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Scaling-up New Service Offerings in Industrial Organizations:

A Case Study

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ABSTRACT:

This study examines how new service offerings are scaled across units and regions in industrial organizations. While prior research has addressed several aspects of service scaling, this concept remains fragmented and insufficiently understood in practice. To address this gap, this study investigates the mechanisms and organizational capabilities that support the long-term scale-up process in firms. The research adopts a qualitative single-case study approach, focusing on a global industrial company in the marine and energy markets. Empirical data were collected through semi-structured interviews with individuals involved in service development and scaling activities. The findings show that service scalability is not achieved through the launch phase alone. Instead, it is an ongoing organizational process that develops over time and involves the alignment of multiple organizational factors, including validation, internal coordination, and capabilities. The study contributes to existing literature by offering a more integrated and process-oriented understanding of service scale-up in industrial organizations. It emphasizes how scalability occurs through the interaction of organizational mechanisms and capabilities. In addition, the study provides practical insights for managers by identifying key areas that require attention to support successful service scale-up.

KEYWORDS: Service scaling, Servitization, Dynamic capabilities, Service development, Industrial organizations

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1 Introduction

The introduction provides an overview of the thesis and guides the reader through the overall structure of the study. It begins by introducing the importance of the research topic and the key challenges associated with it. The chapter continues by outlining the research gap, formulating the research question, discussing the theoretical and managerial contributions of the study, and describing the structure of the thesis.

1.1 Motivation for the study

Scaling is an essential phase of developing a new service idea, particularly in the international manufacturing context (Tippmann, Ambos, et al., 2023). Manufacturers make large efforts to add new services to their portfolios to escape the commoditization trap and gain additional revenue and profits (Gebauer et al., 2005). However, generating an innovative idea is the first step of the process and does not necessarily result in wider deployment and success (Wang et al., 2019). To reach the benefits of integrating services with products, it is necessary to implement and scale up a service idea effectively (Burton et al., 2017). A proper scaling up of an innovative service idea can lead to the creation of a sustainable competitive advantage for a company and increase the likelihood of long-term survival of a business (Jansen et al., 2023). Particularly, global scaling is increasingly important due to the coexistence of rapid growth and digitization in modern MNEs. Moreover, scaling up a service project enables companies to gain access to new resources and strategic assets and pave the way for them to reach international markets (Tippmann, Ambos, et al., 2023). Global scaling plays an important role in helping firms to gain fast growth and improve their position in competitive international markets. When companies are able to scale successfully across countries, the benefits increase beyond the firm and its investors. Expanding at a global level can also contribute to job creation and economic growth in different regions (Tippmann, Monaghan, et al., 2023).

The scale-up stage in service offering development often involves working with multiple actors, making use of existing resources, and at the same time bringing in new ones to create both business and social value (Di Pietro et al., 2018). However, in many manufacturing companies, this stage is not straightforward. Firms often struggle to align product and service development processes, and it can be difficult to design an effective approach for developing services while also balancing product-oriented and service-oriented logic (Burton et al., 2017). Since service innovations originate at multiple organizational levels (front line, central development, open innovation), coordination among different teams and departments is complicated and can create significant management challenges (Wang et al., 2019). When scaling up a project, managing human resources, including recruiting and onboarding skilled employees, becomes a major issue and increases managerial complexity. In addition, financial and organizational resources must be coordinated effectively to navigate the organizational tensions and balance rapid growth with efficiency (Jansen et al., 2023).

These managerial and organizational challenges can stem from a lack of appropriate skills and service capabilities among employees (Burton et al., 2017). Scaling up a service idea at a global level needs even more cooperation and adaptation to different local social and cultural contexts. Companies need to coordinate among multiple stakeholders and integrate diverse actors and resources across markets by developing effective value propositions that resonate across various contexts. Moreover, entering new global markets requires aligning institutional norms and rules, which brings many complexities of service ecosystems during scaling up (Di Pietro et al., 2018). Manufacturing firms need to collaborate with firms, governments, and public organizations to implement a service project across national boundaries. They confront difficulties in designing and transforming organizational structures, controlling international operations to manage a balance between global and local value creation (Tippmann, Ambos, et al., 2023). In this context, choosing effective strategies to address the scale-up challenges is important. Companies

need to navigate conflicting strategic demands and persistent tensions in different locations to achieve rapid international growth while sustaining competitiveness (Tippmann, Monaghan, et al., 2023).

1.2 Research gap

Previous studies suggest that scaling up a new service idea is closely linked to the organizational context and the processes used in the firm. In particular, Di Pietro et al. (2018) point out several important factors that support this process. These include having a clear and well-defined value proposition, adapting the service to local conditions, aligning resources within the organization, and ensuring that the values are shared among different stakeholders. Moreover, prior research has shown that service innovation and deployment are more complex in large organizations. Wang et al. (2019) showed that successful deployment requires explicit strategies such as required and voluntary adoption based on the organizational fit, intrinsic and extrinsic motivation, and effective organizational handover (Wang et al., 2019). In addition, international business research has shown that scaling in multinational enterprises involves bargaining and power struggles over resources and authority among headquarters and subsidiary units. As a result, the way scaling takes place is influenced by several organizational and contextual factors. These include the company's structure, its management and leadership, the organizational culture and internal capabilities, as well as the different institutional conditions across markets and industries (Tippmann, Ambos, et al., 2023).

Although there is a growing number of studies on different aspects of scaling, our understanding of how service offerings actually scale up in practice is still quite limited. Only a few empirical studies have explored the scaling-up process in companies (Di Pietro et al., 2018). In addition, the existing literature remains fragmented and does not provide a clear overall picture of the scaling process and the specific actions, behaviors, and capabilities required during this phase (Jansen et al., 2023).

Manufacturing companies are facing growing competition in product markets, and this has made the development of new services more important as a way to create value and stay competitive. However, there is insufficient research on manufacturers' new service deployment activities and how they can be aligned with service strategies (Burton et al., 2017). Besides, researchers have explored strategies to deploy service innovations successfully, but there is a need to investigate the factors that explain why service innovations fail to be broadly deployed to maximize value and profits (Wang et al., 2019).

In the international context, literature has explored how companies create and govern the ecosystems beyond national boundaries and noted the conflicts concerning replicating the business models and adapting to different contexts. However, the understanding of scaling up is still insufficient, and as Tippmann, Ambos, et al. (2023, p.6) state:

"... we know little about how organizations use coordination and control mechanisms to support (or hinder) scaling efforts of initiatives for global scaling".

The above lack of understanding directly motivates the focus of the present study. In addition, scaling up service offerings in multinational manufacturing firms involves many organizational tensions, which become particularly important when scaling occurs across international markets and diverse institutional contexts. This creates a need for further research on how companies operate under diverse and new conditions to grow and manage these tensions (Tippmann, Monaghan, et al., 2023).

1.3 Research problem and theoretical contribution

Given the arguments presented in the previous section, it is clear that further research is needed to understand the mechanisms and organizational capabilities that enable the scaling up of new service offerings across organizational units and regional contexts in manufacturing firms. Therefore, this study aims to address this research gap by addressing the following question:

RQ: “How do industrial organizations leverage specific mechanisms and capabilities to achieve the long-term scalability of new service offerings across units or regions?”

The contribution of this thesis can be summarized in three points. First, this study contributes to the literature on the scale-up in service development processes by providing a more detailed understanding of the organizational mechanisms and capabilities that support the expansion of new service offerings in industrial firms, especially across different units and regional contexts. By taking a dynamic capability perspective, the study also extends existing research, which has often examined scaling in a more fragmented way. It offers a more integrated view of how firms identify opportunities, make use of them, and adjust their resources over time to support continued service growth.

Second, the study provides empirical insights into the practical challenges of scaling up the service innovation process in industrial settings. Through the analysis of real decision-making processes in a real organizational context, the study provides valuable information on how firms manage coordination, control, and cope with organizational tensions during the scale-up phase and relates its findings to existing studies.

Third, the findings of this study provide practical implications for managers in industrial organizations. The results can help decision-makers better design and organize service scale-up processes, drawing on the mechanisms and capabilities identified in this research. The results also help managers allocate resources more effectively and develop organizational capabilities that support long-term service growth across different units and regions.

1.4 Thesis structure

As illustrated in Figure 1, this study is structured in five main chapters. After this introduction, Chapter 2 presents the theoretical background of the study and reviews the main theoretical perspectives related to service development and the scale-up phase, and outlines the framework used to guide the analysis. Chapter 3 explains the research

methodology, including the research design, data collection, and data analysis. In Chapter 4, the empirical findings and discussion will be provided. Finally, Chapter 5 discusses the implications of the findings, outlines the limitations of the study, and suggests directions for future studies.

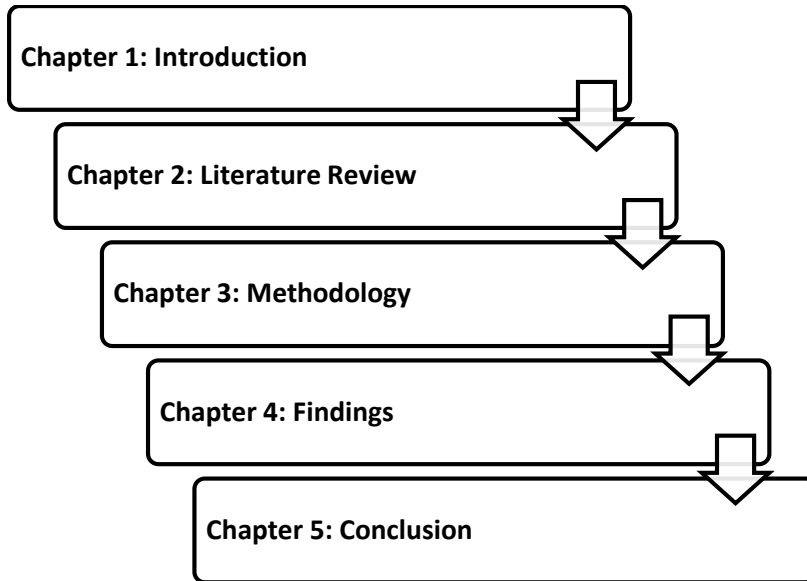


Figure 1: Overview of the thesis structure

2 Conceptual Background and Literature Review

2.1 Scaling of Service Offerings in Industrial Organizations

2.1.1 Background and Conceptual Foundations of Service Scaling

In recent decades, manufacturing firms have increasingly expanded their businesses into further products and moved more toward services. This approach is a response to the strong global competition in product markets. Prior research shows that product markets in industrial sectors have become highly competitive, and there are limited opportunities for differentiation and margin growth through products alone (Kastalli and Van Looy, 2013; Rabetino et al., 2017).

As a result, manufacturers have focused on services as a central source of value creation, customer differentiation, and long-term growth (Parida et al., 2014). This strategic decision, commonly referred to as servitization, means manufacturers' effort to add service-based solutions to their product portfolios and strengthen customer relationships, and generate more stable revenue streams in a long-term perspective (Rabetino et al., 2017). In the context of industrial firms, service offerings are typically closely connected to the firm's products and are delivered throughout the product lifecycle. These services often include activities such as maintenance, repair, spare parts provision, monitoring, and other forms of operational activities that ensure the effective use of installed equipment. In the servitization literature, these types of offerings are usually described as product-related services. They are designed to complement the core product and help customers during the use phase of the product lifecycle (Baines and Lightfoot, 2013; Parida et al., 2014). Early service research already highlighted that service growth differs fundamentally from product growth because services rely on customer participation and ongoing interaction, as well as the simultaneity of production and consumption, which constrains standardization and makes expansion more difficult to control (Carman and Langeard, 1980).

However, the transition toward services does not lead to better financial performance. Servitization can create new growth opportunities, but many firms face serious challenges in grasping these benefits. This situation is called the service paradox (Gebauer et al., 2005). Empirical evidence shows that while services initially contribute to increasing profitability, firms often experience a decline in returns during the expansion stages. This drop can happen because of significant investments in service capabilities, organizational restructuring, and a new delivery system (Kastalli and Van Looy, 2013). Thus, this dynamic highlights that the strategic shift toward service is conceptually different from the firm's ability to develop, deploy, and scale its service offerings effectively. Recent studies highlight that scaling is not the same as simple growth. Scaling refers to situations where size increases are accompanied by more than performance improvements, and it is not the same as expansion (Palmié et al., 2023). Studies suggest that many challenges emerge not at the first stage, when the company tries to create the idea stage, but they happen in later stages and during the implementation and organizational adoption of new services (Wang et al., 2019).

Consequently, service innovation and scaling have become central managerial concerns in industrial organizations. Developing a new service requires far more than generating innovative ideas. It needs to align the service development process with existing processes, restructuring organizational routines, and also needs to build new capabilities across different parts of the organization. They usually update their existing product development practices and governance mechanisms to provide service-specific requirements, which can create tensions between product-oriented and service-oriented goals in related teams (Burton et al., 2017). Moreover, servitization research emphasizes that organizational tensions between product efficiency and service requirements often exist in industrial contexts. Firms must continuously provide a balance between engineering logic and customer orientation or exploration and exploitation views, and not focus on one of them (Kohtamäki et al., 2020).

Di Pietro et al. (2018) mention that scaling service offerings increasingly takes place in complex service ecosystems that include customers, partners, suppliers, and institutional actors, and the coordination of these elements is essential for growth and value creation. Recent research also shows that developing services on a global scale requires coordination across headquarters, subsidiaries, and other actors in the value chain. At the same time, firms need to balance standardization with local responsiveness. This makes the configuration and coordination of the broader ecosystem an important part of the service scaling process (Capanni et al., 2025). Recent research also emphasizes that scaling needs a separate organizational process, and extension of the existing processes is not enough. This is an emphasis on the need for organizational changes during this phase (Coviello et al., 2024). This distinction is important because prior reviews show that the scaling concept has often been used inconsistently across research domains and frequently mixed up with growth, which has contributed to conceptual ambiguity in the literature (Palmié et al., 2023). Indeed, Greenhalgh and Papoutsi (2019) highlight the differences between spreading and scale-up. They explain that spreading means repeating an innovation across different contexts, but scaling up a project means creating new organizational capacity to make a full-scale implementation possible. They emphasize that in complex service systems, these two processes are closely related and rarely follow a linear or predictable path.

The scaling of service offerings in industrial firms is particularly challenging because it evolves across organizational units and geographical contexts. Firms must coordinate activities in multiple departments, integrate various resources, adapt offerings to local market conditions, and also manage institutional differences in different regions (Burton et al., 2017; Di Pietro et al., 2018). In multinational firms, these challenges are even more serious because they need to balance between repeating the business model and local situations, which often create tensions in coordination and controlling efforts (Tippmann, Monaghan, et al., 2023). Together, these dynamics underscore that understanding service scaling requires a comprehensive examination of both strategic and organizational dimensions. This observation provides the foundation for the subsequent review of the

key characteristics, challenges, and mechanisms that form the scaling of service offerings in industrial organizations.

2.1.2 Key Characteristics of Service Scaling

In business literature, service scaling is increasingly considered as a distinct organizational concept rather than a simple continuation of growth. In an effort to reduce definitional ambiguity, Coviello et al. (2024) define scaling as an organizational process in which managers rapidly expand a firm's outputs by transforming the internal organization and leveraging digital resources without requiring proportional increases in inputs. This description is important for the present study because it emphasizes that scaling is basically tied to internal reconfiguration and to the conditions that enable returns to scale, not to an increase in size. Relatedly, Coviello et al. (2024) define scalability as an organizational capability to achieve sustainable coordination in technological structure, organizational configuration, and business model in a company. In the service context, this factor is more necessary because service offerings depend more on elements like organizational processes, employee skills, and customer interaction, and not just physical assets alone. Prior research shows scaling has been defined in multiple ways, including financial, market, organizational, and volume scaling. This reflects the diverse aspects that firms should consider when they decide to expand their working scope or improve their performance (Palmié et al., 2023).

A second central characteristic of scaling service is embeddedness within broader ecosystems. Di Pietro et al. (2018) show that scaling service innovations is not limited to firm boundaries but evolves across various actors, including customers, partners, suppliers, and institutional stakeholders. Based on their findings, successful scaling depends on the development of value propositions that have resonance with different actors, the ability to adapt offerings to local contexts, and the coordination of internal and external resources. Value propositions serve as a coordinating mechanism that enables participation in value co-creation and supports replication of the service business model across

contexts. This fact highlights that scaling service offerings is not only a firm-level expansion task, but also a relational and context-dependent process.

Third, service scaling in industrial organizations is characterized by complex strategic and structural conditions. Servitization research shows that expanding service activities changes the firm's activity system and strategic logic (Rabetino et al., 2017). Firms must integrate product and service activities, change the design of their business models, and manage the correlation between tangible products and intangible services (Kastalli and Van Looy, 2013). Parida et al. (2014) emphasize that the development of advanced service offerings, creating strong customer relationships, and involving customer value creation activities can result in growth in firms. These changes need significant investments in service capabilities, new organizational roles, and new management systems, and this supports the view that scaling services involves deep organizational transformation and not just structural changes. In multinational settings, these transformations are further formed by the need to coordinate central and local service units within global organizational systems (Kowalkowski et al., 2011; Kucza and Gebauer, 2011).

Besides structural and strategic changes, one of the key characteristics of service scaling is the persistent conflict between repeating the core business model and adapting the business to the context. Keeping the core business unchanged enables efficiency and consistency across units and markets, but service offerings often require local changes due to differences in customers, institutions, and partner networks (Tippmann, Monaghan, et al., 2023). Similar tensions have been observed in servitization research and have been mentioned as paradoxical demands, where firms must pursue efficiency in standardized operations and, at the same time, provide effective customized solutions (Kohtamäki et al., 2020). A further characteristic of service scaling concerns its non-linear performance implications. Kastalli and Van Looy (2013) provide strong evidence that the relationship between service scale and firm performance follows a non-linear pattern. In early phases, firms often see positive performance effects from service expansion. As

service activities increase, profitability may decline due to the high costs of developing service capabilities and recognizing service delivery systems.

The literature also suggests that scaling service innovations cannot rely only on standardized replication. Services often operate in complex systems, and in these kinds of systems, outcomes are shaped by local interchanges, interpretation, and ongoing adjustment for local teams (Greenhalgh and Papoutsis, 2019). Learning effects and economies of scale usually start to outweigh the required investments only after services reach a sufficient scale, which can lead to more efficient performance. These cost approaches are closely related to how service delivery systems are designed and coordinated, and ICT and operational integration often support them to enable scalable service requirements (Baines and Lightfoot, 2013).

Finally, service scaling is shaped based on the strong contextual and international aspects. Di Pietro et al. (2018) emphasize the importance of local transformation when imitating service innovations across different environments. At the micro level, these changes in the organization can create a vague situation for different teams and actors involved in service delivery, and they face uncertainty in their roles and responsibilities. Thus, firms must actively manage this situation during scaling (Rönnerberg Sjödin et al., 2016). These characteristics show that service scaling is a multi-level, dynamic, and context-sensitive process that cannot be reduced to simple growth metrics or short-term performance outcomes.

2.1.3 Challenges in Service Scaling

The literature emphasizes that scaling service offerings in industrial organizations is a highly challenging process. These challenges stem from organizational complexity, capability limitations, and the tension between strategic goals in different parts of the company and operational practices. One of the most frequently discussed challenges is organizational alignment and coordination. Burton et al. (2017) show that manufacturing

firms often face difficulties in aligning product-oriented and service-oriented views during the shift from the development phase into large-scale implementation of services. Differences in objectives, language, time horizons, and performance metrics between product and service units generate internal tensions that slow down decision-making and hinder effective scaling. According to Gebauer et al.(2006), similar coordination problems appear when service innovations must be deployed across multiple organizational units. At the managerial level, these coordination challenges are often reinforced by behavioral and cognitive barriers, such as managers' skepticism toward service profitability and a preference for low-risk options, which further slow down service scaling efforts.

A second major challenge is related to resource limitations and capability development. Scaling service offerings needs significant investments in building new skills, defining organizational roles, developing information systems, and creating suitable service delivery infrastructures. Wang et al. (2019) discovered that the lack of managerial attention and limitations in resources can limit the number of service ideas that firms can actively support. These limitations force managers to prioritize the ideas, and can increase the risk that promising ideas fail to scale up in a broader scope. Kastalli and Van Looy (2013) show that during middle phases of service development, profitability often decreases because firms must invest more in building service capabilities and redesigning their operations. If firms underestimate these investment requirements, they risk abandoning service strategies permanently before performance improvements can happen. Similarly, Jansen et al. (2023) emphasize that in companies, supporting growth depends on leadership's ability to build and renew organizational skills and abilities while maintaining the operational situation stable in the long term. These challenges become more critical because of operational obstacles in service delivery systems, such as limitations in ICT infrastructure, facilities, workforce skills, and performance measurement methods (Baines and Lightfoot, 2013). O'Reilly and Binns (2019) further argue that scaling involves a distinct

organizational phase. During this phase, firms often struggle to change resources, attention, and governance from established core businesses to new initiatives, and as a result, many promising innovations stop before entering the scale-up phase.

Service scaling becomes more complex across different contexts and when there is a need for adaptation to different local conditions. Di Pietro et al. (2018) show that service projects often need to be adjusted to local organizational conditions, customer expectations in new contexts, and different networks of partners when repeating the business models in other regions. This need for adaptation limits how much firms can standardize their services and makes it more difficult to manage the operations across regions. Tippmann, Ambos, et al. (2023) describe this challenge as an ongoing conflict between standardization of the processes and, at the same time, keeping enough flexibility to respond to new demands. This tension becomes even more critical in multinational firms. Factors such as differences in regulations, cultures, and market structures increase the need for coordination and make the process more complex. In the service context, these challenges can become more noticeable due to resistance from partners in lower organizational levels, such as dealers or service providers. This is especially the case when motivations, trust, or functional models are not really well aligned (Capanni et al., 2025).

Another critical challenge concerns organizational learning and change management. Scaling the service offerings usually requires more than small changes. In many cases, firms need to rethink existing routines and mindsets, especially those developed around product-oriented business models. Schaarschmidt (2016) highlights the importance of employees' understanding of service strategies and their readiness to adjust their roles for the new setting in the scale-up phase. At the same time, influencing employee behavior and building commitment to service-oriented practices tends to be a gradual and challenging process, especially in large organizations with well-established structures and routines. Kalenda et al. (2018) and Ghiron et al. (2021) further highlight the importance of sustained learning processes, feedback mechanisms, and dedicated coordi-

nation structures in overcoming resistance to change during scaling. In addition, the scaling of integrated product-service solutions may increase role ambiguity between firms and customers, raising coordination costs and complicating service implementation (Rönnerberg Sjödin et al., 2016). From a social and complexity perspective, Greenhalgh and Papoutsis (2019) discuss that scaling fails because companies usually underestimate the workload needed to align people, define new routines, and local practices. This is especially the case when change is a technical or top-down process for replicating the business model.

Finally, service scaling is shaped by external institutional and ecosystem challenges. Naber et al. (2017) emphasize that expectations, trust, and network relationships influence how innovations spread in the organization and then stabilize during scaling. Dearing and Cox (2018) show that firms must continuously create a balance between adaptation and commitment when expanding an initiative across different teams and departments. On the other hand, OECD (2015) highlights the role of policy frameworks and institutional support in enabling or limiting scaling efforts. External pressures combine with internal organizational challenges, making service scaling a complex and often uncertain managerial task. These difficulties help researchers to explain why many service offerings do not achieve their expected outcomes and why sustaining scalability over time remains challenging in industrial organizations.

2.2 Organizational Mechanisms and Capabilities for Scaling

2.2.1 Organizational Scaling and Dynamic Capabilities

The literature describes scaling service offerings in industrial organizations as a capability-driven process. Firms need to continuously adjust their methods for coordinating activities, learning from previous experience, and allocating resources during the expansion of services across different units, markets, and partner networks. This capability-based view defines scaling-up as an ongoing and rapid growth to deliver a feasible business model and investigate scaling in three different settings: initiative, organization, and

ecosystem, and emphasizes that each one needs special coordination across international borders (Tippmann, Ambos, et al., 2023).

A dynamic capability perspective becomes more visible when firms try to scale under conflicting organizational demands. Tippmann, Monaghan, et al. (2023) introduce the idea of an international scaling paradox in companies. In their view, companies need to balance two opposite goals: replicating an established business model to help with expansion and keeping an innovative approach to support creativity. Their model explains how firms can handle this challenge instead of trying to remove it and highlights dynamic capabilities as the ability to establish repeatable practices while still preserving enough room for flexibility to adapt and innovate during the scaling process.

Servitization research explains why these capabilities matter economically. Gebauer et al. (2005) describe the service paradox where manufacturers invest in expanding services, pay for the related costs, but cannot achieve the desired profits. This paradox shows that expanding services without creating the essential organizational capabilities required for proper service delivery, commercialization, and operational monitoring can lead to extra tasks but not to profitability. Servitization research further shows that overcoming this paradox requires firms to align their strategic intent with supporting processes, activities, and intangible assets, as servitization is implemented through interconnected organizational practices rather than isolated service initiatives (Rabetino et al., 2017). Relatedly, Gebauer et al. (2008) examine success factors for achieving high service revenues and explicitly link superior service outcomes to changes in a firm's activities, organizational structure, and culture, the elements that can be interpreted as organizational capability development rather than isolated initiatives.

Beyond internal organizational arrangements, several studies clarify that service scaling-up capabilities are multi-dimensional and context-sensitive. Capanni et al. (2025) explain that successful global service development depends on how well manufacturers adapt

their operating model integration with downstream partners. This integration is influenced by factors such as market differences, network structure, customer orientation, and partner resistance. In other words, scaling capability involves the dynamic ability to adjust collaboration and governance across the service network in response to these contextual factors.

Capability development is also described as a learning and configuration process in servitization. Parida et al. (2014) highlight distinctive capabilities and related learning activities required for becoming a high-value provider. They connect the development of skills with changes in business models and learning processes. Reim et al. (2021) similarly focus on ability development and propose a framework that links business model selection with capability creation during idea implementation. Finally, Hallstedt et al. (2020) emphasize that manufacturing firms face pressures from several major trends, such as digitalization, sustainability, and servitization. This pressure reshapes capability needs in service development and related organizational processes.

Taken together, organizational scaling of service offerings can be understood better through a dynamic-capability lens. Firms need capabilities to manage replication-adaptation tension, organize cross-border scaling across initiative, organization, and ecosystem settings, overcome the service paradox through capability-building investments, and align activities, structure, and culture to achieve strong service revenues.

2.2.2 Micro-processes and Mechanisms of Scaling

Previous studies emphasize that scaling is built from micro-level choices, practices, and routines, including how managers decide to deploy an innovation, how teams coordinate tasks, how roles are defined, and how learning is gathered and reused with teams. These routines and actions can also act as coping practices that organizations develop to manage continuous pressures during servitization processes (Kohtamäki et al., 2020). In other words, scaling is not only a strategy; it is also the accumulation of repeated actions

that make an offering easier to roll out across units and contexts. A first set of micro-mechanisms concerns deployment and adoption inside the firm. Wang et al. (2019) conceptualize deployment as the process of spreading a service innovation across appropriate divisions and distinguish between voluntary adoption and required adoption. Voluntary adoption leaves the decision to local units, while required adoption is compulsory and mandates people to implement the new approach. Their analysis shows that the choice between these approaches shapes both the pace and breadth of deployment, and that adoption is not only a technical issue but also an organizational one, influenced by perceived fit and the organization's ability to support units during rollout (Wang et al., 2019).

A second group of mechanisms relates to the implementation of advanced services. Baines and Lightfoot (2013) emphasize that advanced services require firms to develop operational arrangements that go beyond traditional product delivery. These arrangements include mechanisms for managing service delivery, performance, and ongoing customer support. These structures are important for scaling because they often create new interfaces with customers, introduce new responsibilities for service staff, and increase coordination needs between different functions. At the same time, studies underline that scaling is hindered when routines remain underdeveloped or overly informal. Gebauer et al. (2008) point to the role of organizational arrangements and recurring practices in shaping what kinds of services firms develop and can later expand. Biege et al. (2012) further highlight that a lack of formalization can act as a barrier to wider service expansion, because weakly defined processes make it difficult to replicate service activities consistently across units.

A third micro-level mechanism concerns role clarity and relational coping as firms extend services. Rönnerberg Sjödin et al. (2016) show that when firms move toward more advanced offerings, actors can experience role ambiguity, and scaling depends on how organizations and relationships cope with this ambiguity through relational mechanisms. This idea connects directly to the practical reality of scaling services. As responsibilities

shift, new roles emerge, and boundaries between provider and customer activities change, firms need ways to stabilize expectations and working relationships. Without such coping mechanisms, service expansion may create friction and slow down replication.

Learning processes are another recurring scaling mechanism. Parida et al. (2014) emphasize learning activities that support the transition toward an industrial product-service approach, including learning from customers and using feedback to refine offerings and practices. Gomes et al. (2021) similarly link leadership to organizational learning capability and service innovation outcomes, implying that scaling is supported when leadership helps build learning routines that make service innovation repeatable rather than ad hoc. This conclusion is consistent with Gebauer et al. (2005), who explain the barriers related to managerial understanding and believe managers often remain influenced by product-dominant beliefs. As a result, they may underestimate the requirements of service scaling and postpone the organizational changes needed for success.

Finally, scaling across countries often depends on micro-level launch and adaptation decisions. Lee et al. (2011) show that international launch management involves decisions about how to introduce an offering across different market contexts, and that these decisions differ between developed and emerging markets. In the context of scaling service offerings, replication is rarely a straightforward process. It requires planned decisions about which elements should be kept unchanged and which need to be adapted as services expand across different contexts.

2.2.3 Managing the Scaling Process

Previous research treats service scaling-up as a phenomenon that must be managed as a process over time, not just initiated. A practical starting point is the idea that service growth needs conscious processes and an explicit risk reasoning. Carman and Langeard (1980) describe growth as a set of strategic paths that can be pursued in different orders,

and they highlight that expansion choices create different risk exposures depending on how firms define growth moves. In this view, managing scaling means making calculated choices about when to spread the offering, when to enter new markets, and when to formalize operations so that the organization does not become overloaded by complexity.

As service offerings expand across geographies and organizational units, the literature emphasizes the need to manage central-local integration. Kowalkowski et al. (2011) show that multinational industrial service provision requires clarity about what is coordinated centrally and what is left to local units. They discuss the ongoing balancing of exploitation and exploration when developing and delivering services in global markets. Their work implies that scaling is not only about replicating what works, but also about preserving space for learning and local development while the organization tries to exploit existing service knowledge at scale. Relatedly, Kucza and Gebauer (2011) discuss global service configurations and show that firms make different configuration choices for organizing services internationally, suggesting that one best global setup is unlikely; instead, firms manage scaling by selecting and adjusting organizational configurations that fit their service strategy and context.

This conclusion connects directly to the tension between standardization and local adaptation. Capanni et al. (2025) emphasize that global service development in manufacturing is contingent on factors such as market diversity and the characteristics of actors, and they show that integrating operating models with service partners is shaped by these uncertainties. One of the core implications is that managing scaling needs decisions about what should be standardized for efficiency and what must remain adjustable to local conditions and partner conditions (Capanni et al., 2025). In practice, this is not a one-time design choice but an ongoing managerial task as services are rolled out across different markets and networks.

A further managerial challenge is the governance of deployment strategies inside the organization. Wang et al. (2019) indicate the difference between voluntary and required adoption when executing new service offerings in the organizations. Their findings suggest that scaling involves choosing an appropriate implementation approach, tracking how widely the innovation is adopted, and providing the support needed for units to implement it effectively. Mandatory adoption can speed up the deployment phase. However, it needs more coordination and creates a stronger need for governance to keep consistency and support learning across units (Wang et al., 2019). O'Reilly and Binns (2019) emphasize that scaling requires different organizational arrangements than early innovation stages, as firms must shift governance and resource allocation away from core business logics to support growth. The international business scaling literature reinforces that, under rapid scaling, management must actively address coordination and control.

Finally, several studies highlight that managing scaling is not a separate process from the ongoing development of capabilities over time. Reim et al. (2021) show that capability development progresses as firms implement and expand new business models, implying that managers must monitor capability maturity and address gaps as scaling proceeds. Hallstedt et al. (2020) similarly show that firms navigate transformation under the effects of several major trends. These changes can change the capabilities firms need and shift their organizational priorities. Moreover, prior research suggests that the scaling phase usually does not progress on a fixed organizational plan. Instead, firms tend to adjust their structures and arrangements over time as they learn from implementation experiences (Carman and Langeard, 1980; Hallstedt et al., 2020; Reim et al., 2021). Together, these studies suggest that managing scaling needs continuous alignment among governance, coordination, and organizational configurations. These alignments evolve and change because needed capabilities also change during service expansions.

2.3 Synthesis - Framework for Scaling Service Offerings

This literature review suggests that scaling service offerings is best understood as a dynamic and multi-level process rather than a single managerial decision. This view is consistent with recent conceptual work that separates scaling from simple growth. It describes scaling as a form of growth that leads to better performance results (Palmié et al., 2023). In international business research, scaling is described as persistent, rapid growth that requires firms to handle replication, coordination, learning, and transformation simultaneously (Tippmann, Ambos, et al., 2023). At the same time, firms face an internal dilemma: they need to repeat the business to scale it to a wider scope, but they also need to develop new ideas to remain competitive and responsive. Tippmann, Monaghan, et al. (2023) indicate this concept as a replication-entrepreneurship paradox and show that firms do not solve the tension but must continuously guide it during global expansion. Finally, a process lens is needed because scaling decisions and risks unfold over time. Carman and Langeard (1980) provide a useful basis here by treating growth as a sequenced process shaped by risk logic, suggesting that scaling involves choices about timing, order, and pace of expansion. Building on these concepts and findings, the framework developed in this thesis combines four layers.

Layer 1: Scaling logic (process and tension): At the core, scaling is driven by a logic of replication that must be managed and learned during the scaling phase (Tippmann, Ambos, et al., 2023). However, replication is never purely mechanical because scaling also needs room for local initiative and creativity (Tippmann, Monaghan, et al., 2023). The framework assumes that the scaling process is managed with a sequence of steps, and each of them involves different levels of risk. It does not rely on a single, uniform rollout approach (Carman and Langeard, 1980).

Layer 2: Capability architecture (dynamic and organizational capabilities): The second layer explains why scaling succeeds in some organizations and collapses in others. Kinunen and Turunen (2012) highlight that servitization capability rests on an internal architecture that connects culture, structure, and strategy, implying that service scaling

needs alignment across these elements. Gebauer et al. (2005) show why this layer matters by describing the service paradox: manufacturers may expand services and increase costs without achieving the expected returns if the necessary capabilities are not developed. Gebauer et al. (2008) further link service success to organizational success factors, reinforcing that scaling depends on capability building, not only on service ambition. Importantly, capability is not static. Reim et al. (2021) emphasize capability development as a roadmap or maturity path that evolves during implementation, which supports a view of scaling as capability building over time. Hallstedt et al. (2020) further note that capability development depends on the context of the firm's activities. This becomes more critical when firms face forces from digitalization and sustainability movements, as these can affect the types of capabilities required and how transformation is managed.

Layer 3: Micro-processes and mechanisms (how scaling is enacted): This layer focuses on how scaling takes place in practice, through organizational routines and micro-level mechanisms. Wang et al. (2019) treat scaling inside the firm as a deployment and expansion process and underline a difference between required and voluntary adoption. Baines and Lightfoot (2013) show that advanced services require operational mechanisms that support service delivery systems, meaning that scaling depends on how delivery is organized and executed. Rönnerberg Sjödin et al. (2016) add relational micro-foundations by showing that role ambiguity can arise in advanced offerings and that organizations rely on relational coping mechanisms to handle this during expansion. Finally, routines and organizational practices can become bottlenecks. Gebauer et al. (2008) emphasize the importance of key factors and service development routines in manufacturing firms. Similarly, Biege et al. (2012) point to gaps in structured processes as barriers to broader launch.

Layer 4: Governance and configuration (scaling across units, partners, and countries): Scaling service offerings often requires firms to decide how to organize their activities in multiple locations and networks of stakeholders. Capanni et al. (2025) show that global service development and the integration of operating models should be designed based

on the situation and different conditions, such as market diversity and downstream partner situations. On the other hand, Kowalkowski et al. (2011) point to a critical tension that can stem from central and local points of view toward decision making, idea generating, and repeating the business model in international settings. Kucza and Gebauer (2011) complement this view by emphasizing that global service configurations are not given, but are deliberately designed as part of the firm's structural choices. In this sense, the way service activities are organized across locations reflects intentional decisions about how the organization should operate and coordinate at a global level.

Learning and evolution across layers: Learning and evolution cut across all layers of the framework rather than constituting a separate layer. To keep the framework explicitly dynamic, learning connects all layers. Parida et al. (2014) underline learning activities and business model evolution in the transition toward industrial product-service provision. Gomes et al. (2021) further link leadership to organizational learning capability and service innovation, showing how learning is supported and sustained through leadership. In the framework, learning works as the mechanism and helps firms refine value propositions, upgrade capabilities, stabilize routines, and adjust governance processes as scaling progresses.

Figure 2 summarizes the synthesis of the literature reviewed in Chapter 2 and presents the analytical lens used in this thesis. The framework is read from the core outward: scale-up logic shapes how firms approach replication and local adaptation over time; capability architecture enables service scaling by aligning culture, structure, strategy, and resource reconfiguration; micro-processes translate scaling into deployable routines and service delivery mechanisms; and governance and configuration provide the structural and relational arrangements needed to coordinate scaling across units, partners, and countries. Learning and evolution cut across all layers by supporting feedback-based refinement and iterative adjustment as scaling unfolds.

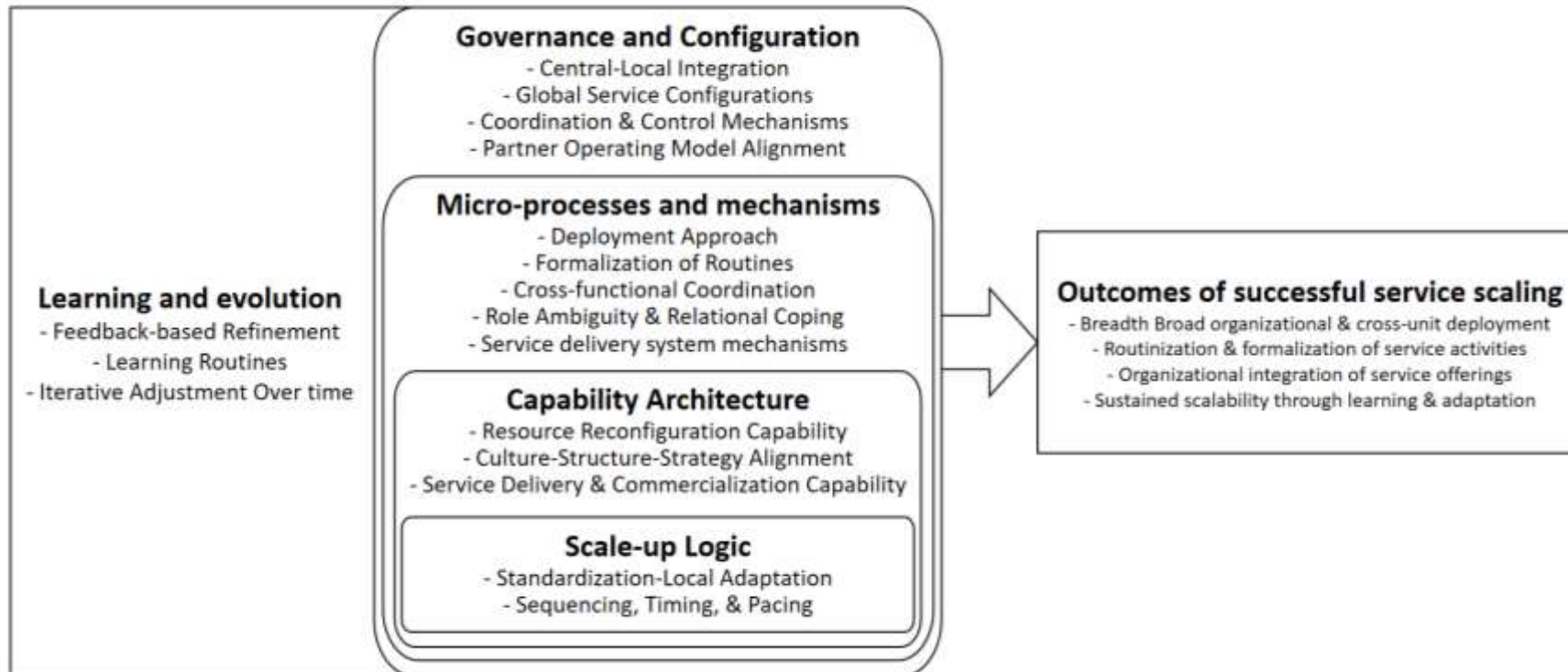


Figure 2: Theoretical framework based on the literature

3 Methodology

3.1 Research Strategy and Method

A qualitative research strategy is employed for this study in order to investigate essential mechanisms and organizational capabilities for scaling up new service offerings in industrial firms. This research strategy is particularly suitable for such objectives when facing both an unexplored phenomenon and a complex organizational context that are not yet fully understood, as it allows the researcher to examine meanings, practices, and interactions within their real-life contexts (Flick, 2022). More specifically, the study employs a case study research method. Case study research is widely used in business and management research when the goal is to examine phenomena within the organizational context and when the boundaries between the phenomenon and its context are not clearly evident (Maylor et al., 2005; Yin, 2009).

Since the thesis aims to study scaling new service offerings and the related managerial practices, organizational structure, and institutional environments, the case study approach is particularly appropriate (Yin, 2009). Based on Saunders et al. (2003), case studies help the researcher to gain a rich and holistic understanding of organizational processes and to investigate real mechanisms that may not be visible through quantitative approaches. The study uses a case study design to examine the literature review and theoretical background of the concept. Eisenhardt (1989) showed that case studies are especially useful when the objective is to develop theoretical insights about phenomena that are poorly understood. With detailed empirical observation, case studies enable researchers to identify patterns, relationships, and mechanisms that can contribute to theory development.

Furthermore, the study follows an inductive qualitative research logic, drawing inspiration from the methodological approach proposed by Gioia et al. (2013). The Gioia methodology emphasizes the importance of using empirical observations and data to examine

the theoretical concepts by systematically organizing qualitative data into first-order concepts, second-order themes, and classifying the main dimensions. Using this method increases the transparency and rigor of the qualitative research because it emphasizes insights that emerge from examining real and empirical data (Gioia et al., 2013). Given that the purpose of this thesis is to identify mechanisms and capabilities underlying service scaling, the Gioia methodology provides an appropriate and structured way to analyze qualitative data and to link empirical findings with existing theoretical perspectives.

3.2 Case selection and description

The selected case company for this thesis is an industrial company that operates in the marine and energy markets. Since the study applies a qualitative case study design, the selection of an information-rich case is a critical methodological step. Case study research in business and management is especially appropriate when the aim is to study a phenomenon in its real organizational context and to develop a detailed understanding of processes and practices (Maylor et al., 2005; Saunders et al., 2003). Moreover, purposeful case selection is a method of selecting case studies to guarantee the relevance of data gained by the case to the topic (Flick, 2022; Saunders et al., 2003). In line with these logics, the case company was selected purposefully as the empirical case to examine the concept of scaling up of new service initiatives in an industrial context.

The case company provides innovative technologies and lifecycle solutions in the marine and energy sectors. The company operates at the international level, and in 2025, employed approximately 18,000 people and provided various products and services in 199 locations across 78 countries. At the group level, the case company reported BEUR 7.0 in net sales in 2025, of which 52% came from services (Case Company, 2025). These figures show the scale of the case company's technology-based operations and the important role of services in its business.

The focus of this thesis is on the service development process and the scaling up of new service offerings in the case company. This focus is relevant because the marine business is the company's largest business area and employs more than 11,000 people in 2025 (Case Company, 2025). The case company provides complex products and solutions for the marine market, together with digital technologies and lifecycle services. From a service perspective, services represented almost 50% of the case company's net sales in 2025, and the company considers service growth as a strategic priority. In its strategy, the case company states that it aims to capture growth in services by strengthening transactional services and retrofits and by moving up the service value ladder through performance-based agreements (Case Company, n.d.-a). This background makes the case company a relevant empirical context for examining how service development is organized and how new service offerings can be developed and scaled within a large industrial firm.

The case company is also a suitable case because the company emphasizes service development and has a dedicated function for developing services alongside products. Its service development activities include systematically collecting service ideas from different organizational channels, after which dedicated teams are responsible for evaluating and developing these ideas and embedding the related processes into organizational routines. Furthermore, the case company provides products and services across multiple geographical contexts where scaling and replication can occur. These characteristics make the case company a proper case for exploring how service ideas move from development and piloting phases toward broader implementation in offices located in different countries.

The case selection is also consistent with the logic of case study research used for theory-related insights. Eisenhardt (1989) emphasizes the value of selecting cases that are particularly suitable for observing the phenomenon and building insights from empirical patterns. Since the case company employs a defined service development process and

scales up service initiatives after pilot phases into multiple international contexts, it provides a strong opportunity to study the organizational actions, routines, and coordination practices associated with scaling up new offering practices and addressing the research questions of this thesis.

3.3 Data collection

After the preliminary literature review, primary data were collected through semi-structured interviews. One of the common methods for data collection in qualitative research is conducting interviews. In this method, researchers have access to interviewees' insights, experiences, and interpretations of organizational processes (Flick, 2022). Interviews are especially a more valuable method for gathering data in case study research since they provide information on managerial practices, decision-making processes, and organizational routines in such detail that it is not easy to observe directly (Saunders et al., 2003; Yin, 2009). Since the objective of this thesis is to understand the mechanisms and capabilities that support the scaling of service offerings, interviews with individuals directly involved in these processes provided rich and relevant empirical material for analysis. In addition to interviews, supplementary data sources such as company documents, presentations, and publicly available materials (e.g., annual reports and internal presentations) were reviewed to provide additional contextual understanding of the service development and scaling processes.

The study used semi-structured interviews, which allow the researcher to guide the conversation using a predefined set of themes while also providing flexibility to explore emerging issues during the discussion (Saunders et al., 2003). For this study, this format was considered suitable as scaling up new service initiatives in industrial organization settings demands complicated processes and role reconfigurations across different teams and departments. Therefore, using semi-structured interviews helps researchers to explore deeper into shared experiences and insights by participants and gain first-hand and valuable knowledge on the topic.

The interview participants were chosen among project managers and middle managers who are involved in the development and scaling of service ideas within the case company. Each of these individuals plays an important part in various stages of the development and implementation of the service offerings, including gathering ideas, evaluating their feasibility, managing, developing, and piloting projects, and finally scaling and expanding the projects in different regions and offices within the company. This can ensure that the researcher is provided with detailed data that reflect real-world and practical insights on the topic.

All interviews were conducted through Microsoft Teams, which allowed flexible participation from managers located in different locations. To do qualitative research, conducting interviews on online platforms is widely acceptable as it facilitates effective communication and removes the barriers to access to geographically distant participants (Flick, 2022). All the interviews were recorded in Microsoft Teams with the participants' permission. Recording interviews helps ensure that responses can be captured accurately and later reviewed during the analysis stage (Saunders et al., 2003). The recordings were subsequently used to support careful data analysis and interpretation.

To provide an overview of the interview participants, the key characteristics of the interviewees are summarized in Table 1. The table includes the interview identification codes, participants' roles, interview duration, communication medium, and the dates of the interviews.

Table 1: Description of the Research Sample

Interview ID	Position / Department	Length	Medium	Date
Interviewee 1	Offering Manager	43 Min	Microsoft Teams	23/2/2026
Interviewee 2	Service Offering Lead	35 Min	Microsoft Teams	2/3/2026
Interviewee 3	Service Offering Lead	27 Min	Microsoft Teams	9/3/2026
Interviewee 4	Service Offering Lead	37 Min	Microsoft Teams	9/3/2026
Interviewee 5	Offering Manager	37 Min	Microsoft Teams	4/3/2026
Interviewee 6	Offering-Manager	55 Min	Microsoft Teams	11/3/2026
Interviewee 7	Service Offering Lead	37 Min	Microsoft Teams	11/3/2026
Interviewee 8	Development Manager	40 Min	Microsoft Teams	13/3/2026
Interviewee 9	Sales Manager	45 Min	Microsoft Teams	13/3/2026

3.4 Data analysis

The analysis of the empirical data followed a systematic qualitative data analysis process suitable for case study research. In qualitative studies, analysis is not a separate end stage, but it is an iterative and interpretive process in which the researcher moves back and forth between data, emerging insights, and relevant concepts in order to develop a coherent understanding of the phenomenon (Flick, 2022). In line with case study research logic, the purpose of the analysis in this thesis was to identify patterns and mechanisms related to the scaling-up of new service offerings and to connect these empirical observations to existing theoretical concepts (Maylor et al., 2005; Yin, 2009). The data analysis was conducted by using the Gioia method to bring qualitative rigor and transparency to the study (Gioia et al., 2013). Gioia et al. (2013) emphasize that qualitative rigor can be strengthened by clearly documenting how concepts are derived from informant terms and progressively linked to higher-order theoretical categories. Accordingly, the analysis is conducted in three phases, including informant-centric concepts, researcher-centric themes, and finally classifying and aggregating theoretical dimensions that build a relationship between raw data from interviews and the final conceptual model (Gioia et al., 2013).

First, the interview recordings were used to create an accurate basis for analysis, enabling careful engagement with participants' accounts (Saunders et al., 2003). The empirical material was examined through an initial open coding phase, during which the researcher identified and labeled meaningful statements related to service development activities, pilot execution, replication and adaptation across units, coordination and control mechanisms, and capability-related practices. In this phase, the coding remained close to the interviewees' own language, consistent with Gioia et al.'s (2013) recommendation to begin by developing first-order concepts that reflect informant terms and interpretations rather than imposing strong theoretical categories too early.

Second, the analysis moved to the development of second-order themes. In this phase, the researcher compared first-order concepts, looked for the main similarities and differences across different interviews, and then classified related concepts to form patterns in order to explain the scaling process. This step reflects the process of the inductive approach and how researchers look for recurring patterns and connections among observations and gradually form abstract theoretical explanations (Eisenhardt, 1989). In the context of this study, the researcher aimed to find the main organizational mechanisms and capabilities essential for scaling service offers across industrial firms.

In the third step, the researcher integrated the second-order themes to extract the main aspects of the opinions related to theoretical themes and shaped the primary blocks of the scaling process (Gioia et al., 2013). Table 2 depicts a summary of the data structure of the study and illustrates how raw text and concepts shaped the main themes. This step aligns with the Gioia methodology that emphasizes creating a transparent data structure based on gathered data. The aggregated dimensions were related to the conceptual framework developed in Chapter 2 and allow the researcher to interpret the empirical findings through an established theoretical lens while still preserving a clear grounding in the interview data. Throughout the analysis, the study followed an iterative comparison logic consistent with Eisenhardt's (1989) approach to building theory from case study research. This involves repeatedly cycling between data and emerging interpretations, refining themes, and checking whether proposed categories remain consistent across participants and across different parts of the service development and scaling process. Based on the literature, this iterative approach supports internal consistency of the results and helps ensure that theoretical insights are firmly grounded in empirical patterns and prevent isolated conclusions (Eisenhardt, 1989; Flick, 2022).

Finally, the researcher analyzed with clear documentation to support methodological transparency and traceability. Based on Saunders et al. (2003), documenting research procedures clearly is one of the important phases of research, especially in qualitative works, and can prevent subjectivity of conclusions. Therefore, the study aims to increase

the transparency and rigor of the qualitative analysis through a structured analysis, sequential coding phases, connecting concepts and themes, and aggregating dimensions clearly (Gioia et al., 2013; Saunders et al., 2003).

3.5 Validity and reliability

Validity and reliability are among the most important parts of qualitative research, particularly in case study works, as the study is based on the interpretation of the researcher, and their understanding plays a central role. In qualitative research, validity is defined as the credibility and accuracy of the research in capturing the studied phenomenon, and reliability is determined by the transparency and consistency of the research procedures (Saunders et al., 2003).

In this study, several measures were used by the researcher to ensure the validity and reliability of the findings. Firstly, the data were collected through semi-structured interviews with participants who are directly involved in service development and scaling activities in the case organization, including project managers and middle managers. Obtaining data from most related individuals with first-hand experience related to the topic improves the credibility of the study (Flick, 2022). In addition, the accuracy of gathered data was guaranteed by recording all the interviews with the permission of the participants and reviewing carefully during the analysis process (Saunders et al., 2003). Moreover, triangulation was used to strengthen the credibility of the findings by comparing and confirming the interpretations derived from interviews with additional sources such as internal company documents, presentations, and publicly available materials, including annual reports (Yin, 2009).

To increase the reliability, a systematic and transparent research procedure was applied throughout the study. The use of a structured interview approach ensured that similar themes were discussed across all interviews while still allowing participants to elaborate on their experiences (Saunders et al., 2003). Furthermore, the data analysis followed the

Gioia methodology, which provides a clear structure that links empirical observations and data to theoretical concepts through first-order concepts, second-order themes, and aggregate dimensions (Gioia et al., 2013). This systematic coding process increases transparency in how interpretations are derived from the data and strengthens the methodological rigor of qualitative studies. By documenting the research process and maintaining a clear connection between empirical data and theoretical interpretation, the study aims to produce findings that are both credible and methodologically robust (Eisenhardt, 1989; Flick, 2022).

Table 2: Data Structure of the Study

First-order concepts	Second-order themes	Aggregate dimensions
<ul style="list-style-type: none"> • Pilot tests customer value, • Pilot tests customer willingness to pay, • Pilot tests market interest, • Pilot tests commercial feasibility. 	Validation of customer value and market demand	Pilot phase as validation for scalability
<ul style="list-style-type: none"> • Pilot tests whether the service can actually be delivered, • Pilot tests whether processes work in reality versus theory, • Pilot tests internal competencies and readiness. 	Validation of internal feasibility and readiness	
<ul style="list-style-type: none"> • Service pilots focus on the commercial approach and service processes, not only on technical functionality, • Pilot can involve end-to-end testing, including delivery and execution. 	Service piloting as broader than technical testing	
<ul style="list-style-type: none"> • Piloting can start with an MVP and be enhanced over time, • The purpose of piloting is to learn, improve, and refine the concept. 	Pilot as an iterative learning process	
<ul style="list-style-type: none"> • One pilot case is not enough to generate all the feedback, • Pilot feedback is often indirect and secondhand, limiting learning. 	Need for broader pilot learning	
<ul style="list-style-type: none"> • Feedback collection is often secondhand and not systematic, • There are no clear thresholds for how many pilots are enough before launch, • Pilot learning may remain in individual documents and not become shared knowledge. 	Weak formalization of pilot evaluation and feedback	
<ul style="list-style-type: none"> • A scalable offering needs a clear and stable core, • The basic structure of the offering should stay unchanged across customers and regions, • Standardization supports repeatable processes, IT tools, and sales support materials, • Excessive flexibility makes scaling and internal communication more difficult, • In scale-up, the offering should be repeatable rather than continuously customized. 	Repeatability through a standardized core	Balancing standardization and adaptation
<ul style="list-style-type: none"> • Each customer is unique, so some flexibility is needed, • Adaptation can happen by adding to the scope, but not removing the basic scope, • Pricing can be adapted through discounts, while the global list price remains fixed. 	Limited flexibility around the core	
<ul style="list-style-type: none"> • Adaptation may be needed because of local legislation, compliance, and ways of working, • Adaptation may also be needed to match customer equipment and remaining lifetime expectations. 	Context-based adaptation across regions and cases	
<ul style="list-style-type: none"> • Sales helps identify early adopters and pilot customers, • Development teams depend on sales to access customers, • Frontline sales help arrange meetings and introduce customers, • Pilot opportunities may require repeated internal follow-up and pushing. 	Sales as a mechanism for pilot access	Sales as an enabler of pilot and scale-up
<ul style="list-style-type: none"> • Sales needs to see the offering as a sales enabler, • Without sales involvement, pilot execution becomes difficult due to limited customer access. 	Sales-side legitimacy and buy-in	
<ul style="list-style-type: none"> • Scale-up requires a systematic sales process, • The offering needs to be included in the pipeline and sales discussions, • Scale-up involves repeated sales meetings across countries. 	Sales-side diffusion in the scale-up phase	
<ul style="list-style-type: none"> • The concept needs to be sold internally through multiple meetings and communication, • Webinars and product/service introductions help spread awareness internally. 	Internal selling and sales awareness building	
<ul style="list-style-type: none"> • Opportunities may be lost when sales involvement is weak or delayed, • Promising offerings may stall if sales do not understand, prioritize, or promote them. 	Weak sales engagement as a constraint	
<ul style="list-style-type: none"> • Scalability requires logistics, workshop capacity, pricing structures, data visibility, tools, and instructions, 	Operational infrastructure for repeated delivery	

<ul style="list-style-type: none"> • More room and broader workshop capability are needed as volume grows, • Logistics capabilities are needed to handle returned parts systematically, • Operational instructions and standardized guidelines are needed for consistent execution. 		Operational re-configuration for scale-up
<ul style="list-style-type: none"> • Automation is a critical enabler for scale-up, • Manual steps increase workload and the risk of error. 	Automation and reduction of manual dependency	
<ul style="list-style-type: none"> • Some service offerings require new tools, safety practices, and training, • Global scale-up requires capabilities across locations, workshops, and field services. 	Capability development for operational scalability	
<ul style="list-style-type: none"> • During the pilot, activities can be handled by a small group of individuals, • In scale-up, execution cannot depend on the original development team. 	Shift away from person-dependent execution	
<ul style="list-style-type: none"> • Local units and local sales teams need to know what to do, • Clear processes, responsibilities, and ways of working are needed, • Otherwise, the service offering lead becomes a bottleneck. 	Shift toward process-dependent execution	
<ul style="list-style-type: none"> • Scale-up has not been defined in great detail, • Formal development processes typically end at launch, • Scale-up has not been embedded in the process like piloting, • There are no agreed or written boundaries between pilot and scale-up. 	Weak formalization of the scale-up phase	Organizational constraints in scale-up
<ul style="list-style-type: none"> • Ownership after pilot and launch is often unclear, • There is no dedicated solution owner in operations, • The original creator may remain responsible during operations, • The process should clearly define who is involved in different stages. 	Unclear ownership after handover	
<ul style="list-style-type: none"> • Different parts of the organization may have conflicting goals, • Inventory optimization can conflict with the requirements of value-added service delivery. 	Misalignment between organizational priorities	
<ul style="list-style-type: none"> • Centralized decision-making is systematic but slow, • Projects need supporting research and materials before decisions are made. 	Slow and centralized internal decision-making	
<ul style="list-style-type: none"> • Regulation and taxation can limit implementation in some countries and regions. • Differences in local operational capabilities and infrastructure can limit service implementation across locations. 	External and location-specific constraints	
<ul style="list-style-type: none"> • Adoption is not mandatory for local teams, • Local actors may ignore the new method and continue working as before. 	Voluntary rather than enforced adoption	Internal deployment and capability building
<ul style="list-style-type: none"> • Scale-up requires a systematic process of internal engagement and deployment, • Internal deployment includes awareness creation, training, and sales support materials, supporting materials may need local adaptation and translation, • The offering needs to be enabled through supply chains and geographical extension. 	Structured internal deployment after launch	
<ul style="list-style-type: none"> • Written material alone is not enough, • People need training and support, not only documentation, • Deployment also requires discussions during handover and practical support. 	Active training and implementation support	
<ul style="list-style-type: none"> • The organization needs to build service capabilities in different locations globally, • Skilled people are needed in workshops, field services, and other operational roles, • Scale-up may require upskilling of a wide group of people. 	Capability building across locations	
<ul style="list-style-type: none"> • Geographical rollout happens gradually from one location to another, • Scale-up may involve adding delivery centers and extending to different product reference types and locations. 	Coordinated geographical expansion	
<ul style="list-style-type: none"> • Standardized processes, supporting materials, and capabilities help the offering be used consistently across teams and locations. • Written instructions alone are not enough; training and implementation support are needed. 	Structures supporting repeated execution in deployment	

4 Findings

4.1 Service Development Process in the Case Company

In the case company, a dedicated team handles the development processes of new service-related ideas. This team is responsible for organizing, evaluating, and adding these ideas into structured offerings. The team works with different types of development paths depending on the nature of the idea.

Service ideas are typically developed through three main types of processes. The first type follows a structured and stage-based development path, and is typically used for product-based service offering development, beginning with idea evaluation and concept development, followed by business and project planning, and continuing with technical and commercial development. This process leads to a broader launch of the offering and includes post-launch evaluation and lifecycle management to support continuous improvement. The second type of process is more iterative and customer-oriented, typically used to develop service-based offerings. It starts with identifying customer needs and assessing the feasibility of the concept, followed by the development of a high-level plan and business case. The concept is then tested through a minimum viable solution with selected customers. Based on these pilot experiences, the offering is further developed, gradually expanded to additional regions, and refined over time. The third approach focuses on structuring and packaging existing service activities into more standardized and sellable offerings. In this case, the emphasis is on making services easier to deliver, replicate, and scale across different customer contexts (Case Company, n.d.-b).

For this study, the empirical data are mainly based on the experience of individuals working within this offering development context. The interviewees are directly involved in these development processes and have hands-on experience in activities related to service development, commercialization, and scaling. To also include other perspectives, such as the sales viewpoint, two additional interviewees were selected from other teams.

These individuals have been involved in service development projects for several years and were able to provide insights from different roles within the organization. This combination of roles provides a relevant basis for examining how new service offerings are developed and scaled within the case company.

4.2 Empirical Findings (Themes from Interviews)

4.2.1 Theme 1: Pilot phase as validation for scalability

A clear pattern in the interviews is that the pilot phase is not seen as only a technical test. In the context of service offerings, the pilot is used to test several issues before broader rollout. These include customer value, commercial feasibility, internal readiness, and the practical ability of the organization to deliver the offer. In this sense, the pilot phase functions as an early validation stage that helps the company understand whether the offering is realistic and scalable beyond the initial concept stage.

One important finding in the interviews is that piloting service offerings differs from piloting physical products. In service concepts, the focus is not mainly on technical functionality. Instead, the pilot is used to test the commercial approach and the service processes behind the offering. One interviewee described this distinction very clearly:

“With the service concepts, it's quite different than if you have a physical product that you are piloting, with the physical products, you would pilot the actual technical product capabilities. But when we are working with the services, we would like to pilot the commercial approach and also the service processes.” (Interviewee 1)

The interviews also show that the pilot phase is often iterative. Rather than starting with a fully developed solution, teams may begin with a minimum viable version (MVP) and then improve it over time based on experience. This is especially visible in service concept development, where the organization has more room to adjust the commercial

logic or the supporting processes than it would have with a physical product design. As the interviewee continued:

“We have different iterative cycles in the process, and also, this piloting is something that we can also do iteratively. So we can pilot first like a minimum viable product, but then we can enhance it over time.” (Interviewee 1)

The interviews suggest that in service settings, the pilot phase is not always clearly defined as a single, fixed stage. Rather than referring to one fixed activity, piloting may involve different objects of validation. In some cases, the focus is on testing the commercial approach and how the concept is introduced and discussed with customers, while in other cases, the pilot is understood more broadly as an end-to-end test that also includes actual delivery and execution. This makes piloting in service offerings more ambiguous than in traditional product contexts, because different parts of the concept may be validated at different times. As a result, the pilot phase may stretch over a longer period, and the boundary between piloting and launch may remain less clearly defined.

A further important point is that the pilot is also used to validate market interest and customer willingness to pay. The interviews suggest that even a promising service idea must still prove that customers see value in it and are willing to buy it. One interviewee explained the pilot phase as a way to evaluate demand, value proposition, and commercial feasibility from the customer viewpoint:

“In my point of view, one primary goal was to test the market interest. So customer willingness to pay, customer value, present this concept to the customer, explain how it works, explain the pricing, because that's what customers many times ask about.” (Interviewee 2)

In addition, the interviews suggest that trusting a single pilot case may not be enough to generate strong learning. One interviewee emphasized the importance of conducting multiple pilot cases in order to gain a wider range of feedback and reduce uncertainty:

“It's important to do a pilot not only with one customer because you can't maybe receive all the feedback and answers to the questions you have.” (Interviewee 5)

Beyond market validation, the interviews also emphasize the importance of internal feasibility. At the same time, the pilot is also used to test whether the service can actually be delivered in practice. The interviews show that this internal side of piloting is just as important as the market side. If the company faces major difficulties in delivering even a limited pilot version, this may indicate deeper challenges for future scale-up. As one interviewee put it:

“Then the other angle, more internally looking, is whether we can actually deliver this kind of service? Is it feasible to do?” (Interviewee 2)

In this way, the pilot functions not only as proof of concept, but also as proof of operability. One interviewee explained this directly:

“I would say it's about internal readiness, it's about being able to see whether the processes work in reality versus theory, or about internal competencies, whether, for example, our field service engineers or any others” (Interviewee 6)

The interviews also suggest that the pilot phase plays an important role in organizational learning. Rather than serving as a final confirmation step, the pilot is used to detect mistakes, refine the concept, and improve the service before wider launch. This strengthens the view that the pilot is an active learning stage rather than a simple checkpoint. One interviewee summarized this very directly:

“The purpose of the piloting is to learn. So, to learn, does it work? Do we need to change or improve it based on the customer feedback or the feedback from the organization?” (Interviewee 1)

At the same time, the interviews also reveal a practical consequence of this ambiguity in current pilot practices. Although the organization has a structured process for service

concept development, the boundary between the piloting and launch phases is not clear. One interviewee explained that the process gives general guidance, but does not define how many pilots are enough before an offering is considered ready for launch:

“That we have a process which tells us what should be done, but we don't have any thresholds on how many pilots need to be done for us to say that this is ready for launch.” (Interviewee 6)

The interviews also suggest that customer feedback collection during the pilot phase is not always systematic. In some cases, feedback reaches the development team only indirectly through sales teams or written comments, rather than through direct customer interviews. This weakens the learning value of the pilot and makes the evaluation less robust:

“We only get some feedback in writing or an email, or somebody says something, but we are not necessarily interviewing the customer to get the direct feedback. So it's all secondhand kind of feedback.” (Interviewee 6)

A similar concern appears in another interview, where feedback from pilots was described as something that is not always collected or made visible in a systematic way. In that account, pilot learning may remain in individual documents or within the knowledge of specific managers instead of becoming shared organizational knowledge. This suggests that the challenge is not only collecting feedback, but also making it accessible and usable beyond the immediate project team.

“We don't gather feedback that often, and if product managers gather, maybe they have it somewhere in their documents somewhere, but it's not available for everybody.” (Interviewee 5)

The interviews show that the pilot phase acts as an important preparation step for future scalability. It helps validate key dimensions such as customer value, feasibility, and internal readiness, while also giving the organization a chance to refine the service concept

before broader rollout. The findings indicate that the company needs clearer evaluation criteria for pilot projects and systematic customer feedback practices to improve this pilot phase. Taken together, the data suggest that the pilot phase functions more than a proof of concept but also as a proof of value, feasibility, and organizational readiness.

4.2.2 Theme 2: Balancing standardization and adaptation

The interviews suggest that scalable service offerings require both standardization and flexibility, and they show that scalability depends on balancing standardization with controlled flexibility rather than relying on either extreme.

4.2.2.1 Standardized core for repeatability

An important point in the interviews is that a scalable service offering needs a clear and stable core. The basic structure of the offering should stay unchanged to make it easier to repeat the offering across different customers and regions. Moreover, having a fixed core helps the project team to communicate the offering internally more effectively and develop it through shared processes and tools in the organization. One interviewee explained that some elements must remain standardized so that repeatable processes, IT tools, and sales support materials can be built around the offering:

“There are certain elements which are standardized ... but we also need to have some things which can be kind of adopted based on the customer. All of the customer installations are a bit unique, so there needs to be a bit of flexibility, but still, I think it needs to be standardized so that we can repeat it. We can build the processes, IT tools, and sales supporting materials in a good, scalable way.” (Interviewee 1)

Another interviewee confirmed the same logic and emphasized that the core of the offering must remain intact, even if the offer is delivered as a package of service and product. They believe that excessive flexibility makes scaling and internal communication

more difficult. If too many parts of the offering can change, it becomes unclear what exactly should be delivered and how different teams should work with it:

“The product and the basic building blocks of parts and field services were the core thing, and also the packages that we have defined for the customer. [We] offer something that they cannot pick up just a few things from there.” (Interviewee 7)

The importance of a stable core is also evident from a sales perspective. A standard offer makes it easier to prepare a service offer and present it repeatedly without redefining the scope in each customer case:

“You don't have to wait for someone to customize an offer for a customer. You are giving the same offer to every customer, but this is your standard offer. So that was the core element to have this kind of budgetary offer available, which can be used frequently. And then the adaptable elements are the ones where each customer is unique.” (Interviewee 6)

Finally, the data highlighted the importance of the fixed elements of service offerings in the scale-up phase and indicated that this phase requires a more stable core than the pilot phase. While the pilot may involve repeated iterations, when the company aims to run the project on a wider scale, the offering needs to be repeatable across different cases rather than continuously customized.

“Once you are ready to scale up, the iterations will be less frequent ... mostly you want to be able to repeat it without having to customize it every time, because then what's the point of developing a service concept” (Interviewee 6)

4.2.2.2 Controlled adaptation across contexts

Although the interviews clearly emphasize the importance of a stable core, they also show that some adaptation remains necessary. However, this adaptation was not described as open-ended. Instead, interviewees indicated that limited and controlled changes in selected elements are necessary while the core logic of the offering remains

fixed. One interviewee explained that the basic scope of the offering should stay unchanged, but additional elements could still be added when needed. This shows that flexibility was introduced around the core rather than by changing the core itself:

“Each customer is unique, so the needs will vary, and that's where you start kind of adding to the scope. We will not remove things from the basic scope because the basic is basic. It needs to be there, but you can keep on adding elements” (Interviewee 6)

Pricing was a clear element in the interviews that can be adapted. Participants explained that the price may need to be changed based on the conditions of the location where the pilot project is implemented. For example, in certain locations, it may be possible to offer parts or services at a lower price, or discounts may be applied. In other situations, the price of the product (components) may remain fixed, while the field service costs can differ depending on the local context. However, these changes are typically limited. They mainly depend on the specific conditions of the service offering and the location where the offer is provided:

“We can change the price, for example, via the discounts, but we cannot change the global list price.” (Interviewee 1)

Another interview supported the same point by showing that local sales teams could apply different discount levels without changing the underlying component price:

“That is left to sales to [apply] their own discount policy [in] every sales region. With different discount levels, but we are not touching the price of the component because it's like individual solutions. Then it's up to sales that they give a discount level that they feel is good enough, not too much.” (Interviewee 4)

The interviews also show that local adaptation is often necessary due to differences in operational and regional conditions, which means the components of the offering

should be adjusted accordingly. These conditions can include legislation, compliance requirements, and local ways of working:

“About local adaptation, there's usually the local legislation and kind of compliance depending on what you're doing, but that usually affects and needs to be considered, and maybe in some cases we should have been better to think about the local ways of working and culture and how to do it.” (Interviewee 7)

Finally, the interviews show that adaptation may also take place within an otherwise standardized technical concept. In one case, a more differentiated structure had to be introduced so that the solution would better match customer equipment and remaining lifetime expectations:

“We wanted to deliver only one material number, for example, but we were kind of guided to go for three different levels of the same material. The only difference is that the remaining expected lifetime for these materials is different, and matches the customer's equipment.” (Interviewee 3)

Taken together, the findings show that scalability depends on defining a non-negotiable core that supports repeatability and communication, while allowing controlled adaptation in selected elements. These adaptations typically relate to pricing, scope extensions, regional operating conditions, compliance requirements, and technical matching, but remain bounded by the core structure of the offering.

4.2.3 Theme 3: Sales as an enabler of pilot and scale-up

One of the clearest patterns in the interviews is the central role of sales in both the pilot phase and the scale-up phase. Across the data, sales teams were not described only as a channel for contacting customers. Instead, they appeared as a key mechanism that enables the whole process to move forward. The interviews suggest that without sales involvement, it becomes difficult to identify pilot customers, access customer discus-

sions, collect market feedback, and spread the offering more broadly across the organization. In this sense, sales were not seen as a secondary support function, but as one of the main conditions for both early testing and later expansion.

During the pilot phase, sales play a central role in identifying and reaching suitable pilot customers. The interviews show that development teams often depend on sales to access customers and move pilot discussions forward. In some cases, this process begins with identifying supportive individuals within sales who are willing to help bring the concept to the customer. As one interviewee explained:

“I think it's very important to find these early adopters who will help us to find the pilot customers. So we need to have buy-in from our sales colleagues. So that together with our sales colleagues, we can then pitch the new thing and we get the feedback from the customers.” (Interviewee 1)

Other interviews confirm the same point from a more operational angle. Customer access depends heavily on the people who already own the customer relationship, and without their support, the pilot cannot proceed. One interviewee described this very directly:

“The bandwidth from the parties that own the customer relationship, because without access to customers, we will not have a pilot that is for sure.” (Interviewee 2)

The interviews also show that sales involvement is needed not only in principle, but also in day-to-day pilot execution. In practice, teams often need close collaboration with frontline sales to identify potential customers, arrange meetings, and move the concept onto the customer table. One interviewee described how frontline sales helped promote the concept and introduce customers, while also noting that internal follow-up was sometimes needed to make these customer contacts actually happen:

“Sales, for example, [is] in touch with the customer and gets meetings with them, and we have also utilized [the meetings] in a way, managing the piloting phase that we have close collaboration with some of the people in the front line sales who can then basically promote or introduce customers to us” (Interviewee 7)

This same interview also suggests that sales involvement does not happen automatically, and that pilot opportunities may require repeated follow-up and internal pushing before they move forward. In some cases, these opportunities are not easy wins and require repeated promotion in sales meetings before any real opening appears.

Another important point in the data is that sales support depends partly on whether the new service is seen as useful for sales itself. One interviewee stated that the sales organization needs to see the offering as a sales enabler. If sales do not see value in the offering from its own perspective, it is less likely to support the pilot:

“If you want to pilot with customers, we need to have sales organization on board. They need to see this [new offering as a] sales enabler for our company.” (Interviewee 3)

The central role of sales continues after the pilot phase, when the offering moves toward broader deployment. At this stage, the challenge is no longer only to find a few pilot customers. Instead, the development team needs to promote the offering and make it visible and actively promoted by sales actors across different regions and teams. The interviews suggest that this requires repeated internal engagement rather than ad hoc communication. In the scale-up phase, broader adoption depends on creating more systematic sales-side mechanisms through which the offering can enter everyday commercial work. This included structured ways of managing leads, introducing the offering into the pipeline, and bringing it into regular sales discussions rather than leaving it dependent on individual initiative alone. As one interviewee explained:

“We need a systematic sales process. So, we would have a very systematic way to manage the leads or include the new offering into the pipeline, and then we would

have a database to approach ... we could systematically include the offering into the sales discussions.” (Interviewee 1)

One interviewee described sales awareness as one of the biggest constraints in scale-up and stressed the need to build confidence to sell the offering. Another interview described scale-up as a repeated series of sales meetings across countries, in which the concept is presented, feedback is gathered, and understanding is gradually built. This shows that scale-up is not simply an extension of the pilot, but also a process of internal diffusion:

“After the pilot phase, we are going to scale up. Then it is all like a repeat of sales meetings ... going to each of those countries and presenting over there, getting their feedback and ensuring that they understand what we are proposing.” (Interviewee 6)

A related pattern appears in how the offering is introduced and spread internally across different teams in the organization. The interviews suggest that scale-up requires repeated internal communication and engagement, and development teams need to present the concept multiple times so that local sales actors become familiar with it, build confidence in it, and are willing to bring it forward to customers actively. In this sense, scale-up also involves an internal selling process in which the concept must be discussed through several interactions before it gains traction. As one interviewee described:

“So you need to convince them, sell [the idea] internally, in different sessions, then they will take it forward to the customer side. So I would say we need a lot of meetings and communications.” (Interviewee 7)

This indicates that sales-side diffusion of new offerings involves both informal, interaction-based processes and more structured, organization-wide communication mechanisms. The interviews also point to more formal internal communication mechanisms that support sales-side diffusion of the offering after the pilot phase. Rather than relying

only on one-to-one discussions, project teams may use recurring communication formats to introduce the offering more broadly across the organization and strengthen sales awareness. One interviewee referred to webinars and regular product or service introductions as practical ways of spreading knowledge of new offerings beyond the original core team:

“In the marine level, we do have these webinars where they are actually sharing the information of the new products [and services], and I think that's the really effective way, and in the sales proposal side, we do have either quarterly or more often sort of product [and service] introductions arranged” (Interviewee 9)

At the same time, the interviews show clearly what happens when sales involvement is weak. Since identifying suitable pilot customers is often challenging, the level of sales engagement can significantly influence pilot outcomes. In one case, the lack of sales awareness about the customer was described as a major constraint. The interviewee explained that opportunities were missed because the relevant salesperson did not respond in time:

“You don't want to have hundreds of opportunities, and when you know you have a good one, you really want to make sure you don't lose the opportunity. We've lost opportunities to pilot because the sales guy just didn't answer ... and then, too late, we missed the shot” (Interviewee 4)

Beyond individual missed opportunities, the interviews suggest that identifying suitable pilot customers is itself a structural challenge. Development teams typically rely on sales actors who own the customer relationships, and therefore, access to pilot cases depends on how actively these actors recognize, prioritize, and follow up on potential opportunities. As a result, even promising concepts may fail to progress if sales attention is limited or delayed. This indicates that pilot execution is not only supported by sales involvement but fundamentally dependent on it. Together, these accounts show that even a promising offering may stall if sales do not understand it, prioritize it, or feel comfortable using it.

Overall, the interviews show that sales involvement serves as a central enabling mechanism across both the pilot and scale-up phases. During the pilot phase, sales helps identify pilot customers, initiate customer discussions, and gather market feedback. During the scale-up phase, sales support commercial diffusion by helping the offering gain visibility, legitimacy, and uptake among customer-facing actors across regions. Thus, the findings reveal that sales can act as a key internal mechanism and not only a route to the market, and also can help the new service offerings gain visibility, internal traction, and broader commercial uptake across customer-facing units.

4.2.4 Theme 4: Operational reconfiguration for scale-up

Another clear finding from the interviews is that scale-up does not happen simply by launching the offering or presenting it to the market. Instead, the data show that broader scaling also requires changes in operational capabilities, logistics, systems, and internal processes. In other words, an offering does not become scalable only because customers are interested in it or because sales teams are willing to promote it. It also needs a delivery system that can support higher volumes and repeated execution across different locations and countries.

4.2.4.1 Operational readiness and infrastructure

The interviews suggest that a service offering is not truly scalable unless the operational system behind it is prepared to support it in practice. This preparation includes logistics processes, workshop capacity, pricing structures, data visibility, operational instructions, and supporting tools. Without these elements, the offering may still work in a pilot setting, but it becomes much harder to repeat it reliably at a broader scale.

One interviewee explained that as the service grows, the organization needs more physical room, stronger workshop capability, and clearer internal instructions and standardized operational guidelines (e.g., clear work instructions and process cards) to handle the larger volume of returned parts and reconditioning work:

“... we need to have more room because there will be more parts in our system and then the capabilities also needed to be very wide and ensured in the workshop organization ... So we need to create very clear cards for our work of organization that they can do the recognitions according to the rules, systems, and designs, not as they have possibly used to do before.” (Interviewee 3)

A similar picture appears in another interview, where scale-up was described as requiring a more systematic operational backbone. This included data visibility, pricing capability, logistics handling for returned parts, and even concrete operational tools such as boxes and instructions for returning the spare parts. The same interview also emphasized that workshop instructions are part of making the process repeatable, not just technically possible. This is important because it shows that scalability also depends on operational consistency.

“We would need to have a systematic data approach ... [for] code resolution transparency to identify [spare parts] for engines. Then we have the pricing capabilities. There is a systematic process to develop or set up the pricing. Then we have all of the logistics capabilities built in so that our logistics centers have a systematic way to take care of returned parts. Then they have built even these physical [capabilities].” (Interviewee 1)

The interviews also show that operational infrastructure becomes especially important when parts of the service are still handled manually. One interviewee explained that automation is critical and increases the efficiency of expanding the project, and manual steps can increase both workload and the risk of error. The same interview gave concrete examples, such as service fee calculation and feasibility checks, which still depended on manual work and individual expertise. This suggests that operational readiness is not only about people and facilities, and the developing technological infrastructures can reduce the reliance on manual work.

“One critical enabler for the scale up is this high level of automation because if we have these manual steps that need to be taken by individual people, that not only increases the workload obviously, but also increases the risk of error.” (Interviewee 2)

The interviews also suggest that scaling more complex offerings may require significant capability development across locations. One interviewee highlighted that new service concepts may demand new tools, safety practices, and training across workshops and field services:

“It requires a lot of capabilities, new tools, and training in this competence ... about new fuel, new safety measures, new safety trainings, and all kinds of different aspects that go along with that.” (Interviewee 8)

This indicates that operational scalability depends not only on replicating existing capabilities but also on developing new ones that support the delivery of more complex service offerings. In some accounts, operational readiness was also linked to geographical scale-up. In one interview, global availability was described as an essential service capability in different locations, and it needs broader upskilling across workshops and field services. This highlights that operational readiness extends beyond the central level and must also be established in local delivery contexts.

At the same time, local operational units may not always be ready to support the new service model at a larger scale. For example, parts operations in different locations were not necessarily used to handle the increased volume of returned components required by the new process. This suggests that operational scalability also depends on whether local units are practically prepared to absorb higher execution volumes.

4.2.4.2 From person-dependent to process-dependent execution

The second sub-theme concerns the shift from person-dependent execution to process-dependent execution. The interviews show that during the pilot phase, many activities can be handled by a small group of individuals. However, this model becomes difficult to sustain once the offering begins to spread more broadly. In the scale-up phase, local teams and operational actors need clearer processes, responsibilities, and ways of working so that execution does not depend too heavily on the original development team.

One interview described this point very directly by arguing that ways of working should be designed from the beginning so that local units and operational actors know what to do when providing the service. Otherwise, the service offering lead may become a bottleneck during scale-up:

“It's very important that from the very beginning we create ways of working and processes that are not dependent on the development team ... so that the local units and local sales teams, as local coordination management, can know what to do when it comes to providing this service.” (Interviewee 2)

This highlights that, while multiple functions may be involved, scalable execution requires clearly defined operational roles and responsibilities. This is reinforced by another insight, which explains that once the concept moves into a broader global setup, the development team can no longer be involved in every case. At that point, it becomes essential that stakeholders know what to do, where to act, and how the process should run. The same interview added that this requires more background work during scale-up, particularly to ensure role clarity and consistent practices across cases. This suggests that process design is not a follow-up activity, but a precondition for scalable execution.

“When it comes to the global setup, the development team cannot be involved in all the cases, and it needs to be clear to all the stakeholders. That's how it goes ... So definitely need to pay a lot more attention to [the] capabilities and resource reconfiguration, so that people know what to do ...” (Interviewee 7)

This reinforces the idea that scale-up depends on execution models that can function beyond the original development team. Once an offering moves beyond the pilot stage, local actors need sufficiently clear routines, responsibilities, and process steps so that delivery can be repeated without constant intervention from the original developers. In this sense, process-dependent execution is a practical operational requirement for scale-up, not only a matter of formal organization. This challenge becomes even more visible when execution still depends on manual coordination and individual expertise, particularly as volumes increase.

The interviews show that scale-up requires more than commercial rollout. It depends on building operational infrastructure and moving from person-dependent execution toward process-dependent execution. A service offering becomes more scalable when logistics, workshop processes, pricing mechanisms, tools, and instructions support repeated delivery, and when delivery can be carried out consistently across cases without heavy dependence on a limited number of original developers. These findings suggest that long-term scalability depends strongly on the organization's ability to build robust and repeatable operational support around the offering.

4.2.5 Theme 5: Organizational constraints in scale-up

A more analytical pattern in the interviews is that the quality of the service offering itself does not mainly constrain scale-up. Instead, several challenges appear after launch, when the organization needs to take the offering forward. These challenges are not technical in nature, but organizational. The interviews suggest that scale-up becomes difficult when ownership is unclear, processes are not fully defined beyond launch, and different parts of the organization operate under partially conflicting goals.

One of the clearest findings is that the scale-up phase itself is not yet fully formalized. The organization has a structured process for developing and launching service offerings, but the steps that follow launch are less clearly defined. One interviewee explained that the formal process typically ends at the launch stage, and that scale-up has not been described in much detail:

"I think scale-up is something that has not been defined in great detail. So our offering development processes typically end in the launch phase, so launch is typically the last phase" (Interviewee 1)

A similar observation appears in another interview, where the interviewee pointed out that scaling has not been embedded in the process in the same way as piloting. In par-

ticular, there are no clearly defined intermediate stages, such as limited releases or region-based rollouts. This suggests that although the organization knows how to move from idea to launch, it has less clarity on how to expand an offering systematically after that point.

“We have never embedded [scale up] in our new service concept development process.” (Interviewee 8)

A second important issue concerns ownership after the pilot and launch phases. The interviews suggest that even when a service offering moves forward into operations, it is not always clear who holds full responsibility for it. One interviewee emphasized that scale-up cannot be handled by a single service offering lead, which implies the need for broader ownership across the organization. However, other interviews show that the ownership of the new projects is not handed over correctly in real situations. A similar issue appears in relation to solution ownership after handover. In one case, although the process had formally moved into operations, there was still no dedicated owner for the solution in the operations organization. As a result, the original creator continued to be the owner of the offering:

“There is no dedicated person or team that is taking the role to be like a solution owner in our operations because we don't have that kind of system. So whoever is the grandfather, grandmother, for any solution, they will continue to become the owner during operation states as well.” (Interviewee 3)

This suggests that formal handover does not automatically create the ownership of the project in later phases and highlights an important gap between formal process steps and actual responsibilities in practice.

“You should have the process really clear who is involved in different stages.” (Interviewee 5)

Beyond ownership, the interviews also reveal tensions between different organizational goals. One interview provided an example of this issue. In that case, the service concept required maintaining sufficient spare part availability to support customer reservations, while inventory management policies aimed to minimize stock levels and reduce capital tied up in inventory. Because of different approaches, there was a conflict among the project team and other departments.

“The main limiting factor when it comes to scaling for this particular concept is our own inventory management policies because here we have a bit of a contradiction ... On one hand, we want to optimize our stock levels, but on the other hand, we would want to provide this kind of value-added service.” (Interviewee 2)

This highlights that scale-up challenges are not always about the offering itself. Even when a service is well designed and there is clear demand, internal misalignment between teams can still hold back its expansion. This tension shows a deeper misalignment between the logic of the service offering and the existing operational situation in the organization. Providing a new service offer for customers usually needs more availability or flexibility in the processes, but existing processes and teams' procedures are typically designed to be more focused on efficiency and cost reduction. Thus, the offer developers should not just think about designing a better service offer, but also need to take into account the different priorities of various teams, which can be more critical in the scale-up phase. Without such alignment, the organization may face structural limitations in scaling otherwise viable service concepts.

The interviews also point to centralized approvals and slow decision-making as a further constraint. One interviewee explained that decision-making in the central organization is systematic, and it slows down the projects. Moreover, the project managers need to provide enough research, presentations, and supporting materials before decisions and confirmations, which can delay progress. At the same time, receiving units may not yet be fully prepared to support the new process at a larger volume:

“In central organization, the decision making is systematic, but it also means that it's slow.” (Interviewee 3)

In addition to internal organizational limitations, the interviews also highlight external and location-specific constraints that may limit the scalability of certain service concepts. In some cases, regulation and taxation make the offering difficult to implement in specific regions and countries. This means that even when a service concept is technically and commercially suitable, its geographical expansion may still be constrained by the regulatory and institutional context of particular markets, sometimes requiring the organization to modify the offer or use an alternative model.

Finally, the interviews indicate that adoption itself is not automatic after launch. New ways of working often need to be introduced repeatedly before they become part of everyday practice. One interviewee described how scale-up requires repetition across the organization to familiarize people with the new service offering, especially when the new approach is not mandatory for local teams, and they can adopt the new method or ignore the idea and work as before.

“The constraint can be that if they don't get [the idea], just like you know, they don't use it, and in [the case company], nobody needs to do it, as we said, it's an option for them.” (Interviewee 7)

This means that scale-up progress is related to the voluntary behavior of individual actors and is not fully driven by formal structures or mandatory processes. As a result, expansion may happen gradually across the organization.

Overall, the findings show that scale-up is not constrained only by the characteristics of the service concept itself, but also by the organizational conditions surrounding it. In particular, the scale-up phase remains only partially formalized, ownership after launch is often unclear, and different parts of the organization may operate under conflicting priorities. In addition, centralized decision-making and non-mandatory adoption further

slow down the expansion of new service offerings. Taken together, these findings suggest that successful scale-up depends on clearer governance structures, more explicitly defined post-launch processes, and stronger alignment across organizational units.

4.2.6 Theme 6: Internal deployment and capability building

A final pattern emerging from the interviews is that long-term scalability depends on the organization's ability to deploy a service offering internally in a structured way. In the data, scale-up was not described as a single event that follows launch. Instead, it appeared as an ongoing process through which the offering is introduced, supported, and gradually embedded across the organization. This process includes internal deployment, training, implementation support, capability building, and geographical rollout. In this sense, scalability is achieved not only through designing a strong offering but through building systematic processes to make it available for use by different units and locations.

One interview described this particularly clearly by emphasizing the need for stronger internal deployment practices. In that account, scale-up requires deliberate effort to ensure that the offering becomes visible, understandable, and usable across the organization. The same interview also identified the main elements that support this deployment work. These include awareness creation, training, locally adaptable supporting materials, and geographical extension through supply chains. These elements describe how the offering is carried forward after launch and made applicable in different contexts:

"We should have a very systematic process of internal engagement and deployment. This could include awareness, creation, training, and excellent sales supporting materials. Also adapt locally if there is some need, for example, to translate the content ... systematically enable the new offering via the different supply chains and geographical extension." (Interviewee 1)

The interviews also suggest that internal deployment cannot rely on passive communication alone. Preparing some materials and providing them to the involved teams does

not create enough understanding for people to use them. Instead, there is a need for active training and implementation support across the organization to ensure people have the same understanding of the offer and use it where it is applicable.

“We have something written somewhere, and then you just push it out and ... you maybe need to do training and so on, you can't think that people will read something somewhere.” (Interviewee 5)

In addition, the interviews suggest that effective deployment also requires ongoing implementation support rather than one-time training. In some accounts, this involved more interactive forms of engagement beyond written documentation, such as discussions during handover and training that help local teams clarify how the concept should be applied in practice. This indicates that deployment is not only about transferring knowledge, but also about supporting its application in practice over time. It also suggests the value of feedback channels that allow experiences from local implementation to be captured and shared beyond individual teams.

Building training and capability also emerged as a key element of internal deployment. The interviews suggest that to scale up a service offering, the company often needs to develop skills in multiple locations, especially when delivery depends on workshops, field services, or other operational roles. This means that deployment is not only about sharing information, but also about enabling execution in practice:

“We also need to build the service capabilities in different locations globally, and this may sometimes be very complex. If you need to have skilled people in the different workshops or via the field services, it may also require upskilling of a wide group of people as well.” (Interviewee 1)

Geographical rollout is another important part of long-term scalability. The interviews show that expansion often happens step by step, and it starts from one location and gradually extends to other regions and offices as the concept becomes more understood and established:

“Some improvements are needed to be done ... the scale up also means that we have added slow delivery centers after careful examination ... to scale up to different PRTS (product reference types) and also to different geographical locations.”
(Interviewee 3)

Finally, the interviews suggest that internal deployment can be supported by processes and tools that make the offering easier to deliver consistently at a larger scale. These tools include standardized processes, supporting materials, and capabilities that help the offering be applied across teams and locations. This suggests that deployment does not happen through communication alone, but also requires structures that support repeated execution.

The interviews show that long-term scalability is built through internal deployment rather than through launch alone. A service offering becomes scalable when the organization systematically introduces it, supports its use, develops the necessary capabilities, and extends it across regions in a coordinated way. Therefore, the findings suggest that scale-up is best understood as an ongoing organizational deployment process that requires not only communication and training, but also continuous support, capability development, and coordinated geographical expansion.

This chapter showed that scaling up a new service offering in the case company is a complex process with various aspects that need to be considered. The findings highlighted the importance of the pilot phase, the need to define a stable core while allowing some adaptation, the central role of sales, the need for operational readiness, the effect of organizational conditions, and the importance of internal deployment across locations and teams. Together, these findings show that several interrelated factors inside the organization shape service scale-up. The next chapter will discuss these findings in relation to the previous literature and the theoretical background of the study.

5 Discussion and Conclusion

This study was conducted to answer the following research question: **How do industrial organizations leverage specific mechanisms and capabilities to achieve the long-term scalability of new service offerings across units or regions?** The findings of this study suggest that the long-term scalability of new service offerings in industrial organizations is not created by launch alone and cannot be explained as a simple continuation of service development. Instead, the results show that scalability is built through the alignment of several interrelated organizational elements over time. This view is consistent with recent literature that distinguishes scaling from simple growth and shows that scaling goes beyond expansion in size, as it involves organizational changes and better performance outcomes (Coviello et al., 2024; Palmié et al., 2023). It also supports earlier work showing that scaling unfolds through a set of interrelated organizational challenges and coordination demands (Tippmann, Ambos, et al., 2023), as well as more general complexities and interdependencies in service growth (Carman and Langeard, 1980). The present study adds a more practice-based and process-oriented explanation of how these conditions are built inside an industrial organization.

A first important finding is that the pilot phase plays a broader role in service scale-up than much of the existing literature has made explicit. Previous studies suggest that deployment and scaling require organizational support, as well as processes of learning and adaptation beyond the initial idea stage (Di Pietro et al., 2018; Wang et al., 2019). The findings of this study support that view, but they also show more clearly that, in service contexts, piloting is not limited to testing technical functionality. Instead, it is used to validate customer value, willingness to pay, commercial logic, internal feasibility, and the organization's practical ability to deliver the service. In this sense, the pilot phase functions not only as proof of concept, but also as proof of value, proof of operability, and proof of organizational readiness. This refines prior literature by showing that important conditions for scalability are already examined before launch, rather than emerging only during later deployment stages. The findings therefore suggest that long-term scalability begins to form earlier than is often assumed in service innovation research.

At the same time, the findings show that pilot learning is not automatically systematic. Prior literature has emphasized the role of organizational learning in supporting service innovation and servitization processes (Gomes et al., 2021; Parida et al., 2014). The present study supports this general idea, but it also shows that learning during pilots may remain incomplete if customer feedback is indirect, fragmented, or stored only within individual documents or project teams. This point is important because it shows that pilot learning contributes to scale-up only when the organization has mechanisms to capture, document, and distribute what is learned. In other words, conducting pilot cases is not enough on its own. The organization also needs to make pilot knowledge visible and reusable beyond the immediate project context. This extends prior literature by showing that pilot-based validation in service settings is not only about testing the offering, but also about building organizational learning structures that support later rollout. It also echoes wider scaling literature arguing that scale-up in complex settings involves addressing organizational and system-level conditions, rather than simply repeating an idea across contexts (Greenhalgh and Papoutsi, 2019).

A second major finding concerns the relationship between standardization and adaptation. Existing literature suggests that scaling in servitization contexts involves a tension between replication and adaptation to local contexts (Di Pietro et al., 2018; Kohtamäki et al., 2020; Tippmann, Monaghan, et al., 2023). The findings of this study support this argument, but they also make it more concrete by showing how this tension is managed in practice. The data suggest that a scalable service offering needs a stable and clearly defined core, because repeatability depends on having a shared offering structure around which processes, tools, pricing logic, communication, and sales support can be built. Moreover, complete rigidity is not realistic in service settings, because some elements still need to be adjusted to customer conditions, regional practices, legislation, compliance requirements, or technical fit. The findings, therefore, refine the standardization–adaptation debate by showing that scalability depends less on choosing one side of this tension and more on defining which parts of the offering must remain fixed and which parts can vary in a controlled way. In this sense, the study moves the literature

from a broad discussion of standardization versus adaptation toward a more practical understanding of how bounded adaptation can be built around a repeatable core.

A third and especially important finding is the central role of sales in enabling both piloting and broader scale-up. While the existing literature on service deployment and servitization highlights issues such as adoption and handover (Wang et al., 2019) as well as customer interaction in service delivery (Baines and Lightfoot, 2013), it has given less direct attention to sales as a distinct internal mechanism in service scale-up. In contrast, the findings of this study show that sales are not simply the final commercial channel through which a developed offering reaches customers. Rather, sales act as a central enabling mechanism throughout the scale-up process. During piloting, sales help the project team to identify suitable pilot customers, open customer discussions, and create access to real testing opportunities. After piloting, sales become equally important for broader diffusion, because the offering must gain internal legitimacy, visibility, and acceptance among customer-facing actors before wider market rollout can happen. This suggests that scale-up includes an internal commercialization process in which the offering first needs to be understood, accepted, and promoted inside the organization before it can be sold more broadly outside it.

This is one of the more novel contributions of the study. Prior literature has addressed service-related organizational configurations (Gebauer et al., 2008), implementation mechanisms (Wang et al., 2019), and learning processes in servitization (Parida et al., 2014), but it has not clearly indicated sales-side involvement as a core mechanism of long-term scalability. Accordingly, the present findings extend existing literature by showing that a promising service concept may fail to scale not because it lacks customer value, but because the organization fails to mobilize the sales side around it. In that sense, sales are not only a route to market. They are also a mechanism of organizational acceptance. This shifts the view of scale-up from being only a delivery and adoption challenge to also being an internal mobilization challenge.

A fourth major finding is that long-term service scalability depends strongly on operational reconfiguration. Earlier studies have shown that service growth requires suitable delivery systems (Baines and Lightfoot, 2013), organizational routines (Gebauer et al., 2008), and the development of service-related capabilities and supporting networks (Reim et al., 2021). The present study supports this view, but it also adds a more concrete explanation of what this means in practice. In the case of the company, scale-up required logistics processes, workshop readiness, pricing capabilities, data visibility, return handling, instructions, tools, and, in some cases, automation and capability development across locations. These findings suggest that operational readiness is not a secondary support factor but one of the core conditions for scalability. A service offering may be attractive from a customer or commercial point of view, but it still cannot scale if the surrounding operational system cannot support repeated execution across cases and locations.

This finding also helps explain why service scale-up can still be challenging even when an offering is evaluated as a promising project. The result is aligned with the service paradox literature, which shows that manufacturers may invest in service growth without gaining the expected performance outcomes because the needed organizational capabilities and supporting structures are not sufficiently developed (Gebauer et al., 2005; Kastalli and Van Looy, 2013). However, the present study refines this literature by showing that many of these capability requirements are deeply operational. In other words, scale-up depends not only on strategic commitment to services, but also on whether execution can move from person-dependent effort to process-dependent delivery. This latter point extends previous work on formalization and routines in service development (Biege et al., 2012; Gebauer et al., 2008) by showing that process-dependent execution is not simply supportive of scale-up, but becomes a necessary condition for sustaining it over time. When execution continues to depend on a small number of experienced individuals, long-term scalability remains fragile.

Another finding of this study is that scale-up can be limited by both operational limits and the broader organizational conditions surrounding the offering after launch. Prior literature has emphasized coordination and integration in global service management (Kowalkowski et al., 2011), structural design choices in service configurations (Kucza and Gebauer, 2011), and coordination challenges in scaling across units (Tippmann, Ambos, et al., 2023). The present study supports these arguments, but it also shows more clearly that scale-up may remain weak when post-launch ownership is unclear, when processes end formally at the launch phase of the projects, or when different teams in the organization continue to operate under conflicting priorities. This means that scalability is shaped by both the value and feasibility of the offering and the extent to which the organization is designed to support it after the formal development phase ends. These findings extend earlier discussions by showing that, in service scale-up, governance goes beyond coordination across different units or countries. It also involves clarifying who is responsible after the launch phase, making accountability clearer, and aligning the service with the broader organization.

This point is especially visible in the tensions identified between service logic and existing organizational priorities. In some cases, the offering required availability, flexibility, or process changes that did not fit easily with established efficiency-driven policies such as inventory optimization or centralized approval routines. This supports prior research, which emphasizes that servitization and scale-up involve tensions between conflicting organizational logics and priorities (Kohtamäki et al., 2020; O'Reilly and Binns, 2019). This study extends this literature by showing that these tensions are reflected in how decisions are made and how different parts of the organization interact during scale-up. They become practical barriers that can slow or block the expansion of otherwise viable service concepts. In this way, the organization itself can become a bottleneck when its structures, responsibilities, and internal priorities are not aligned with the requirements of the new offering.

Finally, the findings show that internal deployment should be understood as an ongoing capability-building process rather than as a short handover after launch. Earlier literature has highlighted deployment, adoption, and implementation support as important mechanisms in service innovation (Schaarschmidt, 2016; Wang et al., 2019), and has also linked implementation to the development of capabilities and service delivery networks (Reim et al., 2021). The present study supports this literature, but it goes further by showing that internal deployment continues well beyond the point at which an offering is formally launched. In the case of the company, scale-up involved awareness creation, repeated internal communication, training, implementation support, capability building, and gradual rollout across units and locations. This means that long-term scalability depends on introducing the offering to the organization, then helping different actors learn how to understand it, sell it, support it, and execute it in practice over time.

This finding is important because it shows that learning in service scale-up does not end after piloting. In fact, during piloting, learning is mainly about validating the offering. After launch, learning is more about organizational embedding, which means building shared understanding, developing local capabilities, and supporting more independent execution across the organization. This extends prior literature by showing that internal deployment is not simply a transfer of information from the development team to the rest of the organization. Rather, it is a continuing organizational process through which scalability is sustained and expanded in practice.

Building on these findings, this study develops a findings-driven framework that explains how long-term service scalability is formed in practice, thereby providing a structured answer to the research question, as illustrated in Figure 3. Unlike the framework presented in Chapter 2, which was based on the literature, the framework developed here is grounded in the empirical themes that emerged from the case data. Chapter 4 presented the findings through six empirical themes, and the final framework brings these themes together into five higher-level and interrelated building blocks that explain how

long-term scalability is formed in practice. These building blocks are: (1) iterative validation of scalability conditions, (2) definition of a repeatable core with bounded adaptation, (3) internal commercialization and sales-side mobilization, (4) operational reconfiguration for repeatable execution, and (5) post-launch organizational embedding. In particular, the last two empirical themes from Chapter 4, namely organizational constraints in scale-up and internal deployment and capability building, are brought together under the broader building block of post-launch organizational embedding, because both reflect the organizational conditions required to sustain scale-up after launch.

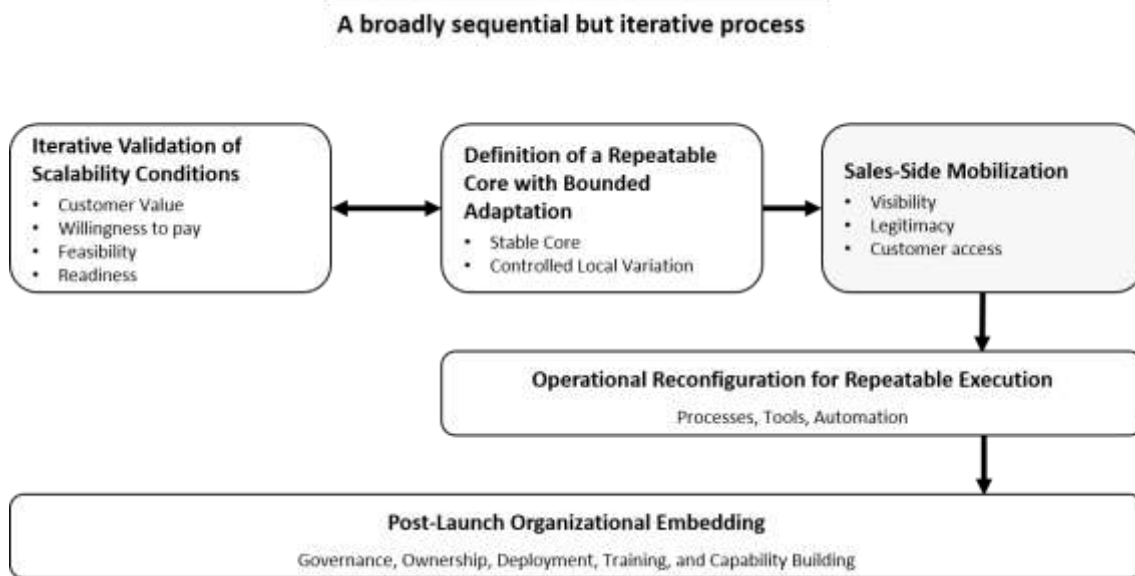


Figure 3: Findings-driven framework of the study

The framework suggests a broadly sequential but still iterative logic. Service offerings first need to be validated through piloting, not only in technical terms, but also in relation to customer value, commercial logic, internal feasibility, and organizational readiness. Although an initial version of the offering exists before piloting, the findings show that the final scalable design is shaped through the pilot phase, where the stable core and adaptable elements become more clearly defined. They then need to be shaped into a form that supports repeatability while still allowing limited adaptation to different customer and regional conditions. Scale-up also depends on the active involvement of sales, because the offering needs to gain internal visibility, legitimacy, and access to customer

discussions before broader expansion can take place. In addition, wider rollout requires operational reconfiguration so that delivery no longer depends mainly on a small number of highly involved individuals, but can instead be supported through repeatable processes, tools, and operational structures. Finally, long-term scalability depends on post-launch organizational embedding through governance, ownership, internal deployment, training, capability building, and coordinated rollout across units and regions.

5.1 Theoretical Implications

This study provides a more integrated explanation of long-term scalability in industrial organizations and contributes to service scaling literature. Previous research has addressed many important aspects of service scaling, including deployment, adaptation, capability development, governance, and coordination (Di Pietro et al., 2018; Tippmann, Ambos, et al., 2023; Wang et al., 2019). However, this literature is still fragmented, and there is limited empirical understanding of how these elements work together during the scale-up of new service offerings. This study helps fill this gap by showing that long-term scalability emerges through an interrelated organizational process in which validation, offering design, internal mobilization, operational reconfiguration, and post-launch embedding become aligned over time. In this sense, the study extends prior literature by moving from isolated scaling factors toward a more process-oriented and integrated view of service scalability.

A first theoretical implication of this study concerns the role of piloting in service scale-up. While prior research has recognized the importance of learning and adaptation in service deployment (Di Pietro et al., 2018; Wang et al., 2019), the findings of this study suggest that piloting should be understood as an early stage in the formation of scalability itself. Rather than functioning only as a pre-launch testing activity, piloting shapes the key conditions that enable later expansion, including value validation, feasibility, and organizational readiness. This refines existing views of scaling by showing that part of the

scale-up process begins earlier in the service development timeline than is often assumed. In this view, scalability does not emerge only during deployment and diffusion, but is partly constructed during the pilot phase. In addition, the findings show that learning from pilots helps the scaling-up process only when it is documented and shared across the organization, which points to the importance of structuring and organizing knowledge as part of building scaling capability. These insights extend existing literature by positioning piloting as a key mechanism in the development of scalable service offerings.

A second theoretical implication concerns the standardization-adaptation conflict in service scaling. While prior literature has framed this issue as a balance between replication and local responsiveness (Di Pietro et al., 2018; Kohtamäki et al., 2020; Tippmann, Monaghan, et al., 2023), the findings of this study suggest a more precise way of conceptualizing this relationship. Instead of treating standardization and adaptation as conflicting choices, the results show that scalability is built by keeping a stable core in place while allowing certain elements to vary in a controlled way. In this view, the key theoretical question is not how much to standardize versus adapt, but how to define the boundaries between fixed and flexible elements within the offering. This reframes the standardization–adaptation debate by shifting it from a general tension toward a configuration problem. It suggests that scalable service offerings rely on clearly defined non-negotiable components combined with bounded adaptation around them. This distinction contributes to a more precise way of understanding how replication and adaptation are managed in service scaling contexts.

A third and central theoretical implication of this study concerns the role of sales in service scale-up. While earlier studies have mainly focused on adoption, deployment, and customer interaction as key parts of service implementation (Baines and Lightfoot, 2013; Wang et al., 2019), the findings here suggest that these views do not fully explain how service offerings build enough internal support to move toward scale-up. The findings indicate that sales should be understood not only as a market-facing function, but as a

core internal mechanism through which scalability is enabled. In particular, scale-up depends on the organization's ability to mobilize its sales function to create access to customers, support pilot execution, and promote the offering internally across units and regions. This adds an important dimension to the theoretical understanding of service scale-up. Rather than viewing scale-up mainly as deployment or delivery, the findings suggest that it also involves an internal mobilization process. In this view, scalability depends not only on the characteristics of the offering or the efficiency of delivery systems, but also on whether the organization succeeds in activating its sales-side actors around the new service. By introducing sales-side mobilization as a distinct mechanism, the study extends existing literature and shows that a service offering may fail to scale even when it has clear customer value, if it does not achieve sufficient internal commercial traction. This highlights that internal acceptance may be a central condition for scale-up rather than only a secondary outcome of it.

A fourth theoretical implication relates to how operational reconfiguration helps the long-term scalability of service offerings. Prior literature has emphasized the importance of delivery systems, routines, and capability development in service growth (Baines and Lightfoot, 2013; Gebauer et al., 2008; Reim et al., 2021). The present study adds to this literature by showing more clearly that scalability depends on a shift from person-dependent execution to process-dependent execution. In this view, service scale-up cannot be sustained through individual expertise or localized effort alone. It requires repeatable operational structures that support consistent execution across units and contexts. This adds a more operational explanation to existing service paradox literature by suggesting that the challenge of service growth is not only one of strategic commitment or capability investment, but also one of turning those capabilities into reliable execution systems. Thus, operational reconfiguration should be understood as a central mechanism that makes scalability possible, rather than just a supporting element of scale-up.

A final theoretical implication concerns the role of internal deployment in sustaining service scalability. Earlier studies have highlighted deployment, adoption, and implementation support as important parts of service innovation (Schaarschmidt, 2016; Wang et al., 2019) and often seen these processes as temporary steps that take place after development and before the service becomes part of everyday operations. The findings of this study show a different interpretation. Internal deployment can be seen as a continuous process of building capabilities, where scalability gradually develops and is maintained over time. From this viewpoint, scale-up does not stop at the launch phase or handover, but continues as the organization learns how to apply, support, and embed the offering across different units and contexts. This shifts the theoretical understanding of deployment from a one-time transfer to an ongoing process of embedding the offering in the organization. It suggests that scalability depends on introducing a new offering and on building the organizational understanding and local capabilities needed to support it over time. As a result, deployment becomes a central mechanism for building capabilities, rather than just a stage in the implementation process. Moreover, the findings add to current literature by showing that learning in service scale-up can be developed over time. The early stages focus on testing and reviewing the offering, and later stages involve building a shared understanding of the offer, developing local capabilities, and supporting more independent implementation. This shows that scalability is sustained through an ongoing learning and capability development process, rather than being achieved only during the initial rollout.

5.2 Managerial Implications

The findings of this study provide useful guidance for managers in industrial organizations seeking to scale new service offerings across units and regions. The results suggest that managers should not consider scale-up as an extension of launch plans. Instead, the scale-up phase needs conscious managerial attention to piloting, offering design, sales involvement, operational readiness, post-launch ownership, and internal deployment over time.

Managers should treat the pilot phase as a structured preparation stage for scale-up rather than as a limited test before launch. Pilots can provide important insight into customer value, feasibility, and internal readiness, but this learning may remain fragmented if it is not captured systematically. For this reason, managers should use multiple pilot cases when possible, define clear evaluation criteria for pilot success, and establish simple routines for documenting and sharing lessons learned across the organization. Therefore, this needs knowledge management (KM) practices that help capture, store, and provide the knowledge gained from pilot experiences available for involved teams. This can support more informed decisions and pave the way for a better offering expansion.

The findings also suggest that managers need to make the design logic of the offering clearer before broader rollout. Insights from the pilot phase should be used to improve the core of the offering so that it can be repeated more consistently across different contexts. At the same time, managers should specify which elements can be adapted, by whom, and under what conditions. Making these boundaries explicit can reduce ambiguity for sales, operations, and local units, and support more consistent implementation across regions.

Another key implication is the role of sales in enabling the scale-up team. Managers should treat sales alignment as a central condition for scale-up because access to pilot customers, customer discussions, and broader market expansion often depends on the attention and engagement of sales teams. Therefore, managers need to involve sales teams early in the process of idea development, understand sales priorities and motives, and ensure that the new offering is seen as a relevant project to sales work. In practice, this may need repeated internal introductions, clear sales support materials, defined sales responsibilities, and structured follow-up mechanisms so that promising opportunities are not lost due to weak internal attention. This also implies that scale-up should be actively monitored from a sales perspective, rather than assumed to happen naturally after launch.

Operational readiness represents another critical condition for successful scale-up. Managers should ensure that the organization is ready to deliver the offering repeatedly before expanding it more broadly. To do this, they need to make sure of several factors, including clear processes, defined responsibilities, and adequate operational support such as logistics, tools, pricing structures, data visibility, and supporting systems. Early suitable results and validation are not enough if the service cannot be executed consistently in various locations. Managers should also reduce dependence on individual expertise by designing process-based execution models. When delivery remains dependent on a few key individuals, scale-up cannot progress in the organization.

The findings also point to the need for clearer governance and ownership of projects after the launch phase. Scale-up is likely to slow down when responsibilities remain unclear after launch, when no clear owner is assigned to the offering in later phases, or when the process ends formally before broader expansion has been organized. Thus, managers should define who is responsible for the offering after piloting and launch, clarify the roles of different teams during scale-up, and establish clearer review points to monitor progress, challenges, and needed adjustments in the post-launch phase. Without such governance arrangements, even promising offerings may struggle to move forward and expand in larger scopes.

Finally, managers should approach internal deployment as a sustained organizational effort rather than as a one-time handover. After launch, the offering still requires support through training, communication, and guidance across units and locations. Managers should not assume that written instructions can lead the teams to perform based on the new rules. This can become more visible when adoption is optional, and local teams can decide whether to use the new offering. Repeated interaction, practical support, and continued visibility across units are often needed before the offering becomes part of everyday work. In addition, effective scale-up depends on knowledge management practices that ensure experiences from implementation are continuously shared, updated,

and reused across the organization. Supporting this process can help local actors apply the offering more confidently and more consistently across the organization.

5.3 Suggestions for Future Research

This study opens several directions for future research on the scaling of new service offerings in industrial organizations. While the findings provide a process-oriented explanation of how scalability is formed in practice, they also highlight several areas that require further investigation.

One important direction for future research is to examine the pilot phase in greater depth, particularly focusing on how pilot learning is systematically captured, shared, and translated into scalable offering designs. While this study shows that piloting goes beyond technical validation, there is still a limited understanding of how organizations define readiness for scale-up and formalize evaluation criteria across different cases. Another important area concerns the role of sales in enabling both pilot execution and broader scale-up. Future studies could explore how sales teams' engagement is developed over time and how internal acceptance of new offerings is built. In particular, more research is needed on how internal commercialization spreads as part of the scale-up process. A further area for future research is the way organizations define and manage the boundaries between standardization and adaptation. Instead of treating this issue as a general tension, future studies could examine how firms define and manage these boundaries in real projects and how these decisions shape scalability in different markets.

Another direction relates to the operational aspect of service scale-up practices. Future studies could analyze how organizations build the essential operational structures needed for scaling, and how execution shifts from person-dependent efforts to more stable and process-based delivery models over time. An additional area that needs further research is designing clear procedures for after the scaling-up phase. The findings suggest that ownership, governance, and internal deployment continue to shape and

refine the scalability phase after launch, but these event processes for this stage are still partially understood. Future research could explore this topic and investigate proper methods and processes for organizations to manage assigning responsibilities during scale-up, building capabilities, and supporting internal acceptance and diffusion of a new service offer in the organization over time.

Finally, since this study investigates a single case company, future research can explore other aspects of the topic by adopting comparative or multi-case designs in various organizational settings. In addition, longitudinal studies would be valuable for understanding how service scale-up can develop over time and how different mechanisms influence each other during this process in different time frames.

5.4 Limitations

This study has several limitations that should be considered when interpreting the findings. This study is a single-case study and explores only one case company. This means that findings gained from one specific company may not explain every other company. Instead, the findings should be counted as valuable insights that help explain the service scale-up process in industrial contexts. In addition, the study relies primarily on qualitative interview data collected from managers involved in service development and scaling activities. While these participants provide valuable first-hand insights, their opinions are based on their roles and reflect their own perspectives and interpretations. As a result, the findings are based on how participants describe and make sense of service scale-up rather than on direct observation of all related activities. Moreover, this interpretive nature is formed by using the Gioia method, where the transition from first-order concepts to higher-level themes involves researcher-driven coding and interpretation, which may introduce a degree of subjectivity.

The scope of the study is mainly limited to internal organizational processes and mechanisms, and the external perspectives, such as customers, partners, and broader ecosystem actors, are not examined in depth. Considering that service scaling often takes place in complex environments with several actors, focusing on only internal elements can limit the ability to explore the effects of the external factors. Furthermore, the study is retrospective in nature, as it relies on participants' accounts of past and ongoing activities rather than on longitudinal observation. This may cause recall bias and limit the ability to trace how scaling processes evolve. Finally, the company for this study holds service development processes and relatively established structures. However, in organizations with different structures, the scaling process may develop in different ways, which can limit how easily these findings apply to other contexts.

Despite these limitations, the study offers a detailed and empirically grounded understanding of the mechanisms and capabilities that support service scale-up in industrial organizations.

References

- Baines, T., & W. Lightfoot, H. (2013). Servitization of the manufacturing firm: Exploring the operations practices and technologies that deliver advanced services. *International Journal of Operations & Production Management*, 34(1), 2–35. <https://doi.org/10.1108/IJOPM-02-2012-0086>
- Biege, S., Jaeger, A., & Buschak, D. (2012). New service development in manufacturing companies—Insights from German manufacturing sector. *Journal of Applied Management and Entrepreneurship*, 17(3).
- Burton, J., Story, V. M., Raddats, C., & Zolkiewski, J. (2017). Overcoming the challenges that hinder new service development by manufacturers with diverse services strategies. *International Journal of Production Economics*, 192, 29–39. <https://doi.org/10.1016/j.ijpe.2017.01.013>
- Capanni, G., Rapaccini, M., Momeni, B., Knapp, T. U., & Poepelbuss, J. (2025). A contingency perspective on global service development in manufacturing firms. *Industrial Marketing Management*, 127, 100–118. <https://doi.org/10.1016/j.indmarman.2025.04.004>
- Carman, J. M., & Langeard, E. (1980). Growth strategies for service firm. *Strategic Management Journal*, 1, 7–22.
- Case Company. (n.d.-a). *Company Website*.
- Case Company. (n.d.-b). *Offering development, Internal document [restricted availability]*.
Case Company. (2025). *Case Company Annual Report 2025 [Annual Report]*.
- Coviello, N., Autio, E., Nambisan, S., Patzelt, H., & Thomas, L. D. W. (2024). Organizational scaling, scalability, and scale-up: Definitional harmonization and a research agenda. *Journal of Business Venturing*, 39(5), 106419. <https://doi.org/10.1016/j.jbusvent.2024.106419>
- Dearing, J. W., & Cox, J. G. (2018). Diffusion Of Innovations Theory, Principles, And Practice. *Health Affairs*, 37(2), 183–190. <https://doi.org/10.1377/hlthaff.2017.1104>
- Di Pietro, L., Edvardsson, B., Reynoso, J., Renzi, M. F., Toni, M., & Guglielmetti Mugion, R. (2018). A scaling up framework for innovative service ecosystems: Lessons from

- Eataly and KidZania. *Journal of Service Management*, 29(1), 146–175. <https://doi.org/10.1108/JOSM-02-2017-0054>
- Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *The Academy of Management Review*, 14(4), 532–550.
- Flick, U. (2022). *An introduction to qualitative research* (2nd ed.). SAGE Publications Ltd.
- Gebauer, H., Fleisch, E., & Friedli, T. (2005). Overcoming the Service Paradox in Manufacturing Companies. *European Management Journal*, 23(1), 14–26. <https://doi.org/10.1016/j.emj.2004.12.006>
- Gebauer, H., Friedli, T., & Fleisch, E. (2006). Success factors for achieving high service revenues in manufacturing companies. *Benchmarking: An International Journal*, 13(3), 374–386. <https://doi.org/10.1108/14635770610668848>
- Gebauer, H., Krempf, R., & Fleisch, E. (2008). Service development in traditional product manufacturing companies. *European Journal of Innovation Management*, 11(2), 219–240. <https://doi.org/10.1108/14601060810869875>
- Ghiron, L., Ramirez-Ferrero, E., Badiani, R., Benevides, R., Ntabona, A., Fajans, P., & Simmons, R. (2021). Promoting Scale-Up Across a Global Project Platform: Lessons from the Evidence to Action Project. *Global Implementation Research and Applications*, 1(2), 69–76. <https://doi.org/10.1007/s43477-021-00013-4>
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology. *Organizational Research Methods*, 16(1), 15–31. <https://doi.org/10.1177/1094428112452151>
- Gomes, G., Seman, L. O., & De Montreuil Carmona, L. J. (2021). Service innovation through transformational leadership, work-life balance, and organisational learning capability. *Technology Analysis & Strategic Management*, 33(4), 365–378. <https://doi.org/10.1080/09537325.2020.1814953>
- Greenhalgh, T., & Papoutsi, C. (2019). Spreading and scaling up innovation and improvement. *BMJ*, l2068. <https://doi.org/10.1136/bmj.l2068>
- Hallstedt, S., Isaksson, O., & Öhrwall Rönnbäck, A. (2020). The Need for New Product Development Capabilities from Digitalization, Sustainability, and Servitization Trends. *Sustainability*, 12(23), 10222. <https://doi.org/10.3390/su122310222>

- Jansen, J. J. P., Heavey, C., Mom, T. J. M., Simsek, Z., & Zahra, S. A. (2023). Scaling-up: Building, Leading and Sustaining Rapid Growth Over Time. *Journal of Management Studies*, *60*(3), 581–604. <https://doi.org/10.1111/joms.12910>
- Kalenda, M., Hyna, P., & Rossi, B. (2018). Scaling agile in large organizations: Practices, challenges, and success factors. *Journal of Software: Evolution and Process*, *30*(10), e1954. <https://doi.org/10.1002/smr.1954>
- Kastalli, I. V., & Van Looy, B. (2013). Servitization: Disentangling the impact of service business model innovation on manufacturing firm performance. *Journal of Operations Management*, *31*(4), 169–180. <https://doi.org/10.1016/j.jom.2013.02.001>
- Kinnunen, R.-E., & Turunen, T. (2012). Identifying servitization capabilities of manufacturers: A conceptual model. *The Journal of Applied Management and Entrepreneurship*, *17*(3).
- Kohtamäki, M., Einola, S., & Rabetino, R. (2020). Exploring servitization through the paradox lens: Coping practices in servitization. *International Journal of Production Economics*, *226*, 107619. <https://doi.org/10.1016/j.ijpe.2020.107619>
- Kowalkowski, C., Kindström, D., & Brehmer, P. (2011). Managing industrial service offerings in global business markets. *Journal of Business & Industrial Marketing*, *26*(3), 181–192. <https://doi.org/10.1108/08858621111115903>
- Kucza, G., & Gebauer, H. (2011). Global approaches to the service business in manufacturing companies. *Journal of Business & Industrial Marketing*, *26*(7), 472–483. <https://doi.org/10.1108/08858621111162271>
- Lee, Y., Lin, B.-W., Wong, Y.-Y., & Calantone, R. J. (2011). Understanding and Managing International Product Launch: A Comparison between Developed and Emerging Markets: UNDERSTANDING AND MANAGING INTERNATIONAL PRODUCT LAUNCH. *Journal of Product Innovation Management*, *28*(s1), 104–120. <https://doi.org/10.1111/j.1540-5885.2011.00864.x>
- Maylor, H., Blackmon, K., & Huemann, M. (2005). *Researching Business & Management*. Palgrave Macmillan.
- Naber, R., Raven, R., Kouw, M., & Dassen, T. (2017). Scaling up sustainable energy innovations. *Energy Policy*, *110*, 342–354. <https://doi.org/10.1016/j.enpol.2017.07.056>

- OECD. (2015). *Innovation Policies for Inclusive Growth*. OECD Publishing. <https://doi.org/10.1787/9789264229488-en>
- O'Reilly, C., & Binns, A. J. M. (2019). The Three Stages of Disruptive Innovation: Idea Generation, Incubation, and Scaling. *California Management Review*, 61(3), 49–71. <https://doi.org/10.1177/0008125619841878>
- Palmié, M., Parida, V., Mader, A., & Wincent, J. (2023). Clarifying the scaling concept: A review, definition, and measure of scaling performance and an elaborate agenda for future research. *Journal of Business Research*, 158, 113630. <https://doi.org/10.1016/j.jbusres.2022.113630>
- Parida, V., Rönnerberg Sjödin, Wincent, J., & Kohtamäki, M. (2014). Mastering the Transition to Product-Service Provision. *Research Technology Management*, 57(3), 44–52.
- Rabetino, R., Kohtamäki, M., & Gebauer, H. (2017). Strategy map of servitization. *International Journal of Production Economics*, 192, 144–156. <https://doi.org/10.1016/j.ijpe.2016.11.004>
- Reim, W., Sjödin, D., & Parida, V. (2021). Circular business model implementation: A capability development case study from the manufacturing industry. *Business Strategy and the Environment*, 30(6), 2745–2757. <https://doi.org/10.1002/bse.2891>
- Rönnerberg Sjödin, D., Parida, V., & Wincent, J. (2016). Value co-creation process of integrated product-services: Effect of role ambiguities and relational coping strategies. *Industrial Marketing Management*, 56, 108–119. <https://doi.org/10.1016/j.indmarman.2016.03.013>
- Saunders, M., Lewis, P., & Thornhill, A. (2003). *Research methods for business students* (3rd ed.). Pearson Education Limited.
- Schaarschmidt, M. (2016). Frontline employees' participation in service innovation implementation: The role of perceived external reputation. *European Management Journal*, 34(5), 540–549. <https://doi.org/10.1016/j.emj.2016.02.005>
- Tippmann, E., Ambos, T. C., Del Giudice, M., Monaghan, S., & Ringov, D. (2023). Scale-ups and scaling in an international business context. *Journal of World Business*, 58(1), 101397. <https://doi.org/10.1016/j.jwb.2022.101397>

Tippmann, E., Monaghan, S., & Reuber, R. A. (2023). Navigating the paradox of global scaling. *Global Strategy Journal*, 13(4), 735–773. <https://doi.org/10.1002/gsj.1435>

Wang, Q., Voss, C., & Zhao, X. (2019). Deployment Strategies for Service Innovation. *IEEE Transactions on Engineering Management*, 66(4), 514–528. <https://doi.org/10.1109/TEM.2018.2850452>

Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). SAGE Publications.

Appendices

Appendix 1. Interview Questions

1. Can you briefly describe your role in relation to developing, piloting, and scaling up new service offerings in the case company?
2. So, thinking about a specific service offering, how was the pilot phase designed and managed? (core teams, processes, Service logic, challenges)
 - What was the main purpose of the pilot in relation to future scaling? “For example, was it mainly about testing replicability, customer value, or internal readiness?”
 - Which elements were considered core and needed to stay consistent, and which were allowed to vary? “For example, in terms of value proposition, delivery logic, or roles.”
 - Which capabilities or resources proved critical for making the pilot work? “People, processes, systems, or decision rights”
 - What was the biggest signal during the pilot that scaling would be challenging?
3. Thinking about the same service offering, how did you manage the scale-up across units or regions?
 - How was the balance between standardization and local adaptation handled?
 - What capabilities or resources had to be developed or reconfigured as scale-up progressed?
 - How were coordination and decision-making structured between central and local units?
 - How was ownership transferred from the pilot team to operational teams, and where does handover typically break down?
 - What were the main constraints that limited or slowed down the scale-up process?
 - To what extent did partners, customers, or conditions influence the scale-up process?
4. Based on your experience, what are the top two or three mechanisms or capabilities that the case company should strengthen to improve the long-term scalability of new service offerings across units or regions?
5. Is there any mechanism, capability, or risk in scaling that we have not discussed but you consider important?