metrics were designed to reflect controllable costs and actions.

> *"So there are these approval grids, and if I think about our own work, then we have very clear process thinking in what we do. And we think about these things through these RACI matrixes, so we clearly describe the process flows and the interfaces and the roles and responsibilities related to that." Interviewee 5.*

> *"Exactly that roles and responsibilities have been clarified. That you define that is your "sandbox", you are responsible for this. That makes it probably more meaningful for the person, because they know what accountability is expected from them. And for the manager it is clearer that okay, I know that this is their area and they are responsible for it. But of course that does not remove the fact that you can*

go outside that "sandbox" and help others. But when the boundaries are defined it makes things clearer and more efficient." Interviewee 5.

"Previously, in our reporting systems, absolutely everything was allocated all the way down to the lowest level. That had been done for years – a huge mess. Moving away from that has probably been the biggest change. Now the message is: you are responsible for the costs you can actually influence." Interviewee 2.

Contribution margin concept is an essential example of how the new strategy is embedded to control practices. While it showcases the development towards measuring performance at a level where organizational actors can actually influence the outcome, it also illustrates the increased flexibility to design control mechanisms based on business needs. BAs did not receive any detailed guidance from group accounting on how the contribution margin should be calculated, instead they got to design it by themselves.

"We wanted to follow organizational performance at a level where people can actually influence it. So in plain words, this contribution margin concept". Interviewee 1.

"The first thing that comes to mind from the finance side is the new concept of contribution margin. That came from top management level, but what didn't come was detailed guidance on what exactly should be included in it. Each business area was essentially allowed to decide how it would be calculated." Interviewee 2.

Furthermore, increased responsibility at business side is also illustrated by reducing strict instructions and guidance coming from group control. Business is now responsible for budgets and planning, and they can determine how many times per year estimates should be updated and whether the policy differs across different functions.

"What else we have done is that this estimating – or rolling forecasting – what it means on cost centre level, we have given more authority to the business areas. We have said that when you do rolling forecasts, our expectation is that volumes and also overhead costs are up to date. And [businesses] know best what situation you have and what level of accuracy is reasonable for updating cost centres. So earlier we had that three times per year there was a forced bottom-up process. We no longer do that. - - Because in practice, you can have different cost centres – one that needs to be followed continuously and another that it is enough to check twice

> *per year. So the business itself understands that dynamic better and can use its time better." Interviewee 5.*

Another central topic that arose in the interviews regarding the new strategy implementation was the increased standardization through systems integration. The role of ERP and business intelligence systems was identified as critical for enabling successful strategy execution. Standardized processes support consistent decision-making, cross-unit comparison and global coordination, but are also required as there are fundamentally less people than before.

> *"The finance organization was reduced as part of the change, so we have to work more efficiently. We need to take advantage of the global ERP and standardize ways of working." Interviewee 2.*

> *"- - it forces having common master data, and that is at the core of everything. Because if everyone has different cost centre structures, profit centres, charts of accounts, and everything else, then it becomes really difficult. Because if you want to compare, for example, how our personnel costs are in China versus Brazil, it becomes quite difficult when everything is in different local languages, different accounts, different systems and so on." Interviewee 1.*

As mentioned earlier also, a key enabler of successful strategy implementation was seen to be related to the belief systems and organization culture. Especially the newly introduced leadership guidance was seen to have significant importance among the interviewees and was welcomed change. Concepts such as psychological safety, bold and fast decision-making, accountability and learning from mistakes type of thinking is emphasized. In addition, interviewees have experienced more positive atmosphere within the organization when the new leadership team has started. Essentially, interviewees perceived that these belief systems are highly influential in guiding action and commitment, and without the new leadership style of top management, many thought that the organizational transformation would not have been successful.

"- - without those leadership principles, this probably would not have turned out as well. Because leadership principles have constantly said that we should be brave, make changes, move forward, fix things, make new changes. So that is what enabled this." Interviewee 5.

"There has been a shift toward leading through positivity. From my own perspective, and what I personally value – and I think many others as well – leadership has moved toward a more positive approach. It is not about pushing people, but choosing a direction and moving toward it together." Interviewee 3.

"Of course, that the organization is credible and an interesting business and that we believe there is a positive future for the company, that's important. But maybe on a more personal level, where I see the biggest change, it is those belief systems, and especially leadership principles. Those have, at least for me personally, brought – I don't know if commitment is the right word, but in some way you notice a clear change and it brings belief on what we are doing and what opportunities it brings." Interviewee 1.

4.2.3 Transition towards forward looking management control

The third central theme that appeared within the strategy implementation dimension captures a shift from backward-looking performance monitoring towards forward-looking and predictive control practices. New financial targets are ambitious and focus on growth, while previously the organization has tended to settle on results that are slightly improving compared to previous year. At the same time, new strategic initiatives are followed carefully, and control systems are expected to increasingly focus on where the organization is going long-term rather than retrospective evaluation. Nevertheless, interviewees acknowledge that due to the nature of listed company, quarterly results are still important also.

"So the idea is that it is not that we improve a bit compared to last year, but we actually need to benchmark ourselves against the target level, which is clearly higher than last year. Because even last year there were still situations where people were satisfied if performance was slightly better than the previous year, even though the target level was significantly higher. So more and more the reference point has been shifted towards the targets rather than historical performance." Interviewee 4.

> *"We think more long-term. When we make decisions now, we think – Ok, what does this mean for this quarter or this month – but how does it affect next year? So that long-term strategic thinking has clearly come in. - - Of course, this doesn't remove the fact that we are still a listed company and every quarter matters and the result of every quarter is important." Interviewee 3.*

> *"So now we look 5 or 6 quarters forward depending on the timing. And we have also emphasized that this is an early warning system. So exactly like we talked about earlier, that it is not only monitoring, but also looking forward." Interviewee 5.*

A fundamental change within control systems and reporting practices is the shift towards forecasting and future-oriented analysis. Traditional annual planning has been gradually replaced by rolling forecasts, and there is greater emphasis on estimating future performance trajectories. However, the interviewees disclaim that the shift is still ongoing, and the organization needs to learn the best practices related to forecasting.

> *"- - there has been a shift in thinking. Earlier, it was more like: we make a budget for the year, and then we basically track the year through quarterly follow ups. Now we have moved much more to rolling forecasting." Interviewee 3.*

> *"- - another important direction is moving toward rolling forecasting, instead of having a fixed annual budget that just ends with the calendar year. So rolling forecasting has started to be introduced gradually, and to fairly say, we are still learning how to use it in practice." Interviewee 4.*

Forecasting has become or is intended to become a central tool for guiding strategic direction and decision-making under uncertainty. Therefore, the role of MCSs have evolved from passive reporting to active business steering and warning system. The idea is to identify deviations and insights that need preventive actions, but also steer the organization to the desired long-term strategic direction through the forecasting and financial figures.

> *"But what I am maybe trying to say is that our role is not only to look in the rear-view mirror and day that now it went like this and like this. But it is equally*

important to look forward and say that hey, we can for example build these scenarios, or I forecast and there is this kind of forecasting uncertainty" Interviewee 5.

"So the main focus is really on forecasting. Forecasting and the direction, and if we think about this, the of course also bringing organization in a strategic direction through the financial number, into the strategy guiding-direction that way." Interviewee 3.

"Of course we also look at finance from very much from a strategic angle – what makes sense in a longer term and so on. And then just that – well, one example could be that we think about the quality of forecasting – how it could be improved, and how driver-based forecasting could be done, and what that means, and how AI could be used there and so on." Interviewee 5.

Forward-looking control also requires higher quality and more timely data. Integrated systems enable more real time analysis and reduce errors and ambiguity in forecasting. Data transparency and streamlined processes improve responsiveness and align with the broader goal of increasing organizational agility. Common structure that has been implemented across the organization supports the quality and comparability of the data. Interviewees emphasized that reliable monitoring and forecasting is only possible when data is transparent, comparable and trusted.

"- - having a common structure – like standardized cost centre hierarchies – supports what we are trying to achieve especially from a finance perspective". Interviewee 2.

4.3 Management control as both monitoring and learning system

The last aggregate dimension captures how MCSs function simultaneously as mechanisms for performance monitoring and organizational learning during the transformation. Control systems are not used solely for tracking outcomes and enforce accountability, rather they are also perceived as platforms for dialogue, reflection and adaptation.

Across the interviews, respondents described a clear dual role for MCSs. On the one hand, control systems were diagnostically used to monitor financial performance and

ensure target achievement. On the other hand, they increasingly support interactive processes, where managers are actively engaging to discuss about uncertainties, challenge existing assumptions and foster learning. It is important to notice that the implementation is still on-going, and new or enhanced controls and practices are still being actively introduced as the new organization learns.

The dual role of MCSs is reflected within two themes, that include diagnostic control for performance monitoring and interactive control for dialogue-based learning and reflection.

4.3.1 Diagnostic control for performance tracking

Performance monitoring remained as a key function of MCSs after the organizational transformation. Diagnostic control systems are central tools in ensuring alignment with ambitious growth and profitability targets, and interviewees consistently emphasized that financial performance still has a major role in the organization even though there have been changes in leadership style and dialogue. Even though the organization is still relying on performance measurement, it is important that the used metrics provide feedback that enables improvement and learning aspects.

> *"If we think about management control systems more generally – in practice, they are fundamentally based on performance measurement. But it is really a combination of short-term, daily, and quarterly business performance measurement together with longer-term strategic elements." Interviewee 4.*

> *"Traditionally, performance measurement has very much been the main thing for us. You could say it has been in the centre. Targets have always been very though, and business has been guided form the top-down very much through that. But there has been some change here with the new leadership. We obviously still have financial targets, and they are still tight, but the change has been that leadership really emphasizes accountability." Interviewee 3.*

> *"At the same time, the idea is that those metrics – and performance measurement – should provide feedback that enables improvement and learning aspects." Interviewee 4.*

Traditional financial control tools such as actual results, estimates and budgets remain as key reference points within the new organization. As previously stated, forecasting has received more emphasis, and it is used to track whether the organization is moving toward its strategic targets. Additionally, there is a shift on diagnostic control focus also towards balance sheet measurement on to align with strategic initiatives. The aim is to improve efficient balance sheet usage, rather than looking profitability relative to revenue. Essentially it helps to evaluate and compare between organic growth and growth that is generated through acquisitions.

> *"Well, for example, the balance sheet side is now measured more. We have traditionally been very income statement focused as an organization. So a major change is that, at group level, there is more focus on balance sheet efficiency. At the beginning of this year, for example, a new metric was introduced at business area level – business area return on capital employed." Interviewee 4.*

A key development was related to the move towards measuring performance at a level where organizational actors can actually influence the outcomes and take the ownership that is one of the cornerstones within the new organizational design. Extensive and centralized allocations to lower levels were reduced, and metrics were designed to increase clarity and ownership. Interviewees described that allocating and calculating full EBITA to lower organizational levels was problematic and decreased the relevance of metrics because costs were shared across various functions and units. Contribution margin was therefore introduced to strengthen the behavioral effectiveness of diagnostic control.

> *"Because if you want to calculate comparable EBITA for some lower-level unit, it means that the allocations have been run through the "blender" so many times that nobody really knows anymore what actually goes through". Interviewee 1.*

> *"In my view, they give individuals more responsibility for their own area, which ties nicely to the contribution margin logic, you are responsible for a certain thing, and you can influence it. Earlier, when all kinds of costs were allocated everywhere, they*

were sort of handed down as a "gift", regardless of what you did. It was difficult to really feel ownership over anything like that. Now things have been simplified. Responsibility is clearer." Interviewee 2.

Previously, bonus incentives consisted of centralized, group-wide numerical metrics and individual- or team-level performance targets. With the organizational transformation, achieving personal targets are no longer tied to bonuses, instead bonuses are based entirely on business-level financial targets and their achievement. The goal with this change is to reach simplification and reduce workload related to the individual target setting processes but also ensure fairness within the whole organization as personal targets used to be defined in very different difficulty levels.

"First of all, there is clearly simplification aspect in the background. - - defining and tracking personal targets for that many people – with thousands of managers involved is a huge effort. And then there is also the issue that personal targets are quite difficult to define in fair and objective way across the whole organization. So you easily end up in a situation where different people have very different levels of targets, and it becomes inconsistent. And quite often those personal targets end up including things that are basically just part of everyday work." Interviewee 4.

"But then also this kind of equal treatment perspective, that earlier it was that everyone had a bit different kinds of targets, so someone could get that bonus much more easily, which was not necessarily such a target that really drove the strategy forward, maybe more something related to basic work." Interviewee 6.

Interviewees acknowledged that removing personal targets can create a feeling that employees cannot personally influence the target achievement as much as before, however, the new targets are defined partly based on group level targets and partly based on unique, BA specific targets, whereas the aim is that employees make decisions that benefit the whole organization instead of their own personal objectives. The new performance targets are expected to increase accountability and empowerment but also steer the focus towards profitability and growth improvement.

"We want to guide people to make decisions that benefit the overall company and the big picture rather than optimizing their own part. But at the same time, BAs, BUs and regional organizations under them also have targets that are closely

linked to their own business scope. And the idea there is exactly to increase accountability and empowerment – so that part of the bonus depends quite directly how your own organization performs." Interviewee 4.

Changing the incentive system towards common financial targets instead of personal targets was not just a management decision but linked to the requirements of compensation reports provided by listed companies. Therefore, the change reflects the desire to have transparent, fair and comparable targets between all employees, but it is also a structural response for compliance expectations.

"Then another background factor is that incentive systems in general, the trend is moving more and more toward financial metrics. And that already comes from listed company compensation policies. If you look at compensation reports, which listed companies are required to publish, they nowadays explain quite clearly what executive and employee bonuses are based on. And that transparency also drives organizations to make these systems more objective and comparable." Interviewee 4.

4.3.2 Interactive control for dialogue-based learning and reflection

Alongside the performance monitoring, central theme that arose in the interviews was MCSs role as interactive platforms, that enable learning and strategic dialogue. Interviewees described a clear shift toward discussion-oriented use of control information under the new leadership.

Interviewees repeatedly mentioned that the new leadership is encouraging experimentation and reflection from the employees, illustrating how interactive controls contribute to the organizational learning. Mistakes are discussed openly, and learning from the outcomes is emphasized over being afraid of mistakes and blame, which are essential in the psychological safety concept that has been emphasized within the organization.

> *"And there was also said out loud that bold actions are encouraged. So in that sense, it encourages trying new things instead of always doing as before." Interviewee 1.*

> *"And then that theme – psychological safety, speed over perfection – that you have to be agile and brave and continuously willing to develop and change things. But then also that psychological safety aspect, that if something goes wrong, you still get the chance to fix it and you are not punished for something going wrong." Interviewee 5.*

Important part of the organizational learning and reflection is the fact that transformation process did not end with the formal announcement of the new organization. Instead, interviewees describe that operational implementation phase has taken a long time and is still continuing in terms of shaping the MCSs to support the chosen strategy and organizational design. New or adjusted processes are continuously implemented as many teams have long lists of development ideas that they have identified together. There have also been constantly new challenges that arose with the new reporting model, and problem solving has been central to many managers' role. This illustrates how organizational transformation is a multi-phase process that does not happen overnight, and although structural decisions may be implemented on a specific date, the operational consequences unfold over longer period.

> *"We do have quite long development lists in finance – there's a lot to improve. That's obvious. With new leaders and fresh perspectives, it's also natural that blind spots are noticed. It's actually good to question how things are done. Basic processes stay as they are, but we can always improve efficiency. And now we are forced to do that, because we have fewer resources." Interviewee 2.*

> *"We have been reporting in the new organization structure for about nine months, and we still haven't had a single month where there wasn't something that needed to be investigated." Interviewee 3.*

The interviews show that the transformation has been supported by new meeting practices and targeted invitations to have in-depth discussions that focus on the implementation of strategic initiatives strategic and operational challenges. Interviewees

highlighted that employee surveys and feedback tools are increasingly used to gather information about the experiences and feelings related to the transformation.

> *"Even now when looking at calendars, there are new invitations to recurring sessions that didn't exist before, - - to ensure strategic development initiatives are implemented systematically in every region." Interviewee 2.*

> *"- - meaning we track things much more frequently, for example where the team is going, what feeling in the team is, and those kinds of employee surveys. That changed during this transformation. There have probably already been four such surveys within a little over half a year. So there was a clear change there – a desire to really hear and see from the organization how the change is going through, and what the feelings are." Interviewee 3.*

Furthermore, the interviews indicate that top management shows active interest in receiving feedback how the transformation is progressing across the organization. They have sought understanding about how structural and control related changes have been experienced and implemented in practice. The interactions have focused on understanding the implementation challenges, organizational tensions and identifying areas that require adjustment.

> *"Just the other day, our leadership team had a 45-minute discussion with the CEO. They specifically wanted feedback on the organizational change – what we feel has gone well and what has not gone so well. Because when changes of this magnitude are made, it is known that some things won't work perfectly. So I found it very positive that there was a clear desire to hear feedback from employees." Interviewee 3.*

In order to focus managerial attention to strategic priorities and learn and develop, cross-functional forums have been established to enhance collaboration across different functions. Several interviewees described new or intensified forums for interaction, with the aim to enable shared understanding across organizational boundaries. Even though the organizational structure was renewed in a way that it should prevent silos, there is still need for special focus on the topic, and interactive practices haven been noticed to

be necessary in practically breaking the silos. Nevertheless, there are still identified issues in roles and responsibilities between functions.

> *"We have weekly meetings where we work through these things together and go through all shared topics. And this is actually something I have really liked about this organization change – we have been somewhat forced out of our silos. Everything we want to develop or do, we try to do it with a much broader scope." Interviewee 3.*

> *"There are challenges there, yes. But there always were, even before. We are still separate business areas with our own needs. That requires communication and collaboration. The one "company" idea is important, but it still needs work." Interviewee 2.*

Common structures for support functions are seen to enable collaboration in the new organization. Particularly in finance, the creation of separate finance function serving all BAs and having reporting structure under the CFO is seen to be supporting the common finance process development and communication. Previously, finance development topics were perceived to fall behind the business' needs, however, now it seems possible to focus solely on finance development needs. Interviewees also emphasize that they are still in the beginning of the journey within the new organizational design, therefore it takes time to evaluate whether the structures and roles are working and delivering enhanced results in practice.

> *"We are also starting a finance development setup, with representatives from each BA, where these things can be discussed together. Since now the structure is more similar everywhere, it is easier to exchange ideas." Interviewee 2.*

> *"- - we prioritize as one finance team those development topics and what we want to spend money on and development budget on, for example systems. Instead of that if we are under business organizations, then we more easily go business-first, but then that might limit that kind of functional process development from a broader perspective. So at least I feel that, from the function perspective, this current model supports information sharing and development. But there as well we are still only taking the first steps – we have been together for a quite short time like this." Interviewee 4.*

The findings indicate that MCSs are increasingly used to maintain focus on strategic initiatives and continuously evaluating whether the initiatives are still relevant. Rather than treating strategy as fixed, interviewees describe that strategy execution is now more dynamic and dialogue-based process that is supported by the interactive use of control information. Strategic initiatives are not only monitored in terms of execution but can be also reassessed if there are changes in the external environment, such as market conditions and customer demands or geopolitical issues. This interactive use of MCSs shifts attention from implementation to strategic reflection, which helps the organization to notice misalignment between strategy and environment.

> *"Well, definitely there has been an effort to put more focus on the strategic side. For example, when we discuss with top management – at CEO level – those discussions are not really about the monthly business performance. Instead, quarterly we summarize both business performance, but especially the status of strategic initiatives." Interviewee 4.*

> *"Well yes, we do follow them in these business review meetings, that how those strategic initiatives are progressing, but also whether they are still relevant, because the world around us is changing so fast, that even if something has been thought in a certain way, we have to reflect whether it is still relevant." Interviewee 6.*

Although the interviews indicate significant progress in adopting new ways of working, there are still challenges with unlearning old habits. There are many routines, behavioral patterns and practices that were established long time ago and followed in the same manner for a long time, making them difficult to change even when new structures and control practices are introduced. This shows that behavioral and cultural change takes longer time to fully materialize.

> *"Resistance to change, doubt, there is no belief then gradually maybe starting to change mindset, but that getting everyone on board takes time, and then it is also easy to fall back to the old way, that what if we just did it like before, so there is a lot of unlearning involved." Interviewee 6.*

4.4 Summary of the findings

The findings chapter followed the logic of the data structure and discusses how the interviewees describe the organizational transformation from various perspectives. Table 3 illustrates the central themes and concepts that have emerged from the interviews and summarizes their connection to the interview quotes. The table is constructed according to the previously presented data structure by showing the 2nd order themes and 1st order concepts with related quotes linked to three different aggregate dimensions.

Table 3. Aggregate dimensions, second order themes, first order concepts and interviewee quotes.

First order concepts and second order themes	**Quotes**
Aggregate dimension: Drivers of organizational transformation and strategic reorientation	
1. Sensemaking of strategic rationale	
A: Organizational inefficiencies in matrix structure	*"When we previously operated in a matrix, where we had area organizations and business line organizations, the organization was quite big and quite heavy - - decision-making speed and clarity, was not necessarily at the best possible level." Interviewee 1.* *"The existing structure was seen from different stakeholder point of view as somewhat rigid and slow in responding to current business needs." Interviewee 4.* *"Overall, the matrix organization was very inefficient. So the original idea there was that in the areas there would be only sales capability. But that has deteriorated over the years, and there had become delivery capability and all kinds of other things there as well. So then the question of who is responsible for what, and who has authority to make which decisions – that had become blurred over the years." Interviewee 5.*

B: Legacy practices and increasing organizational complexity	*"Well if we think about these kinds of practices then, it is that the company has operated for a long time in a certain way, and strong processes and ways of working have been developed, every year strategy has been done in a certain way, every year annual planning has been done in a certain way, decisions, so in a certain way the whole control system has been done in a certain way for ten years, so that of course slows down that strategic change." Interviewee 6.* *"There had been some acquisitions - - but those were integrated on top of the existing structure as pieces. - - The company has basically doubled in size, and there have been also many smaller acquisitions. So the structure had started to become more complex and, in a way, somewhat bloated. And especially in the current market situation and at this level of company maturity, a different structure was needed." Interviewee 4.*
C: Internal competition and siloed operations	*"Earlier there was always this competing dynamic between business and region. There were this strange historical tension and competition. - - So basically the fact that [different business lines] had been so separate, so siloed in the previous way of operating, that as a company we weren't really utilizing the full potential." Interviewee 3.* *"The idea is that decisions are made from lifecycle perspective – what is best for us and the customer over the entire lifecycle. For example, instead of one organization rejecting a deal because it doesn't make sense for its own business, while another loses future service potential – now the whole picture is considered." Interviewee 4.*
D: Leadership change as a catalyst for transformation	*"That is where it started. You get new CEO, they renew the strategy, and through that the organization changes, that is the order in which things actually happened. - - I would argue that whenever the CEO changes, they shape the organization to look like how they want to lead it." Interviewee 1.* *"I believe one reason for bringing in a new CEO from outside was precisely to drive this kind of structural change. It's generally easier for someone external to*

	lead major transformations – they don't have the same historical ties or existing relationships with the leadership team. So in that sense, an outsider can act more freely as a change leader." Interviewee 4.
E: Performance and market signals	*"If you think about what comes out of the control systems, the in practice it culminates, in my opinion, in how the company grows. How the company's profitability develops and what the company's cost level is. And closely related to that as part of control systems are also the estimates, that if we continue with this business structure and these costs, then what kind of profitability level we will reach. And I remember seeing some slides also in external presentations where it was referred to that profitability development had levelled off." Interviewee 1.* *"Everything we do is guided by profitability, and also by share value. In that sense, I would say that very strongly the need to renew strategy and make organizational changes comes from there". Interviewee 3.*
2. Top-down strategic initiative	
F: Strategic renewal driven by leadership	*"That is where it started. You get new CEO, they renew the strategy, and through that the organization changes. That is the order in which things actually happened." Interviewee 1.* *"We received a new strategy, and when that new strategy was published, you could already see from it that things would need to be done differently. The strategic focus areas changed as well." Interviewee 3.*
G: New organizational structure revealed gradually	*"Another issue was that ourselves had been looking at the new organization for months. We had Excel sheets where we could drill down into levels and understand the structure. Publicly, only level three or so was shown – nothing detailed. But we already knew the lower levels very well. So for me, everything was clear – who is responsible for what. But for others, for example finance colleagues who joined later, understanding what the change actually meant took time. And because the publication of lower-level organizations with names took a long time, that made things even harder." Interviewee 2.*

	"In some cases, people had to do initial planning somewhat "blindly" – before they even knew what their own role would be." Interviewee 4.
H: Top-down direction with delegated implementation responsibility	*"The CFO had selected a few people to be involved. And then we started designing from a clean slate --." Interviewee 5.* *"It went basically so that information came that it has been decided that this will be done, and you plan how it will be implemented." Interviewee 1.* *"I would say that I was able to create my own leadership area very much independently. What came from above was very high-level framework". Interviewee 3.*
I: Sequencing and alignment of strategy, structure and MCSs	*"Well, in my opinion it always goes that strategy is the primary driver. And then governance structures and processes and systems are built after that so that the strategy can be executed." Interviewee 5.* *"I would say that in this case they were developed very much in parallel. We had a quite tight timeline. -- So in practice, they had to be developed at the same time – not so that strategy is finalized first and only after that you start designing the organization and management model. But of course, the primary starting point was still the strategy itself – what we want to achieve. And then the organization and management model are built to support that." Interviewee 4.* *"And then even within strategy, it is multi-layered. First the top-level strategy is defined, and after that it has been brought to more detailed levels to the strategic initiatives and in a sense cascaded lower and lower down in the organization." Interviewee 4.*
Aggregate dimension: Strategy implementation through structures and control practices	
3. Centralization and empowerment	
J: Dismantling area structure	*"So we previously had a matrix organization, where you had geographical areas and business lines. An in practice when the area organization was dismantled, so leadership is now primarily through business areas and regions are also led by them, and the rest of the*

	organization was integrated into that. - - So the biggest changes were dismantling the area organization, changing how the [different business units] were divided into new business areas." Interviewee 1. *"Actually two big changes happened at the same time. So the area organization was dismantled, but also the business line structure was given up. - - So now the idea is that equipment delivery and service business are within the same entity. And the business logic there is that it is viewed from a lifecycle perspective – how profit actually forms over the lifecycle." Interviewee 5.*
K: Standardizing and centralizing processes and support functions	*"In this organizational change, we modified structures so that previously finance teams in different business units and market areas were under their respective business organizations. Now the structure was changed so that all finance personnel were moved under the CFO organization." Interviewee 4.* *"Another important element is the creation of the global supply organization. Manufacturing operations were brough under one organization to gain scale and cost efficiency – instead of all business areas managing its own production independently. This allows for better optimization of the overall manufacturing footprint. And this has also been communicated in the strategy – that significant savings and efficiency benefits are expected from this new model." Interviewee 4.* *"Well we also had one clear major change – our order management, which was very fragmented, done very differently in different roles in different parts of the organization globally. So that was quite a big effort to make into one global team." Interviewee 6.* *"So when that area organization was dismantled, then the statutory compliance that was there – we built a new [country finance] function for it under corporate." Interviewee 5.*
L: Decentralizing decision-making authority	*"Many have said that earlier we had quite a centrally led organization. Like, of course there is always central control from top management and group level*

	and so on, but maybe earlier it was somewhat over-emphasized. - - But maybe more what I have understood from this organizational change is that earlier management directly led business operations more strongly than now. Now perhaps it is more in a certain kind of owner role. Like you are kind of an investment portfolio owner and then the businesses are led through that. I don't know if that's the best way to verbalize it, but something like that in my opinion." Interviewee 1. *"So in a way there has clearly been a deliberate shift toward giving more responsibility for the daily business management and execution of strategy to the business areas. And then the focus with top management is more on the strategic discussions, and on identifying where support or decisions are needed from the CEO level." Interviewee 4.* *"A lot is talked about accountability, and as part of that, even at board and leadership team level, authorization limits have been adjusted – meaning who can decide what kind of things. In practice, those limits have been raised so that not everything needs to go for approval all the way to the CEO level." Interviewee 4.*
M: Performance and results ownership	*"At least one clear aspect is that, starting from the CEO level, more and more responsibility and mandate have been given to the next organizational levels. That is also aligned with the broader work we have been doing on company culture – related to leadership mindset, psychological aspects, and so on. So business areas are increasingly being made responsible for their own performance strategy, and execution of that strategy." Interviewee 4.* *"So it's specifically about accountability. There is no longer the big boss who dictates what must be done. Instead, you carry the responsibility yourself, define your own targets more, and then you are expected to stick to them. That's probably the biggest change." Interviewee 3.*
4. Embedding strategy into systems and control practices	

N: Systems adapted to support new strategic logic	*"It depends a bit on the perspective, – in a way certain components in the management system, they are such that exist everywhere. So you have what our result is. What our estimate is. What our targets are. What our approval limits are. What our code of conduct is. What you are allowed to do and what you are not allowed to do. So we have had mission, visions, values, and so on earlier as well. So I would mainly say that earlier ones were more modified. - - So summing up, it probably depends on how you define it. But I would say that the elements all existed earlier, but the question is how they are done, and some of them have changed more dramatically than others." Interviewee 1.* *"- - I have also said that we don't fix something that isn't broken. Even though change is being made, not everything has to be changed. There are also things that have worked well." Interviewee 6.*
O: Finance-driven implementation of structural changes	*"Because we are in finance, there was also the master data side. Everything changed hugely – all tracking, everything." Interviewee 3.* *"- - Basically planning how we implement the organizational change in our financial reporting systems and processes. So how we practically define the data structures and hierarchies according to the new organization and that we have all the needed master data. What we need, how it is changed in the systems. In what order things need to be done, how it is implemented and tested, and so on." Interviewee 1.*
P: Accountability built to control systems	*"Exactly that roles and responsibilities have been clarified. That you define that is your "sandbox", you are responsible for this. That makes it probably more meaningful for the person, because they know what accountability is expected from them. And for the manager it is clearer that okay, I know that this is their area and they are responsible for it. But of course that does not remove the fact that you can go outside that "sandbox" and help others. But when the boundaries are defined it makes things clearer and more efficient." Interviewee 5.*

	"We wanted to follow organizational performance at a level where people can actually influence it. So in plain words, this contribution margin concept". Interviewee 1. *"The first thing that comes to mind from the finance side is the new concept of contribution margin. That came from top management level, but what didn't come was detailed guidance on what exactly should be included in it. Each business area was essentially allowed to decide how it would be calculated." Interviewee 2.* *"What else we have done is that this estimating – or rolling forecasting – what it means on cost centre level, we have given more authority to the business areas. We have said that when you do rolling forecasts, our expectation is that volumes and also overhead costs are up to date. And [businesses] know best what situation you have and what level of accuracy is reasonable for updating cost centres. So earlier we had that three times per year there was a forced bottom-up process. We no longer do that. - - Because in practice, you can have different cost centres – one that needs to be followed continuously and another that it is enough to check twice per year. So the business itself understands that dynamic better and can use its time better." Interviewee 5.*
Q: Culture and belief systems as enablers	*"- - without those leadership principles, this probably would not have turned out as well. Because leadership principles have constantly said that we should be brave, make changes, move forward, fix things, make new changes. So that is what enabled this." Interviewee 5.* *"There has been a shift toward leading through positivity. From my own perspective, and what I personally value – and I think many others as well – leadership has moved toward a more positive approach. It is not about pushing people, but choosing a direction and moving toward it together." Interviewee 3.*

	"Of course, that the organization is credible and an interesting business and that we believe there is a positive future for the company, that's important. But maybe on a more personal level, where I see the biggest change, it is those belief systems, and especially leadership principles. Those have, at least for me personally, brought – I don't know if commitment is the right word, but in some way you notice a clear change and it brings belief on what we are doing and what opportunities it brings." Interviewee 1.
5. Transition toward forward-looking management control	
R: Shift from annual budgeting to forward-looking forecasting	*"- - there has been a shift in thinking. Earlier, it was more like: we make a budget for the year, and then we basically track the year through quarterly follow ups. Now we have moved much more to rolling forecasting." Interviewee 3.* *"- - another important direction is moving toward rolling forecasting, instead of having a fixed annual budget that just ends with the calendar year. So rolling forecasting has started to be introduced gradually, and to fairly say, we are still learning how to use it in practice." Interviewee 4.*
S: Anticipating future performance and identify risks	*"But what I am maybe trying to say is that our role is not only to look in the rear-view mirror and day that now it went like this and like this. But it is equally important to look forward and say that hey, we can for example build these scenarios, or I forecast and there is this kind of forecasting uncertainty" Interviewee 5* *"So now we look 5 or 6 quarters forward depending on the timing. And we have also emphasized that this is an early warning system. So exactly like we talked about earlier, that it is not only monitoring, but also looking forward." Interviewee 5.* *"We think more long-term. When we make decisions now, we think – Ok, what does this mean for this quarter or this month – but how does it affect next year? So that long-term strategic thinking has clearly come in. - - Of course, this doesn't remove the fact that we are still a listed company and every quarter matters*

	and the result of every quarter is important." Interviewee 3.
T: Financial forecasts steering decision-making and strategic direction	*"So the main focus is really on forecasting. Forecasting and the direction, and if we think about this, the of course also bringing organization in a strategic direction through the financial number, into the strategy guiding-direction that way." Interviewee 3.* *"Of course we also look at finance from very much from a strategic angle – what makes sense in a longer term and so on. And then just that – well, one example could be that we think about the quality of forecasting – how it could be improved, and how driver-based forecasting could be done, and what that means, and how AI could be used there and so on." Interviewee 5.*
Aggregate dimension: Management control as both monitoring and learning system	
6. Diagnostic control for performance tracking	
U: Performance focus tied to strategy execution	*"If we think about management control systems more generally – in practice, they are fundamentally based on performance measurement. But it is really a combination of short-term, daily, and quarterly business performance measurement together with longer-term strategic elements." Interviewee 4.* *"Traditionally, performance measurement has very much been the main thing for us. You could say it has been in the centre. Targets have always been very though, and business has been guided form the top-down very much through that. But there has been some change here with the new leadership. We obviously still have financial targets, and they are still tight, but the change has been that leadership really emphasizes accountability." Interviewee 3.* *"Well, for example, the balance sheet side is now measured more. We have traditionally been very income statement focused as an organization. So a major change is that, at group level, there is more focus on balance sheet efficiency. At the beginning of this year, for example, a new metric was introduced at business area level – business area return on capital employed." Interviewee 4.*

V: Performance measured at influenceable level	*"Because if you want to calculate comparable EBITA for some lower-level unit, it means that the allocations have been run through the "blender" so many times that nobody really knows anymore what actually goes through". Interviewee 1.* *"In my view, they give individuals more responsibility for their own area, which ties nicely to the contribution margin logic, you are responsible for a certain thing, and you can influence it. Earlier, when all kinds of costs were allocated everywhere, they were sort of handed down as a "gift", regardless of what you did. It was difficult to really feel ownership over anything like that. Now things have been simplified. Responsibility is clearer." Interviewee 2.* *"We want to guide people to make decisions that benefit the overall company and the big picture rather than optimizing their own part. But at the same time, BAs, BUs and regional organizations under them also have targets that are closely linked to their own business scope. And the idea there is exactly to increase accountability and empowerment – so that part of the bonus depends quite directly how your own organization performs." Interviewee 4.*
W: Changing personal bonus targets to collective financial metrics	*"First of all, there is clearly simplification aspect in the background. - - defining and tracking personal targets for that many people – with thousands of managers involved is a huge effort. And then there is also the issue that personal targets are quite difficult to define in fair and objective way across the whole organization. So you easily end up in a situation where different people have very different levels of targets, and it becomes inconsistent. And quite often those personal targets end up including things that are basically just part of everyday work." Interviewee 4.* *"But then also this kind of equal treatment perspective, that earlier it was that everyone had a bit different kinds of targets, so someone could get that bonus much more easily, which was not necessarily such a target that really drove the strategy forward, maybe more something related to basic work." Interviewee 6.*

	"Then another background factor is that incentive systems in general, the trend is moving more and more toward financial metrics. And that already comes from listed company compensation policies. If you look at compensation reports, which listed companies are required to publish, they nowadays explain quite clearly what executive and employee bonuses are based on. And that transparency also drives organizations to make these systems more objective and comparable." Interviewee 4.
7. Interactive control for dialogue-based learning and reflection	
X: Encouraging experimentation and learning from mistakes	*"And there was also said out loud that bold actions are encouraged. So in that sense, it encourages trying new things instead of always doing as before." Interviewee 1.* *"And then that theme – psychological safety, speed over perfection – that you have to be agile and brave and continuously willing to develop and change things. But then also that psychological safety aspect, that if something goes wrong, you still get the chance to fix it and you are not punished for something going wrong." Interviewee 5.*
Y: Increased dialogue with top management around strategic KPIs	*"Well, definitely there has been an effort to put more focus on the strategic side. For example, when we discuss with top management – at CEO level – those discussions are not really about the monthly business performance. Instead, quarterly we summarize both business performance, but especially the status of strategic initiatives." Interviewee 4.* *"Well yes, we do follow them in these business review meetings, that how those strategic initiatives are progressing, but also whether they are still relevant, because the world around us is changing so fast, that even if something has been thought in a certain way, we have to reflect whether it is still relevant." Interviewee 6.* *"Just the other day, our leadership team had a 45-minute discussion with the CEO. They specifically wanted*

	feedback on the organizational change – what we feel has gone well and what has not gone so well. Because when changes of this magnitude are made, it is known that some things won't work perfectly. So I found it very positive that there was a clear desire to hear feedback from employees." Interviewee 3.
Z: Continuous adjustment of control systems through collaborative processes	*"We have weekly meetings where we work through these things together and go through all shared topics. And this is actually something I have really liked about this organization change – we have been somewhat forced out of our silos. Everything we want to develop or do, we try to do it with a much broader scope." Interviewee 3.* *"We are also starting a finance development setup, with representatives from each BA, where these things can be discussed together. Since now the structure is more similar everywhere, it is easier to exchange ideas." Interviewee 2.* *"We have been reporting in the new organization structure for about nine months, and we still haven't had a single month where there wasn't something that needed to be investigated." Interviewee 3.*

5 Discussion

This chapter discusses the findings of the study in relation to the theoretical background and the research question: *what is the role of management control systems in organizational transformation?* The aim is to interpret the empirical findings and how they are connected to the existing literature, particularly focusing on the Simons' (1995) Levers of Control framework and strategy process perspective on organizational transformation. By doing so, this chapter seeks to provide a deeper understanding of how MCSs contribute to strategic renewal and organizational change in practice.

The case study illustrates practical example of a planned change initiated by top management. The transformation began with new appointments in the executive team, and most importantly by introducing the new CEO into the organization. Thus, the findings confirm Simons & Davila's (2021) demonstration that alongside the changes within operative environment, appointment of new the CEO often acts as the catalyst for change. Information that MCSs have provided has very likely impacted the board of directors and executive team's intention to pursue strategic renewal and organizational transformation even though it could not have been confirmed without interviewing the executive members. Among the interviewees, MCS information regarding profitability trends and customer feedback contributed to the sensemaking about the need of strategic renewal. Therefore, this study cannot reveal the strategic initiative and formulation process truly, it is only based on retrospective sensemaking. Key findings related to the need for organizational transformation were related to the slow and fragmented matrix organization, maturity and long history of the previous top management within the organization, issues with speed and operative efficiencies related to decision-making, increased internal competition and the need for clearer accountability.

Overall, outside board of directors and executive management level, the focus was on organizational design and structures rather than strategy formulation. The findings suggested a heavy focus on organizational design which determines how responsibilities, decision rights and information flows are structured within the organization. The

organizational design and structure were revealed hierarchically and in phases, and it was seen to be the cornerstone for re-designing MCSs to support strategy execution. It aligns with Simons (2005) claim that organization's design is the most important determinant of successful strategy implementation within large organizations, and the interaction of MCSs and structure is an important driver of strategic change (Simons & Davila, 2021). Furthermore, the findings confirm Chenhall's (2003) suggestion that the appropriate design of MCSs is influenced by the operative context, and similarly, Davila's (2005) interpretation that MCSs should be designed as part of the organizational structure to provide a framework for day-to-day actions. However, as part of the new strategy, the aim was to reduce internal competition and apply lifecycle perspective that enables full potential exploitation from new project sales and service sales, and this requires extensive cross-organizational collaboration. Therefore, structure cannot be emphasized too largely, and interactive controls play a key role in enabling actions outside structural boundaries.

The findings illustrate various practical examples on how the new strategy was implemented through structures and control systems, including centralization of support functions to common global organizations, such as global supply or country finance. The findings also confirmed textbook examples of how the span of influence and accountability was widened through allocation policies and interactive networks (Simons, 2005). Decision-making authority has been intentionally pushed downward in the organization closer to business and customers. Implementation of strategy and designing MCSs to support the new strategy was central within the organizational transformation and is still continuing. Based on the responses, it can be concluded that there was a heavy emphasis on diagnostic and interactive control systems. Diagnostic controls were mainly used to guide new strategic direction through performance monitoring, forecasting and new target-setting scheme. Contribution margin concept was an essential example of how the new strategy was embedded into control practices and it showcases the development towards measuring performance at influenceable level. Performance measurement was found to be critical element in enacting successful strategy implementation as

suggested by Abernethy et al. (2021), as it helps to translate new strategic KPIs into operational change across the organization. Interactive control systems are used to enable dialogue-based learning and reflection, and for example, strategic KPIs are regularly followed and based on the feedback, it is possible that their relevance is re-evaluated, or new metrics are developed if needed, highlighting the important role of interactive controls. Additionally, belief systems were seen to have a crucial role within the whole transformation process, as the respondents thought that without new organizational culture and leadership principles, it could not have been successful. In addition, as the new strategy encourages experiments, belief systems have an important role in enabling emergent strategies to arise.

Furthermore, the findings suggested that the existing controls were mainly adapted by reshaping the role, use and meaning. According to Fagerlin et al. (2025), when the change needs to be rapid, it is an efficient way to perform strategic reorientation instead of building a whole new control infrastructure. The case company started with adapting the most crucial controls and then based on available resources and learning, they have also introduced completely new controls. The responses on director level also emphasized multiple adaptation issues, as the change of strategy and organizational design caused a major disruption especially to finance and master data level and it was deemed to be the most demanding task within the organizational transformation. The responses also highlight the importance of system integration, which aligns with Varma et al. (2025) and Elbashir et al. (2020) suggestions that enabling technologies have a critical impact for integrated MCS and quality of information, which leads to better performance.

Lastly, in relation to Aaltola's (2019) view on accounting and financial information as a paradoxical force that is both enabling and constraining strategic thinking is reflected in the findings. Financial information supported the transformation by highlighting profitability pressures, but also enabled target-setting, forecasting and performance monitoring. At the same time, Aaltola (2019) warns that the overemphasis on financials and short-term results can narrow strategic thinking and discourage new initiatives, which

was also noted in the interviews. The strong focus on financial targets, quarterly performance and centralized targets may limit individual influence and keep the attention on short-term focus. However, the findings also indicate that these potential constraints are actively balanced through different interactive control practices and belief systems, for example by encouraging experimentation, psychological safety and being active on the dialogue related to strategic KPIs. This suggests an active attempt to find balance between constraining effects of diagnostic control and enabling use of interactive and belief systems which aligns with the concept of dynamic tension between different control levers (Simons, 1995) and balanced use of MCS (Henri, 2005; Kruis et al., 2015; Mundy, 2009).

As a conclusion of the findings, a revised framework is presented in figure 9. It illustrates the relationships between MCS and strategy process by showing how different elements interacted throughout the transformation process and what were the main practices related to each lever of control within the organizational transformation.

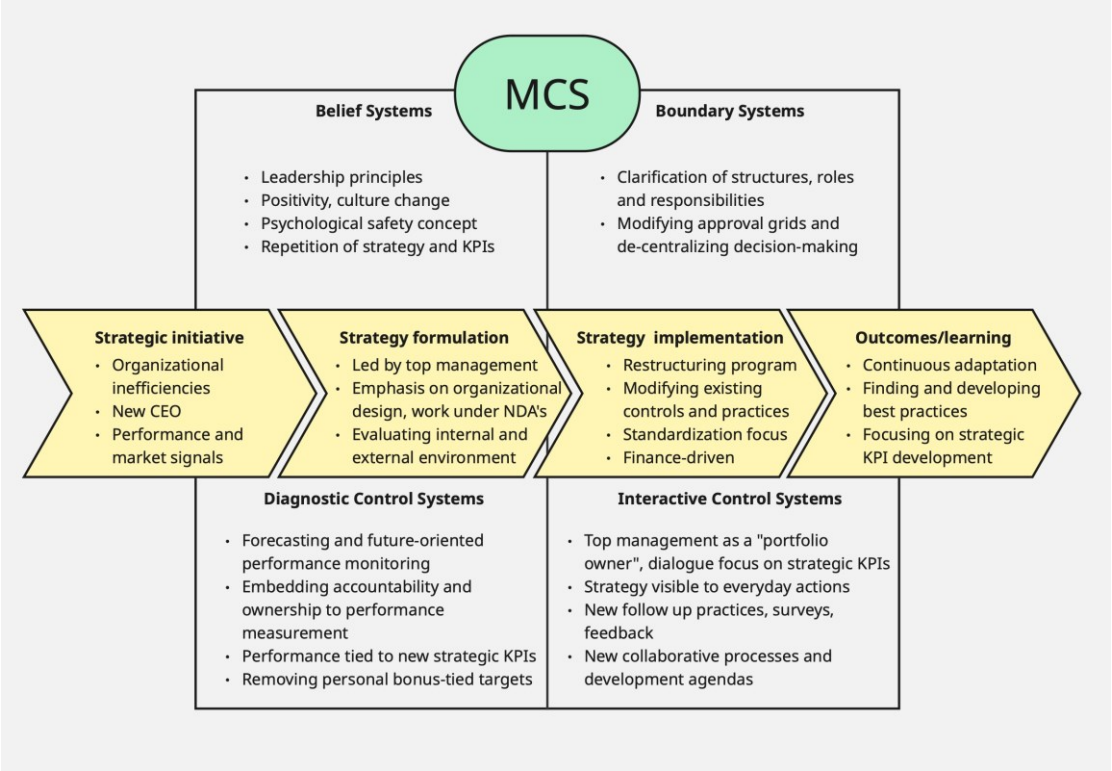

Figure 9. Revised framework.

5.1 Theoretical contributions

The purpose of this study was to explore what kind of a role MCSs have in organizational transformation in a single-case study. Central to the theory section was the relationship between control systems, especially based on Simons' LOC framework, and organizational transformation which comprises changes related to organization's strategy, structure and design. Therefore, this study contributes to the existing literature on MCSs and strategy by extending prior research on the role of MCSs in strategic renewal and organizational change. While earlier studies have emphasized the role of MCSs in strategy implementation (e.g Anthony, 1965; Chenhall, 2003; Langfield-Smith, 2008) and their contribution to strategic renewal (Huikkola et al., 2017), less attention has been paid to how MCSs are used and adapted in practice during transformation. By focusing on the role and adaptation of MCSs during transformation, this study responds to the gap by illustrating how control systems are used, modified and reconfigured as part of the strategy

renewal process. In particular, the findings demonstrate how changes in reporting structures, master data and control practices are embedded into organizational design and support the implementation of the new strategy in practice.

First, the findings of this study contribute to the literature on the relationship between MCSs and strategy, particularly from the strategy process perspective and respond to the limited understanding of how the relationship between MCSs and strategy is enacted during organizational transformation. Traditionally, MCSs are conceptualized as tools to implement predefined strategies and assist in achieving organizational goals (Anthony, 1965; Chenhall, 2003). In this perspective, MCSs are seen as passive mechanisms that are used to translate strategic objectives into measurable targets and ensure their execution by guiding employees to make decisions that align with the defined strategy (Davila, 2005). However, the more contemporary research has challenged this view and suggested a more dynamic relationship between MCSs and strategy. Kober et al. (2007) have presented the view of "MCSs both shape and are shaped by strategy" and propose that MCSs not only implement strategy but also play an active role in shaping it by influencing managerial attention, decision-making and organizational learning processes. The findings of this study support both views in a sense that the organization seemed to initially follow a relatively traditional logic whereas strategy was defined at the top management level and subsequently implemented through structures and control systems, but the implementation and learning phases revealed interactive and iterative relationship between MCSs and strategy. MCSs were continuously adapted to align with the new strategy, but at the same time, they influenced how the strategy was interpreted, operationalized and refined in practice. Especially the increasing use of interactive control practices and the shift towards forward-looking performance control highlight how MCSs contributes to the ongoing strategic adjustment rather than just executing predefined plans. Thus, this study demonstrates that MCSs have a strong role in strategy implementation phase but act also as integral component on learning and strategic evolution. In addition, belief systems especially have an important role in the appearance of emergent strategies, and the case organization is increasingly trying to shift the

employees' mindsets towards experimentation and bold moves through psychological safety concept.

Next, this study contributes by advancing the understanding of how different control mechanisms are used across the strategy process during organizational transformation. Building on Simons' (1995) LOC framework, this study demonstrates what type of roles different control elements have within the strategy renewal and transformation process and how they evolve over time. The findings show that diagnostic and interactive control systems had most emphasized role within the transformation process, however the study also provides empirical evidence of the importance of belief systems and boundary systems as enablers, which are generally less studied in the existing literature (Tessier & Otley, 2012). Overall, in addition to traditional performance monitoring role, diagnostic controls were used to guide new strategic direction through forecasting and target-setting. Interactive controls had a key role in facilitating dialogue, learning and adaptation, which aligns with prior literature. Belief systems were instrumental in driving commitment to new strategic direction through cultural change, leadership principles and communication. Boundary systems on the other hand, became more clarified as roles, responsibilities and processes were streamlined and standardized, and therefore it became easier to build accountability matrixes and role descriptions.

Finally, this study contributes to the limited empirical evidence on MCS adaptation requirements in practice and addresses the identified research gap. The findings show that instead of replacing all existing control systems, the organization primarily modified existing control practices and changed their use and meaning to align with the new strategy and organizational design. At the same time, the study highlights the practical complexity of such adaptation, as it required extensive changes to master data structures, reporting processes and systems integration. This adaptation process was closely linked to strategy implementation and was largely driven by finance function, while having broad implications across the whole organization and its operative processes. The study supports the view by Varma et al. (2025) that business intelligence systems and accounting

analytic capabilities has an important role in enabling the design and development of MCS. In particular, the findings highlight that without reliable and working data sources, it becomes difficult to build and adapt effective control mechanisms that support successful strategy implementation.

Overall, this study extends prior studies by demonstrating that MCSs role in organizational transformation should be understood as a dynamic dual role whereas MCSs function simultaneously as a mechanism for performance monitoring and organizational learning during the transformation. Rather than being a sequential process, the findings indicate that strategy, structure and MCSs co-evolve during transformation and levers of controls are deeply integrated in both strategy process and organizational design, and do not just act as tools for static performance control.

5.2 Managerial implications

The findings of this study provide concrete managerial insights into how MCSs can be effectively utilized and adapted during large-scale organizational transformation and what is their role within the whole strategy process. Merchant & Van der Stede (2023, p. 7) have argued that improving MCSs is usually even more important than improving strategy, as without good execution, the strategy will fail. This study confirms that MCSs have an essential role within strategy process, particularly in implementing the renewed strategy and guiding organizational actors' daily work and decision making according to the organization's needs.

It became evident that the organizational actors do not necessarily conceptualize MCSs from theoretical perspective. Many interviewees did not explicitly recognize the concept of MCSs or different control types, however they were actively involved in designing, adapting, and implementing control practices aligned with the new strategy and organizational structure. This suggests that managers would benefit from better understanding of the MCSs concept as an integrated system that influences behavior, decision-making

and strategy execution. Increasing awareness of MCS concepts can help managers to better recognize the implications of their design choices and strengthen the alignment with strategy, structure and control practices already in the strategy formulation phase. When considering MCSs design in strategy formulation phase, strategy execution and implementation are likely conducted smoother. Additionally, after the implementation is almost finalized, it would be beneficial to review and assess current MCSs as a whole and evaluate its alignment with strategic targets.

Next, the findings emphasize the critical role of organizational structure as a foundation for effective MCS design. The case demonstrated that misalignment between revenue streams, responsibilities and reporting structures leads to poor information flows and feedback sharing, resulting in inefficient operational work. Therefore, managers should ensure that accountability structures, reporting lines and performance measurement are tightly aligned. When responsibility is linked to measurable and influenceable financial outcomes, ownership and behavioral effectiveness of control systems will increase.

Lastly, the findings illustrate the importance of system integration and data quality in enabling effective management control and strategy execution. The transformation requires extensive changes in master data, reporting structures and system architecture, and the implications were especially affecting the finance function. These changes were described as the most demanding aspects withing the transformation process, therefore, sufficient resources, time and expertise must be allocated to system and master data redesign. Furthermore, without reliable, comparable, and timely data, it becomes difficult to implement effective diagnostic and interactive controls or to support decision-making. Consequently, time allocation to data standardization and investments in common ERP and business intelligence systems should be seen as central enablers of strategy execution. Additionally, as Elbashir et al. (2020, p. 1808) have stated, managers often lack the knowledge and competence to use the data for decision-making that is provided by integrated MCSs. Based on the case study, organizations undergoing a transformation

should pay attention to developing data and control system interpretation capabilities and remember the importance of repetition.

5.3 Limitations and suggestions for future research

This study has several limitations that should be acknowledged when interpreting the findings. However, the limitations also provide opportunities for future research. Firstly, even though the qualitative approach allowed to generate in-depth understanding of the transformation process and the role of MCSs in it, the credibility of the study is decreased by the fact that the findings only illustrate organizational transformation in one specific case-context and timing. The case-study is conducted within a particular industry, organizational structure and transformation setting, and there are many contextual factors such as external environment, size and maturity that limit the external validity of the study. Therefore, the results cannot be directly linked to other organizations going through organizational transformation.

Secondly, the data was collected from a limited number of interviewees representing Director and Vice President levels. Despite that the participants were actively involved in the transformation process and had decision-making authority, the perspectives from executive management or board of directors were not included. This is a significant limitation considering that the initiation of the strategic renewal and transformation process originated from the top of the organization. As a result, the early phases of strategy formulation and MCSs role in that phase is only interpreted through retrospective sense-making by the interviewees rather than having direct insights from the executive team. Additionally, the study relies mainly on retrospective interview data, which may cause bias in how the interviewees recall different topics. Since some time had passed from the beginning of the organizational transformation, the interview responses may not fully capture the actual sequence of events or all relevant factors. Furthermore, important part of this study was to ensure the anonymity of the case company and interviewee participants, thus the organizational functions or full job titles of the

interviewees are not revealed. In addition, due to confidentiality constraints and non-disclosure agreements, some aspects of the transformation may not have been fully discussed by the participants.

Despite these limitations, the study provides valuable insights of an organizational transformation process and the role of MCSs on it in a concise and thorough manner. Further studies could include perspectives from the executive management team and board of directors as it would provide deeper insights into the early stages of strategy formulation and the role of MCSs in initiating strategic renewal. It would also be valuable to have longitudinal research following an organization throughout the entire transformation process, from the initial strategy formulation phase to full implementation and stability. This would capture information about the dynamic MCS role and adaptation over time, avoid bias in recalling the process and give better understanding how MCSs evolve and how learning occurs. Additionally, future research could focus explicitly on specific phases of the strategy process and the role of MCSs. This would allow more detailed analysis of the MCS role in a certain phase and help clarify how different control practices contribute to different phases of transformation.

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Appendices

Appendix 1. List of interviewees

Interviewee	Role	Duration of the interview
1	Director	57 min
2	Director	58 min
3	Director	59 min
4	Vice President	59 min
5	Vice President	45 min
6	Vice President	46 min

Appendix 2. Semi-structured interview questions

Background and role

1. What is your current role in the organization and describe shortly the main tasks?
2. How long you have worked in the company and what was your previous role before the restructuring?

Organizational transformation

3. Can you describe your involvement the organizational transformation process across different phases?
4. What were the main reasons for the need of organizational transformation?
5. How would you describe the key changes within the organization?

MCSs and Strategy relationship

6. Do you think that MCSs influenced the formulation of new strategy and organizational change? If yes, how?
7. Can you describe the current relationship between MCSs and strategy within this organization, and does it emphasize more performance monitoring or enable discussions and learning?

Different types of control

8. Can you describe any changes in the following system categories and how you are/were involved in the process of developing them?
    - **belief systems** (e.g. core values, mission statements, purpose and direction)
    - **boundary systems** (e.g. define the boundaries for organizational activities, set minimum standards and instructions what should not be done; codes of conduct)
    - **diagnostic control systems** (e.g. feedback systems to monitor performance, define critical performance variables and objectives, budgets, profit plans, cost accounting, HR plans)

- **interactive control systems** (e.g. evaluating key strategic uncertainties and choosing which systems top management is focusing interactively/engages with employees)

Role of MCSs in Strategic change

9. Which controls or practices you think have/had the most impact on successful strategy implementation?
10. Were there any controls or practices that have complicated or slowed down strategic change?
11. Would you say that strategy and control systems have been redesigned simultaneously or in isolation of each other?

Adaptation of MCSs

12. Was the purpose to mainly modify existing controls or introduce completely new ones?
13. What role ERP and other business intelligence systems play in MCS quality and how well different systems are integrated?
14. What challenges did you face when adapting or developing control systems and reporting practices?

Organizational Design

15. Do you think that the new organizational structure, decision rights and information flows support the new strategy?
16. Does the organizational design encourage learning and flow of new ideas?
17. Has the concept of balance between control and flexibility taken into account in organizational design?