



Major in Global Management and Politics

Chair in Global Organization Design and HRM

**Service Agility in the Banking Industry.**

**Prof. Luca Giustiniano**

---

SUPERVISOR

**Prof. Jonathan Berkovitch**

---

CO-SUPERVISOR

**Federica Fedeli**  
ID Number 776871

---

CANDIDATE

Academic Year **2024/2025**

## **Abstract**

This paper critically reviews the rapid changes that have impacted the concept of innovation within firms over the years. A particular emphasis is placed on the broader notion of organizational agility, which is subsequently reduced to the concept of service agility in the work. This last one is defined as the ability of banks to adapt their offerings and interactions in contexts characterized by variability and complexity. This dissertation aims to give an analysis of the main theoretical contributions, followed by an exploration of the organizational, technological, and cultural conditions that enable agility. The discussion is enriched by the examination of two exemplary cases, which illustrate different ways of translating agile principles into practice, showing both opportunities and challenges. The work also addresses the primary barriers that continue to hinder the adoption of agility in banking, including cultural resistance, regulatory constraints, and legacy systems, while outlining possible directions for progress. The findings highlight that service agility should be understood as a long-term perspective rather than a set of isolated initiatives. Thanks to service agility, banks should reconsider the way in which they define their structure and engage with customers, promoting a culture of continuous innovation. In this way, financial institutions can sustain responsiveness and competitiveness without losing the stability and reliability that remain essential to their role.

**Keywords:** service agility, organizational agility, banking sector, digital transformation, customer experience.

## Table of Contents

<b>Introduction</b> .....	6
<b>1. Literature Review</b> .....	10
1.1. Organizational Agility.....	10
1.1.1. Definition, Strategic Role, and Evolution.....	10
1.1.2. Core Dimensions and Enablers of Agility.....	11
1.1.3. The Eleven Pillars of Agile Organizations.....	14
1.2. Agility’s models.....	18
1.3. Service Agility: qualities, facilitators, and differentiators.....	26
1.4. Agility in the banking sector.....	29
1.4.1. Digital Transformation and Agility.....	30
1.4.2. Implementing Agility.....	31
<b>2. Introducing Service Agility in the banking sector</b> .....	35
2.1. Organizational foundations of service agility.....	35
2.1.1. The role of dynamic capabilities in banking.....	35
2.1.2. Organizational resilience and structural flexibility.....	40
2.1.3. Coordination mechanisms in agile banking models.....	45
2.2. Technological Enablers of Service Agility.....	52
2.2.1. Modular IT architectures and agile information systems.....	52
2.2.2. AI, analytics, and digital platforms for adaptive services.....	57
2.3. Human and Cultural Factors.....	65
2.3.1. Agile mindsets and learning orientation.....	65
2.3.2. Cross-functionality teams and empowered roles.....	68
2.3.3. Leadership models for agile service delivery.....	72
2.4. Practices and Patterns of Service Agility.....	76
2.4.1. Agile methodologies in banking service design.....	76
2.4.2. Prototyping and iterative service innovation.....	81

<b>3. Comparison between two exemplary cases.....</b>	<b>86</b>
3.1. Rationale for Case Selection.....	86
3.2. ING.....	87
3.2.1. General context.....	87
3.2.2. Implementation of service agility.....	91
3.2.3. Challenges encountered and outcomes achieved.....	97
3.3. BBVA.....	100
3.3.1. General context.....	100
3.3.2. Implementation of service agility.....	104
3.3.3. Challenges encountered and outcomes achieved.....	109
3.4. Comparative Discussion of the Two Exemplary Cases.....	111
<b>4. Challenges and Strategic Suggestions for Banking Service Agility.....</b>	<b>115</b>
4.1. Typical Barriers to Service Agility.....	115
4.2. Strategic Suggestions for Enhancing Service Agility.....	118
4.3. Concluding Remarks.....	122
<b>Conclusion.....</b>	<b>125</b>

## **Bibliography**



## **Introduction**

In recent decades, the economic and social context in which companies operate has been increasingly characterized by a VUCA environment, defined by volatility, uncertainty, complexity, and ambiguity.

In this scenario, adaptability is no longer an ancillary resource, but rather an essential condition for organizational survival and for maintaining a sustainable competitive advantage. It is in this perspective that the concept of *organizational agility* comes into play, understood as the ability of organizations to recognize and interpret signals from the competitive environment, to reallocate their resources and skills quickly, and to reformulate strategic and operational models in response to constantly changing circumstances (Doz & Kosonen, 2008).

Organizational agility, far from being a static condition, is a dynamic process based on the continuous striving to become rather than the illusion of being definitively agile. It is fuelled by levers such as resource fluidity, i.e., the ability to move resources and skills between projects and functions, leadership unity, which ensures cohesion and rapid decision-making, and strategic sensitivity, understood as the readiness to pick up on weak signals of change. So, agility is not just a technique for dealing with outside challenges, but it is also essential for staying ahead of the competition. This unique characteristic distinguishes organizations that can innovate and prosper from those that are destined to fail in increasingly integrated and globalized marketplaces. The concept of agility originates from the manufacturing industry and production models built on lean and just-in-time principles. However, it has now expanded to encompass more areas, including governance models, organizational structures, and value delivery procedures. Models such as the Dynamic Capabilities Framework (Teece et al., 1997) have helped to clarify how agility can be understood as the ability to integrate, build and reconfigure corporate resources to cope with turbulent environments, while schemes such as the Agile Wheel or the autonomous cell approaches – including the well-known Spotify model – have offered concrete representations of how more fluid, decentralized and collaborative structures can promote adaptability.

Within this theoretical framework, the concept of *service agility* has become increasingly important, namely the ability of an organization to quickly adapt its service offerings, delivery processes, and customer relationship strategies. The literature identifies three central dimensions of this agility in services:

1. Operational flexibility is necessary to deal with unforeseen situations.
2. Customer responsiveness, which requires customizing solutions and models of interactions.
3. Strategic flexibility, which allows for the redefinition of offerings and models in light of technological and market changes.

Services differ from manufacturing in that they are more variable and uncertain in nature. This is because they involve working with customers and stakeholders, dealing with intangible elements, and relying on processes that cannot always be standardized. In this way, service agility is not merely a new perspective on organizational agility; it is a distinct approach. However, it represents a specific variation of it, essential for ensuring consistency and value in scenarios characterized by unpredictability and rapid change.

The banking industry is an excellent example of these changes. The financial business has always been known for being inflexible, bureaucratic, and focused on stability. However, it is now under more pressure than ever before. Digitalization, the rise of new actors such as fintech companies, changes in the law, and shifting customer expectations have all made it clear that it is time to reassess old models and ways of doing things. In this situation, being able to change banking services quickly is crucial for staying competitive, maintaining customer satisfaction and loyalty, and driving continuous innovation. Deloitte (2020) states that established retail businesses must adopt agile methods to remain competitive with younger, more digital, and flexible competitors. This process requires digital transformation to be effective. Banks can redesign their internal processes and enhance the customer experience by leveraging technologies such as artificial intelligence, blockchain, big data analytics, and digital platforms to provide personalized, accessible, and real-time services. However, digitalization cannot be understood solely as a technological change. In fact, it implies a profound transformation

of structures, organizational cultures and leadership styles. In this sense, service agility in the banking sector cannot be ignored, as it relies on organizational enablers such as resilience, structural flexibility, effective team coordination, the spread of agile mindsets, and the adoption of leadership models that combine strategic vision, experimentation, and a focus on people.

This thesis aims to provide a systematic reconstruction of the concept of service agility in the banking sector through a logical progression that unfolds in four main chapters. The first chapter is devoted to the literature and aims to provide the conceptual basis for understanding organizational agility, including its definitions, dimensions, and evolutions. It reviews the most relevant models and then focuses on the application of service agility, particularly in the banking sector. The second chapter focuses on the organizational foundations of service agility, analyzing in particular the roles of dynamic capabilities, resilience, structural flexibility, coordination mechanisms, modular IT architectures, and digital platforms, as well as the cultural and leadership factors that enable these capabilities. Consequently, the third chapter presents two exemplary cases – those of ING and BBVA – which demonstrate how central international banks have undertaken significant agile transformation journeys, introducing new organizational, technological, and cultural approaches. Despite differences in approach and context, these cases provide concrete examples of how service agility can be translated into operational practices, the challenges encountered and the results that can be achieved. Finally, the fourth chapter examines the primary challenges that hinder the banking industry's agility, including cultural resistance, regulatory barriers, organizational complexities, and managing stakeholder trust. It also provides strategic suggestions on how to improve it and maximize its potential.

The primary objective of this thesis is to provide a comprehensive and clear understanding of a complex and rapidly evolving phenomenon where theoretical dynamics and organizational practices intersect. In banking institutions, agility is not just a response to outside influences. On the other side, it is a strategic tool for building organizations that are robust and receptive to new ideas, while continuously innovating, learning, and adapting to change.



## **1. Literature Review**

### **1.1. Organizational agility**

In today's volatile, unpredictable, complex, and ambiguous (VUCA) environment, organizational agility has emerged as a critical survival need (Nguyen et al., 2014). This section investigates the nature of organizational agility by examining its conceptual roots, strategic significance, fundamental characteristics, and the frameworks that influence its use.

#### **1.1.1. Definition, Strategic Role, and Evolution**

Organizations must deal with constant uncertainty because today's markets and industries constantly evolve, clashing, splitting, increasing, and falling. As a result, regardless of their level of financial success, people struggle to devise plans to handle these risks.

In the twenty-first century, corporate organizations no longer have the option to be agile. Successful organizations are now distinguished from failing ones by their organizational agility and capacity to react quickly to the external environment. The pressure of the market, where profitable corporate strategies are imitated worldwide, exacerbates this. Rapid reactivity and flexibility are necessary due to these ongoing changes (Harraf et al., 2015). However, an organization's capacity to be adaptable and quickly react to changes in the market is hampered by the intrinsic need to expand and establish themselves as competitors in their particular industries. Market dominance and sheer scale can make it difficult to see and reach quickly to changes that could have otherwise increased competitiveness. According to Alzoubi (2016), there is no one-size-fits method for creating an agile company – a company can grow more agile but never be truly agile. By combining reconfigurable resources and knowledge-rich environments' best practices, agility is the practical application of competitive bases like speed, flexibility, innovation, and quality to deliver customer-driven products and services in a rapidly evolving environment, as considered by Yusuf et al. (1999). Like continuous improvement, agility is a continuous process. "Organizational agility is more a matter of becoming than being" (Alzoubi, 2016; Doz & Kosonen, 2008; Holsapple & Li, 2008; Williams & Lawler, 2013).

Doz and Kosonen (2008) associate this concept with three key levers: resource fluidity, or the capacity to reallocate resources and skills swiftly; leadership unity, which ensures cohesiveness and facilitates quick decision-making; and strategic sensitivity, or the ability to recognize changes in the competitive environment. As a competitive advantage, differentiator, and core competency, organizational agility necessitates strategic thinking, an innovative mindset, exploitation of change, and an unwavering need to be proactive and adaptable. As a result, agility becomes a business imperative for survival rather than choice.

The dynamic character of internal competitiveness demands a thorough comprehension of the elements contributing to an organization's agility. "We are experiencing not merely another turn of the business cycle, but restructuring of the business order" (Davis et al., 2009). Markets, technologies, and organizations are now more integrated due to globalization. Outsourcing, foreign collaborations, and general internationalization exemplify this change. The intensity of global rivalry is making competitive advantage more and more ephemeral. Since agility is the key to organizational performance and excellence, organizations must stay relevant. It is a way to achieve and maintain high performance. Beyond business procedures, agility must be fundamental to the organization's people, teams and culture.

### **1.1.2. Core Dimensions and Enablers of Agility**

When applied to enterprises, where organizational adaptation to change in the face of dynamic and changing market conditions needed speed and swiftness, the notion acquired acceptance among practitioners and researchers in the early 1990s.

Lean manufacturing originates from agility and agile manufacturing (Marchwinski & Shook, 2007). Indeed, the idea of agility is still directly impacted by the ideas and innovations created by lean ideology, sometimes overlapping in purpose and goal. Lean manufacturing emerged as a response to the changing market demands in the post-war era following World War II. Much of this endeavour was focused on Toyota Motor Corporation in Japan. Under Toyota CEO Eiji Toyoda, a straightforward lean manufacturing process emerged in the 1960s (Womack & Jones, 2003). Toyota Motor

Company gradually created what is now known as the Toyota Production System (TPS) by building on prior achievements and ideas. TPS is an essential step before lean manufacturing: it combines cheap costs, quick lead times, excellent quality, and waste removal into a system designed to achieve these objectives. The development of the TPS coincided with the spread of quality management ideas throughout Japan. W. Edwards Deming<sup>1</sup> started giving quality control lectures to Japanese management in 1947. The main takeaway from his speech was that raising quality will boost competitiveness while lowering costs. This thematic idea clarifies the reasoning behind organizational agility: enhancing an organization's agility will reduce costs while boosting its capacity to compete more successfully in a global market that is changing fast. However, the relationship between the two ideas is complex: an organization may be agile, lean, or none. It is easier to comprehend agility's definition and development as organic reactions to market demands and continuing past historical monuments when one knows its roots in manufacturing and lean processing.

Essentially, agility can be divided into two components: adaptation and flexibility (Falance, 2012; Holsapple & Li, 2008). Agility is a metric for responsiveness; an organization's total flexibility can be shown in the expected reactions to an external stimulus. An organization's ability to adapt is gauged by its choices and reactions to external stimuli. Effectively planned and unplanned responses are two main aspects of agility that an organization must consistently implement. Agility is an organization's ability to sense, anticipate, be entrepreneurially attentive, and take initiative. Holsapple & Li (2008) highlight that an organizational design based on knowledge management facilitates this agility: making knowledge widely accessible and available expedites decision-making and enhances overall flexibility. These aspects of agility might be characterized as the overall objectives that each agility pillar seeks to accomplish. According to Gunasekaran (1999), agility highlights speed and adaptability as the key characteristics of an agile organization. Adapting to change and uncertainty is another crucial aspect of agility (Goldman et al., 1995). The ability of an organization to modify its internal structures and procedures in a predetermined way in response to environmental changes is known as organizational flexibility. Adaptability is the

---

<sup>1</sup> W. Edwards Deming was an American engineer, statistician, and professor, widely credited with helping to revolutionize quality control and management practices in post-war Japan.

foundation for how well organizational resources are and how simple it is to mobilize them.

Throughout the past few decades, organizational flexibility has been researched, and numerous attempts have been made to define agility in corporate settings - nonetheless, most definitions concentrated on distinct corporate functional domains. Numerous scholars have tackled the multifaceted and intricate subject of organizational agility from various angles. Most previous research focused exclusively on a particular industry of organizations, specifically the manufacturing sector, where researchers examine what manufacturing organizations can do to improve their agility. Some assess agility in a specific context based on business processes or areas, such as supply chain agility, human resource agility, IT capabilities and knowledge management, business processes, strategic alignment, and market orientation. The idea of agile corporate strategy and vision was first presented by Goldman et al. (1995), who defined an agile organization as one that can adjust to changing customer patterns and remain profitable in a constantly shifting environment. Furthermore, agility encompasses more than just operational speed; it also includes the capacity to establish cooperative networks throughout the supply chain, enabling the provision of tailored and integrated responses to demand fluctuations. According to Yusuf et al. (1999), knowledge, reconfigurable resources, and alignment of “competitive bases” – speed, flexibility, innovative proactivity, quality, and profitability – all affect an organization’s degree of agility. The strategic use of information technology, skill integration, customer focus, and knowledge advancement are the four primary drivers of agility identified by the study. Businesses must integrate these enablers and adjust to the shifting customer and market demands to increase organizational agility. Consequently, Lu and Ramamorthy (2011) introduced the ideas of speed and creativity as essential characteristics of organizational agility. Agility is an organization’s capacity to respond quickly and creatively to unforeseen environmental changes while leveraging such developments. While innovativeness relates to the calibre and content of reaction (e.g., production creation, decision-making, and strategic direction), speed is one of the most crucial prerequisites for agility in terms of response and execution (Cai, 2013). The following definition of organizational agility can be produced by combining all of these components: organizational agility is the capacity of a society to identify unforeseen

changes in the environment and react appropriately, quickly, and efficiently by repurposing and rearranging internal resources, thereby gaining a competitive edge.

### **1.1.3. The Eleven Pillars of Agile Organizations**

Scholars differ significantly in their understanding of agility's characteristics and classifications. During this time, researchers have created several agility frameworks comparable to – and sometimes conflict with – one another. More significantly, the suggested structure provides fresh perspectives on the characteristics of organizational agility.

The pillars of agility aim to offer a workable framework of agility and a simplified tool that many organizations can use. Although the boundaries between each region may become hazy because of the concept's interdependence, the relationship between these pillars is clear. Every pillar is described in terms of its fundamental characteristics related to agility. The pillars analyzed are eleven:

1. *Culture of Innovation*: An organization that transcends a tendency towards change is said to have an innovative culture. An organization with an innovative culture continuously assesses its current teams, structures, systems, processes, and other organizational elements. Although a desire for innovation is a catalyst for change, a culture of innovation is an organization-wide approach to leveraging changes in the external world to mould the internal environment of the company better. Opportunity-seeking and general attentiveness are traits of an innovative culture. The entire organization must cultivate an internal drive to find new avenues for innovation, actively pursue these avenues, and take advantage of those opportunities. Organizations must also maintain their inventiveness, adopt an openness to new experiences stance, and look for competitive positions in the environment to be prepared to take advantage of new chances.
2. *Empowerment*: It explains how employees and leadership interact through authority, autonomy, and other elements. It describes how lower-level employees' and organizational leaders' authority is divided, shared, or distributed. The idea of

centralization and decentralization, as well as how it determines decision-making authority, is the most fundamental sub-component of this pillar. Devolved power organizations are typically more flexible and better equipped to react to changes in the outside world. Lower-level employees respond to the environment more quickly and can be carried out more quickly, particularly during emergencies. This enables a quicker reaction to an urgent threat or important issues that would take too long for lower-level decision-makers to handle.

3. *Tolerance for ambiguity*: Agile companies need to be able to adapt to uncertainty. It embodies an organization's overall perspective – a culture that cuts beyond organizational levels and boundaries (i.e., this pillar is comparable to the culture of innovation). The level of unpredictability in the market is rising, particularly today. A common feature of the knowledge economy is ambiguity. Even though the marketplace is generally complete with knowledge and information, the sheer volume of data makes it more difficult to locate pertinent information. An organization that satisfies the standards set out by this pillar does not falter or falter in the face of uncertain market conditions; instead, it thrives in making the right short-term decisions to achieve long-term goals.
4. *Vision*: A concise summary of what an organization strives to accomplish daily is called its vision. Since it outlines the ideal future condition of an organization, it serves as the ultimate guide and unifier. Its purpose is to guide and inspire. In agility, vision encompasses the expressed or written vision statement and the strategies and tactics used to create and implement the organization's vision. Leadership and other influential people who run an organization regularly are included. These elements help a company stay in line with its overarching goal. A well-defined vision is essential to the success of an organization because it gives managers, staff, governors, and others a broad objective to strive for continuously and collaboratively.
5. *Strategic direction*: An organization's vision determines its general course. However, dedication to the goal and concentration on achieving the ideal state are essential for success. Ultimately, having a vision does not increase an organization's agility. It is common to have an organizational vision. Unsuccessful organizations frequently establish ineffective, uninspired, or non-existent visions.

A laser-sharp focus is a hallmark of compelling visions. By providing the guiding framework for decisions in response to external events, clarity of direction enables an organization to operate flexibly and efficiently. In other words, a company's strategic path is followed while responding to the external environment in a targeted way. The leading advocate and defender of an organization's dedication to its mission is its leadership. Even in decentralized organizations, leadership is the source of much power and decision-making.

6. *Change management*: An organization that can effectively handle and understand the changes occurring within and outside it is said to be agile. Change management is adaptable and particular to each organization, just like any other pillar of agility. Different organizations will be affected by change in different ways, and the pressures an organization faces to adapt may be specific to that industry or organization. Three components make up an agile organization's change management: recognizing the change, putting it into practice, and testing it. The ability of an organization to detect possible changes, both internal and external, is related to perceiving the change. It also emphasizes how quickly and accurately change is perceived. The process of converting a choice into results that can be put into practice is called implementation. Changes are executed more quickly, smoothly, and accurately in agile organizations than in less agile ones.
7. *Communication*: An organization's overall agility is also determined by its communication. This pillar highlights the significance of communication with investors, potential clients, and other pertinent market participants within the company. Internal communication addresses the channels through which information is shared within an organization. Communication channels can be found in three main directions: top-down, horizontal, and bottom-up. It might be argued that the most successful and agile organizations integrate and apply various communication techniques, promoting open and multidirectional communication across the entire organization. A key component of agility is the informal language used by the company, which can either facilitate or impede growth and strategic agility in addition to official strategic communication with stakeholders or employees. Within the company, informal communication makes it easier to understand the external world, the context of various decisions, and the firm's

strategic position. The foundation of team building is a subset of organizational communication associated with empowerment. Since teams are increasingly responsible for making decisions and ensuring operational success, their implementation is usually linked to decentralization. An organization's overall agility is influenced by its propensity to use implement teams and the characteristics and operations of those teams. Setting team active priorities for particular tasks is what makes this pillar significant.

8. *Market analysis and response*: This pillar strongly emphasizes the environment surrounding a firm, its industry, and the wider world. Market responsiveness is a measure of a firm's ability to assess its external environment and its inclination to employ a variety of instruments to do so efficiently. Its ultimate objective is to facilitate agility. In particular, this pillar defines the necessity for an organization to use the instruments for analysis efficiently and offers the metrics and techniques for external environment analysis. This pillar also emphasizes the importance of connections between people in the same business.
9. *Operations management*: Generally speaking, what an organization aims to accomplish is directly tied to effectiveness or efficiency, and operations management in organizational agility is no different. Organizations that constantly exhibit lithe activity participate in critical activities for efficiency management. To conclude that all agile organizations are inherently efficient is a sweeping generalization. One must comprehend the crucial urge to constantly work to make operational areas that are not naturally flexible, more so to elaborate on some of the organizational capacities that are invariably associated with growing agility. More precisely, the flexibility of operations and their continuous and pertinent improvement in the face of ambiguity and fierce competition distinguish organizations that manage their operations agilely from those that do not.
10. *Structural fluidity*: An organization's performance is primarily driven by its organizational structure, which also develops the connections and lines of communication that have a significant impact on the organization's vision, encourages adaptability, and opens up opportunities for responsiveness. These companies are typically flat, boundary-free, customer-focused, process-oriented, and team-oriented. These traits facilitate organizational dexterity and agility

despite their distinctiveness in application to different organizations. These features also show how the structure works and relate to other agility traits. The importance of flexibility in allowing an organization to be nimble is highlighted by organizational fluidity. Academics have also suggested resource fluidity through grafting, decoupling, modularizing, dissociating, and switching. These options would make the implementation of new strategic models easier.

11. *Development of a learning organization*: Creating a learning organization is the last of the pillars of agility. The simplest definition of a learning organization is one that aims to continuously grow and transform by promoting the learning of its people, preventing the possibility of stagnation and enhancing overall organizational performance. Since learning and continuous improvement are linked to responsiveness and represent the idea that every experience an organization has, positive or negative, is a chance to learn, these organizations are usually the most agile. Since it offers the cultural ramifications and tools required to allow the earlier pillars to coexist, tailored to distinct organizations' diverse goals and functions, creating a learning organization is the last pillar of agility. (Harraf, Wanasika, Tate, & Talbott, 2015).

Although the ideas behind the pillars are not brand-new, when combined, they offer a foundation for implementing an agile company that is more sensitive to its surroundings. An organization's specific needs should determine how it implements the metrics associated with each attribute. Knowing how much an organization adheres to the pillars may help managers guide their businesses toward success in the future; however, the application may differ.

## **1.2. Agility's models**

Numerous models and frameworks have been used to study organizational agility. These models provide insights into how organizations might manage uncertainty and ongoing change resulting from theoretical development and real-world application. The content and structure of many frameworks and models vary because they analyze agility and its

characteristics in different contexts. Some of these frameworks and definitions are too narrow and cover specific industries. In contrast, in the majority of the domains, agility frameworks are interrelated and have similar themes: organizational culture, workforce, customers, organizational abilities, and technology, which are represented in each separate domain with an emphasis on that particular domain (Wendler, 2013).

This section provides an overview of some of the best-known models of agility. These include integrative frameworks that combine agility across organizational contexts, models based on dynamic capabilities, and structural techniques like the Agile Wheel and the Spotify model.

### *Dynamic Capabilities Framework*

The Dynamic Capabilities Framework is one of the most relevant models for comprehending organizational agility. It sees agility as a strategic ability to compete in ever-changing settings rather than a fixed asset. This concept, rooted in strategic management literature, emphasizes an organization's capacity to recognize opportunities and risks, take appropriate action, and adjust internal procedures and resources (Teece et al., 1997). Dynamic capabilities are how businesses integrate, construct, and reorganize tangible and intangible assets in reaction to erratic external circumstances. At the core of the issue is how companies create and effectively incorporate agility-enhancing dynamic capabilities (Sune & Gibb, 2015; Schuiling, 2014) like coordination, cooperation, capability development, and connection (Gulati, 2007) into their business operations. Goldman et al. (1995) categorize agile organizations' capabilities into four strategic dimensions:

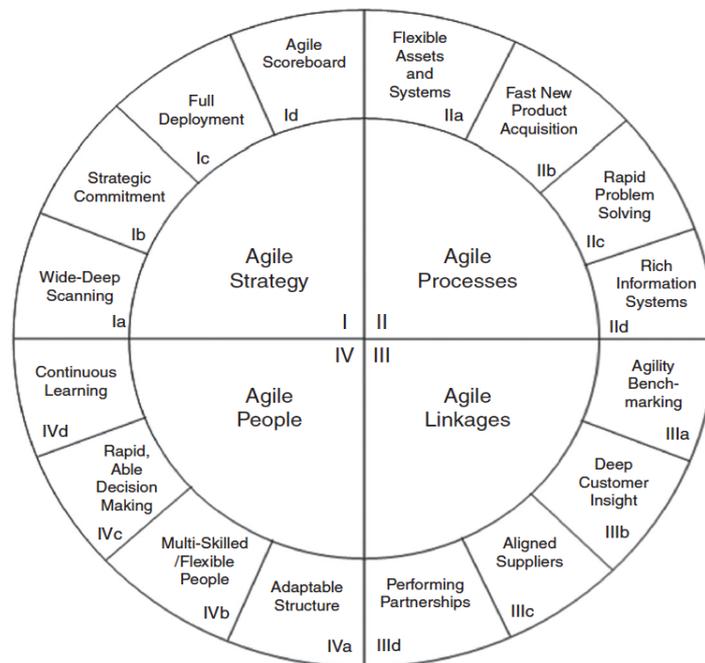
1. Customer enrichment.
2. Competitive enhancement through collaboration.
3. Mastery of uncertain change.
4. Leverage of key personnel and information.

According to Meredith and Francis (2000), "Organizational strength in turbulent situations requires proactivity, adaptability, flexibility, speed, learning and skills to provide strategically driven and effectively implemented waves of change" (p. 138). Their

research indicates that a dynamic ability to compete successfully in a setting of frequent, complex, and frequently unforeseen change is increasingly important for gaining a competitive edge. Order-winning criteria include volume flexibility, diversity, extreme customization, fitness for purpose, rate of innovation, and, most importantly, quick response. Businesses that cannot adapt to these new consumer demands are unlikely to survive in the face of growing local and international competition. A solution seems to be provided by implementing agile enterprise concepts and practices.

### *The Agile Wheel*

Consequently, Meredith and Francis (2000) have also introduced the Agile Wheel reference model (Figure 1), which offers a helpful framework for comprehending the various interconnected elements that go into organizational agility. The wheel is weakened if a spoke is missing, damaged, or brittle. In terms of organizational agility, the same is true. The firm's potential to be nimble is diminished if any of the 16 elements, which are divided into four categories, i.e., Agile Strategy, Agile Processes, Agile People, and Agile Linkages, are not fully developed.



**Figure 1: The Agile Wheel.**

Source: Meredith, S., & Francis, D. (2000). *Journey towards agility: the agile wheel explored*. *The TWM Magazine*, 12(2), p. 139.

### *Greiner's Organizational Evolution and Revolution Model*

Greiner's Model (1998) is another helpful framework for comprehending organizational agility. It was not initially created as an agility framework. However, it has become relevant to agility academics because it clarifies why and how firms must move from stable models to more flexible and learning-based configurations in response to market volatility and growth. The shift from more static models to truly adaptive learning organizations is unquestionably a "multiyear endeavour with major challenges and setbacks along the way" (Greiner, 1998), regardless of how you define organizational agility. Greiner's Organizational Evolution and Revolution Model plots fundamental business revolutions as a function of the corporation's age, size, and industry growth rate (Harraf et al., 2015). It offers a visual representation that suggests how, in a hyper-growth/hyper-volatile context, specific periods of evolution and revolution might combine into what could be viewed as a single event. The dynamic capacities that allow it to respond to a single future vision and its new, constantly changing character identify the new type of corporation that emerges from this complex meta-transformation.

### *Agile Organizations: Lean, TQM, JIT*

Moreover, some approaches to organizational agility, which encompasses all definitions, techniques, and technology employed in the business during the past 20 years, are excessively general and vague, as claimed by Sherehiy et al. (2007). Sherehiy, Karwowski, and Layer (2007) further point out that organizational flexibility, proactivity, responsiveness, and the capacity for ongoing learning are characteristics of agility. Under the umbrella of the agile organization idea, this method combines lean manufacturing, flexible production technology, Just-in-Time production (JIT), Total Quality Management (TQM), agile manufacturing, and workforce empowerment. According to the theory, only agile organizations can fully benefit from various innovative techniques and technology. This method shows why organizational agility was and still is a little hazy and challenging to categorize. However, the second strategy for organizational agility is far more concentrated and limited, setting it apart from all other organizational techniques. Unlike lean manufacturing, TQM, JIT, or even agile manufacturing concepts, which are only a set of operational techniques and processes that are primarily applicable to manufacturing organizations, an agile organization encompasses the entire organization. In order to

respond to sudden and rapid changes in a dynamic business environment, the agile organization expands on the manufacturing model and incorporates other organizational features, goals, and objectives.

### *Agile Cells and the Spotify Model*

Now, it is necessary to introduce the concept of Agile Cells and the Spotify Model. Firstly, most agile transformations fail when they try to scale beyond a few pilots, which is no easy task. Leadership must acknowledge that scaling up will necessitate an iterative mindset, where learning is quickly integrated into the plan. It calls for sufficient time – a sizable amount of the time of important leaders – and a readiness to provide an example of new attitudes and actions. Agile transformations acknowledge that since not everything can be understood and planned for, it is important to make adjustments as needed.

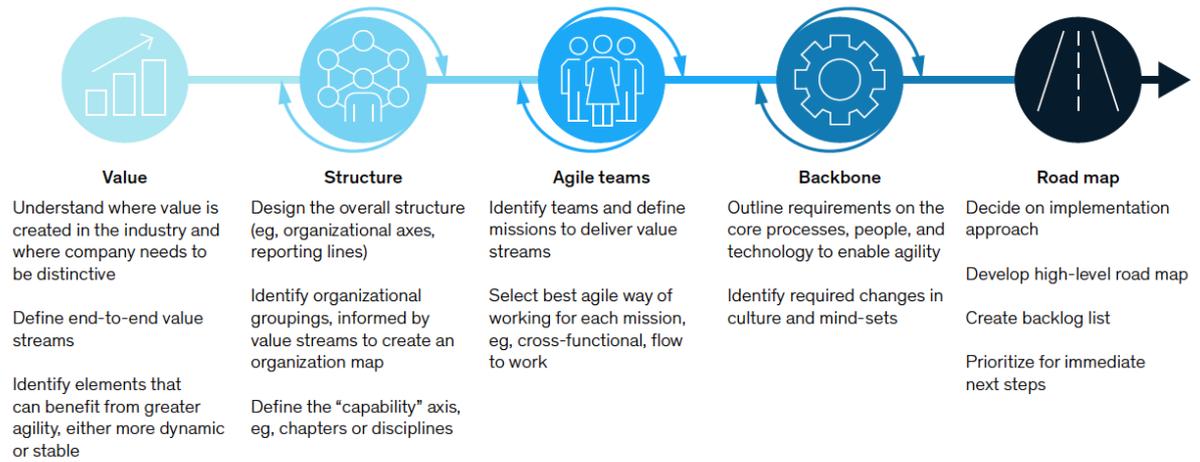
Most transformations start with building the top team’s understanding and aspirations, creating a “blueprint<sup>2</sup>” to identify how agility will add value, and learning through agile pilots (Brosseau et al., 2019). These three elements inform one another and often overlap. An agile operating model’s blueprint must offer a clear vision and design of how a new model might operate; it goes well beyond an organization chart, as shown in Figure 2. Because an agile transformation radically alters work, blueprinting must identify changes to the operating model’s people, processes, and technology components.

---

<sup>2</sup> This sentence refers to the initial phase of agile transformation described by Brosseau et al. (2019), where organizations develop a “blueprint” to identify how agility will add value, as outlined in *The journey to an agile organization*.

**The blueprint provides a clear vision and design for a new operating model.**

Iterative process to derive agile operating model



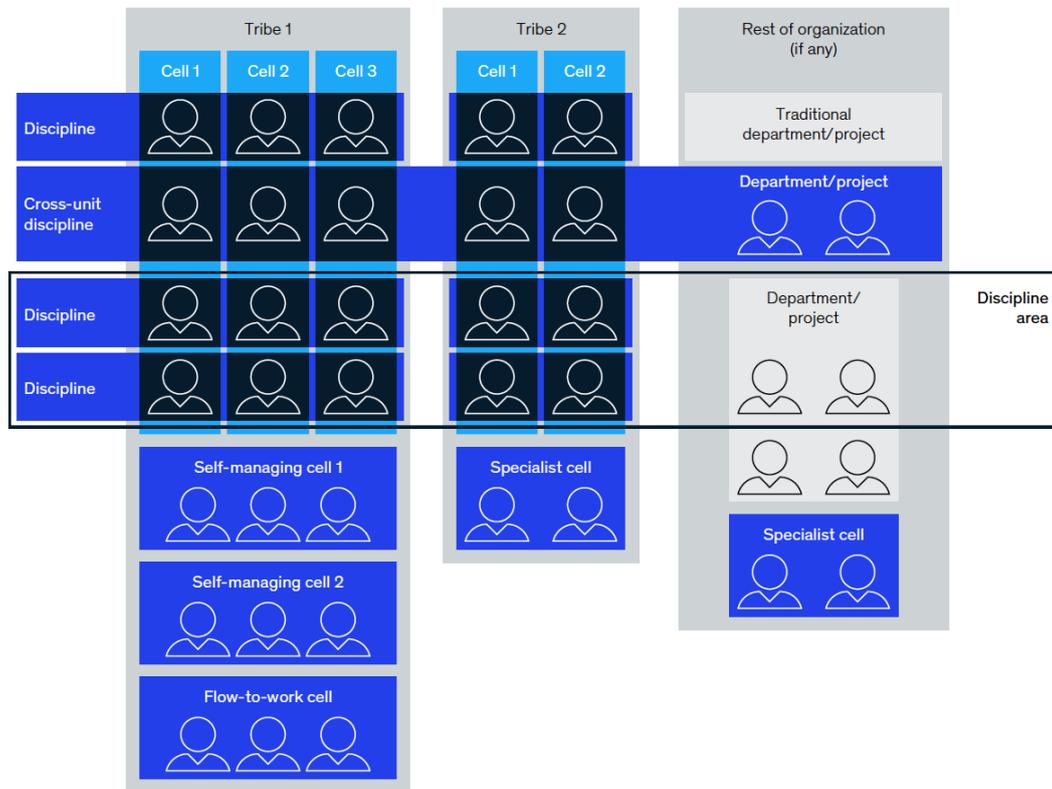
**Figure 2: Blueprint for an agile operating model.**

Source: Brosseau, D., Ebrahim, S., Handscomb, C., & Thaker, S. (2019). *The journey to an agile organization*. McKinsey & Company.

In addition to a more identifiable organization chart that displays the capability axis along which shared skill sets are owned and controlled, the blueprinting component should generate a tribe map (Figure 3) that depicts how individuals who are grouped complete tasks.

The blueprint combines a 'tribe map,' illustrating how individuals are grouped, with a 'capability' axis along which common skill sets are owned and managed.

Example tribe map



**Figure 3: Example of tribe map and blueprint deployment in agile organizations.**

Source: Brosseau, D., Ebrahim, S., Handscomb, C., & Thanker, S. (2019). *The journey to an agile organization*. McKinsey & Company.

Instead of input actions or capabilities, individual agile cells are defined by their missions or outputs. Teams working on different kinds of missions will use different agile models. Nonetheless, the most prevalent kinds of agile cells are three:

1. First, projects, activities, or products are delivered by cross-functional teams. These possess the team's expertise and abilities, and their goals should be to deliver the related value stream from start to finish. One example is the squads and tribes model created by Spotify and utilized by ING and other companies.
2. Second, self-managing teams are comparatively steady over time and produce baseload activity. These teams determine the most effective methods for establishing objectives, setting priorities, and concentrating efforts. Examples of

this agile methodology could be maintenance teams or lean manufacturing teams. Corporate agility and lean manufacturing techniques and tools work well together.

3. Third, depending on the urgency of the requirement, full-time staff members are assigned to various tasks in flow-to-work pools. Flow resources are frequently considered limited resources like enterprise architects or functional teams like human resources.

(Brosseau et al., 2019)

First and foremost, establishing more agile cells is necessary for agile scale-up. However, an organization cannot achieve enterprise agility by piloting there. The aim, context, and organizational cadence should all be reflected in the transition. However, a shift to the new agile operating model, methods, and culture will eventually be required. Large organizations will probably go through several waves, and this does not have to be the first day. Instead of addressing frontline, customer-facing divisions, many began by reforming their headquarters and product-development organizations. One plant or complete customer experience can be changed at a time, but heavily interconnected operations at the corporate office might require an all-in transformation strategy. The speed of scale-up is frequently constrained by the resources needed to support new agile cells, such as the availability of agile coaches or suitable workspaces. The change may encounter resistance and be delayed if the support of new agile cells is not addressed.

#### *Static vs Dynamic Dimensions of Agility*

Finally, the primary goal of agility in an organization is to adapt to change, obtain a competitive edge, seize chances from environmental shifts, and flourish in an unpredictable and uncertain environment. Therefore, agile companies require a set of competencies and enablers to adapt to such change. Agile organizations can gain a competitive edge in a changing environment, according to the framework of enablers and competencies. This framework may be the topic of organizational agility from a static and dynamic perspective. The term static dimension relates to the structural elements of the organization and asks, “What organization has that makes it agile?”.

On the other hand, the dynamic dimension focuses on the organization’s capabilities and aims to respond to the question, “What can an organization do to become more agile?”.

Both dimensions are dependent upon one another. The organization cannot be agile if it depends on the structural component. The newest organizational structure or technology will not help if it is not used effectively to adapt to the changing environment. According to Yusuf et al. (1999), the primary competitive pillars of agility – speed, flexibility, innovation, proactivity, quality, and profitability – form the basis of crucial organizational agility enablers. Agility enablers are used as leverage to achieve agile capabilities (Bottani, 2010; Eshlaghy et al., 2010; Gunasekaran, 1999). Agile capabilities describe an organization’s capacity to take the necessary actions to become more agile. Organizations with agile capabilities can gain a competitive edge and adapt to change effectively. According to a macro perspective on organizational capabilities, organizational agility is a higher-order dynamic capability that can improve performance by efficiently adapting an organization to environmental changes (Cai, 2013).

In conclusion, the models under consideration present contrasting viewpoints on how agility might be attained and expanded throughout enterprises. They all emphasize agility as a systemic and dynamic organizational attitude, even though they focus on diverse aspects such as strategy, structure, teams, or competencies. These frameworks offer a strong basis for examining how businesses effectively manage complexity and consistently adjust to changing conditions.

### **1.3. Service Agility: qualities, facilitators, and differentiators**

The ability of an organization to quickly and competently modify its service offers, delivery procedures, and strategic direction in response to shifting consumer demands and market conditions is known as service agility. According to the literature, there are three essential components of agility in service settings:

1. Operation flexibility as services must be delivered with real-time adaption, frequently in unanticipated circumstances.
2. Client responsiveness as services are individually individualized and customer-facing.

3. Strategic flexibility as service offerings frequently need to change in response to technical advancements or market changes<sup>3</sup>.

(Kuitunen et al., 2023).

The need for service providers to function quickly and adaptably while staying in line with client value is reflected in these characteristics. It is made up of operational, partnership, and customer agility. Redefining the company's procedures to obtain a stronger position in the market is a key component of operational agility. It responds strategically to changes in the outside world. It supports the company's operations, enabling it to handle business changes quickly and nimbly. It is interesting to note that although some definitions of agility focus on operations, others use implementation.

Furthermore, some researchers have found that customer agility pushes businesses to make choices that will satisfy the needs of their customers. Prioritizing customer agility has forced businesses to adapt to changing market conditions, which has led to the development of manufacturing practices. Partnering agility enables businesses to use suppliers' skills, resources, and expertise, significantly advancing sustainable practices (Sun et al., 2022). As such, agility ought to be present at all organizational levels, ranging from strategic, business, and organizational levels to the product or service, tools, and even the personal agility of employees. Agility is not just a collection of skills; it also describes an organization's capacity to recognize environmental shifts and make timely, relevant decisions.

Because of the dynamic nature of human contact, outside influences, and shifting consumer expectations, service organizations experience a high degree of operational unpredictability in contrast to industrial environments. These factors affect response mechanisms and process modelling accuracy. In service organizations, process quality is often managed through Process Key Performance Indicators (KPIs), which focus less on the data components of business processes and more on the performance level of activities, typically used in service organizations to manage process quality. However, their business process models are less accurate due to the variability they encounter from

---

<sup>3</sup> Kuitunen, K., Lemmetty, S., Mäkinen, S., & Wits, W. (2023). *On increasing service organizations' agility: An artifact-based framework to elicit improvement initiatives. Sustainability, 15*(13), 10189. <https://doi.org/10.3390/su151310189>

suppliers, customers, service providers, or unforeseen circumstances. Therefore, agility may not be impacted by changing operational business procedures.

In contrast to an operating routine, agility is viewed as a dynamic skill that explains how resources can be integrated and changed in response to changing circumstances. Businesses require a set of enablers – capabilities that enable them to react quickly to shifting business environments to be agile. Generic agility enablers include knowledge management, organizational learning, leadership commitment, interdisciplinary teams, organizational culture, decentralized decision-making, and stakeholder and customer involvement. The subject of how to increase agility in a particular organization has somewhat generic responses. However, given the various changes in their corporate settings, managers must understand what skills to build and what methods and strategies can be used. Several enablers influence service agility, but organizations must implement specific methods and frameworks to develop and enhance agility over time. The literature claims that the generic approach frequently fails to meet any organization's unique requirements.

Variability is a natural part of service systems, whether from suppliers, customers, service providers, or unforeseen circumstances. As a result, their management teams could have trouble comprehending their agility-related resources and performance indicators. They could also have trouble establishing the parameters of development projects about agility. An organization must, however, be precise about its agility capabilities and implement its agility improvement programs to become agile. Every business is unique, and their problems change according to size, industry, and degree of resources and capabilities.

The flexibility required to handle ongoing change and uncertainty is rarely supported by traditional business process models based on activity flow. Every organization, irrespective of its field of activity, depends on its business records, which provide details about its output. While work tasks are defined by considering how artefacts are processed, business artefacts allow for recording this information to reflect the context of a business. Concrete, recognizable, self-descriptive informational components included in a long-lasting framework and utilized to manage a firm are business artefacts (Kuitunen et al., 2023). In practice, artifact-centric business process modelling has shown great success. Compared to the communication made possible by conventional activity-flow-based

methodologies, it significantly improves communication between stakeholders in business processes. When correctly modelled, business artefacts at the operational level of the company demonstrate a company's capacity for organizational agility. Information is lost or processed differently the more exchanges there are. Because of this, to promote agility, the emphasis on tasks and processes should be changed from conformity to a plan to building the result to fit other tasks. In other words, the interfaces between tasks and business processes should be re-engineered to include or refer to particular business artefacts.

Finally, service agility is a multifaceted and dynamic quality that helps businesses modify their internal structures, delivery methods, and service offerings in response to frequent and frequently unforeseen changes. Based on adaptability, responsiveness, and strategic alignment, service agility must be ingrained at all organizational levels to provide value in complex and variable situations. The development of this agility is supported by various frameworks and enablers, including dynamic capabilities, customer and partnering agility, and artefact-centric process modelling; nevertheless, its actual implementation is still heavily context-dependent. This conceptual underpinning will also be used in the next section to examine the banking industry, where organizational and service agility requirements have become more pressing due to rising competition, digital disruption, and quickly changing customer expectations.

#### **1.4. Agility in the banking sector**

The banking industry has faced more complicated problems in recent years due to increased rivalry, regulatory demands, technology developments, and quickly changing customer expectations. Because of these factors, banks have been compelled to reconsider their conventional operating models and switch to more adaptable, agile, and customer-focused strategies. Agility has gained attention in strategy talks due to the financial services industry's increasing need for innovation, speed, and personalization. Historically known for their operational conservatism and rigidity, banks must today undergo continuous changes that affect organizational culture, decision-making

procedures, service design, and technology infrastructures. Agility, especially service agility, has emerged as a critical asset to guarantee responsiveness, robustness, and long-term competitiveness in this dynamic environment. For established retail banks, implementing business agility is a crucial strategic requirement to stay ahead of emerging competitors (Deloitte, 2020)<sup>4</sup>.

#### **1.4.1. Digital transformation and agility**

Innovations like blockchain, artificial intelligence (AI), and mobile banking radically change how banks operate and engage with customers. These developments provide opportunities and challenges (Probojakti et al., 2014). Bank rivalry has increased due to fintech technologies such as digital payments, peer-to-peer lending, and cryptocurrency platforms, which have enabled non-traditional companies to provide financial services. Banks must adopt digital transformation with agility to stay competitive in the face of swift technical advancements, evolving regulations, and shifting consumer behaviour. Failing to do so could lead to obsolescence and a loss of market share.

On the other hand, digital transformation may be a potent source of competitive advantage if it is handled with flexibility and reactivity. The “speed and effectiveness with which an organization can generate new insights, adapt, and respond to them” is the definition of business agility (Deloitte, 2020)<sup>5</sup>. One relevant element that might motivate organizations to adapt and innovate in the face of these challenges successfully is transformational leadership. With its emphasis on idealized influence, motivation, intellectual stimulation, and personalized attention, transformational leadership is essential for helping organizations navigate the process of digital transformation (Probojakti et al., 2014). In addition to encouraging the adoption of new technologies, transformational leaders motivate the operational and cultural adjustments required to utilize these technologies

---

<sup>4</sup> This sentence refers to the strategic importance of agility for traditional retail banks as highlighted in the executive summary of Deloitte’s report *Business Agility in Retail Banking – Build up your agility* (Deloitte, 2020, p. 2). The report emphasizes how agility helps banks respond effectively to emerging digital-native competitors.

<sup>5</sup> Definition of business agility taken from *Business Agility in Retail Banking – Build up your agility* (Deloitte, 2020, p. 2).

fully. Innovation, adaptability, and operational efficiency are fuelled by digital transformation and transformational leadership in the banking sector. In a market that is evolving quickly, banks' ability to take advantage of these special resources highlights their competitive strength.

Integrating information systems/technology, people resources, business processes, and facilities into a cohesive and adaptable organization that can react quickly to changing circumstances is the cornerstone of organizational agility. In the highly regulated and externally sensitive banking sector, these factors are essential. Banks can better manage risks and adjust to changes in the market and regulations by increasing their agility. Agile banks can better meet consumer requests, optimize operations efficiently, and swiftly introduce new goods and services. An organization's capacity to incorporate innovations and build capabilities that enable the company to adjust to new opportunities swiftly is the real source of enduring competitive advantage. This idea goes beyond conventional ideas of competitive advantage by highlighting the necessity of long-term sustainability and moral corporate conduct. Increased employee motivation, improved customer satisfaction, and faster time to market are among the advantages (Deloitte, 2020)<sup>6</sup>.

#### **1.4.2. Implementing agility**

Cash services, reimbursable fund collection, credit and long issuing, payment services, and forward are generally part of banking services. Online and offline banking services are available (Aliaskaru et al., 2011). Customers' loyalty to banks has been influenced by the kind of service, quality, and perceived value (Mukerjee, 2018). Reinartz and Kumar (2003) assert that a bank's relationship with a customer improves with the number of goods and services the customer purchases. As a result, a bank's sales strategies now include offering a competitive advantage, the quality of service and the value that the customer perceives (Mahadin & Akroush, 2019).

---

<sup>6</sup> This summary of benefits is taken from *Business Agility in Retail Banking – Build up your agility* (Deloitte, 2020, p. 2), where the authors emphasize how agility supports sustainable growth, employee engagement, customer satisfaction, and time-to-market performance.

Agile methods must be implemented throughout the entire organization to satisfy the demands of huge organizations. SAFe is the most widely used of the several scaled agile frameworks proposed. An agile method of working may be implemented across the entire organization thanks to the ideas and practices of SAFe. This last one can be tailored to the business's unique requirements and customized in various ways. The framework provides an implementation roadmap to help organizations navigate the change and is based on fundamental values and principles. SAFe comes in a variety of configurations. The four layers of the organization – team, program, value stream/solution, and portfolio – are outlined in the most comprehensive design.

Business consulting firm Initio has examined the impact of ING Benelux, BNP Paribas, Deutsche Bank, and SimCorp's SAFe transformations and has reported on the lessons learnt. According to observations, changes must be made gradually by conducting modest tests regularly. Additionally, they advise close coordination with upper management and educate them on SAFe practices and principles. According to SAFe, the South African Standard Bank discloses specific difficulties in its corporate transformation. Standard Bank implemented a few agile teams; however, scaling up agile methodologies and collaborating across teams proved challenging. Further research into the Standard Bank example by Johnston & Gill<sup>7</sup> revealed that it was challenging to reinterpret the project manager's job, particularly to substitute a mentoring leadership style for the command-and-control one (Nilsson Tengstrand et al., 2021).

Additionally, upper management found comprehending the transformation's long-term advantages challenging. Prioritizing requirements and balancing time and quality have also been mentioned as difficulties. According to the American Bank Capital One, teams found it challenging to embrace the change, and early in the transition, dependencies outside of the teams made it challenging for teams to deliver independently. Capital One mentions dependencies outside of the teams as a challenge. This implies that organizational barriers in businesses impact the SAFe transition. When attaining business agility, incumbents have several obstacles, especially in contrast to emerging market participants like fintech. Numerous organizational factors contribute to this, such as the

---

<sup>7</sup> Johnston & Gill is referenced in Nilsson Tengstrand et al. (2021) as part of a prior study examining Standard Bank's experience with SAFe adoption. The study highlighted the challenges in redefining the project manager role and transitioning to a mentoring leadership style.

size of established retail banks (and the complexity of their history), deeply embedded bureaucratic procedures, company culture, and employee mentality (Deloitte, 2020)<sup>8</sup>. An intriguing conundrum arises here. As for the cases of ING Benelux, BNP Paribas, Deutsche Bank, and SimCorp, it is customary to implement changes incrementally rather than doing the transformation all at once. However, interdepartmental dependencies challenge a successful transformation, suggesting that multiple departments must undergo adjustments simultaneously. However, under these conditions, the financial sector is not the only one facing difficulty implementing an agile work style throughout the organization. High levels of trust must be established in the banking industry due to the nature of the services, which can be challenging when working with regular releases and incremental changes, as advised by agile principles. Moreover, there could be other specific challenges for the banking industry and may be regarded as delicate in adapting agile methods:

1. Banking values traditions and stability, implying difficulties for transformation.
2. External rules and regulations complicate transformations in the banking industry.
3. Big transformations may endanger the external stakeholder trust<sup>9</sup>.

(Nilsson Tengstrand et al., 2021)

These difficulties are unique to the banking sector and may be regarded as delicate, which may be why they have not been discussed before.

Even if the term service agility is not explicitly used in banking literature, the continuous evolution of financial services strongly reflects its fundamental ideas, which include responsiveness, adaptability, and value co-creation. The industry's move towards digital and personalized experiences, the coexistence of physical and online channels, and the significance of customer happiness and perceived service value are the finest examples of how service agility is used in the banking sector.

Promoting a cultural and organizational change that empowers people, fosters innovation, and supports transformational leadership is crucial to maximizing agility in the banking

---

<sup>8</sup> This sentence is based on Deloitte's report *Business Agility in Retail Banking – Build up your agility* (2020), p. 2, which highlights key organizational barriers to agility in traditional banking institutions.

<sup>9</sup> These points summarize the key challenges discussed in Nilsson Tengstrand et al. (2021), based on their analysis of SAFe implementation in Standard Bank and other financial institutions.

industry. In addition to alterations in organizational structures and frameworks, agile transformation entails behavioural and mental adjustments, which are especially challenging to execute in a sector that is not accustomed to change management or its way of thinking. Banks are compelled by service agility to embrace networked and modular organizational models, such as squads and tribes, where teams can operate independently and across functional boundaries. It becomes crucial to have the ability to satisfy client demands through both digital and physical channels while maintaining client loyalty through perceived value and high-quality service. Working with incremental releases and under stringent rules might make developing the internal trust and agile technology platforms needed for this shift challenging. The importance of history and stability, external laws and regulations, and the possibility that significant changes could jeopardize stakeholder trust are some of the particular difficulties that banks face. Because of this, building human capital, encouraging resilience, and guaranteeing leadership commitment are essential to the success of agile transformation in banking. Business agility is a crucial strategic requirement for established retail banks in an unpredictable market and more agile new competitors (Deloitte, 2020)<sup>10</sup>.

---

<sup>10</sup> This sentence is derived from Deloitte's report *Business Agility in Retail Banking – Build up your agility* (2020), p. 14, which emphasizes how agility enables retail banks to remain competitive amid market volatility and the emergence of faster, more adaptive players.

## **2. Introducing Service Agility in the Banking Sector**

### **2.1. Organizational foundations of service agility**

#### **2.1.1. The role of dynamic capabilities in banking**

The term dynamic capabilities describes a company's capacity to incorporate, develop, and reorganize internal skills in order to respond to or, in certain situations, initiate changes in the business environment. They are supported by managerial skills and organizational routines (Teece, 2007). The ability of a company to create and modify business models is one of the many ways that its dynamic capabilities are essential to its long-term prosperity.

An organization's whole portfolio of capabilities, which can be viewed as operating on two levels, makes it easier to comprehend dynamic capabilities (Winter, 2003). Operational and other ordinary capabilities are at the base level. These include regular tasks, management, and fundamental governance that enable every organization to effectively pursue a specific production program or specified set of activities. Dynamic capabilities, which are further subdivided into micro-foundations and higher-order capabilities, sit on top of these (Teece, 2007). Micro-foundations entail both the creation of new capabilities and the modification and recombination of a company's current ordinary capabilities. Developing new products, expanding into new sales regions, allocating product mandates across divisions in large corporations, and other actions that represent wise managerial decision-making under uncertainty are examples of second-order dynamic capabilities. These are guided by high-order dynamic capabilities that enable management, with the help of organizational processes, to sense probable future directions, create business models to capitalize on new or altered opportunities and select the optimal organizational structure based on the organization's current structure and future needs.

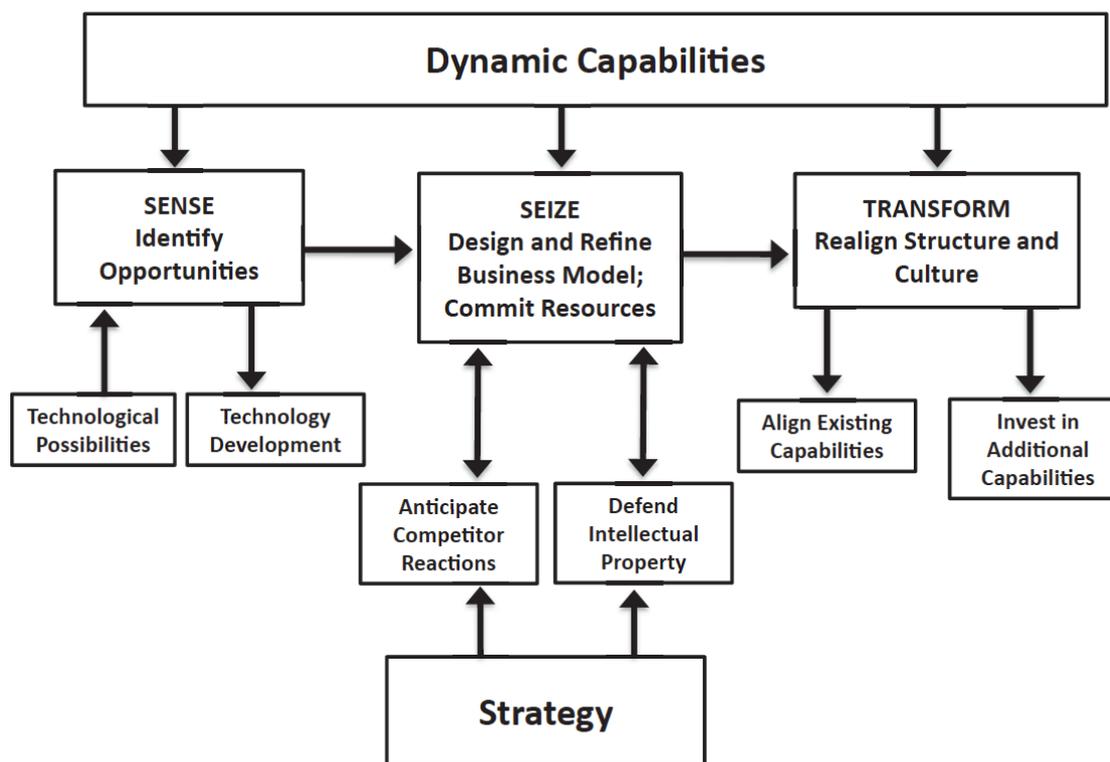
Dynamic capabilities encompass the ability to sense, seize, and adapt to create and execute a business model. The architecture or design of a company's value creation, delivery, and capture strategies is referred to as its business model. They can help a business improve its standards and skills, as well as those of its partners, by focusing on high-yield projects. To respond to and even influence changes in the marketplace or the broader business environment, this calls for creating and organizing, or orchestrating, the firm's – and its partners' – resources. The extent to which a company aligns its resources, including its business model or models, with the demands and desires of its customers, as well as the speed and cost associated with this alignment, depend on the strength of its dynamic capabilities. To achieve this, organizations must consistently recognize and capitalize on opportunities. They also need to be able to adapt parts of their culture and organization regularly so that they can proactively reposition themselves to address new threats and opportunities as they emerge.

Dynamic capabilities come in many forms, and companies will not always excel in all of them. A firm could excel in sensing new possibilities yet be relatively bad at identifying new business models to capture them. Alternatively, a company may excel at creating new business models yet struggle to execute and improve them. According to Teece (2007), strong dynamic capabilities typically refer to being more potent than rivals in all pertinent areas of sensing, seizing, and transforming. A company with excellent dynamic skills will be able to successfully develop, renew, and optimize assets, capabilities, and resources, rearranging them as necessary to innovate and respond to or initiate market changes. To provide value to clients, the company's resources must be cleverly planned and synchronized with those of its partner companies. Non-routine managerial interventions punctuate the steady formation of organizational routines and processes, which provide a foundation for dynamic capabilities.

In most situations, a company's managerial skills in creating and improving business models will be a crucial component of its dynamic capabilities in seizing new opportunities (Teece, 2007). In fact, over the last decade, managerial competencies have evolved into the subfield of dynamic managing capabilities, of which creating and executing innovative business models is a key component (Helfat & Martin, 2015).

Because dynamic capabilities are based on the unique traits of entrepreneurial managers as well as the organization's established procedures and culture, they are difficult for competitors to imitate (Teece, 2014). Furthermore, even people directly involved in a complex system may not completely comprehend its uncertain imitability (Lippman & Rumelt, 1982). Strong dynamic capabilities can serve as a solid basis for long-term competitive advantage, as they are a unique and relevant general-purpose resource. As capabilities become increasingly integrated within the organization and less confined to the top management team, this is particularly true.

Organizational transformation is guided by a defensible business model that is developed and refined through the combination of dynamic capabilities and strategic planning. This should ideally result in enough revenue to enable the business to maintain and grow its resources and skills (Figure 4).



**Figure 4: Simplified schema of dynamic capabilities, business models, and strategy.**

Source: Teece, D. J. (2018). *Business models and dynamic capabilities*. *Long Range Planning*, 51(1), 40-49.

One of the fundamental micro-foundations of dynamic skills is management's capacity to create and improve business models (Teece, 2007). This holds for both the initial model

design and the gradual replacement and recombining of model components. When business model modifications are converted into organizational transformation, a firm's capabilities are implicated. To successfully manage new company structures alongside current operations, exceptional asset coordination abilities are required, provided that the new business model is not incompatible with the current business.

Cross-border integration, innovation, and transformation have become relevant organizational development issues in the digital economy era (Lee et al., 2021). As a new engine of economic expansion, digital transformation (DT) has garnered considerable attention (Pan et al., 2022). Both internal organizational strategies and external market strategies undergo significant modifications in organizations that implement DT (Schallmo & Williams, 2018). According to Vial (2019), a high DT capability denotes the capacity to change customer experiences, value propositions, operational procedures, and culture while maintaining market sensitivity. Brazo et al. (2023) claim that DT entails using technology to drastically improve enterprise performance, paving the way for a shift away from conventional business methods. According to the previously mentioned idea, to successfully execute digital transformation, organizations must efficiently manage a range of capabilities to maximize resources and enhance overall corporate performance. A crucial element of digital transformation (DT) is innovation, which enables businesses to adapt to the rapidly evolving technology landscape, meet the demands of a dynamic marketplace, strengthen their market positions, and enhance overall business performance (Hutton et al., 2021; Nambisan et al., 2019).

For several reasons, Abdurrahman et al. (2024) identified that dynamic capabilities provide an appropriate conceptual framework for comprehending the digital transformation:

1. Since their primary focus is on an organization's ability to quickly adapt, integrate, and reconfigure internal and external resources in the face of rapidly changing environments, they excel at adapting to rapid change (Gong & Ribiere, 2021; Teece, 2014). This is a critical trait in the rapidly changing landscape of digital transformation, which is fueled by technological advancements and market dynamics (Lee et al., 2020).

2. Second, strategy renewal is a component of dynamic capabilities, which involves a process that recognizes possibilities, allocates resources efficiently, and continually changes the organization (Schneider et al., 2023; Teece, 2016).
3. Thirdly, DC offers a comprehensive view that is essential for success in digital transformation, which depends not only on technology adoption but also on coordinating internal structures, processes, and cultures with digital strategies (Lee et al., 2012). This view encompasses a range of topics, including technology, organizational practices, and environmental factors (Steininger et al., 2022).
4. Fourth, by utilizing a variety of resources, including human capital, financial investments, and technological assets (Ellstrom et al., 2022; Gong et al., 2020), dynamic capabilities highlight the flexibility of resources (Eisenhardt & Martin, 2000; Pezeshkan et al., 2016; Teece, 2016). This flexibility is crucial for organizations to experiment with new technologies, foster innovation, and maintain competitiveness during digital transformation.
5. Fifth, DC recognizes the need for businesses to balance internal capabilities with external opportunities in the digital landscape (Ellstrom et al., 2022; Warner & Wager, 2019) and seamlessly aligns with the strategic goals of digital transformation (Eisenhardt & Martin, 2000; Hutterer, 2013; Teece, 2016).
6. Sixth, as businesses navigate experiences, customer feedback, and market shifts, it is crucial for them to continuously learn and improve (Hutton et al., 2021; Posen et al., 2023; Teece, 2016). This is especially true in the business world (Lee et al., 2020; Naeem et al., 2022).
7. DC is intrinsically linked to entrepreneurship and innovation (Heubeck & Meckl, 2022; Posen et al., 2023; Teece, 2016). They play a crucial part in digital transformation by offering a conceptual framework that aligns with key components, such as adopting emerging technologies, innovating in service offerings, and fostering an entrepreneurial mindset to explore new business models (Schallmo & Williams, 2018; Warner & Wager, 2019).

When examining the factors that influence technology adoption within organizations, the Technology-Organization-Environment (TOE) framework - a comprehensive theoretical model that evaluates how organizations adopt innovative technology in their

technological, organizational, and environmental contexts - has been widely used (Tornatzky et al., 1990). Instead of prescribing specific explanatory variables for distinct settings, this framework enables the selection of influential aspects tailored to different study scenarios, making it highly flexible (Vogelsang et al., 2018). The TOE framework has been applied to the banking industry to investigate digital banking services and the adoption of technology within it. These include blockchain technology, business intelligence applications, e-banking, internet banking, FinTech, and green banking. The need for digital transformation (DT) innovation in the banking sector stems from changing consumer demands for personalized, convenient services that are accessible online (Faia et al., 2021; Harun, 2022). Traditional banks continue to face challenges from fintech disruption and new emerging tech companies, necessitating digital adoption to remain competitive (Megahed et al., 2022; Singh & Sharma, 2022). Digital innovation not only enhances customer experiences but also boosts operational efficiency by leveraging automation, artificial intelligence, and data analytics to streamline processes, lower costs, and ensure compliance with evolving regulations.

Additionally, banks must strengthen their security measures against cyber threats, broaden their global reach, and utilize data insights to provide personalized services (Garcia-Perez et al., 2022; Shahim, 2021; Yigit Ozkan & Spruit, 2022). To prosper in the changing financial landscape, spur growth, and maintain relevance in an increasingly digital world, banks must embrace digital transformation – it is not just a strategic benefit (Aracil et al., 2021; Faia et al., 2021; Forcadell et al., 2020; Mielberg, 2018). Consequently, organizational dynamic capabilities are at the heart of this system, enabling banks to operate in dynamic environments.

### **2.1.2. Organizational resilience and structural flexibility**

Existing organizations that must contend with a variety of hazards and are subject to severe external discontinuities are characterized by uncertainty. When conventional strategic behaviours become outdated and established organizational frameworks fail to hold (Donaldson & Joffe, 2014), managers must deal with developing misfits. As a result, organizations are expected to recognize, develop, and put into practice resilient

behaviours and structures that can not only deal with uncertainty quickly and effectively but also prevent and anticipate it.

Resilience is the capacity of an organization to carry out its core functions by swiftly and effectively recognizing and implementing organizational micro- and macro-structures that can transform uncertainty into creative solutions. Organizational resilience design remains primarily focused on adapting to the external environment despite the need for organizations to be more resilient due to the increasing volatility of the external environment. Furthermore, organizations must build resilience – defined as the ability to predict, react to, and quickly recover from disruptive events – because globalization requires them to be exposed to numerous pressures originating from various and heterogeneous settings (Vogus & Sutcliffe, 2007). Only organizations that are adaptable, agile, and dynamic can prosper as a result. Because they are prepared for the unexpected, resilient organizations can effectively manage external uncertainty and ambiguity. Through learning from past occurrences and near-misses, resilient organizations develop the ability to handle a wide range of anomalies and continually work to enhance their capacity to do so. The process through which an actor – whether an individual, organization, or group – develops and utilizes its capability endowments to positively engage with the environment, adjusting and maintaining functionality before, during, and after adversity, is known as resilience (Williams et al., 2017). As an umbrella concept with numerous components, definitions, and concepts, resilience to disruptive events is a significant managerial concern (Vakilzadeh & Haase, 2021).

According to Giustiniano and Cantoni (2018), resilience in organizational design has two components:

1. The ability to quickly recover from a crisis – known as the “Sponge effect”, which is defined by Collins Dictionary as “a very light soft substance with lots of little holes in it”<sup>11</sup>.

---

<sup>11</sup> Collins English Dictionary (as cited in Giustiniano, L., & Cantoni, F., 2018, p.170), *Between sponge and titanium: Designing micro and macro features for the resilient organization*.

2. Strength with solidity, or the ability to remain strong – known as the “Titanium effect”, which is defined as “a strong, malleable white metallic element, which is very corrosion-resistant and occurs in rutile and ilmenite”.

According to these two definitions, because it can learn from mistakes and experiences and look forward with new vigour, a resilient organization continues to be productive even in the face of turbulence and difficulties. Every time anything bad happens, this forward-thinking, self-correcting kind of organization predicts changes and responds to them proactively by triggering several learning processes.

Three qualities – robustness, redundancy, and resourcefulness – as well as two potential performances – response and recovery – make up the complex concept of resilience. These latter two elements specifically outline how a system functions during a crisis. The response requires the capacity to mobilize rapidly in the face of emergencies and necessitates broad participation, as well as effective communication. Effective communication and confidence in the information communicated enhanced the likelihood that stakeholders would be able to promptly exchange and disseminate information in the event of a crisis, as well as to ensure audience collaboration and prompt response. Robustness, or the capacity to absorb and endure disruptions and crises; redundancy, or the excess capacity and backup systems that allow the maintenance of core functionality in the event of disruptions; and resourcefulness, or the capacity to respond flexibly to crises, adapt to them, and, when feasible, turn a negative impact into a positive, are three main traits or features that makeup resilience. Accordingly, organizational resilience can be viewed along two complementary dimensions: proactive resilience, which focuses on anticipating, adapting, and changing in response to external changes (e.g., resourcefulness and learning orientation); and reactive resilience, which emphasizes resistance and recovery after disruptions (e.g., robustness and redundancy). In a volatile setting like the banking industry, both are necessary for service agility.

The idea that resilience is dynamic aligns with the concept that internal mobility – defined as a worker’s ability to switch roles within an organization, move from one organizational unit to another, and thus perform different tasks – can activate and enhance resilience. In this regard, it is strategically relevant for organizations to create an internally consistent

mobility program that fosters each employee's cognitive, behavioural, and contextual aspects of resilience by allowing mobility between organizational units. Internal mobility is a pertinent example of structural flexibility, as it enables the business to adapt to shifting needs and emergencies by dynamically reorganizing its personnel resources and operational procedures. This includes the utilization of cross-functional teams, semi-autonomous units, and networked managerial structures that can quickly and independently reallocate resources in response to market signals in agile service organizations. Flexible structures facilitate higher responsiveness and resilience by enabling more adaptable decision-making, quicker feedback loops, and local experimentation.

Firms can survive upheavals, seize opportunities, and foster innovation when they possess resilience, which is rooted in dynamic capabilities, adaptive capacity, and organizational learning. Agility, adaptability, and resourcefulness are key traits of resilient organizations that enable them to successfully navigate obstacles, including environmental upheavals, technological advancements, and economic crises. Resilient workers are essential to the stability and effectiveness of organizations because they are flexible and psychologically supported. Building resilience at all organizational levels requires supportive leadership, a positive work environment, and focused training and development. By incorporating resilience into their organizational culture and strategy frameworks, businesses can turn crises into opportunities for growth and renewal.

Adversity inevitably affects organizations worldwide, impairing their performance and operations. Significant worldwide economic downturns, climate-related events, natural disasters, industrial accidents, product recalls, information technology breaches, data security violations, disruptive social media trends, and terrorist threats are just a few of the more severe and varied challenges that organizations have recently had to deal with (Williams et al., 2017). Malicious assault occurrences, significant and organized crime, environmental hazards, threats to human and animal health, major accidents, and social risks are among the risk categories that organizations are exposed to, which have the potential to cause disruptions (Koh et al., 2023). Numerous requests have been made for organizational research to explain better how to build organizational resilience in response to adversity and prevent it from occurring in the first place in light of these trends (William et al., 2017).

An organization's strategic learning orientation has a significant impact on its ability to recover quickly from shocks and outperform its prior performance. A resilient system continuously learns, improves, and adapts under stress, demonstrating improvement after disturbances through adaptation, as noted by Evenseth et al. (2022). Senge (1990) popularized the concept of the learning organization, emphasizing the importance of fostering an organizational culture that promotes ongoing learning and innovation. Learning fosters candid dialogue, introspection, and a shared goal among staff members to enhance group learning and collaboration. Thus, organizational learning is a dynamic and complex idea that is essential to a company's capacity for innovation, adaptation, and competitiveness.

Moreover, a key element of organizational resilience is adaptive capability, which measures an organization's ability to respond to changing circumstances. This ability encompasses the organization's capacity to adjust its capabilities, structures, procedures, and strategies in response to changing circumstances (Pettigrew et al., 2001). It encompasses several key elements that enable the organization to overcome obstacles, including adaptability, agility, learning capacity, and innovation readiness (Norris et al., 2008). Managers and organizational leaders can benefit from understanding the critical role that adaptive capacity plays. Investing in projects that enhance adaptive capacity, including learning - and innovation-focused training programs, is a prudent way to support organizational resilience (Eisenhardt & Martin, 2000). Prioritizing initiatives to enhance adaptive capability is essential for maintaining long-term viability and success as organizations face unprecedented challenges. Because they enable organizations to develop resilience in the face of adversity, dynamic capabilities are a practical strategy for producing valuable resources and adding value (García-Valenzuela et al., 2023). They serve as a tool for businesses to mobilize resilience-related resources, which include the acquisition, integration, and reallocation of resources in response to market shifts (Eisenhardt & Martin, 2000). According to the theory of dynamic capabilities, gaining and maintaining competitive advantage depends on an organization's capacity to adjust its resources and capabilities in response to changing conditions. This highlights the importance of organizational resilience and adaptability in a rapidly changing environment (Garrido-Moreno et al., 2024).

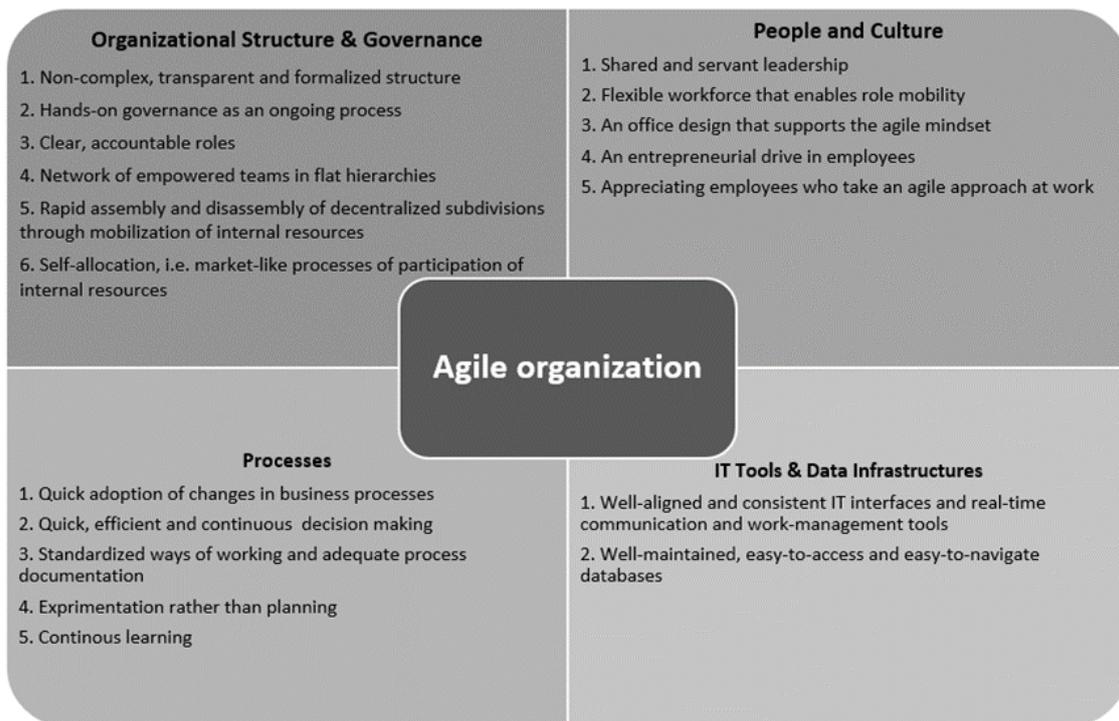
One of the most crucial abilities for developing organizational resilience is the capacity for learning (Wang, Hutchins, & Garavan, 2009). Accordingly, companies need to provide their staff members with opportunities to collaborate and learn in line with company objectives (Effendhie, 2011). Developing human resources, usually through staff training and development, is one efficient way to operate. By equipping employees with the skills, knowledge, and competencies they need to adapt and flourish in challenging circumstances, these programs enhance employees' resilience and increase their preparedness to meet changes and difficulties (Cahya et al., 2021). Effective human capital management and staff skill development, therefore, enhance a company's ability to withstand any crisis and allow for a strong organizational reaction to major disruptions (Wang et al., 2009). However, to maintain resilience, market competitiveness, and organizational efficiency, training is essential.

Because it enables companies to swiftly reallocate resources, assign new tasks, and reorganize internal structures in response to shocks and changes, structural flexibility is a crucial element that supports organizational resilience. This flexibility is particularly significant in highly regulated and complex sectors, such as banking, where companies must continually adapt to new regulations, emerging technologies, and shifting customer needs. By integrating structural flexibility into their organizational design through mobility programs, decentralized decision-making, and modular structures, banks enhance their capacity to both withstand shocks and capitalize on new opportunities. As a result, structural adaptability and resilience must work closely together to sustain service agility.

### **2.1.3. Coordination mechanisms in agile banking models**

Known as VUCA (volatile, uncertain, complex, and ambiguous) environments (Bennett & Lemoine, 2014), these increasingly competitive and multifaceted business landscapes demand that organizations be flexible, deploying strategies and resources quickly and efficiently in response to opportunities and challenges in both local and global markets (Fjeldstad et al., 2012).

A VUCA environment emphasizes the importance of creating ambidextrous organizations, which can successfully balance organizational attributes of alignment and adaptability. Alignment is the ability to capitalize on existing concepts and leverage market opportunities, whereas adaptability is the capacity to respond to change. According to Nijssen and Paauwe (2012), an organization that successfully balances both is referred to as agile and has a considerable competitive advantage. The primary objective of organizational agility is the ability of an organization to adapt to changes in its environment. Organizational agility refers to the ability to recognize and promptly respond to changing conditions. It is a dynamic capability for businesses operating in a highly dynamic environment (Nijssen & Paauwe, 2012; Wawarta & Heracleous, 2018). Since organizing is a process of problem-solving that aims to find solutions for the universal organizational issue of balancing efficiency and flexibility (Puranam, 2018), organizational agility cannot be investigated or put into practice independently of organizational components, such structure, role distribution, culture, technology, procedures, motivation, and coordination. To understand how organization design impacts agility, Figure 5 provides a summary of the four categories and their fundamental agile concepts.



**Figure 5: Design characteristics of an agile organization.**

Source: Shafiee Kristensen, Shafiee, & Shafiee, (2021). *Organization design in motion: Designing an organization for agility*. In Proceedings of the International Conference on Engineering Design (ICED21), Gothenburg, Sweden, 16-20, August 2021.

The structure and governance of the organization shape and develop its competencies and resources. It also directs internal communications within the organization and establishes chains of accountability. The boundaries, conventions, and rules required for governance and well-informed decision-making are closely tied to the structure. Given that both are thought to be essential for attaining organizational agility, an agile company should have the following primary governance and structural traits:

1. Agile organizations have a clear, structured, and uncomplicated structure. An agile organization, as opposed to a complex matrixed organization, has a simple structure with a consistent logic across departments and regional offices. This enables teams, leaders, and the organization as a whole to anticipate how the organization will evolve in response to its environment.
2. Good hands-on governance, which is a continuous process that occurs team by team, is another level of greater agility. Effective governance establishes a point

of contact where pertinent teams may make decisions quickly in extremely productive coordinating forums (Alberts & Hayes, 2005).

3. Another aspect of an organization that might increase agility is responsibilities that are clear and accountable. Employees can engage productively without wasting time or waiting for manager approval in an organization where they can see each other's goals and responsibilities.
4. Moving away from hierarchical organizational structures and toward models where work is completed in teams within flat hierarchies is a crucial component of designing for agility. Consequently, a network of teams will be the organization of the future.
5. Decentralization, or assigning tasks to self-managing teams, is a lever for enhancing the efficiency-flexibility balance in a truly agile organization. This enables lateral coordination across hierarchies or functions, which in turn facilitates the sharing and, ultimately, the creation of new knowledge (Hansen et al., 2018; Alavi et al., 2014).
6. Because temporally decentralized teams are autonomous, this design alone may foster an atmosphere where individuals choose to join a project on their own (Burton et al., 2017).  
(Shafiee Kristensen, Shafiee, & Shafiee, 2021).

The internal ability for organizational agility is thus fostered by culture, which comprises the collection of values, beliefs, assumptions, and modes of interaction that define an organization's distinct organizational, psychological, and social environment. A cultural shift from command-and-control to an autonomy-oriented culture, which prioritize people, empowers and engages all members of the organization, and encourages quick reactions, was necessary for agile transformation (Wawarta & Heracleous, 2018). Agility is closely related to the following cultural traits:

1. A crucial component of organizational culture that is most closely linked to agility is shared and servant leadership.
2. A cultural setting that encourages role mobility is another component of organizational structure. People can learn, grow their networks, and develop skills

and knowledge by frequently switching between teams and jobs, both horizontally and vertically, in alignment with their growth plans.

3. Even though not every employee is a good fit for the agile work style, rewarding employees who take the initiative, contribute fresh ideas, and take on new roles in the interest of learning can be a potent way to foster an agile culture where everyone feels valued, heard, and taken into consideration (Wawarta & Heracleous, 2018).
4. An agile culture can be shaped and supported by effective office design. An agile mindset is embodied in the workplace. Therefore, a flexible and intuitive work environment – an office designed primarily with adaptable moving parts – may be necessary for role mobility, transparency, and nimbleness (Rob, 2015).
5. An entrepreneurial drive, or those who are eager and innately motivated to learn and innovate, must be fostered in the cultural context.  
(Shafiee Kristensen, Shafiee, & Shafiee, 2021).

Agile organizations must provide solutions, products, and services made possible by developing technology to maintain a competitive edge, accelerate innovation, shorten time-to-market, and adapt to changing client needs. Because of this, these businesses must quickly and continuously adapt their operational procedures, which requires updating technology tools, interfaces, and architecture. In terms of technology, the following two elements are essential:

1. Any agile organization must have real-time communication and work-management tools, as well as IT interfaces that are consistent and well-aligned.
2. An agile organization's dynamic capabilities are realized through aligned interfaces and databases that are simple to access and traverse.  
(Shafiee Kristensen, Shafiee, & Shafiee, 2021).

Employees should be able to quickly adapt to changes in corporate procedures recognizing and capitalizing on the opportunities they present. As a result, there is no single ideal way to build an organization; instead, the design must always be based on the possibilities, problems, and changes that exist both within and outside the organization.

Agile companies place a strong emphasis on making decisions quickly, effectively, and continuously. They have visibility into the kinds of decisions that are made and by whom, due to the organizational structure and IT interfaces that utilize transparency in information flow, as well as accountabilities and roles.

This solid foundation serves as a launching pad for the business in an agile organization, an anchor that remains consistent despite a plethora of other factors that are constantly changing. In other words, nimbleness, quickness, and responsiveness are made feasible by a standardized method of working and sufficient process documentation. Additionally, this enables business and organizational processes to be continuously improved (Trkman, 2009). Agile organizations welcome experimentation in their organizational endeavours as well as in their provision of goods and services. A learning and safe atmosphere where people dare to fail is necessary for experimentation, quick iteration, and acceptance that mistakes can be made (Ebrahim et al., 2018). Employees at an agile organization that prioritizes experimentation, position mobility, and empowerment always have access to exceptional learning opportunities. People take on new positions, propose novel concepts, test them out, and have the courage to fail.

This paradigm for an agile organization design, based on the contingency perspective, emphasizes that an organizational unit's performance results are determined by how well its internal arrangements and external circumstances align.

With more connections enabling ordinary people to network and cause significant political, social, and commercial disruption, entire industries, as well as organizations, are being impacted. There have never been more chances to spearhead change, and for some people, these are thrilling times. Others find the lack of clarity and the rapid growth of complexity to be debilitating and disorganized. The latter are becoming increasingly dismayed at the future and their helplessness to influence it. Providing organizations and individuals with a fresh perspective on what it takes to lead in a complex environment is the key to resolving this dismay. Despite its name, complexity is a very straightforward concept: rich interconnection is what complexity is all about. When the term 'rich' is added to interconnectedness, it suggests that objects influence each other in unexpected and lasting ways when they interact. Scholars of complexity tend to refer to this as the difference between complexity and complicated. Even though complex systems may consist of numerous components, they do not alter one another when they interact. A

dynamic system that can change and adapt to a changing environment is referred to as a complex adaptive system. On a larger scale, it is a network of dynamic interactions comprising numerous agents that work in tandem to produce rich interconnections. Enabling adaptive space allows organizations to function as sophisticated adaptive systems. Adaptive space is a network structure that was not previously recognized in leadership literature. In addition to allowing agents to interact in ways that lead to the emergence of a new adaptive order within a system, it mitigates the pressures caused by complexity difficulties. Adaptive space, when enabled, is a hierarchical organization's means of overcoming the adaptability constraints of bureaucratic institutions; it aids leaders and organizations in resisting the tendency toward equilibrium. By promoting the creation and flow of concepts and information within a system, leaders foster the growth of adaptable space. They achieve this by using two network structures – brokerage and group cohesion – that are linked to the creation and flow of ideas. Brokerage serves as a bridge or link between two groups. It establishes the framework for new ideas to be discovered, introduced, and amplified to achieve systemic scale. The degree of an agent's connection to other members of a group is known as group cohesiveness. Cohesion within the group provides a secure setting for testing and refining ideas to enhance their impact and scalability. Accordingly, brokerage helps agents develop innovative solutions. It provides them with the opportunity to influence how this information is disseminated, as it grants them early access to new and diverse knowledge about events occurring in other regions. By expanding the range of possibilities, brokerage empowers agents to think more creatively about what is feasible.

On the other hand, under circumstances of high trust, group cohesion enables agents to communicate information quickly. Ideas are more likely to be adopted and improved locally when presented in cohesive groups. The degree of trust in cohesive groups promotes risk-taking, learning, and sound effects – all of which are seen to be essential elements of creativity. The circumstances for adaptable spaces are shaped by the network structures of cohesion and brokering, which are explained by the dynamics of complexity. The two fundamental dynamics that make complex systems adaptive – conflicting and joining up – are understood by leaders who facilitate adaptive space. When agents bring different wants, worldviews, preferences, or values to encounters, tension is formed. It encourages and pushes an agent or system to develop and adapt when agents discover

something in common that enables them to connect in networks and partnerships, this is known as linking up. The bonds that bind aggregates and bound agents together are called links. We must learn to engage and interact with the profound interconnectedness that underpins the forces of change in our organizations and societies during this time. We need to learn to respond to complexity in a way that is adaptive rather than regimented. Coordination in agile banking models stems from the interaction of decentralized teams, open communication, flexible leadership, and supportive technology rather than being restricted to formal structures. According to Burton et al. (2017), attaining agility requires alignment between structure, procedures, and culture. Real-time interfaces, flat hierarchies, and cross-functional cooperation facilitate decision-making. Agile organizations go from control to enablement, encouraging experimentation and autonomy, in line with Mintzberg's theory of adhocracy. To effectively navigate complexity and ongoing change, coordination turns into a strategic enabler of responsiveness and learning (Trkman, 2009; Ebrahim et al., 2018). To demonstrate how digital architectures, platforms, and data systems facilitate the constant flow of information and decision-making in agile banking environments, the next section will examine the technological enablers that support and amplify these coordination dynamics.

## **2.2. Technological enablers of service agility**

### **2.2.1. Modular IT architectures and agile information systems**

Digital technologies are increasingly prevalent in today's world. They have a profound impact on the operations, services, and products of many businesses, fundamentally altering the nature of new product and service developments.

Digital technology's core characteristics are data homogenization and programmability. When combined, they offer a setting of open and adaptable affordances that are utilized to produce innovations that exhibit generativity and convergence. These attributes create environments of open and flexible affordances as digital technologies proliferate, leading

to two distinctive features of organizational innovation with digital technology: generality and convergence. These traits mark the beginning of a new field of organizational studies that examines the digital materiality of emerging business models, novel organizational structures, and innovative product and service designs connected to ubiquitous digital technologies. Digital technology is deeply ingrained in the operations, services, and products of many businesses. The increasing usage of digital technologies and their development is radically changing the nature of goods and services. One characteristic of pervasive digital technology is the incorporation of digital capabilities into formerly just physical material objects.

Designers can extend the physical materiality of objects by entangling them with software-based digital capabilities (Yoo, 2010; Zammuno et al., 2007), thanks to the particularly potent affordances of digital technologies (Kallinikos et al., 2010). In many respects, the digital materiality made possible by ubiquitous digital technology presents fresh opportunities for developing relationships, experiences, processes, and organizational structures.

However, over the past decade, remarkable advancements in connectivity, communication, and information technology have enabled the introduction of new features. In order to adapt their business infrastructure to the new digital era, companies, both established and startups, have been using the post-dotcom decade to take advantage of lower price/performance levels of computing (e.g., hardware and software) as well as global connectivity through standard protocols (e.g., Internet and mobile web). Due to the modular, distributed, cross-functional, and global business processes that enable work to be done across time, space, and functional boundaries, these digital technologies are radically transforming traditional business strategies. Additionally, many dynamic capabilities suitable for stormy situations are enabled by digital technologies (Pvlou & El Sawy, 2010). With social media and social networking, digital technologies are also changing the way social connections are structured in both the consumer and business sectors. Moreover, digital technologies are increasingly integrated into products and services, and making it harder to separate digital products and services from the IT infrastructures that support them. New business strategies are emerging from the cross-border industry disruptions enabled by digital platforms. The digital business strategy is an organizational strategy developed and implemented through the use of digital

resources to generate unique value. According to Bharadwaj, El Sawy, Pavlou, & Venkatraman (2013), in line with the resource-based view of strategy, this working definition emphasizes:

1. Moving beyond the traditional view, consider IT strategy as a function within firms and acknowledge the widespread presence of digital resources in other functional areas like operations, purchasing, supply chain, and marketing.
2. Moving beyond systems and technologies, which may have limited the traditional views of IT strategy to recognize digital resources.
3. To elevate the performance implications of IT strategy beyond efficiency and productivity measures to those that drive competitive advantage and strategic differentiation, it is necessary to explicitly link digital business strategy to delivering differential business value.

The rise of a platform as the primary focus of an invention is one of the most significant characteristics of innovation processes, resulting in ubiquitous digital technology. A platform, as defined in this context, is “...*a building block, providing an essential function to a technological system – which acts as a foundation upon which other firms can develop complementary products, technologies or services*” (Gawer, 2009). Platforms have grown in importance and are now the primary focus of many firms’ innovation efforts, mainly due to the extensive use of digital technology and its open, flexible affordances. The platform and its components form an ecosystem of heterogeneous players. Designing, constructing, and maintaining a dynamic platform is one of the primary innovation imperatives, as the strategic significance of these digital platforms has increased. The increasingly dispersed nature of the innovation process and product is a second characteristic of innovations involving ubiquitous digital technologies. Organizational scientists have observed over the past few decades that the geographical dispersion of innovation activities is a result of information technology’s ability to lower the cost of coordination and communication. Consequently, innovation activities are increasingly taking place outside of organizations. To capture creativity outside of the organization, businesses are adopting new ways of organizing, such as online communities (Faraj et al., 2011), open innovation (Boudreau, 2010), and innovation

challenges (Boudreau et al., 2011). Not only are innovations increasingly occurring on the outskirts of an organization, but the diverse range of knowledge resources required for innovation is also increased by distributed innovation sparked by ubiquitous digital technology. Consequently, combinatorial innovation is a third characteristic of invention with ubiquitous digital technology. Businesses are increasingly fusing pre-existing modules with integrated digital capabilities to create new goods or services. The almost infinite recombination of digital artefacts has emerged as a new source of creativity, according to Arthur (2009). These days, many software-based digital modules with standard interfaces can be combined with other modules that share the same interface.

Many industries have undergone disruptive shifts as a result of globalization and digitalization; these changes are often linked to cutting-edge technologies, including artificial intelligence, machine learning, blockchain, the Internet of Things (IoT), and advancements in high-performance computing. New organizational structures, such as value creation networks, platform solutions, and cluster organizations have emerged alongside shorter product life cycles and value chain fragmentation. Companies must develop flexible operating models in response to digitalization, enabling them to adjust their business plans quickly in a changing economic climate. The strategic role and organizational structure of IT as a business function, which extends far beyond the conventional duties of developing, managing, and maintaining IT systems, are also impacted by these trends. Information technology helps firms to preserve and establish competitive advantages by introducing innovations that disrupt the market or by promoting quality and cost-effectiveness in goods and services. Achieving business goals often requires a faster time-to-market, which necessitates iterative and customer-centric development techniques. Accordingly, agility can be thought of as an organization's dynamic capability to quickly adjust to new market developments, expedite procedures, and actively shape its competitive position by enhancing innovation performance and flexibly allocating corporate resources. The original purpose of agile techniques was to improve the administration of software development projects that were small to medium in size. This was because IT projects that were completed using the waterfall method frequently took longer, cost more, and were less creative than anticipated. As a result, agile methods are increasingly being used for organizational transformation projects at the business or company level, as well as for large-scale-IT-related projects.

Large, well-established companies have more autonomy and self-management thanks to technology such as Scrum, Glassfrog, Slack, SAFe, and DevOps, which also enhances visibility. By improving cooperation between the development and operations teams, expediting the release process, and simplifying and automating the software delivery lifecycle, DevOps enhances agile development. While Agile focuses on flexibility and iterative development, DevOps manages the deployment and operational aspects, resulting in a cohesive approach to software development. In contrast, Scrum is one of the agile software development approaches that has attracted considerable attention from software experts over the last five years. Scrum focuses on managing software projects, while Extreme Programming, widely recognized as one of the most significant agile methodologies, has a distinct programming flavour – pair programming, code standards, test-driven development, refactoring, and continuous integration. SAFe is a comprehensive agile framework that addresses various domains, levels, and capabilities of a company, making the entire organization more agile. The SAFe framework distinguishes between various elements that comprise an agile enterprise, including Lean-Agile Leadership, Agile Product Delivery, Team and Technical Delivery, and Organizational Agility, which must be addressed concurrently and customized to meet unique business needs. SAFe incorporates the use of several agile methodologies, like Scrum or XP, in conjunction with lean management tools, like Kaizen or Six Sigma, because its scope is far broader than enhancing IT projects or product development processes (Knaster & Leffingwell, 2020).

Agile information systems and modular IT architecture are essential building blocks for providing service agility in the banking industry. Modularity improves responsiveness, scalability, and flexibility by separating interdependent systems and permitting the autonomous development of services and procedures. These architects encourage experimentation and provide incremental value, which accelerates customer-focused innovation. Furthermore, since modular systems require and enable more dispersed, adaptable, and collaborative work arrangements, organizational paradigms and technological infrastructures must coincide. As a result, they provide the technical foundation for agile service delivery, in which IT facilitates competitive differentiation and dynamic strategic adaptation in a digital financial environment rather than merely

acting in a support role. Banks must go beyond experimentation and change key business domains, such as rethinking intricate workflows with multi-agent systems if they hope to reap tangible benefits from AI. The potential of AI, particularly generative AI (gen AI), to revolutionize the banking industry has been extensively discussed. AI has the potential to enhance banks' intelligence, efficiency, and ability to generate superior financial results, in addition to introducing the next generation of automation.

### **2.2.2. AI, analytics, and digital platforms for adaptive services**

Given the growing complexity of customer expectations, market volatility, and technological advancements, banking institutions must create responsive and adaptable services that are predictive. In this sense, AI, digital platforms, and advanced analytics are critical enablers of service agility. Banks can now provide individualized encounters at scale, anticipate client demands in real-time, and dynamically modify their products thanks to these technologies. Banks can enhance customer experience, decision-making, and speed to market by integrating modular platforms and intelligent systems into their service architecture. This will enhance their ability to respond effectively in a rapidly evolving digital ecosystem.

#### *The role of AI and data analytics in adaptive banking services*

For the largest profit pools, banks must contend with declining revenue and loan growth, as well as competition from non-bank providers, fintech companies, neo-banks, private credit organizations, and payment solutions companies. As revenue growth slows, banks will need to reduce costs much more quickly to sustain the present return on tangible equity margins. As workers continue to assign an increasing number of routine activities to increasingly complex and capable AI systems, AI can help address these issues and contribute to banks' stability in the years to come, particularly in enhancing labour productivity. By successfully scaling AI, including gen AI, certain institutions are setting the standard higher and separating themselves from their peers. The bank is utilizing AI in retail banking to create personalized reminders that help clients with financial planning

and investing. AI is helping the small company sector identify which loans are at risk of default, enabling banks to take action and support customers.

According to McKinsey and Company (2023)<sup>12</sup>, AI usage has increased significantly across various industries and organizations. However, many organizations are still in the experimental stage, and the adoption rate (as indicated by the deployment of AI across different organizational functions) is relatively low. However, a few top banks are notable for their capacity to implement AI, notably gen AI, throughout the company and have started to see tangible benefits from its application. AI banks excel at four things:

1. Establish a daring, bank-wide vision for the potential benefits of AI. Prominent banks have a broad perspective on the potential of AI, viewing it as a means to boost revenues, significantly enhance the experiences of both customers and employees and reduce costs.
2. Instead of merely implementing specific use cases, transform entire domains, processes, and journeys to ground the transformation in commercial value. AI banks avoid the temptation to provide limited use cases, like a chatbot or a conversational Q&A tool, one after the other. In isolation, these will not yield significant financial benefits despite their potential for low risk and rapid introduction.
3. Construct a whole range of AI capabilities using multiagent systems. Managing intricate banking processes, such as assessing a business client's loan application, involves multiple phases and the handling of both structured and unstructured data. When paired with digital tools and predictive AI, gen-AI-enabled multiagent systems can perform jobs that standard automation cannot. Establishing a thorough AI bank stack is necessary to expand these systems throughout the entire organization.
4. Establish key enablers to sustain and scale the value of the AI transition. These consist of cross-functional teams for technology, business, and AI, as well as a central AI control tower that facilitates the reuse of AI capabilities, fosters

---

<sup>12</sup> McKinsey & Company. (2023). *Extracting value from AI in banking: rewiring the enterprise*. <https://www.mckinsey.com/industries/financial-services/our-insights/extracting-value-from-ai-in-banking-rewiring-the-enterprise>

governance and adoption of standardized risk guardrails, and coordinates corporate decisions across functions<sup>13</sup>.

Banks must become AI-first organizations and implement AI technology across the board to increase value in this world, or else the risk of falling behind. A successful AI transformation involves multiple organizational levels. Because underinvestment in one area can undermine the entire AI transition, it is crucial to make investments in all of the interrelated layers. The following are prerequisites for creating an AI-first bank:

- Reimagining the consumer experience for partner ecosystems and bank-owned platforms by offering tailored offers and simplified, frictionless use across many devices.
- By developing the necessary architecture to provide real-time analytical insights and converting them into messages that precisely answer customer needs, AI may significantly increase productivity and assist in decision-making.
- Updating the basic technologies for the AI capabilities stack's backbone, such as streamlined design, an application programming interface, and automatic cloud provisioning, to allow for constant, safe data interchange across the bank's many departments.
- Creating an operating model for a platform that combines the appropriate organizational structure, culture, and talent.

(McKinsey & Company, 2023)<sup>14</sup>.

A company's operations must be fundamentally rewired to reap the benefits of digital and AI changes. A business-led digital roadmap, skilled personnel, a fit-for-purpose operating model, team-friendly technology, continuously enriched and readily accessible data throughout the organization, and the adoption and expansion of digital solutions are the

---

<sup>13</sup> McKinsey & Company. (2023). *The great banking transition – Global banking annual review 2023*. McKinsey & Company. <https://www.mckinsey.com/industries/financial-services/our-insights/global-banking-annual-review-2023>

<sup>14</sup> McKinsey & Company. (2023). *The great banking transition – Global banking annual review 2023*. McKinsey & Company. <https://www.mckinsey.com/industries/financial-services/our-insights/global-banking-annual-review-2023>

six essential enterprise capabilities required for this. The success of the transition depends on all these interrelated components working properly. AI can do much more than automate processes and boost productivity. Banks that view AI as a revolutionary tool utilize technology to achieve key strategic objectives, such as increasing revenue, differentiating themselves from competitors, and enhancing customer and employee satisfaction. Banks must determine whether the value of an AI transformation of a specific subdomain can be precisely measured, whether the suggested solution fits in with the bank's strategic goals, whether end users – whether clients or employees – are prepared to accept the solution, and whether the solution will be a business priority to determine its business impact. Each subdomain can be broken down into several executable modules that must be developed, distributed, and adapted to generate business value after being selected for an AI transformation. For instance, reimagining end-to-end workflows and processes requires the collaboration of digital tools and platforms, classical analytics and emerging AI to overhaul the customer underwriting subdomain completely.

#### *Digital Platform as infrastructure for service adaptability*

Digital platforms have emerged as the foundation for providing flexible and scalable banking services in today's quickly changing financial sector. These platforms facilitate smooth integration across goods, channels, and partner ecosystems, providing businesses with the technology foundation they need to react quickly to changing consumer demands and market conditions. With the proliferation of modular and API-driven architectures, banks are increasingly relying on platforms to leverage real-time data, deliver services, and foster ongoing innovation. A platform is in a crucial position to promote service flexibility because of its capacity to act as a coordination layer in the digital era, facilitating communication both internally and externally.

As highlighted by McKinsey and Company (2023)<sup>15</sup>, it is reasonable to list five priorities as a starting point for thinking about how financial institutions wish to transform; these are neither all-inclusive nor exclusive. The five priorities are as follows:

---

<sup>15</sup> McKinsey & Company. (2023). *The great banking transition – Global banking annual review 2023*. McKinsey & Company. <https://www.mckinsey.com/industries/financial-services/our-insights/global-banking-annual-review-2023>

1. Making better use of talent, increasing productivity, and improving the delivery of goods and services through the use of AI and technology.
2. The balance sheet is flexed and unbundled. Flexing entails a renewed emphasis on deposits, active use of syndication, originate-to-distribute models, and third-party balance sheets.
3. Growing or shutting down transactional enterprises. The key to success in a market or product is scale, but it can take many forms. Institutions may choose to cover a whole market or focus on a specific niche.
4. Increasing distribution to sell to consumers and provide them with direct and indirect advice, such as through marketplaces and embedded financing, as well as by providing digital and AI-based advice.
5. Adjusting to evolving hazards. All financial institutions must keep pace with the constantly changing risk landscape.

To determine which technology investments increase productivity, some prosperous banks are adopting tech-based business strategies with obvious value at stake. The following are some examples of how banks can reduce their technology and overall expenses by embracing technology as a fundamental component of their business strategy and risk management. These include an emphasis on engineering excellence, platform-oriented architecture, and automated infrastructure, as well as public cloud services. So, there are three horizons that financial actors traverse, as outlined by McKinsey. The primary business transformation is one of them. This involves utilizing technology to transform core company and client-facing processes, such as collateral appraisal and direct customer interaction. Another way to change the internal operating paradigm is by the use of platform-based design or the subtle incorporation of AI into operations, such as virtual experts or frontline coaching. Lastly, technology can be utilized to enhance productivity in various ways. In addition to conquering obstacles, banks have a significant chance to add value if they can reinvent themselves.

AI has the power to genuinely alter banking structures, particularly its more recent form, gen AI. There are three primary reasons why gen AI may differ. First, it has the potential to improve both customer satisfaction and productivity significantly. Second, even

smaller financial institutions and start-ups can swiftly test and implement a wide range of use cases due to the comparatively low entry barrier of recent versions. Third, a large portion of the impact of gen AI occurs in the bank and middle offices, making it more challenging to replicate and giving particular banks a competitive advantage in use cases. In this approach, it might be feasible to rewire a bank in a way that is difficult for the public to see, something that most modern technologies have not been able to accomplish. However, there are some significant disclaimers. Since gen AI is still in its infancy, it is not yet appropriate for all applications. Its value judgments are mainly untested, and it is still prone to mistakes, factual inaccuracy, or creation. As of right now, it is not appropriate for high-stakes situations where any of these defects could be harmful or when it is challenging to offer proof or substantiation at the time. This implies that, among other things, it still must be improved before being applied in regulatory interactions. However, gen AI can improve the entire banking value chain from start to finish and ease the strain on the talent pipeline in various areas, including marketing and sales, operations, technology, and legal, risk, and compliance. There will undoubtedly be difficulties along the way to deploying AI, just as with any new technology. However, the endeavours might be valuable if they result in increased efficiency, more effective operations, more innovation, and the ability to alter the fundamental relationship between banks and their clients.

The expanding strategic significance of digital platforms in enhancing service delivery and adaptability is further demonstrated by recent statistics from BAI's 2024 Digital Banking Metrics Report<sup>16</sup>. More customers than ever before prefer to open accounts at fintech rather than traditional banks and credit unions due to the increased sophistication of digital banking technology as well as changing consumer tastes and behaviours. Financial institutions require key performance indicators (KPIs) and metrics to assess their progress, efficacy, and efficiency, thereby comprehending their position in this wave. Nevertheless, evaluating measures in a vacuum without considering the context of financial institutions' relative positions to one another does not yield insightful results (Shevlin & Gujral, 2024). In general, mid-size financial institutions are the ones most

---

<sup>16</sup> BAI. (2024). *2024 Digital Banking Performance Metrics*. BAI. <https://info.bai.org/featured-innovation-digital-banking-performance-metrics.html>.

engaged in digital transformation initiatives – 90% of banks and 95% of credit unions are actively pursuing a digital transformation strategy – and as a result, digital investments have increased for the third consecutive year. One in 2022, the average amount spent on digital assets per \$1 billion was little more than \$200,000. Over the last two years, this amount has almost doubled to approximately \$780,000. Financial institutions are investing more in technology overall. Spending on digital channels accounted for approximately 26% of the total IT spend, representing a modest increase from 23% in 2023.

#### *Performance metrics and indicators of digital service agility*

To understand how the use of AI and digital platforms translates into quantitative service agility, it is essential to examine how financial institutions track and assess their performance in the context of digital transformation.

According to the BAI's 2024 Digital Banking Metrics Report<sup>17</sup>, financial institutions' digital banking performance can be measured in 12 categories:

1. *Digital Banking.* In 2024, 77% of checking accounts had active digital banking users, an increase from the previous year. At 79%, low performers were in the lead, but they were not much ahead of middle-of-the-pack and high performers. The research shows that low performers are spending more per digital banking user to ensure they are active digital users, at \$47 per user, even though there is a slight variation in the groups' total IT costs as a percentage of digital banking spend.
2. *Online Banking.* The proportion of checking accounts with active online banking users – those who have utilized the digital banking system in the last ninety days – decreased by 8% from 2023. Low performers led the pack at just 64%, while high performers trailed other groups at 56%.

---

<sup>17</sup> Shevlin, R., & Gujral, E. (2024). *2024 Digital Banking Performance Metrics*. Cornerstone Advisors & Alkami Technology Inc.

3. *Mobile Banking.* Between 2023 and 2024, the proportion of checking account holders who use mobile banking regularly rose by 1%, indicating that the uptake of mobile banking had plateaued.
4. *Mobile Deposit.* Overall, the percentage of people using mobile deposits increased from 52% in 2023 to 54% in 2024. With 57% of active mobile deposit users as a percentage of active digital banking users, the high performers were by far the most prominent. The intermediate and low performers, at 52% and 55%, respectively, were not far behind. The average number of checks deposited each month rose from 1.16 to 1.34, indicating an increase in utilization.
5. *Digital Deposit Account Opening.* The percentage of checking accounts opened digitally increased from 3% to 16% of all checking accounts in 2024, despite several institutions having recently implemented new digital account opening technologies and many more planning to do so in the same year.
6. *eStatements.* Overall, 80% of digital banking customers enrolled in paperless statements, a comparable rate across all groups, representing a six-percentage-point increase in eStatement adoption year over year.
7. *Bill Pay.* Twenty-nine per cent of people who used digital banking were also active billpayers, which is a decrease of 1% from the previous year.
8. *Person to Person (P2P) Payments.* Two-thirds of financial institutions were able to supply P2P data, which is significant given that 63% of consumers in 2023 stated that P2P is essential or significant in mobile banking features. This is similar to last year.
9. *Mobile Payments.* The proportion of digital banking customers who made mobile payments on or through their bank's or credit union's mobile app increased from 22% to 34% annually among financial institutions that reported mobile payment activity.
10. *Digital Lending.* In 2023, 10% of credit unions and 17% of banks chose or upgraded to a digital consumer loan origination system.
11. *Digital Support.* The ratio of institutions with a chatbot increased from 8% in the previous year's report to 23% this year, indicating the growing popularity of conversational AI. It is impossible to overlook the rise in popularity among

financial institutions and their clients despite the average number of sessions remaining essentially the same from year to year.

12. *Cross-Sales*. As a gauge of cross-sell success, only roughly 25% of the participating banks could report on additional goods per digital banking user. By launching an average of 1.34 new products, high performers among those monitored increased their relationship with digital banking customers by 24% compared to middle-of-the-pack institutions and 100% compared to low performers.

## **2.3. Human and cultural factors**

### **2.3.1. Agile mindsets and learning orientation**

Agility has become increasingly relevant in practice, and as a result, it has also garnered more attention from researchers. Organizational agility is the “*degree to which firms can readily and rapidly retool their business processes to adapt to the market environment*”, according to Chen et al. (2014). Increasingly, researchers are focusing on the human aspects and internal components of agility. The core of agile’s efficacy lies in this culture change. Traditional organizations typically have a hierarchical structure with a centralized decision-making process. Tasks are frequently delegated to employees according to well-defined positions, leaving little opportunity for creative autonomy or cross-functional cooperation. Agile culture, on the other hand, emphasizes accountability, adaptability, trust, and teamwork. Teams are given the authority to make important decisions; decision-making is decentralized, and cooperation among various departments is prioritized. Teams should be self-organizing and take responsibility for the outcomes and processes of their work, aligning with the principles of agile culture.

Actor’s internal structures (such as beliefs, attitudes, or dispositions) are frequently significant barriers to implementing agility, even though external structures and frameworks like Scrum have frequently been studied and implemented to improve strategic direction. The Agile Manifesto (Beck et al., 2001), which serves as the

foundation for agile software development, emphasizes the “people factor” in agility by prioritizing “individuals and interactions over processes and tools”. In addition, several writers have noted that actors are a crucial component of agile success, as seen in the work of Coyle et al. (2010) and Cockburn and Highsmith (2001). Moreover, prior research has highlighted the relevance of an Agile Mindset (AM) for successful software projects, agile transformation, and productive teamwork (Miler & Gaida, 2019). Agility, according to practitioners, is a mentality rather than a methodical technique. Accordingly, “*any particular agile management methodology, process, system, platform, or organizational structure is less significant than the agile mindset*” (Denning, 2016). There is a lack of thorough conceptualization of AM as the foundation for creating a measurement tool.

Furthermore, the impact of actors with an AM approach on digital disruption and its enhancement of organizational performance remains unknown. Moreover, the impact of the actor’s AM on strategic agility is not given enough thought. A conceptualization of AM and a tool to measure it would aid in the development of theories in studies on the simultaneous management of agility and digitalization.

The ability of an organization to thrive in a changing market is referred to as strategic agility. According to Shams et al. (2021), it is “*how a firm could remain flexible and quickly adapt to new ideas, technologies, socioeconomic aspects, host countries’ and host stakeholders’ norms and values*”. Accordingly, it embodies adaptability without sacrificing effectiveness. The literature currently in publication outlines three essential components of strategic agility: leadership unity, resource flexibility, and strategic sensitivity (Doz & Kosonen, 2010; Morton et al., 2018; Debellis et al., 2021). While resource fluidity offers the chance to “*reconfigure capabilities and redeploy resources rapidly*”, strategic sensitivity refers to “*the sharpness of perception of, and the intensity of awareness and attention to, strategic developments*” (Doz & Kosonen, 2010). The “*ability of the top team to make bold, fast decisions, without being bogged down in top-level ‘win-lose’ politics*” is the final definition of leadership unity (Doz & Kosonen, 2010). A growing number of scholars are examining actors, their roles, teams, and culture in greater detail because they are responsible for strategic agility. Here, the emphasis is on their abilities, proficiency, disposition, and network interactions and cooperation with clients, coworkers, and other stakeholders. People working in a changing, tech-driven

workplace need to adopt a new mentality that encourages agile behaviour, which guarantees and enhances an organization's performance (Cunha et al., 2020). Attitude is a *“psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour”*, according to Eagly and Chaiken (1993). A person with a highly developed AM has a very positive assessment of learning, interpersonal interactions, work organization, and value creation in terms of customer satisfaction. The AM is a person's attitude in a dynamic work environment that is demonstrated by their positive evaluation of how they: 1) consistently look for new insights to adapt to changes; 2) openly share and discuss work methods and outcomes with others; 3) make their own decisions about how to proceed; 4) remain customer-oriented throughout a co-creation process at work. According to Schwartz (2007), attitudes are not essentially fixed; instead, they can evolve.

Therefore, new technologies and digital business models can be developed and implemented with the help of strategic agility, and the impact of agility can be amplified by digital advancement. Within an organization, actors play a crucial role in advancing agility and digitalization. To date, little is known about how actors utilize digital innovation to enhance their strategic agility and even less is known about their internal structures, including their thought processes and how they should respond to disruptive change. Everything in the work system is impacted by agility. To carry out the modified task design and implementation of agile methodologies, personnel must adopt a new mentality and the associated new behaviour.

Additionally, agile methodologies frequently accompany new technology and digital transformation. Nevertheless, imposing strategic agility on an organization that must contend with a digitally driven, complex, and uncertain environment is not always effective and may even lead to failure. According to Cunha et al. (2020), companies may struggle to understand and adapt to changes in the market environment, which prevents them from demonstrating the required level of strategic sensitivity. To address this issue, a new approach is needed. This subject is influenced by AM's attitude towards the customer co-creation component. Actors with a high degree of this dimension are near to their clients and, consequently, to the market, according to the notion of strategic agility capabilities. It is possible to more accurately comprehend dynamic market developments by continuously reflecting on and integrating the customer. Thus, it is possible to verify

the relevance of external knowledge for innovation, business performance, and competitiveness. Integrating these ideas into the organization's core beliefs, encouraging collaboration, process ownership, and adaptability in the face of change or new information are all necessary to develop an agile mindset. The success of agile adoption thus depends critically on an organization's ability to match its cultural values with the principles of agility. Significant difficulties may arise from cultural resistance, which often stems from entrenched hierarchies, risk-averse individuals, or leadership.

The relevance of the AM also emerges from superficial insights into how players currently handle new technology to achieve strategic agility. Nonetheless, it is clear that the conceptualization of the AM is shifting, and as a result, it lacks a shared theoretical underpinning. To date, however, research has not given sufficient attention to how actors' AM affects organizational performance, digitalization, and strategic capabilities. It seems that AM is relevant for both digitalization and strategic agility: "*DT [digital transformation] will simply magnify those flaws if people lack the right mindset to change and the current organizational practices are flawed*" (Tabrizi et al., 2019). By enabling more agile actors to handle digital disruption, insights into actors' AM and their impact on digitalization will help organizations become more adaptable.

### **2.3.2. Cross-functionality teams and empowered roles**

Cooperation and adaptability are valued more highly than strict planning and legal compliance when one adopts an agile attitude. Teams are encouraged to take pride in their work, participate in regular feedback loops, and make informed decisions that advance the overarching goal and vision. In addition to meeting order requirements, the emphasis is on fostering an atmosphere that encourages groups to experiment, generate ideas, and learn from their mistakes.

Adebayo (2022) recognized four fundamental ideas from the foundation of the agile framework:

1. *People and their relationships with procedures and equipment.* This value highlights the significance of interpersonal relationships and teamwork. People are valued more in an agile culture than in inflexible procedures, which may be excessively slow or unadaptable to change. Agile-thriving teams are cross-functional, with each member contributing special talents that are used to the project's overall success.
2. *Working product above extensive documentation.* Agile prioritizes producing something concrete rapidly and improving iteratively, even while acknowledging that documentation has its purpose. Agile teams prioritize providing consumers with value as soon as feasible while also collecting input to guide future efforts.
3. *Contract negotiation versus customer collaboration.* Agile teams actively communicate with stakeholders or customers at every stage of the project. Agile promotes constant communication and course correction as needs change, as opposed to securing everything in strict contractual obligations upfront. More significant, prompt, and responsive results are made possible by this adaptable, customer-focused strategy.
4. *Adaptive to change rather than sticking to a plan.* Agile views change as unavoidable and frequently advantageous. Agile management thrives on flexibility; in contrast to traditional management approaches, which view plan changes as failures, it enables businesses to adjust their course swiftly in response to new data, shifting market dynamics, or client feedback<sup>18</sup>.

When these ideas are united, the focus of work is shifted from rigid planning and hierarchical control to one of trust, cooperation, and flexibility. To implement these principles, many organizations must overcome significant cultural inertia.

Cross-functional teams comprising designers, testers, software architects, and system managers are the outcome of the agile transformation. The primary responsibilities

---

<sup>18</sup> Adebayo, O. T. (2022). *Agile and organizational culture: Fostering agile values and mindset.* International Journal of Science and Research Archive, 7(2), 672–681. [https://www.researchgate.net/publication/385984928\\_Agile\\_and\\_organizational\\_culture\\_Fostering\\_agile\\_values\\_and\\_mindset](https://www.researchgate.net/publication/385984928_Agile_and_organizational_culture_Fostering_agile_values_and_mindset)

involve creating new product features that aim to increase productivity while fostering cooperation and learning. The team members share the objectives, backlog, and working circumstances for managing highly interrelated activities. Attitude towards collaborative exchange describes how much an actor appreciates open communication and exchanging ideas and information with colleagues to solve challenges. Dealing with issues in a digitally driven VUCA world frequently requires cross-functional teams. Actors who exhibit a high degree of attitude towards collaborative exchange value incorporating many viewpoints and take pleasure in offering assistance and encouragement to others. In the context of digitalization, this component also frequently leads to beneficial actions by players. A high attitude towards collaborative exchange may lead actors to share their expertise through online workspaces, discussion forums, collaboration tools, and knowledge management systems (Morton et al., 2018). They are, therefore, more prone to employ these technologies.

Additionally, actors might be more active on social media sites, where they can ask questions, debate issues, and collaborate to find answers. As a result, performers collaborate across departments and are located via digital and cross-functional networking. Collaboration between teams and departments is essential for agile development. The development of informal cross-team relationships and knowledge sharing outside of the team are impeded by internal interdependency and ongoing time constraints (Van De Hoof & De Ridder, 2004). Agile approaches require an organizational culture that prioritizes collaboration, open communication, and collective problem-solving. Since it involves removing these barriers, the transition to agile can be challenging for companies with siloed departments. Departmental silos should be eliminated to foster cooperation. Members of cross-functional teams from different disciplines can foster creativity, making it easier for ideas and information to flow, which in turn improves the team's overall performance.

According to Tautz and Heilmann (2008), self-managed, team-based organizations resemble biological super-organisms, which are composed of numerous distinct entities that coexist, collaborate, and develop as a single, complex organism through a complex web of reciprocal and symbiotic relationships. The conventional logic of control, hierarchy, formal positions, and financial incentives is significantly outdated due to the open and peer-based nature of self-managed teams. Informal control by peers within the

teams and informal authority based on expertise, reputation, status, gatekeeping privileges, or control over relevant resources or technology replace the formal authority exercised by managers in team-based organizations. Therefore, an organization's fundamental capacity to lead individuals and groups is not solely dependent on its formal authority structure; it also depends on the bargaining power that various organizational entities may have over employees and teams, which can be derived from any asymmetric dependence (Gulati & Sytch, 2007).

In this context, it is possible to recognize two parallel organization designs with minimal connectivity between them, pursuing efficiency and innovation as strategic objectives. Firstly, the organization's strategy for implementing productivity and efficiency measures is subtly driven by the Scrum methodology, which requires constant monitoring of team performance and task progress. Second, due to the efficiency-driven design, the coexistence of distinct team stakeholders led to the concept of structural differentiation. This led to entities at the same level focusing on specific elements of the inclusive higher-order strategy. In this situation, we observed an expansion of the line/project manager's duties, along with the addition of team-related tasks. The product owner (PO) concentrated on assigning requirements to the teams and setting priorities for the work that needed to be done within them.

Along with overseeing any significant differences in team performance, feature owners were also responsible for identifying and removing any barriers that would prevent effective task execution. To varying degrees, stakeholders supported the organization's shift to agile methods of operation and promoted agile ideas. This extensive stakeholder network was established to effectively monitor the team's activities, enforce objectives, and promote alignment. Teams were not always able to meet the expectations of their innovation coaches because stakeholders displayed a variety of consistent influences. This was because achieving some goals might not align with the expectations of other project stakeholders, which led to subpar performance in product innovation tasks.

However, the network of innovation coaches, which seemed less extensive, was more focused on guiding product innovation and presented a more distinct pressure because it was less able to monitor team behaviour or establish behavioural standards.

### 2.3.3. Leadership models for agile service delivery

Being nimble can be achieved by organizations through effective planning, implying that agility can be demonstrated without relying on improvisation. One example of this possibility is the very adoption of agile methodologies: companies use agile ways to become more agile.

According to Cunha et al. (2017), improvisation is the intentional blending of the planning and execution of a new creation. Improvisation is unique because it enhances planning and routine rather than replaces them (Cunha et al., 1999). Although improvisations are not a series of ad hoc operations, organizations improvise when their plans are insufficient or inadequate to deal with reality. Research on flexibility and agility often assumes that the process is particularly crucial for businesses competing in unpredictable and unstable contexts as they aim to remain agile. (Bahrami & Evans, 2011).

Four fundamentals of agile ideas and principles were established by Rigby and his colleagues (2016)<sup>19</sup>:

1. People over processes and tools.
2. Adapting to change instead of following a plan.
3. Working prototypes over copious documentation.
4. Customer collaboration over strict contracts.

These ideas are similar to an improvisational view of leadership. There are three ways that leaders can prioritize people over procedures or equipment. They must first establish everyday organizational realities. Establishing the prevalence of people over processes is a crucial reality to convey. Although it is usual to argue persuasively that people are the primary source of competitive advantage (Pfeffer, 1994), the reality frequently shows differently. The ability to instill agile ideals through improvisation must be based on the conviction that individuals have the power to shape an organization and that the organization has faith in the sincerity and responsibility of their change initiatives. When individuals are prioritized over processes or to accept and grow from mistakes.

---

<sup>19</sup> Rigby, D. K., Sutherland, J., & Takeuchi, H. (2016). *Embracing agile*. *Harvard Business Review*, 94(5), 40–50.

Consequently, leaders can use peer-to-peer methods to bring teams together. Prioritizing people to improve agility can also be achieved by reducing the influence of hierarchy and enhancing the effectiveness of relational forms of coordination, as well as adopting a mindful approach to challenges (Gittel & Douglass, 2012). In peer-to-peer cultures – that is, cultures that view the hierarchy as a tool rather than a communication channel – such an approach necessitates close collaboration. Leaders can lead with questions by creating variety with variety, which aligns with the peer-to-peer logic of agile management.

In contrast to more conventional command-and-control methods, leaders who lead with questions adopt a coaching orientation (Zenger, 2016). By asking questions, leaders treat people as members of the organization rather than as subordinates, enabling managers to encourage introspection and refrain from imposing their opinions, which would ultimately undermine the notion that people are valuable assets. Instead of being protected or forced, important assets should be released.

A novel framework for leadership study and practice, complexity leadership explains how leaders may make organizations function as complex adaptive systems – networked systems that can change and adapt to their changing surroundings. Operational, entrepreneurial, and facilitating leadership are three forms of leadership highlighted by complexity leadership as necessary for flexibility. The formal design and alignment of systems and procedures for effectively implementing concepts and turning them into profitable results (such as exploitation) is known as operational leadership. The source of fresh concepts, creativity, learning, and organizational development (such as exploration) is entrepreneurial leadership. The creation of circumstances that efficiently support and maintain adaptive space is known as enabling leadership. One special kind of leadership brought forth by complexity thinking is enabling leadership. Enabling leadership, when properly combined with operational and entrepreneurial leadership, makes organizations more adaptable to complexity (i.e., function as complex adaptive systems). A single person can fulfil any or all of the three complex leadership responsibilities; therefore, they are not exclusive to any one person or role. The nimblest leaders would be skilled in all three. The ability to switch between operational, enabling, and entrepreneurial thinking would allow highly agile complexity leaders to bring new concepts into the system and develop into a new, flexible order. However, this is neither required nor usually the case.

Adaptive organizations typically draw from a wide range of leaders: those who can flexibly manage operational systems and allow for adaptability to turn them into results; those who are adept at entrepreneurial leadership to create new ways of thinking and doing things; and those who can create the conditions that spark new ideas for the entrepreneurial system and facilitate their flow into the operational system to produce innovation and adaptive outcomes.

Integrating agile into the organization's culture requires strong leadership. By emphasizing servant leadership over command-and-control leadership, agile values challenge conventional leadership roles. Leaders in an agile organization are there to remove barriers that prevent teams from reaching their full potential rather than micromanaging. They trust teams to take responsibility for their initiatives and empower them by providing them with the necessary tools, support, and direction. Agile principles can flourish in an atmosphere of cooperation, trust, and constant improvement that is deliberately fostered by leaders who practice servant leadership.

Additionally, flat organizational structures that enable teams to make decisions independently are often essential for agile organizations. Businesses with firmly established hierarchical structures, where decision-making is usually centralized, may find this transition challenging. In such situations, the leadership role must adapt to change to accommodate self-organizing teams and decentralized decision-making. Leaders must be comfortable relinquishing control and have faith in their teams to deliver results while maintaining alignment with the overarching strategic objectives. Employees at all levels must adopt a new mindset that values accountability and autonomy as part of this transition, which requires a significant cultural shift. In agile transformation, leadership plays a significantly more important role than just simply encouraging the adoption of new procedures or technologies. Leaders must reshape the organizational culture from the top down and adhere to the fundamentals of agility for the transformation to be successful. A paradigm shift is necessary for agile leadership; leaders must abandon traditional command-and-control strategies and adopt new approaches, including servant leadership, which enable teams to take initiative, experiment with new ideas, and consistently deliver value. Servant leadership plays a vital role. Instead of making decisions from the top down, leaders in an agile environment are supposed to facilitate

and enable others. A servant leader's primary duties include removing roadblocks that hinder the team's progress, providing guidance without micromanaging, and cultivating an environment that enables teams to succeed. Successful agile adoption requires a culture of constant improvement, open communication, and trust, all of which are fostered by this leadership style.

Although agile transformation has many advantages, numerous obstacles stand in the way of becoming a genuinely agile organization. To overcome these obstacles and ensure the seamless integration of agile principles into the current corporate culture, leadership is crucial. Consequently, Adebayo (2022) distinguished that, during the agile transition, leaders frequently encounter the following difficulties:

- *Resistance to Change.* Opposition from leaders and staff who are accustomed to traditional methods of working is one of the primary barriers to adopting agile methods. For people accustomed to hierarchical systems and process-driven workflows, the cultural shift required by agile might be unnerving. As change agents, leaders must clearly explain the benefits of agile concepts and promptly resolve any issues that arise.
- *Balancing Control and Autonomy.* The shift to servant leadership can be challenging for leaders who have centred their careers on top-down decision-making and result control. Trust and faith in the team's talents are necessary to strike the ideal balance between offering direction and permitting autonomy. Leaders need to shift their focus from overseeing tasks to achieving results.
- *Maintaining Strategic Alignment.* Leaders must ensure that their teams' actions align with the organization's overarching strategic goals as they grow increasingly independent and decentralized. Teams may unintentionally undertake activities that are not aligned with the organization's long-term objectives if there is unclear alignment. To maintain teams' attention on the organization's priorities, leaders must provide the necessary direction and vision.
- *Developing New Leadership Skills.* Compared to traditional management, agile leadership requires a distinct skill set. Effective communicators, mentors, and facilitators who can foster cooperation and trust are essential for leaders.

Companies must invest in leadership development initiatives that equip executives and managers with the skills necessary to lead in a flexible environment.

- *Cultural Fit.* Agile methods are not a good fit for every organization. Leaders need to assess the company's current culture and identify any inconsistencies between agile principles and its existing values. Agile transformation initiatives may be slowed down or even destroyed in extremely risk-averse or bureaucratic organizations due to cultural inertia. To overcome these cultural obstacles, leaders must aggressively promote an atmosphere of candour, trial and error, and ongoing education<sup>20</sup>.

Leadership that combines operational flexibility with strategic direction is essential for delivering agile services. To tackle the challenges of dynamic and shifting environments, the paradigms of servant leadership, improvisational leadership, and complexity leadership offer complementary strategies. In particular, to promote cooperative, flexible, and continuous improvement-focused work settings, transitioning from hierarchical leadership to distributed, enabling, and people-centred leadership is crucial. Leadership must actively embody their principles, rather than merely advocating for new practices, to achieve a truly agile transition.

## **2.4. Practices and Patterns of Service Agility**

### **2.4.1. Agile methodologies in banking service design**

Agile approaches have become increasingly important in recent years, not just for managing IT projects but also for creating organizational structures that are adaptable and flexible, which are necessary to handle disruptive developments and create effective digital business plans. Large software development projects were traditionally managed

---

<sup>20</sup> Adebayo, O. T. (2022). *Agile and organizational culture: Fostering agile values and mindset.* International Journal of Science and Research Archive, 7(2), 672–681. [https://www.researchgate.net/publication/385984928\\_Agile\\_and\\_organizational\\_culture\\_Fostering\\_agile\\_values\\_and\\_mindset](https://www.researchgate.net/publication/385984928_Agile_and_organizational_culture_Fostering_agile_values_and_mindset)

using the waterfall method, which divided the project scope into distinct work streams, each organized as a series of steps (Sommerville, 2015). A hierarchical approach is a defining feature of the waterfall technique, resulting in project management procedures that generally follow a linear, single-directional workflow. The benefits of the waterfall approach stem from a rational, well-organized project plan. However, it also has a low degree of flexibility because its linear stage progression makes it difficult to identify errors, bottlenecks, or shifting user needs early on, as initial product releases are typically created later in the development process (McConnel, 2004).

Agile software development primarily focuses on complex systems with dynamic, non-determinist, and non-linear properties, in contrast to traditional software engineering. Such initiatives frequently lack clear user expectations, comprehensive information on technical difficulties, and well-developed business cases at the beginning. Thus, agile approaches steer clear of comprehensive upfront requirements in favour of flexible, iterative, and evolutionary processes (Schwaber & Sutherland, 2020). A memorandum signed by seasoned software engineers summarizes the fundamentals of agile software development, regardless of the various agile methodologies that have been created since then (Manifesto for Agile Software Development, 2001). A customer-centric approach to software development, which relies on close communication between developers and business representatives, is a key tenet of this approach. Planning, analysis, design, coding, testing, and user acceptability are all covered in each iteration. This reduces total risk and enables quick modification of the product design in response to changes. Agile approaches are believed to expedite projects, enhance quality control, and reduce development expenses. Although a shared set of principles characterized agile methods, other agile approaches that highlight various facets of agility have emerged in recent years.

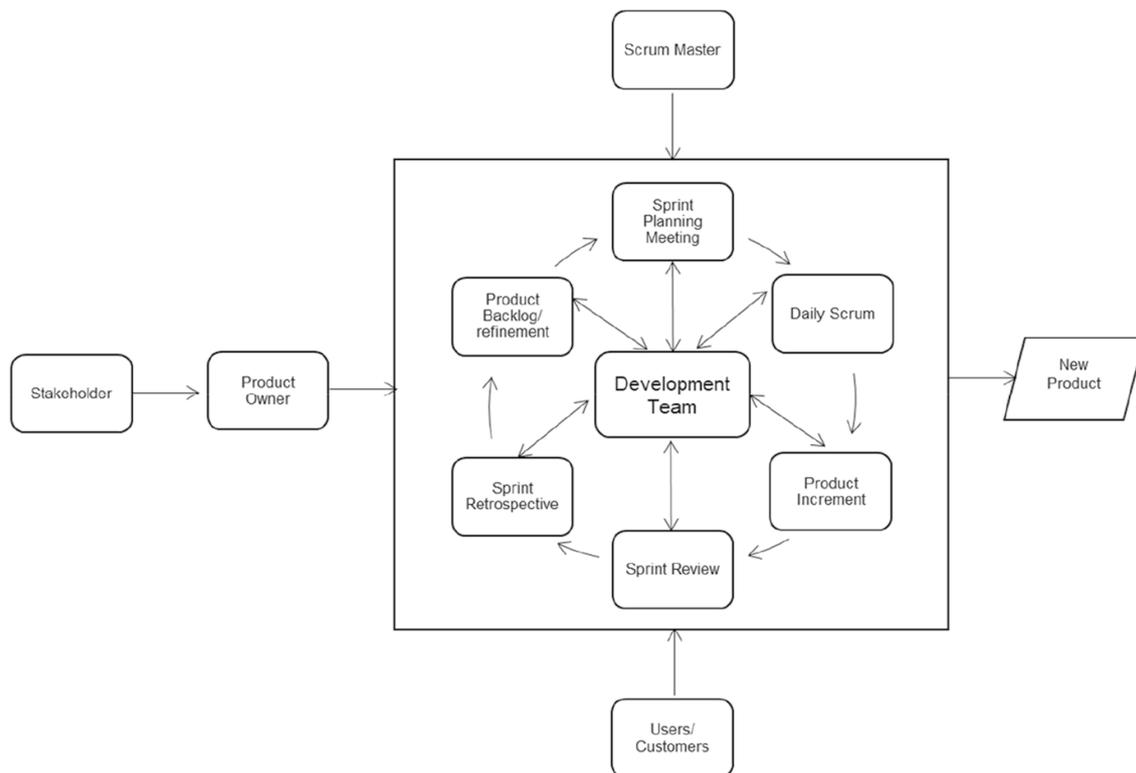
According to Takeuchi and Nonaka (1986), the Scrum methodology was initially created for product development procedures in the industrial sectors. Transfer to software development processes began in the 1990s. Several methodological changes and improvements have further developed the Scrum technique. A small team of up to ten people, comprising developers, a Scrum Master, and a Product Owner, is the core unit of action in Scrum. The team works collaboratively to deliver the product, is self-managing,

and frequently crosses functional boundaries. Self-organization, involvement, and mutual accountability are all encouraged by the Scrum system. In addition to negotiating priorities, scope, finance, and timeline with stakeholders, the product owner is responsible for defining the product in terms that focus on the client's needs and requirements. Therefore, creating, ordering, and communicating product backlog items to the developers is a crucial responsibility of the product owner. They also need to make sure that the development team is aware of and understands the product requirements (Sverrisdottir et al., 2014). As key members of the scrum team, developers are in charge of creating the product increments in each iteration that lead to the finished product. By preparing for the upcoming sprint, defining the sprint backlog, and adjusting tasks as necessary, the development team self-organizes their work based on the product backlog. It is advisable to have direct communication with stakeholders or customers to understand their needs better and enable frequent input. A Scrum master facilitates the Scrum process and is in charge of carrying it out in compliance with the fundamental guidelines outlined in the Scrum guide. In this capacity, the Scrum Master assists developers, the product owner, and the entire company where the Scrum process is being implemented. The Scrum Master, in particular, helps team members overcome internal or external obstacles to create valuable product increments or other deliverables and teaches them the fundamental agile working concepts – such as self-management, customer orientation, and cross-functionality. The Scrum Master leads relevant meetings and motivates the team to improve continually. However, unlike a project manager, the Scrum Master is not responsible for people management.

The fundamental Scrum iteration unit of development is called a sprint, and it has a predetermined duration of one to four weeks. The necessary product backlog items are converted into a sprint backlog that covers the tasks required to accomplish the sprint goal. Each sprint begins with a sprint planning session that sets the sprint goal. The development team must convene daily (i.e., hold a daily Scrum) to track progress, identify any roadblocks to reaching the sprint goal, and adjust the sprint backlog as needed. To assess progress towards the sprint goal, the Scrum team provides the sprint's deliverables – that is, the product increment – to stakeholders after each sprint (i.e., sprint review).

Lessons learnt are also noted to enhance the upcoming sprints (i.e., sprint retro respective) and possibly improve the product backlog<sup>21</sup>.

However, given the variety of design alternatives available, Scrum projects are typically customized to the unique circumstances of the business, even though they share a common framework and set of tools. Figure 6 displays an overview of the Scrum process.



**Figure 6: Overview of the Scrum process.**

Source: Brühl, V. (2022). *Agile methods in the German banking sector: some evidence on expectations, experiences and success factors*. *Journal of Business Economics*, 92(8), 1337-1372.

By examining the adoption, goals, and relative popularity of agile frameworks in the German banking industry, Volker Brühl (2022) adopted an industry-specific viewpoint. The information revealed potential implementation challenges and success factors, as well as expectations and experiences associated with agile approaches. The author

<sup>21</sup> Brühl, V. (2022). *Agile methods in the German banking sector: some evidence on expectations, experiences and success factors*. *Journal of Business Economics*, 92(8), 1337-1372. [https://www.researchgate.net/publication/362041706\\_Agile\\_methods\\_in\\_the\\_German\\_banking\\_sector\\_some\\_evidence\\_on\\_expectations\\_experiences\\_and\\_success\\_factors](https://www.researchgate.net/publication/362041706_Agile_methods_in_the_German_banking_sector_some_evidence_on_expectations_experiences_and_success_factors)

conducted a structured survey to determine whether and to what extent German banks utilize agile methods in IT projects, which tools they prefer, and to investigate their expectations, experiences, and perceived success factors, as there was a lack of empirical evidence on these methods in the German banking industry. Additionally, he examined if there were notable distinctions between fledgling fintech companies that can primarily use greenfield strategy and established banks that do not have to address legacy IT problems. Between November 1, 2020, and January 31, 2021, 51 financial firms with their headquarters in Germany participated in a structured pool to provide answers to these questions. He focused on the banking industry and banking-related fintechs, which can serve as suppliers, partners, or rivals to conventional banks. Fintechs that offer services in the areas of financing, investments, and transactions (e.g., payments), as well as other banking-related services (e.g., risk management), were thus included by Brühl. In larger institutions, he had sent the questionnaire to the heads of corporate development and corporate information technology, who then determined who should be responsible for gathering the necessary data internally. This was also done to make sure that when filling out the questionnaire, both technology and business-related factors were taken into account. The questionnaire was often filled out by the Chief Operating Officer (COO) of small to medium-sized banks. At fintechs, the questionnaire was collected by the company's Chief Technology Officer (CTO) or Chief Executive Officer (CEO). He first discussed the questionnaire with at least one representative from each participating firm to resolve any issues that might have arisen and ensure the questions had been understood. Brühl occasionally held extra meetings after receiving the complete form, especially when the participating company made qualitative comments on specific sections, which provided more context for the responses and company-specific information. One of the analysis's limitations was the application of agile methods, as the agile mindset might vary significantly within major banks with a wide range of business divisions. As a result, Brühl's feedback from diverse banks might be described as a corporate perspective that considers the many agile development stages of the different divisions.

It has been discovered that practically all fintechs and banks use agile approaches in their IT initiatives. Fintechs, on the other hand, employ agile techniques more frequently and have comparatively more expertise with them than banks. The widely used framework currently is Scrum. In the German banking industry, scaled agile frameworks are

currently insignificant. Project acceleration is the primary goal of implementing agile methodologies. Although it is more challenging for banks to meet their goals than for fintechs, agile approaches can still lead to cost reductions, as well as enhanced quality and innovation performance. The results indicate that German banks are still developing their agility and that there is potential for quicker adoption of agile practices, in general, and scaled agile frameworks, specifically.

Overall, the results indicate that, despite Scrum's extensive use by banks and fintechs, German banks are still at a lower stage of agile maturity, particularly when it comes to implementing scaled agile frameworks such as SAFe, which are still considered marginal in the industry.

#### **2.4.2. Prototyping and iterative service innovation**

To ensure the optimal client experience, digital financial products are designed using the powerful method of Design Thinking in banking, which involves five steps analyzed by Kreger (2022): Emphasize, Define, Ideate, Prototype, and Test.

1. *Emphasize*. To investigate the entire context surrounding the product, this stage gathers much information on business objectives, customer demands and pain spots, and product characteristics. Focusing on and emphasizing the issue firms are attempting to resolve is the goal. Putting oneself in the customer's and business owner's shoes is necessary to accomplish this.
2. *Define*. Prioritize relevant data and identify the main issues by analyzing and synthesizing the data that has been gathered. The primary goal is to determine what value it may offer clients and why they would choose it over competing options. Approaching data analysis from these several perspectives – business, psychology, user behaviour, rivals, marketing, technology, etc. – is necessary to do this.
3. *Ideate*. It begins to generate several theories on potential solutions. The primary objective is to find the most effective solution to the previously identified issues.

To do this, one must think creatively and come up with dozens of possible answers.

4. *Prototype*. To develop the final version, the prototype stage requires dozens of previously generated ideas on how the end solution could appear and function. The Synthesis step verifies each solution using previously created user scenarios, business objectives, and other relevant criteria. In this manner, it reduces the number of options to one or a few that are provided as visual prototypes for users and business owners to test.
5. *Test*. To ensure the visual prototype provides the required solution for the previously specified problem, a final test stage is necessary. If not, the procedure is repeated, and it goes back to the initial step<sup>22</sup>.

Never before have Design and Design Thinking had such a significant impact on a company's ability to succeed across all industries. Design Thinking is essentially a customer-centred approach to issue-solving. Understanding people's requirements, identifying their problems, devising creative solutions, developing those solutions, and testing them are all essential components of this process. Teams and individuals use Design Thinking to integrate consumer needs and desires with what is technically possible under the given conditions and profitable for the company. Banks are seeking methods to transform their organizations and recognize the value of Design Thinking in the financial services industry. BBVA has trained 1,000 Design Thinking specialists to teach staff members how to apply this methodology daily. Capital One created "Capital One 360 Café", a branch that combines a bank and coffee shop, where staff members are free to converse with clients to learn about their banking experiences.

Additionally, many banks worldwide have acquired Fintech businesses and established accelerators to attract them. However, consumers who are moving their existing bank accounts to Fintech companies are increasingly choosing these businesses. For instance, Revolut gained over a million users in just the first three years, of whom a quarter were active users. By 2021, they had reached the 15 million user milestone.

---

<sup>22</sup> Kreger, A. (2022). *Implement Design Thinking in Banking to Improve the Customer Satisfaction*. [Preprint].

Bank and fintech experts concur that every business's foundation is an understanding of its customers. In actuality, bank workers are well-informed about customer-centricity. People in the two kinds of organizations, however, have different perspectives on customer-centricity. Fintech firms put themselves in the shoes of their customers and investigate them more thoroughly to discover fresh approaches to upending established financial services. Banks focus on continuing to provide their wide range of clients with current offerings. Moreover, smaller businesses, like fintech companies, find it easier to establish shared objectives and ambitions. Banks have numerous teams and departments that focus on different goals. In reality, the primary barriers to implementing the Design Thinking approach in global banks are a lack of attention to clearly defined problems and a poorly defined set of challenges. Setting goals is essential to overcoming any obstacle. To draw attention to the specified issue, it is crucial to get them right. From the standpoint of Design Thinking, the objective can be characterized as a problem statement that encapsulates the challenge of identifying who the customer is and what their needs are. The ability of any novel methodology to be implemented successfully depends on the organization's culture. The majority of banks have been in existence for many years. Since fintech businesses were only recently established, they can start from a clean slate. To stay afloat in the market, fintech organizations have been forced to put procedures in place that consistently produce the best results in the shortest amount of time. Banks have launched numerous projects to transform their organizations despite fintech companies appearing to be more conscious of the application of Design Thinking in banking.

Start-ups must construct physical prototypes and gather consumer feedback on them to rapidly test business ideas. The ability of early-stage software firms to prototype quickly determines how quickly they can learn, as prototyping is a crucial component of the learning process. Research on prototyping in software firms is lacking despite its significant importance. Furthermore, software firms now face a greater challenge in identifying client requests and offering solutions that add value for the customer than in implementing customer requirements. One of the primary causes of failing start-up businesses is the ad hoc and guesswork-based approach taken to addressing uncertainty in both the solution and problem domains. The need for methodical ways to deal with uncertainty has raised interest in Lean Start-up, software start-ups, New Product

Development (NPD), and ongoing experimentation. According to Brooks (1987), “*the concept of rapid prototyping has a name and a recognized value in software engineering, at least, whereas it does not always have the same status in computer design and building architecture*”<sup>23</sup>.

Prototyping is a rapid and cost-effective method that helps determine what the finished items should look like. Technically speaking, prototypes can be distinguished based on their relationship to subsequent product development. Throwaway prototypes are not used as fundamental building blocks; instead, they are primarily employed for specification purposes. The majority of their applications are in experimental and exploratory prototyping. They are employed in evolutionary prototyping, but they can also be found in experimental prototyping – if it demonstrates that they provide a reasonable basis for a system. Evolutionary prototypes serve as the foundation for a genuine system that develops from the prototypes. For example, a fundamental idea in Lean Start-ups is the Build-Measure-Learn loop. Software companies are managed and run using the loop to identify a viable business plan. Reducing waste and concentrating just on the components that will be examined are relevant concepts. The concept states that to get knowledge about the market, various applications, and market segments, start-ups should present an early version of their product to clients. Throughout the initial phases, the model shows the percentage of actions related to product development against customer development.

From a commercial standpoint, start-ups might develop a Minimum Available Product (MVP) – a representation of product ideas – without implementing the product. According to Robinson (2001), MVP is the outcome of “*synchronous development*” – the concurrent creation of a product and the study of the target market and how it responds to it. An MVP is a future project version that enables the gathering of as much helpful information as possible on how users engage with it at the lowest possible expense. An MVP is designed to evaluate if users need such a product and whether the business

---

<sup>23</sup> Brooks, F. P. (1987). No silver bullet: Essence and accidents of software engineering. *Computer*, 20(4), 10-19.

[https://www.researchgate.net/publication/220477127\\_No\\_Silver\\_Bullet\\_Essence\\_and\\_Accidents\\_of\\_Software\\_Engineering](https://www.researchgate.net/publication/220477127_No_Silver_Bullet_Essence_and_Accidents_of_Software_Engineering)

model's underlying assumptions are accurate rather than to test technologies. The MVP's primary goal is to reduce the amount of time and energy required to test the idea's reception in the market. MVP enables the drawing in of actual consumers as mentors who will assist in modifying the business model, fundamental features of the future product, open-source directions, and creating a revised roadmap. The creation of a complete version of the product is authorized based on the successful outcomes achieved at the MVP stage. MVP is not a prototype, however. Only the most essential features are included in a Minimum Viable Product, but it should not be rudimentary or undeveloped. Instead, the MVP's primary role should be carried out as effectively as feasible.

In the early phases of business, there are often many unknowns regarding clients and their expectations. There is always a chance of wasting effort when beginning with single-feature prototypes or other implementation strategies. Starting with a thorough understanding of the throwaway approach and concentrating on proving business value rather than reusing the technical components is likely to save time. Quick and dirty experiments, often resulting from uncertainty about what to develop and how to build it, are frequently the outcome of inadequate architectural concepts, coding methods, and documentation. In this way, frequent modifications to specifications or demands for new features may ultimately lead to an increase in technical debt.

### **3. Comparison between two exemplary cases**

#### **3.1. Rationale for Case Selection**

Due to their creative and well-documented transformation projects, ING and BBVA were selected as exemplary cases for this thesis, which examines the creation and implementation of service agility in the banking sector. Agile methodologies have been adopted by both institutions as holistic approaches to rethinking leadership, service design, organizational structure, and customer responsiveness, in addition to being used as project management tools.

Two well-known European banks with a significant global footprint and a broad extent of financial services are ING and BBVA. They are pertinent and instructive cases due to their early involvement in agile transformation projects and their significance in the global banking sector. To provide adequate and easily accessible evidence for analysis, each institution has worked hard to make its journey publicly available through reports, interviews, academic papers, and corporate communications. (BBVA, 2020; McKinsey & Company, 2017).

Although improving responsiveness and adaptability are shared objectives, the two institutions have taken different approaches to achieving agility. With a strong emphasis on flattening hierarchies, reinventing internal roles with a bottom-up dynamic, and reorganizing teams into squads and tribes, ING adopted an innovative and IT-driven approach that the Spotify model greatly influenced. The Single Development Agenda (SDA) and other formal governance tools have helped BBVA adopt agility through a more structured, top-down framework. The company has also placed a strong focus on strategic alignment, leadership development, and cultural change across all business units (Fonstad & Salonen, 2021; BBVA, 2020).

Due to these distinctions, comparing ING and BBVA is not only insightful but also fruitful from an analytical perspective. The two examples demonstrate different approaches to service agility: controlled scalability and institutional learning in one case and quick organizational simplicity and experimentation in the other. As a result, they

present a unique opportunity to examine how organizational context, legacy systems, leadership styles, and cultural readiness impact the effectiveness of agile transformations in well-established financial companies.

Finally, ING and BBVA cases highlight the complexity of service agility and distinguish key facilitators, obstacles, and outcomes that can inform future sector-wide transformation initiatives.

## **3.2. ING**

### **3.2.1. General context**

ING is one of the leading universal banks in Europe, with operations spanning the globe. Amsterdam is home to the headquarters of the Dutch international banking and financial services company ING Group. Retail and wholesale banking are its primary operations. ING operates in more than 40 countries, employs approximately 57,000 people worldwide, and serves around 38.4 million consumers. It is listed as a Systemically Important Financial Institution (SIFI) and is one of the largest banks globally. Events in the world around ING, such as societal challenges, global trends, shifting regulations, and political and economic developments, have a significant impact on its business.

As a bank, ING makes significant contributions to the advancement of the economy, society, and the environment. By fulfilling its role as a bank, it makes its most significant contribution to its stakeholders. ING handles payment processing, safeguards client funds and information, offers loans, invests, and offers a range of financial services. The bank may add value for stakeholders in various ways. Customers expect ING to satisfy their requirements and entrust them with their money. By providing loans and other financial services and products, ING enables them to do so. The bank can maintain appropriate capital levels, make profitable investments in the company, and distribute cash to its shareholders. By providing employees with learning and development opportunities, ING aims to build human capital and equip them with the skills and competencies they will

need in the future. However, ING's actions can put its stakeholders in danger. They are conscious of this and, when practical, take steps to mitigate it. ING's strategy is inclusive and cooperative, collaborating with others to achieve greater results. The bank believes that global issues such as financial crime and climate change cannot be addressed by a single industry, much less a single bank. They must work together to address issues like these if they want to see significant, constructive change. Banks can contribute to the development of sustainable solutions to economic difficulties, address climate change, and safeguard consumers, the bank, and the financial system from financial economic crime by collaborating with governments and other enterprises. The value creation model illustrates how ING utilizes various input sources to generate long-term value for its stakeholders and how its strategy enables value to flow throughout the entire ING organization. ING's stakeholders are persons or organizations that may be directly or indirectly affected by its actions or who may have an impact on its activities or ability to supply products and services. The environment in which banks operate is highly regulated. ING must so anticipate, understand, and assess how legislative and regulatory changes may affect its customers and businesses. New laws and regulations should promote economic stability, uphold fair competition, and enable ING to provide its customers and society with a wide range of excellent services.

In addition to NGOs, trade groups, think tanks, academics, and other members of society, ING frequently interacts with consumers, investors, and policymakers, including banking regulators, supervisors, officials, and politicians. The bank considers the interests of ING and all parties concerned when determining ING's stance, and it strives to find the best balance between potentially opposing viewpoints.

The goal of ING is to enable people to stay ahead in both their personal and professional lives. Making a difference for people and the environment is the foundation of its strategy. The bank aims to be a leader in sustainability and digital innovation in a rapidly changing world, able to adapt to the trends that impact the company. ING's two main goals are to give clients the best possible customer experience (CX) and to make sustainability the centre of all it does. Four enablers support these priorities: delivering seamless digital services, utilizing scalable operations and technology, maintaining safety and security, and maximizing the potential of its people. ING must be customer-focused as a company

since, in the end, its customers are its purpose for existing. The bank aims to provide customers with the goods and services they require, such as processing payments and other transactions, managing and preserving their funds, and offering loans and investment opportunities. ING's goal is to achieve all of that with a simple, quick, intimate, and pertinent experience. It acknowledges that the needs of various consumer types vary. In addition to offering suitable financial products and personalized advice, ING can help clients plan for the future and make informed financial decisions. ING aims to provide consumers with a simple, quick, and personalized experience. The sort of customer determines how this appears. While its focus is primarily on mobile banking for private individuals and small businesses, it is also about fostering personal relationships and leveraging industry and network knowledge for its mid-corporate and wholesale banking clients.

ING is constantly enhancing its mobile capabilities to meet client demand. According to ING's Annual Report (2023), compared to 58 per cent in 2022, more than 62 per cent of consumers in 2023 only used mobile banking – logging in via the app or website. Particularly notable examples of high mobile banking usage are Spain (66%), the Netherlands (69%), Romania (84%), and Turkey (90%)<sup>24</sup>. Thanks to ongoing advancements in the mobile onboarding process, more than 60% of new clients in the Netherlands, Australia, Germany, and Spain are now entirely digitally onboarded<sup>25</sup>. The goal of such enhancements is to enable as many new clients as possible to access digital onboarding. In other retail nations, similar initiatives are underway.

An increasing number of clients are utilizing digital self-service channels and remote video conferencing services. Through ING's cloud-based customer engagement platform, it can communicate with customers via phone, chat, and video. To standardize the experience and ensure that clients receive the same services worldwide, ING's global customer interaction platform is utilized in wholesale banking, as well as in seven retail countries. ING continued to expand the platform's reach this year, launching chat and phone services in Italy, as well as audio functionality in Germany and Romania. In 2023,

---

<sup>24</sup> ING Group N.V., *ING Group Annual Report 2023*, Amsterdam, 2024, pp. 23-24.

<sup>25</sup> ING Group N.V., *ING Group Annual Report 2023*, Amsterdam, 2024, pp. 23-24.

the technology enabled over 3.1 million automated chat sessions and more than 100,000 video meetings<sup>26</sup>.

The strategy update announced on October 3, 2016, at the ING Group Investor Day in Amsterdam was called Accelerating Think Forward (ATF). It was an update to the Think Forward plan, introduced in March 2014. According to the release, ING Bank customers have been increasingly using mobile devices to conduct financial transactions and have become more digitally savvy. “*Start a path of convergence towards one digital banking platform*” was the bank’s stated objective as a leader in digital banking<sup>27</sup>. Risk awareness, people, and digitalization were the three primary forces driving the reorganization. The digitization component of the restructuring made a significant contribution to cost reduction. People were the second force behind the reorganization. The placement of occupations and duties, the nature of some functions, and the elimination of office and IT positions were all going to change dramatically. Furthermore, there would be a change in the way things were done. At ING, employees were beginning to operate in self-organizing groups.

All organizational levels were introduced to the Agile Way of Working. A quicker time to market, where goods and services can now be introduced much more quickly than previously, was made possible by this working technique. This approach breaks down procedures into smaller steps. These procedures are circular rather than linear: based on consumer insight, a minimal viable product is developed through smaller sprints (time and activity intervals, such as one or two weeks). After a prototype is created based on the client’s demands, they are contacted regularly to determine if any modifications are needed to meet their needs. Although there is no set result, as there is always room for improvement, staff members can use that information to map out a course towards a final product. The continuous digital transformation component of ING’s reorganization also reflects this trend. The work environment at ING has become considerably more dynamic due to several changes in working practices, which have necessitated that some employees possess a range of skills.

---

<sup>26</sup> ING Group N.V., *ING Group Annual Report 2023*, Amsterdam, 2024, pp. 23-24.

<sup>27</sup> Eurofound, *Restructuring trends in retail banking: Case study on ING (the Netherlands)*, Working Paper WPEF22039, 2022, p. 6.

Last but not least, the board's initial impetus to reposition the bank was greatly influenced by the emergence of fintech and high-tech, as they released that an unwieldy service provider like ING needed to change to maintain its right to exist in its quickly evolving environment.

### **3.2.2. Implementation of service agility**

Firstly, almost every bank is currently concerned about how their business model or models may be disrupted. The majority of banks are hindered by legacy systems, regulatory restrictions, compliance requirements, and risk-averse mindsets, as well as challenges in introducing innovations beyond incremental improvements in products and services to the market, despite a general desire to foster innovation and customer-centricity throughout their organizations. Because of this, the banking industry as a whole presents an intriguing subject for research into the value-generating capabilities of agile approaches. Additionally, ING Bank is a particularly intriguing case study because, at the beginning of its agile transformation journey, ING was a traditional actor that had recently completed an operational and financial restructuring following its widely reported semi-nationalization after the global financial crisis. Furthermore, ING is more geographically and product-diversified than the majority of agile champions, in contrast to many of the recent success stories that support the implementation of agile principles. Lastly, ING's cultural DNA was structured, hierarchical, and administrative, in contrast to businesses run by millennials and conceived of in the Silicon Valley perspective.

The agile transformation at ING Netherlands began in 2011 as a grassroots initiative within the bank's IT department. While establishing the bank's new Think Forward Strategy in 2014, CEO Nick Jue and the senior leadership team realized that they were in the business of delivering products digitally. They observed how top digital firms were changing consumer expectations in many sectors, including banking. They concluded that ING ought to be the digital leader in the banking industry, ready and able to provide its retail, business, and investment customers with an unmatched level of customer service.

ING's executives adopted a minimum viable product (MVP) strategy for execution, which the renowned Agile Manifesto influenced. The "it depends" idea was their corollary strategy, which is still in use today: leaders needed to maintain flexibility when they did not have all the answers at once<sup>28</sup>. Marketing, product development and management, data, and IT – all the departments engaged in creating, executing, and maintaining new goods and services – comprise the bank's delivery organization, where the transition began. As the custodian of people and change management, HR's primary responsibility was to assign individuals to their new groups and assist in creating the framework of an agile organization. To ensure compliance with the entire transformation, HR must coordinate and interact with the work councils in the Netherlands simultaneously. Product owners, chapter leads, and agile coaches are the three new critical positions that ING created. In just two months, 3,000 people, or around 25% of the Netherlands' workforce, had their employment redefined. The method of choosing employees was also novel. The majority of workers had to reapply for jobs at the new company. Peer panels and chapter leads, as well as product owners from many functional areas, conducted interviews with employees due to the significance of digital and cross-functional collaboration. It took four months to complete the selection process, which included revising job descriptions and assigning squad members.

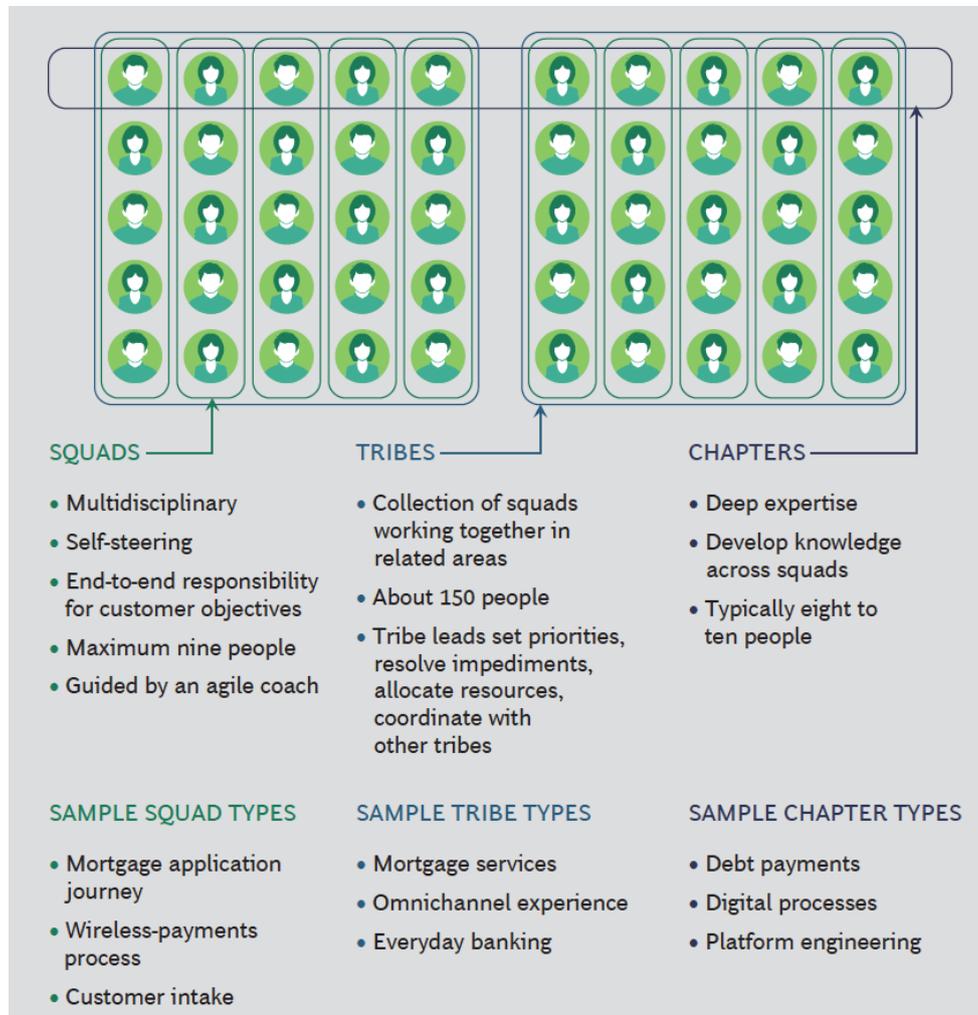
To develop a vision, goals, and a working model, HR leaders met at workshops and offsites over several months. The bank's delivery organization was organized into more than 200 chapters, 13 tribes, and over 300 multidisciplinary squads, all of which were modelled after the typical agile structure for software development teams (see Figure 7). To develop a particular product, squads have collective competence – including product and consumer knowledge, as well as IT and data analytics skills. They have the power to prioritize backlogged work and collaborate independently in sprints of two or three weeks. The numerous handovers of the pre-agile days, when members were spread across several departments and mostly communicated at biweekly meetings, are significantly reduced by this interdisciplinary team structure.

Additionally, it accelerates product releases, enabling products to meet consumer demands. Working side by side allows team members to increase their skill level; even if

---

<sup>28</sup> Boston Consulting Group, *HR's Pioneering Role in Agile at ING*, May 2018, p. 2.

one departs, the task can still be completed. An agile coach supports each squad (Boston Consulting Group, 2018).



**Figure 7: The Building Blocks of ING's Agile Organization.**

Source: Boston Consulting Group (2018). *HR's Pioneering Role in Agile at ING.*

The squad served as the foundational unit in ING's agile structure. Squads were independent, self-guiding groups that were responsible for their customer-related tasks from start to finish. Squads were formed based on a variety of backgrounds, specialities, and disciplines. A squad might, for example, consist of customer journey specialists with a range of expertise, such as marketing, product management, data analysis, and user experience, collaborating with engineers; the precise makeup would depend on the squad's goal. One squad member, known as the product owner, was given product ownership inside each squad. This person managed the squad's work and prioritized the

backlog, taking responsibility for the squad's production, but there were no hierarchical duties involved. ING established tribes to guarantee coordination between autonomous squads and self-steering squads. A tribe was a group of teams working towards the same goal, such as mortgage services, securities, and private banking. Although not the conventional ruler of all tribe members, the tribe leader was responsible for organizing the group and setting its course. The nimble coach, who guided squads and helped them become high-performing teams, played a crucial role in the new arrangement. The needs of each squad determined which agile coaches were allocated to them, and their profiles differed widely, with some emphasizing team dynamics, backlog management, and velocity enhancement. HR's new Craftsmanship framework, which effectively serves as a declaration of the bank's commitment to the employee in the modern era, is arguably the most significant innovation. The word "craftsmanship," which nods to the guild era, emphasizes the bank's value of expertise and commitment to professional development. Craftsmanship, according to leaders, makes individuals feel like they belong and stokes their enthusiasm for what they do. Craftsmanship is now the cornerstone of ING's regular performance reviews and personal development plan, which each employee is supposed to start creating on their 100<sup>th</sup> day.

HR established a dedicated workspace for its planning and operations in addition to implementing other agile techniques, such as smaller teams, sprints, and an iterative approach to product development and execution. The room sometimes called the Marketplace or the Obeva, is used as a control tower, information hub, and meeting spot. HR is no longer required to use printed reports, minutes, or internal newsletters, thanks to the Obeva. Every two weeks, HR leaders gather in the Obeva for stand-ups to review fresh data and customer input, as well as to check in on the strategic themes. HR now employs a single, standardized strategy for talent development, performance management, and benefits rather than developing distinct programs for each company and department. HR may create goods and services more rapidly and iteratively over time by utilizing the MVP approach. The HR team is focusing on incorporating the new methods of working into initiatives that are linked to the bank's success today. Implementing ING's Step-Up Performance Management program, which encourages

frequent and continuous feedback and inspires individuals to strive for excellence through personal stretch goals, is one of its top priorities.

The financial services industry in which ING operated was undergoing fast change due to technological and digital trends. In a market that has become increasingly competitive due to the introduction of new businesses, especially financial technology companies (fintech) and the large tech giants, the company felt that banking goods had become commodities and that the key differentiation was the customer experience. ING had a head start as a digital innovator. However, to serve individuals and organizations that were becoming increasingly interconnected in digital ecosystems, the corporation recognized the need to shift from a multichannel approach to an omnichannel vision of banking. The goal of the concept was to create an open platform where clients could access services and offers from external sources in addition to their financial requirements. To be present whenever and wherever its consumers spend time online, ING also needed its digital technologies to blend in seamlessly with other ecosystems.

It brings us to yet another core idea that guides ING's transformation process from start to finish: the company, technology, and techniques exist to help create value for the client, not as a means to an end. In other words, the fundamental objective was to address the issues the organization was facing rather than becoming agile for the sake of being agile. Additionally, this meant making ING a desirable employer for engineers to achieve this. It resulted in an unanticipated but fundamental change that drastically altered internal discussions and mindsets, making IT customer-centric almost overnight. Instead of working independently on an abstract technological roadmap or functional specs, IT teams began collaborating with businesses to work for the customer. Moreover, IT was becoming as legitimate as marketing, if not more so, in developing product roadmaps thanks to the direct feedback they were receiving from customers.

The agile transformation of ING Netherlands' IT first occurred swiftly, naturally, and almost unintentionally: by recognizing the accomplishments of the initial teams, bringing them to the attention of the rest of the organization, removing organizational barriers, and letting the IT department organically embrace and adjust to this new method of working from the bottom up. However, by 2012, a "*handover impediment*" had arisen in business

due to the significant shift towards DevOps (McKinsey & Company, 2017). The business initiated a parallel, independent, and agile transformation path to overcome this obstacle. However, in the end, this overlap between business and IT was crucial in accelerating ING's rapid transformation. Two years after IT's initial moves, the business side of ING Netherlands started its agile transformation journey in 2012.

By 2014, ING Netherlands had effectively initiated two distinct, related changes - one at the business level and one in IT - both of which utilized agile methodologies. However, because each department was testing and refining its internal methods of operation, the two initiatives mainly remained separate. Businesses' ability to supply the IT DevOps teams with the required resources – that is, product owners – was the primary reason for the convergence of these two experimental journeys. However, it became increasingly apparent that a coordinated and cohesive strategy was necessary as agile methodologies and approaches gained widespread adoption throughout the business world. Given how extensively ING Netherlands' teams and divisions had already adopted agile principles, it may come as a surprise to learn that, at this point, the majority of the Management Board members knew very little or nothing about agile. The Board needed to be educated as the first step. Peter Jacobs, who was ING Netherlands' CIO at the time, planned a learning trip for the Board of ING Netherlands to visit Spotify in Sweden in December 2014. Following the Spotify learning expedition, the Dutch organization saw rapid growth. Six Board off-sites were planned between December 2014 and January 2015 to create the agile framework that ING would eventually use. Instead of using business units or departments, a product-centred organization was chosen and structured around four work areas (McKinsey & Company, 2017).

ING is notable for several reasons, even though it is neither the largest nor the first corporation to attempt an agile transformation:

1. It was among the first corporate changes that the general public was aware of.
2. It was the first time a multinational bank of ING's size underwent a recorded transition.

3. ING has developed a proprietary model that combines its innovative techniques and procedures with agile best practices from the technology industry.
4. ING has been very transparent about sharing its experience, sharing its story, and attempting to assist others in doing the same.
5. The scope of the ongoing transformation is unprecedented.
6. A rising number of banks and corporate heavyweights, including Société Générale, BNP Paribas, and General Electric, share ING's goal of becoming a technology firm.

(McKinsey & Company, 2017).

Lastly, there are still significant obstacles to overcome, and the story is still developing.

### **3.2.3. Challenges encountered and outcomes achieved**

ING has to overcome obstacles brought on by the adoption of agile. Because the team had to report on its accomplishments, the agile method of working increased performance visibility. Daily stand-ups, biweekly retrospectives, and demos were among the routines that demonstrated how each member of the squad contributed to the team and how the team contributed to the overall success.

Some of the initial concepts that ING adopted from observing IT businesses did not completely flourish in the Dutch agile environment. ING changed responsibilities and established new ones in light of the lessons learnt. For instance, because large tribes had more than 20 product owners, some central product owners were responsible for ensuring that all product owners agreed to interact with their tribe lead. One of the key components of the ING model was that, without a managerial layer in between, a tribe lead communicated directly with their product owners to gain a better understanding of what the squads were doing. However, this proved too much for some of the larger tribes, so ING established a product area lead, who took over a specific domain or region within a tribe. ING was also able to begin addressing the issue of employees' career trajectories with the help of the definition of new roles. There used to be a clear path for people to

transition from junior to senior positions. However, now they can only choose between two roles: Customer Journey Expert and DevOps Operations Engineer (McKinsey & Company, 2017). ING was working on this at the time, and although these new positions assisted individuals in moving forward, they did not provide enough control over each person's career path.

It was also essential to attract the right candidates for the new positions. The role of customer journey specialist was highly demanding, as it encompassed the entire experience across all channels, including fulfilment in the back-end systems. Because the position was still relatively unknown in the market, ING was now investing a significant amount of time and effort in finding qualified candidates. The bank also took the time to explain to all new hires why it was making the decision it was making. For the new roles, external recruitment also needed to be modified. Because individuals were accustomed to outdated roles, such as marketing and product management, and because prospective new hires were unclear about the job's purpose, the Customer Journey Expert position needed to be repositioned in the market. As a tribe leader, this is the first thing that comes to mind every day: ensuring alignment and empowering teams to be autonomous while still respecting their autonomy. It is an ongoing process. A team may need assistance to improve when there is a lack of alignment, yet individuals may perceive this as an infringement on their freedom. In a customer delivery organization, there are occasional issues that must be resolved quickly. However, teams often dislike having their independence compromised when it comes to deciding how to approach the task – it is a constant balancing act. Another test of balance was the conversation with agile coaches. Agile coaches are part of a centre of competence and do not report to the tribe leads hierarchically. Such that, if needed, they can take on the tribal leader on their own. Agile coaches have occasionally questioned the tribe leaders, eventually switching to other tribes. The initial enthusiasm was weaker, and there was pressure to meet deadlines, as well as a risk of reverting to previous behaviours from a leadership standpoint. Even with the best of intentions, it was typical and a natural part of human nature for employees to revert to what had previously worked if they were not accustomed to working in a new manner under pressure.

As such, the ING transformation path presents a significant cliff-hanger regarding whether it will succeed at a group-wide scale while also delivering numerous insights into the critical elements that influence a successful agile transformation, not just for the banking industry.

One of the most relevant realizations is that establishing a new culture to facilitate the change at all organizational levels seemed to have depended more on a dedication to shared values than on tools:

- Even modest personal and local efforts can make a significant difference.
- Little victories encourage imitation and are infectious.
- Prioritize customer value as a means to drive change.
- To promote change, focus on problem-solving rather than method application.
- Before reproducing and adjusting on a larger scale, test, learn, and defend locally.
- Instead of focussing on the anticipated/desired outcome, let the experiment direct the learning.
- Be prepared to make tough decisions along the road regarding structure, organization, and management.
- To promote culture, concentrate on attitudes and behaviours.
- Agile concepts can serve as a standard compass to help all parties coordinate their efforts.

However, these broad guidelines were based on an already existing ING corporate culture characterized by two guiding principles that were succinctly stated: permit employees to depart from the norm purposefully and then have the courage to do so on a large scale. ING observed increases in customer satisfaction, team engagement, and release speed in subsequent years. Due to the agile reorganization, the time-to-market was shortened, and Net Promoter Score increased dramatically in specific units (Agile Business Consortium, 2020).

These lessons demonstrate that ING's journey involved a cultural transition that required perseverance, innovation, and sustained dedication rather than just an organizational makeover.

### **3.3. BBVA**

#### **3.3.1. General context**

The second-largest bank in Spain is BBVA Group, headquartered in Madrid. Operating in 30 countries, this globally diversified financial services company has a strong presence in top markets such as Europe, the US, Mexico, South America, and the Asia-Pacific region (Santoyo, 2015). BBVA and its affiliates offer a range of services, including retail and wholesale banking, asset management, private banking, credit cards, corporate and business banking, insurance, and loan products. Prudence and foresight are the cornerstones of the BBVA Group's business model, which is managed both locally and worldwide at the subsidiary level (BBVA, 2016). The bank currently employs over 132,000 people, has 8,400 branches, and serves more than 71 million customers (Rodriguez-Canfranc, 2018). Innovation, research, and community involvement are among its key values, as well as enhancing people's lives and opening doors for their futures. This is achieved through enthusiasm, cooperation, and fair play while leveraging technology as a competitive advantage.

The leadership of BBVA had made significant investments in digital transformation initiatives during the previous ten years, and the company had won awards for its work, including the Best Online Service in Europe and the Best Mobile Banking App in the World award from Forrester Research in 2017.

When it comes to digital transformation, Banco Bilbao Vizcaya Argentaria (BBVA) has advanced and integrated to a higher level than the majority of businesses in all sectors. The leadership of BBVA recognized and comprehended the nature of digital disruption, the growing disconnect between commercial banking and consumer behaviours, and the importance of network connections and sponsorship in closing that gap.

In 2007, one of BBVA's primary business goals was to expand globally, and the bank chose sports sponsorship to help achieve this goal because:

1. Sport was popular in BBVA's developing markets.
2. Sports sponsorship provides an opportunity to connect with millions of potential customers.

3. Sport is linked to a set of values, including fair play, respect for the rules, teamwork, transcending barriers, personal and professional integrity, and ethical behaviour, which align with and are a fundamental part of BBVA's Corporate Culture.

(Santoyo, 2015, p.1).

The bank's core values – a worldwide reputation, value positioning, and commercial activation potential – are upheld by BBVA's strategic sponsorship program.

Basketball and European football – specifically, Spain's La Liga – are two sports that appeal to BBVA's target markets and were the bank's initial key focus for sponsorship. The success of Pau Gasol and other Spanish NBA players, as well as the silver medal won by the Spanish national team at the 2008 Olympics, sparked BBVA's interest in basketball (IEG, 2010). BBVA signed three relevant sponsorship deals. The first came in 2008 when Spain's La Liga sponsored a league title. According to Santoyo (2015), BBVA's original marketing strategy was to attract and retain customers who were passionate about sports, incorporating football into its activation tactics so that fans and customers could experience the brand. Through its sponsorship of La Liga, BBVA successfully met its goal of reaching a global audience and establishing connections with millions of potential customers globally.

BBVA Compass (BBVAC)<sup>29</sup> was able to sponsor a range of sports properties, cultural events, and venues at the local and regional levels thanks to its partnership with the NBA, particularly its designation as the Official Bank of the NBA from 2010 to 2016, and its continued partnership with Anschutz Entertainment Group (Santoyo, 2015). BBVAC discovered that offering individualized financial services, educational opportunities, and distinctive customer engagement options through its award-winning mobile banking platform was a successful business strategy. Customers can make financial transactions and buy tickets to the bank's sponsored sporting and cultural events via its mobile app. Although the Sun Belt region of the United States is the primary location of BBVAC's

---

<sup>29</sup> BBVAC refers to BBVA Compass, the U.S.-based subsidiary of the BBVA Group. Headquartered in Birmingham, Alabama, BBVA Compass operated primarily across the Sun Belt region and served as a strategic platform for BBVA's expansion into the North American market, particularly through digital innovation and sponsorship initiatives.

target consumers, the organization also targets those individuals with credit or debit cards and a passion for sports nationwide.

With the help of its subsidiaries BBVAC and BBVA Francés, BBVA was able to expand its reach to new local, regional, and international audiences through innovative, digitally focused investment, relationship, and animation sponsorship activities, as well as successful multi-platform activations. BBVA achieved its growth and revenue goals by adhering to its client-centred approach, developing highly specialized digital banking products and services, and integrating sports and cultural sponsorships into its marketing strategy.

A data-driven business constantly develops, incorporates, and disseminates analytics knowledge to make people and processes more intelligent. Building an organizational capability that consistently produces creative, new analytics-based work practices and scales best practices throughout the organization is essential to becoming a data-driven organization. It extends far beyond simply employing data scientists and implementing dashboards and visualization tools. Businesses with a data-driven competence are more likely to generate unique knowledge that gives them a competitive edge and optimize the benefits from data.

As its centre of excellence for data science, BBVA created a wholly owned subsidiary in February 2014 called BBVA Data & Analytics (D&A). Initially, it was anticipated that D&A would finance itself by creating and marketing new goods or services in external markets, utilizing BBVA data, such as anonymized and aggregated payment data. However, BBVA executives soon realized that D&A's methods and data could generate significant financial value through internal operational enhancements and be applied to develop relevant digital product features and customer experiences – essential to bank digital transformation initiatives. Thus, internal BBVA projects were added to D&A's data monetization strategy over time. The leadership of BBVA believed that the entire organization needed to be involved and make a concerted effort to become a data-driven. However, leaders were aware that, in order to capture employees' attention in BBVA's conventional, hierarchical organization, they would need to explain the importance of data and being data-driven. By asking D&A data scientists to solve challenges both inside and outside the bank, BBVA created creative work practices. D&A scientists collaborated with business groups inside the bank to jointly develop innovative approaches to

enhancing operations. Moreover, D&A and BBVA Customer Analytics collaborated to create a dashboard that provided branch managers with personalized product recommendations at their discretion. D&A's success measurements encompassed both financial targets and long-term capability-building goals, which encouraged the company to transform its best innovative work practices into tools and approaches that could be applied throughout the organization.

In order to better match the company's investments in digital innovation projects with its strategy, BBVA management began developing an evidence-based procedure in 2016 that they named the Single Development Agenda (SDA) (Fonstad & Salonen, 2021, para. 3). Every quarter, over 2,000 proposals are assessed and prioritized by this procedure. The executives' ability to learn from initiatives and direct talent towards the most strategically promising ones was greatly enhanced by the creation of a unified investment model for the entire bank. While creating the SDA process, BBVA executives adopted a test-and-learn strategy, building on the agile approaches that the organization had implemented early in its digital transformation journey. Therefore, to follow the same tempo as agile, they structured the process to be evidence-based and iterative.

The SDA process underwent constant improvements over a five-year period. An execution framework developed from what began as a structure for prioritizing capital expenditures. The four concurrent activities that make up the SDA process today are:

1. Portfolio Strategy.
2. Prioritization and Planning.
3. Resource Allocation.
4. Execution.

(Fonstad & Salonen, 2021).

These activities are synchronized every quarter. Prioritizing efforts for the upcoming quarter are done top-down by combining the first two tasks. Initiative leaders, functional specialists, and senior executives collaborate to rank projects according to data that they are required to submit every quarter. The third task oversees the distribution of talent

among projects. The implementation of initiatives that leaders choose to receive talent for the previous quarter is represented by the fourth action.

BBVA's single accountability structure is the SDA process, which is implemented consistently and openly across the whole company. A sizable number of individuals representing various stakeholder groups must actively participate in this process. Although the SDA process required a significant amount of commitment, all the executives agreed that it was worth their effort. The approach helps initiative leaders create deliverables that serve the organization's strategic objectives more efficiently and intentionally. Furthermore, it enables senior executives to implement the company's plan more effectively and efficiently than they could in the past.

Since many components of achieving value are constantly changing due to the development and application of digital technology, benchmarking has less significance for businesses than it did in the past. Businesses should prioritize learning from their own experience above benchmarking. Make sure that every member of the top management team is on board and actively participating. The CEO of BBVA presented a clear directive for the team's work, frequently conveyed that it was a high priority, set up time for it in several important meetings, and offered encouragement to anyone reluctant to carry out the changes they had promised.

### **3.3.2. Implementation of service agility**

Agile is a project management approach that enables independent, multidisciplinary teams to concentrate on producing measurable outcomes quickly. As a result, the project's progress can be tracked, and if needed, the course can be adjusted, always keeping the client's needs at the forefront. With a growing interest in exploring operational methods, this project management strategy gained traction at BBVA. In 2014, teams tasked with creating a new mobile banking application began testing the new strategy, in addition to providing value-added services based on emerging technologies, such as artificial intelligence. The app sought to meet customer expectations regarding account management. Small, independent teams comprising individuals from multiple

departments with specialized profiles in various disciplines were established to achieve this goal. These teams, known as Scrum teams, began operating in a manner that differed significantly from the bank's customary methods (BBVA, 2020). This marked the beginning of the first BBVA agile team, whose work proved to be a total success. BBVA's app in Spain has been acknowledged by the consulting firm Forrester as the best in the world for three consecutive years (BBVA, 2020).

The bank chose to create additional scrum teams to take on new, high-impact business projects as a result of this initiative's success. As a result, BBVA established what it refers to as its digital factories in Spain and Mexico, which are teams responsible for completing initiatives crucial to the bank's transition. In addition to proving that more extensive organizational adjustments were required if the bank was to continue advancing with this method of working, BBVA's digital factors transformation efforts helped reinforce the bank's commitment to the agile methodology. These multidisciplinary scrum teams were being formed by stealing resources from other departments to work on new, agile projects. It resulted in work overload as teams struggled to keep up with regular workloads. The organization was initially set up in functional silos, which performed distinct steps of a single process without providing a comprehensive overview of how it was being executed.

Moreover, allowing for a liquid resource pool where employees can be allocated to the most relevant projects or procedures at any given time, this approach proved insufficient for the bank's new challenges. These factors led BBVA to make a significant change to its organizational structure. The Group used the knowledge it had acquired from applying agile methods to address this shift to build a more open, flexible, and effective organization.

As previously stated by the Single Development Agenda (SDA), this organizational shift also required complete visibility and openness regarding the ongoing programs. The SDA is now the crucial cornerstone of a staffing model that satisfies needs, as it has allowed the Group to gain a comprehensive picture of the bank's ability to complete projects. Lastly, based on expertise and experience, the model is designed to allocate each resource to the projects where it will contribute the most.

The first major corporation to successfully implement an agile transformation of its core service functions across all of its global branches is BBVA. In addition to the organizational and governance structure, over 33,000 employees in the bank's central services have seen changes in their working methods and experienced professional growth. The conventional idea of department and functional divisions has been reinterpreted by this modification, creating a new framework with five major building components for every department:

- *Customer management* – also known as the front line: small groups that oversee the interactions between several departments.
- *Project teams*: independent, multidisciplinary groups with the authority to reallocate resources every three months to the strategic priorities of the bank. They usually follow a scrum model.
- *Process teams*: charged with carrying out routine procedures to assist project teams of corporate operations. They usually operate using a Kanban model.
- *Disciplines*: smaller groups tasked with overseeing and disseminating the bank's best practices and knowledge in technical fields.
- *Control*: groups that span all business, operational, and management divisions within the Group.

(BBVA, 2020).

Additionally, tools for the professional development of the new organization's employees were developed. They consist of an assessment model that aligns with the new project approach to work and the people leader's responsibility to advise employees on their career paths and increase their visibility within the company.

Simultaneously, the bank employees needed to be supported during the shift to a model that deviated from tradition and instructed on the new work practices to guarantee the transformation's bedding-in. To achieve this, the bank initially established a team tasked with assessing the extent to which the new approaches were being implemented, as well as pushing the agile model throughout the bank's departments and geographic reach. Second, the agile coach position was established to support all teams in ensuring that the new model's methods and resources were effectively utilized, thereby maximizing the

potential profit from the new strategy. Agile coaches help teams focus on deliverables, quality, and customer satisfaction by teaching them how to work independently and supporting the necessary mental shift. Training and assessment programs have been introduced to support this new process. They are intended to promote the adoption of a new leadership style that makes leaders more accessible to teams and to foster team spirit as people embark on career development paths aligned with the new reality.

Technology is essential to making sure this paradigm is implemented. In this regard, businesses are finding that they must place bets on models that enable them to function with more scalability, agility, and accessibility from any location. Technology that facilitates the organization of data and planning of models more effectively, allowing for swift adjustments to accommodate a changing environment. With 78.9 million customers, BBVA holds a solid leadership position in Spain. It was the first bank in Europe to deploy the Chronicle and has been a Google Workspace user since 2011 (Google Cloud, n.d.). In Google, BBVA found a mentor with the technological know-how and insights to help transform the organization into a digital enterprise that competes with fintech companies, which are digital natives and challenge the financial industry's status quo. With the help of Google Cloud, BBVA acquired the essential skills necessary to fulfil its strategic objectives and make a strong impression on the market about how it would adapt to the demands of modern banking.

Additionally, with productivity tools that enhance the working environment, BBVA would be better equipped to combat increasingly complex cybersecurity risks and enhance the employee experience. By embracing digital innovation to develop new capabilities for its clients, BBVA also found a role model in Google. By embracing a new mentality – moving from a digital bank to a digital company – BBVA is collaborating with Google Cloud and its partners, Inetum and Accenture, to satisfy the demands of its contemporary clientele. This shift entails understanding the significance of cybersecurity, as well as catering to tech-savvy, multichannel consumers (Google Cloud, n.d.).

By having closer relationships with its clients, BBVA can maintain the customer's voice at the centre of its operations. The bank can adjust due to the rich insights generated by these exchanges and disseminated throughout the organization. Its Economy self-service

app, for instance, is the first of its kind in Spain (Google Cloud, n.d.). Customers can use it to assess their financial health and receive personalized suggestions for adjustments by tracking their income and expenses over time. Now, BBVA can quickly provide items to clients by imitating Google's software reliability engineering. BBVA now accomplishes this aim in just nine months, whereas the industry average is more than two years to get a concept into a customer's hands. GloMo, a recent innovation, serves as a mobile hub for personal finance. It connects all of a client's bank accounts – whether or not they are BBVA accounts – to a single platform. Consumers will always have financial demands beyond banking, and BBVA may continue to meet these needs well into the twenty-first century by deliberately leveraging these ancillary sectors. With the acquisition of fintech company Madiva Soluciones and the subsequent establishment of BBVA Valora, the bank has already fulfilled this plan (Google Cloud, n.d.). Customers may use the home-buying mobile app to point their phone at a house and get information about its neighbourhood, cost, and whether it is for sale or rent.

As it looks to the future, BBVA is aware that the key to success in four crucial areas – automation, personalization, human-machine interactions, and security – lies within the 12 billion contacts that occur across its channels. With the help of Google Cloud's AI and ML solutions, BBVA is now looking to leverage that untapped data, finish its digital transformation, and obtain a competitive advantage over digital-native businesses.

As a result, BBVA continued to apply the agile model to an increasing number of teams before transferring all its teams working on new client solutions to a new quarterly planning process based on the concepts of the Scaled Agile Framework (SAFe). 3.600 employees were working in the scrum at BBVA by the end of 2016, and many more were using the quarterly cadence of PIs (Program Increment) (BBVA, 2016, para. 5). All other departments, including HR, Finance, Risk, Legal, and others, continued to operate as usual, despite the remarkable change of some Customer Solutions and Engineering groups. BBVA chose to begin with HR (or Talent & Culture) as a result. By the end of 2016, the first step was to transfer 10% of the team to this new project-based organization and establish a pool of individuals who were entirely committed to projects across all Talent & Culture (T&C) units nationwide. At the same time, BBVA began examining the possibility of setting up shared-services centres in each nation. The head of T&C in Spain

decided to advance by turning the entire team into a completely agile organization by the middle of 2017 (BBVA, 2016, para. 6). This new organizational structure serves as the foundation for a new governance model that calls for new roles and duties, team rituals, people management techniques, and communication technologies to promote transparency and openness. Since the ultimate objective is to foster a cultural shift that centres execution teams within the organization and turns managers into servant leaders, this agile transformation is an ongoing process. Now, leaders will focus on providing strategic direction to their teams, assisting them in overcoming obstacles and serving as coaches to help everyone develop new skills and perspectives. Additionally, teams will gain from greater accountability, empowerment, and visibility.

### **3.3.3. Challenges encountered and outcomes achieved**

Businesses have had to make significant internal organizational changes in response to the forces of globalization, technological innovation, shifting social dynamics, and a workplace influenced by new generations of workers. By incorporating agile approaches into the daily operations of its core services division, which employs more than 33,000 people, BBVA achieved a significant milestone in 2019 in response to these developments. This development provided an opportunity to reflect on the bank's evolution and marked a turning point in its broader transformation path. Crucially, this change went well beyond just implementing new technology; it necessitated a significant adjustment to BBVA's operational and cultural framework (BBVA, 2020).

Extensive change management was required when agile work practices were extended to other countries within the Group, and employees from the different departments were integrated into newly established interdisciplinary teams. It involved redesigning internal procedures that had historically been hierarchical, as well as realigning the culture. The difficulty lay specifically in striking a balance between the continuous requirement to maintain business-as-usual operations and the increasing demand for agile initiatives that provide value-added, technology-based services. Ultimately, this conflict led BBVA to completely restructure its central services division (BBVA, 2020).

The bank's pre-existing organizational structure, characterized by functional silos that hindered cross-functional cooperation and process visibility, was one of the most significant challenges the bank faced during this transition. To improve transparency and flexibility, the legacy model needed to be completely redesigned, as it was found to be incompatible with the flexible, iterative nature of agile operations (BBVA, 2020). When employees were transferred from traditional departments to newly established agile teams, human resource restrictions became even more apparent. Teams were under tremendous pressure to simultaneously accomplish both every day and operational goals, as well as innovation-related objectives, as a result of this talent redistribution (BBVA, 2020).

BBVA's culture challenge was arguably the most complicated one. In addition to new work procedures, adopting an agile mentality required redefining interpersonal relationships and leadership responsibilities. The bank established specialized training and evaluation initiatives to support this change, with the goals of promoting servant leadership models, enhancing teamwork, and fostering a culture of continuous learning (BBVA, 2020). The demands of the transformation were further increased by the need to establish new governance structures, responsibilities, and procedures to integrate agility at all organizational levels (BBVA, 2020).

Despite these significant obstacles, BBVA has achieved notable results. By the end of 2019, more than 33,000 central services personnel had embraced agile-based new working practices, which had a substantial impact on interdepartmental interactions and professional growth pathways (BBVA, 2020). Due to this widespread adoption, BBVA is now recognized as a leader in agile transformation within the financial services industry.

The accelerated time-to-market for new digital products was one of the most obvious outcomes of this change. BBVA outperformed industry standards by reducing the average time required to transform an idea into a market-ready product from more than two years to approximately nine months, utilizing agile delivery frameworks and enhanced collaboration mechanisms (Google Cloud, n.d.).

The bank's agile journey has extended to departments, such as human resources, that are not typically associated with agile techniques. The Talent & Culture unit in Spain was the first to adopt a fully agile, project-based organizational structure in 2016. Other areas subsequently adopted this structure (BBVA, 2020). This program strengthened the all-encompassing character of BBVA's transformation by promoting more strategy coherence, autonomy, and visibility across support areas.

Lastly, BBVA was able to sustain a strong customer orientation through agility. The bank was able to put the demands of its customers at the centre of its operations by creating agile, data-driven feedback loops, which ensured that consumer needs continued to influence service delivery in real time (Google Cloud, n.d.). The structure required to successfully allocate resources, coordinate priorities, and maintain agile processes across several business units was supplied by tools like the Single Development Agenda (SDA).

In conclusion, BBVA's agile transformation was a multifaceted evolution encompassing organizational, cultural, and technological renewal rather than just a methodological change. Although there were many structural, operational, and behavioural obstacles along the way, the outcomes show that the ability to innovate, adapt, and successfully meet shifting market demands has improved.

### **3.4. Comparative Discussion of the Two Exemplary Cases**

Comparing ING and BBVA offers valuable insights into two distinct approaches to achieving service agility in large, well-established financial companies. Both businesses pursued agile transformations as strategic responses to external influences, including digital disruption, changing customer needs, and the need for faster and more flexible service delivery. However, the pace, design, and operational focus of the chosen models varied greatly.

The two situations are similar in that they acknowledge that agility necessitates systemic change at multiple organizational levels rather than just the adoption of discrete techniques. To better meet the needs of their customers and be more responsive to the

market, ING and BBVA both implemented cross-functional team structures, redesigned professional roles, and reorganized internal procedures. Senior leadership supported the change in each instance, and organizational learning and investments in human capital development were closely aligned with the change (McKinsey & Company, 2017; BBVA, 2020).

Their paths, however, show different institutional contexts and philosophies. Decentralization, experimentation, and hierarchical flattening were key components of ING's technology-driven, bottom-up change, which Spotify inspired. Rapid implementation, with its focus on autonomous squads and tribes, enabled speed and ownership; however, it also introduced early difficulties with position clarification, career growth, and coordination (Agile Business Consortium, 2020).

On the other hand, BBVA used a more methodical and hierarchical strategy. Utilizing governance instruments, such as the SDA, placed a high priority on strategic coherence. It also gradually incorporated agility into both business and support activities. BBVA gave formal coordination systems, training initiatives, and cultural change much attention. Digital platforms and agile coaches played a crucial role in facilitating a mental shift and ensuring uniform procedures across divisions and nations (Fonstad & Salonen, 2021; BBVA, 2020).

This comparison reveals that there is no single, uniform paradigm that consistently facilitates the efficient implementation of service agility in banking. Instead, how well the organization's structure, legacy systems, and cultural preparedness mesh with the selected agile framework determines how successful such changes are. While BBVA shows the feasibility of a slow, governance-driven approach based on institutional alignment and cultural cohesiveness, ING's example highlights the possibilities of quick, IT-centric transformation based on team autonomy.

Table 1 compares ING and BBVA based on organizational dimensions deemed pertinent in the research of agility in financial services, providing a summary and highlighting the key distinctions and similarities between the two models examined:

<b>Dimension</b>	<b>ING</b>	<b>BBVA</b>
Change management.	<i>Bottom-up, based on the Spotify model, with substantial team autonomy and HR as the sponsor of change.</i>	<i>Top-down, driven by executive leadership through the Single Development Agenda, which ensures alignment between strategy and execution.</i>
Leadership.	<i>Servant and coaching approach: focus on engaging people and creating self-organized teams.</i>	<i>Direct sponsorship from top management and strategic leadership to ensure discipline, consistency and continuity of change.</i>
Organizational culture.	<i>Strong emphasis on autonomy, experimentation and rapid prototyping, with greater flexibility and adaptability.</i>	<i>Emphasis on cohesion, standardization and resilience, with a culture more oriented towards control and internal alignment.</i>
Use of technology.	<i>IT and digital platforms are the primary drivers of transformation; the organization is structured into squads, tribes, and chapters.</i>	<i>Advanced use of data analytics, AI and technological partnerships (Google Cloud) to strengthen the scalability of services and the adaptability of the offering.</i>
Results.	<i>Rapid innovation and adaptability, but with challenges related to career sustainability and</i>	<i>Strategic alignment, greater resilience and process standardization, but with a more gradual pace of adaptation.</i>

	<i>the complexity of coordination.</i>	
--	--	--

**Table 1: Comparative Summary of Service Agility Models at ING and BBVA.**  
Source: Summaries of sources and cases covered.

These organizational features, summarized in Table 1, highlight the key differences between BBVA’s structured governance approach and ING’s rapid experimentation strategy. The comparison between ING and BBVA shows that the implementation of agility in banking services does not follow a single model but adapts to the organizational context. ING represents a radical and experimental approach, with change driven from the bottom up and focused on team autonomy. This has fostered rapid innovation and strong engagement but has also created challenges in terms of governance and career paths. In contrast, BBVA has undertaken a more gradual and structured process, with strong top-down leadership and centralized coordination tools such as the Single Development Agenda. This has ensured consistency and resilience but has somewhat limited the speed of adaptation.

These differences reflect what has been discussed in the literature on contingency perspectives (Teece, 2018; Uhl-Bien & Arena, 2018), according to which organizational agility is not a universal model but depends on the resources, culture and strategy of each bank. ING can be seen through the lens of dynamic capacity (rapid sensing and seizing), whereas BBVA symbolizes the dimension of reconfiguration (Teece, 2007), aiming for stability and long-term alignment. Leadership models also become differentiators: BBVA is more aligned with complexity leadership (Uhl-Bien & Arena, 2018), while ING adopts a servant and improvisational leadership approach (Pina et al., 2022).

In conclusion, according to the comparison, banks that want to add agility to their offerings must carefully consider their specific situation. While the BBVA model is better suited for organizations that value stability and strategic consistency, the ING model may motivate institutions seeking speed and experimentation. Both cases, however, confirm that agility cannot be imported as a standard solution, but requires a dynamic adaptation process capable of balancing autonomy and control, experimentation and discipline, speed and resilience.

## **4. Challenges and Strategic Suggestions for Banking Service Agility**

### **4.1. Typical Barriers to Service Agility**

The adoption of service agility in the traditional banking sector faces several significant and recurring obstacles, which concern not only the technological or procedural dimensions but also, above all, cultural, organizational, and systemic aspects.

The first critical element concerns cultural resistance to change. Traditional banks have historically been structured around hierarchical and linear models, with rigid processes and a culture of control and stability. These traits are hardly compatible with the principles of agility, which are based on adaptability, continuous learning, decision-making autonomy and cross-functional collaboration. In particular, as demonstrated by the ING and BBVA cases, even in contexts where agile models such as the Spotify framework or structures based on squads and tribes have been introduced, behaviours anchored to vertical logic remain, limiting the full expression of agile potential. Both banks had to undergo internal cultural transformation processes to make agility not only an organizational structure but also a shared identity. BBVA, for instance, encountered strong resistance in the initial phase due to the difficulty of overcoming a culture rooted in command and control and had to strengthen top management sponsorship and training programmes to foster the spread of an agile mentality at all levels of the company. Similarly, ING has focused on values such as empowerment, continuous learning and customer-centricity, recognizing that agility cannot be achieved without a profound change in people's behaviours and attitudes. The literature confirms that introducing agile practices in structured organizations requires a profound cultural change, without which the risk is that of fake agility, where structures appear flexible but are not. However, decision-making processes and operational logic remain unchanged (Adebayo, 2022).

This cultural barrier is closely linked to a second major obstacle: the rigidity of the technology infrastructure. Many banking institutions still operate on fragmented, vertical legacy systems, developed over decades of technological layering and not designed to support modularity, rapid change or real-time data integration. Offering flexible and adaptable services is complex in the absence of modular architectures and shared

platforms, which limit the bank's ability to respond promptly to customer demands or market changes. Again, ING and BBVA have addressed this critical issue through cloud-oriented IT modernization processes, utilizing APIs and breaking down services into reusable microservices. However, these transformations require long lead times, substantial investments and a comprehensive rethinking of the operating model (Fulea et al., 2023).

A further obstacle concerns the complexity of coordination between teams, which is particularly pronounced in large organizations. The interdependent nature of banking processes and the need to comply with common quality, compliance, and risk management standards make it challenging to align different agile teams and units consistently. In the absence of shared prioritization tools and a clear development agenda, agility risks generating confusion, duplication and loss of coherence. In addition, BBVA introduced a Single Development Agenda (SDA) to address this critical issue and ensure constant alignment between the strategy and its operational implementation. A further structural obstacle is the regulatory environment within which banks operate. The iterative and experimental approach of agility frequently clashes with the standards of compliance, data protection, transparency, and stability that financial organizations must ensure are met.

The traditional separation between the compliance function and operational activities can generate friction, slowdowns and uncertainty in decision-making, necessitating a rethinking of the relationship between agility and regulation through agile compliance models (McKinsey & Company, 2020). Finally, the lack of agile leadership and soft skills is a further limitation to the diffusion of service agility. The managerial models still prevalent in many banks are oriented towards control and predictability, whereas agility requires facilitation skills, complexity management, active listening and the promotion of experimentation. The literature on complexity leadership emphasizes that agile leaders must enable self-organizing dynamics, promoting psychological safety and adaptive coordination (Nguyen et al., 2024). At the same time, the scarcity of professional profiles capable of working in cross-functional and dynamic contexts requires a strategic investment in internal training and attraction of new talent, as witnessed by the initiatives undertaken by ING and BBVA.

Ultimately, these obstacles outline an articulated and layered picture, which confirms the extent to which service agility cannot be implemented through pictorial or technical interventions but requires a systemic and coherent transformation along multiple organizational dimensions. As emerged in the previous chapters, obstacles such as cultural inertia, infrastructural rigidity and coordination complexity act as limiting factors of dynamic capabilities (Teece, 2018) and hinder their operational activation. Additionally, organizations' capacity to scale agility in a cross-cutting and sustainable way is weakened by the absence of integrated governance and metrics-appropriate settings. The following section will address the strategic, staged approach necessary to overcome these challenges.

It should be emphasized that many of the impediments to service agility are not isolated barriers but rather result from ongoing tensions between opposing values, even as the systemic character of the problems is acknowledged. For instance, the control and traceability requirements of the banking sector may conflict with the degree of autonomy required for agile teams to make decisions. In a similar vein, iterative release frequency needs to be continuously matched with regulatory compliance and risk mitigation. Furthermore, some barriers tend to overlap and support one another. Similar to how a lack of agile leadership can impair a team's capacity for efficient coordination, an organizational culture resistant to change may impede the adoption of new technology. Addressing these challenges requires a systemic, integrated approach that can understand the more profound organizational ramifications rather than a piecemeal approach.

A summary of the main obstacles identified, along with examples from the analyzed exemplary cases, is presented in Table 2.

<b>Obstacle</b>	<b>Description</b>	<b>Examples</b>
Cultural and Organizational Resistance.	<i>Traditional mindsets and control orientation hinder the agile mindset.</i>	BBVA had to work hard on internal culture with training and sponsorship.
Rigidity of Legacy Systems.	<i>Outdated IT systems limit modularity and slow down innovation.</i>	ING has transformed its IT architecture to cloud-native and API-driven.

Complexity of Coordination.	<i>Aligning agile teams and strategy is complex without shared governance tools.</i>	BBVA introduced the SDA to harmonize execution.
Regulatory Constraints and Compliance.	<i>Regulatory pressure limits experimentation and slows down decision-making cycles.</i>	Both ING and BBVA have initiated efforts to integrate compliance into agile workflows.
Insufficient Leadership and Skills.	<i>There is a lack of facilitator leaders and profiles with hybrid skills for agile environments.</i>	BBVA and ING created academies and internal pathways to promote agile leadership.

**Table 2: Typical Barriers to Service Agility.**  
Source: Summaries of sources and cases covered.

The difficulties that slow down agile transformation in banking are by no means unique to that context. For example, insurance companies face similar challenges: outdated IT systems, rigid organizational structures and looming regulatory pressure. As evidence of this, McKinsey & Company (2025) notes that only a few companies in the sector have successfully leveraged artificial intelligence to gain real competitive advantages. The main problem is not a lack of technology, but rather the absence of a systemic strategic approach, a comprehensive rethinking of processes, technologies and organizational models. This reinforces the idea that cultural and infrastructural barriers are common obstacles to agility within the financial services ecosystem.

#### **4.2. Strategic Suggestions for Enhancing Service Agility**

A planned and integrated approach that can act in concert on multiple important organizational dimensions – culture, technology, governance, and leadership – is necessary to overcome the barriers preventing the banking industry from adopting service agility. The recommendations presented in this section are not intended as one-size-fits-all or standardized solutions but rather as dynamic guidelines that must be adapted to each bank’s specific context. In line with the dynamic capabilities’ perspective (Teece, 2018),

this implies the organization's ability to perceive changes in the environment (sensing), to seize new opportunities through timely decisions (seizing) and to consistently transform its structure (transforming), so that the services it offers are indeed agile, adaptive and value-oriented for the customer.

A priority area of intervention is cultural transformation, which is the enabling condition for any agile change process. As emerged in the cases of ING and BBVA, agile organizational structures (e.g., squad, tribe, chapter) can be ineffective if not accompanied by an evolution of corporate culture. Banks should, therefore, invest in building a widespread agile mindset, fostering people empowerment, shared responsibility and iterative experimentation. Continuous training paths, consistent recognition systems, psychologically safe environments and distributed decision-making processes are key tools to promote this change. BBVA, for instance, developed a change management plan that actively involved top management in the role of sponsors and disseminators of new organizational behaviours.

The technological dimension constitutes the second strategic pillar. IT infrastructures must be updated with modular designs, flexible digital platforms, and standardized APIs to guarantee ongoing service adaptation. The success of a modular cloud-oriented approach in promoting the quick creation and scalability of digital services has been validated by ING's experience. In particular, the separation of front-end and back-end, the use of reusable microservices and the adoption of DevOps models have enabled greater team autonomy while reducing dependency on legacy environments and the accumulation of technology debt. However, technological transformation requires a long-term vision, coordination with control functions and the introduction of governance mechanisms capable of balancing autonomy and architectural consistency. This approach aligns with the discussion in Chapter 2.2.1. where it is emphasized that modular IT architectures are a strategic prerequisite for building adaptive and flexible services. In particular, modularity enables the development of reusable and interoperable components, facilitating the iterative release of customer-oriented solutions and the scalability of service models in keeping with the ideas of service agility, the division of

front-end and back-end, together with the use of APIs and microservices, aids in lowering reliance on outdated systems and encouraging ongoing development.

Third, there is a need to strengthen the governance of cross-functional coordination. One of the main criticalities that have emerged in the transition to agile models concerns fragmentation between teams and the difficulty of aligning priorities in complex contexts. The creation of shared tools for strategic prioritization, the definition of common roadmaps and the introduction of structured feedback mechanisms between teams are essential conditions for ensuring consistency between short-term and long-term objectives. In this sense, the experience of the SDA adopted by BBVA represents good practice for synchronizing the execution of agile teams with the organization's strategic objectives. Collaborative digital platforms and integration roles, such as agile delivery managers or cross-functional product owners, can support such tools. As discussed in Chapter 2.1.3, the effectiveness of coordination in agile environments depends not only on the formal structure but also on the adoption of flexible and adaptive mechanisms. Among these, hybrid governance systems, which combine strategic alignment and operational autonomy, and digital tools that facilitate transparency, priority sharing and cross-functional learning, are particularly relevant. According to this viewpoint, team coordination is a dynamic activity that immediately impacts the organization's capacity to create value in unpredictable times, rather than being solely a managerial task.

Another strategic front is the proactive management of regulatory compliance. Agility in financial services must necessarily coexist with stringent regulatory constraints. To prevent these from becoming a brake on innovation, banks can adopt agile compliance models, whereby control functions are integrated from the early stages of service design. The use of automated tools for monitoring requirements, the implementation of dynamic checklists and the co-creation of solutions between business and compliance help reduce decision-making time and promote a shared risk culture (McKinsey & Company, 2020).

Finally, a cross-cutting enabling factor is adaptive leadership, along with the enhancement of hybrid competencies. The literature on complexity leadership theory emphasizes the importance of non-prescriptive leadership models that can enable emergent dynamics,

facilitate collaboration, and promote adaptation in complex systems (Uhl-Bien & Arena, 2018). Banks should orient management development paths towards facilitation, coaching, negotiating meanings and managing complexity. Talent with a variety of transversal capabilities, including digital, relational, and analytical abilities, must be sought out and nurtured. According to this viewpoint, ING’s horizontal mobility policies and BBVA’s training programs, including the Agile Academies, are admirable examples since they help create a workforce that is robust and adaptable to shifting circumstances. This approach is consistent with the discussion in Chapter 2.3.3, where it is emphasized that leadership in agile contexts assumes a facilitating rather than a directive role. In particular, models such as servant leadership and the complexity leadership model emphasize the need for leaders who can foster collaboration, enabling self-organizing contexts and accompanying the organization in continuous exploration and learning. These competencies are not innate but require structured training and an overhaul of the traditional managerial evaluation system.

In summary, the recommendations outlined should not be understood as isolated interventions, but rather as part of a systemic, co-evolutionary transformation in which the various organizational elements reinforce one another. Building an agile culture, supporting flexible technologies, the presence of integrated governance, fostering dialogue between agility and compliance, and the emergence of new forms of leadership represent interconnected dimensions that, when managed synergistically, can make genuine, scalable, and sustainable service agility possible.

The main policy recommendations to promote agility in banking services, categorized by areas of intervention and illustrated with application examples, are summarized in Table 3.

<b>Domain</b>	<b>Summary Recommendation</b>	<b>Application examples</b>
Organizational Culture.	<i>Promoting a widespread agile mindset through training and feedback.</i>	BBVA involved top management as sponsors of cultural change.

Technological Infrastructure.	<i>Adopt modular IT architectures and flexible platforms to enable adaptive services.</i>	ING implemented microservices and cloud to support agile digital services.
Strategic Coordination.	<i>Implement shared tools and roadmaps to align teams and strategy.</i>	BBVA adopted a unique agenda to orient agile teams to corporate strategy.
Compliance Management.	<i>Integrating the compliance function into agile processes with collaborative approaches and automated tools.</i>	BBVA and ING experiment with agile compliance models that involve early risk assessment.
Leadership and Skills.	<i>Developing facilitative leadership and attracting talent with transversal skills (digital and relational).</i>	ING and BBVA have created internal training paths for leadership and agile skills.

**Table 3: Strategic Suggestions for Enhancing Service Agility.**  
Source: Summaries of sources and cases covered.

### 4.3. Concluding remarks

The analysis in this chapter has demonstrated that the banking industry’s adoption of service agility must be viewed as a profoundly transformative process that encompasses organizational structures, skills, leadership models, technology, and culture rather than being reduced to a set of discrete procedures or tools. The obstacles encountered – cultural, technological, regulatory and coordination – do not act independently but reinforce each other, generating systemic complexities that require integrated and coherent solutions.

The strategic recommendations outlined do not offer a one-size-fits-all recipe but point to the need for multilevel and continuous action, combining vision and operability, stability and adaptation. In this sense, service agility is configured as a dynamic capability

(Teece, 2018) that can be cultivated and renewed over time through experimentation, iterative learning, and constant realignment between structure and customer value.

The paths taken by ING and BBVA show that, while operating in a highly regulated environment, it is possible to implement effective agile models. Nevertheless, the adoption of agile tools, such as squads, digital platforms, or specific organizational roles, is only part of the process; it is crucial to activate a more profound cultural change, which involves the entire organization and recognizes leadership as a key element in enabling and sustaining transformation. Only by adopting a systemic and adaptive perspective will it be possible to make service agility not a goal to be achieved but a permanent and sustainable organizational condition.

The considerations developed in this chapter form the basis for the overall conclusions of the thesis, which will analyze not only the initial objectives but also the broader implications of service agility in future banking scenarios, both traditional and digital. Such considerations could also be a starting point for future studies on the scalability of service agility in smaller or emerging banking contexts.

In conclusion, although the analysis in this chapter has focused primarily on the banking sector, many of the considerations made can also be extended to other related areas, such as insurance. Insurance companies, too, find themselves having to reconcile legacy systems, entrenched organizational culture and regulatory constraints with the need to innovate and offer more flexible and personalized services. In recent years, several experiments have been launched in this direction. As noted by McKinsey & Company (2025), actual value stems from a more comprehensive transformation that encompasses digital infrastructures, decision-making processes, and operating models, rather than from the discrete introduction of new technology. It is a challenging procedure that requires a shift in perspective and a specific set of skills. However, it confirms that agility is becoming a strategic objective common to the entire financial services sector, far beyond banking institutions alone.



## **Conclusion**

At the end of this work, it is possible to examine the concept of service agility in the banking industry in a thorough and structured manner, emphasizing its theoretical foundations, organizational requirements, application strategies, and implementation issues.

Organizational agility has been confirmed as a necessary response to a context characterized by volatility, uncertainty, complexity, and ambiguity. As a result, service agility falls under this paradigm and refers to the ability to modify products, procedures, and customer interactions in unpredictable and variable situations. Due to technological improvements, the rise of new competitors, increasing regulatory complexity, and changing consumer needs, this flexibility is becoming progressively noticeable in an industry like banking, which has traditionally prioritized stability and preservation. The development of service agility is rooted in a combination of organizational, technological, and cultural factors that must act in an integrated manner. Moreover, adaptability is a result of both coordination mechanisms that maintain unity and alignment in increasingly dynamic organizations, as well as the resilience and flexibility of structures that enable us to deal with ever-changing environments. It is further compounded by the role of modular IT architectures and digital platforms, which are now essential for ensuring scalable, fast, and customizable services. However, none of these dimensions can produce lasting results without a truly agile culture and leadership that can combine strategic vision with a people-centric approach. It is precisely this integration that determines the difference between agility experienced as an abstract principle and agility translated into concrete practice.

The examples of ING and BBVA have demonstrated how these principles can take different forms depending on the context, as well as how they can be translated into valuable operational pathways. ING has focused on a model of independent and collaborative teams that promotes ongoing innovation and enhances the client experience. In contrast, BBVA has initiated a gradual yet steady transformation process, supported by top management, that integrates strategy and execution, and utilizes data as a lever to make choices more quickly and effectively. Even if ING and BBVA, as two influential

and international banks, follow different paths, both experiences demonstrate that agility is a practical viewpoint for them, one that, despite inevitably facing challenges, can yield observable and long-lasting benefits.

The analysis of obstacles and recommendations revealed that the adoption of agility in banking services is still hampered by cultural rigidity, bureaucratic structures, regulatory constraints, and technological complexity. At the same time, potential areas for improvement have emerged, including the promotion of a culture of continuous learning, investment in enabling technologies, the building of autonomous multidisciplinary teams, and, finally, the valorization of leadership models capable of supporting experimentation and strategic vision. This implies that service agility is not an immediately achievable goal, but a progressive process that requires consistency, commitment, and a systemic perspective.

Moreover, it should be emphasized that this work does not claim to exhaust the broad and complex concept of service agility. The intention was instead to offer a general and structured overview of the phenomenon, capable of connecting the main theoretical contributions with organizational dynamics and examples drawn from banking practice. From this perspective, the value of the analysis lies not in its completeness, but in how it can help better comprehend the problems and challenges associated with being agile in services.

Ultimately, the path developed clearly shows that the bank of the future cannot simply adopt individual agile practices but make agility a distinguishing feature of its identity. Only institutions capable of balancing stability and innovation, efficiency and experimentation, security and flexibility will be able to maintain their relevance in a constantly evolving context, consistently placing the customer relationship at the centre of their strategies. At the end of this analysis, it emerges that service agility is more than just a practice or tool for adaptation. In fact, it is a prerequisite for creating financial institutions that can continuously innovate, learn from mistakes, and successfully negotiate the complexity of the modern world.

The primary contribution of this research lies in interpreting service agility as a distinctive strategic orientation for the banking sector, rather than merely a variation of organizational agility. The thesis emphasizes the systemic character of agility in services by fusing theoretical models, organizational circumstances, and real-world examples. It demonstrates how this calls for coordinated managerial, cultural, and technical changes.

At the same time, the analysis opens up prospects for future research, ranging from comparative studies of different banking models at the international level to the role of fintech and digital-native players to empirical investigations of customer and employee perceptions of agility.



## Bibliography

- Abdurrahman, A., Gustomo, A., & Prasetyo, E. A. (2023). Impact of dynamic capabilities on digital transformation and innovation to improve banking performance: A TOE framework study. *Journal of Innovation and Entrepreneurship*, 12, Article 58.  
[https://www.researchgate.net/publication/377805294\\_Impact\\_of\\_dynamic\\_capabilities\\_on\\_digital\\_transformation\\_and\\_innovation\\_to\\_improve\\_banking\\_performance\\_A\\_TOE\\_framework\\_study](https://www.researchgate.net/publication/377805294_Impact_of_dynamic_capabilities_on_digital_transformation_and_innovation_to_improve_banking_performance_A_TOE_framework_study)
- Adebayo, O. T. (2022). Agile and organizational culture: Fostering agile values and mindset. *International Journal of Science and Research Archive*, 7(2), 672-681.  
[https://www.researchgate.net/publication/385984928\\_Agile\\_and\\_organizational\\_culture\\_Fostering\\_agile\\_values\\_and\\_mindset](https://www.researchgate.net/publication/385984928_Agile_and_organizational_culture_Fostering_agile_values_and_mindset)
- Agile Business Consortium. (2024). Using AI to empower cross-functional teams.  
<https://www.agilebusiness.org/resource/using-ai-to-empower-cross-functional-teams.html>
- Aghina, W., Ahlbäck, K., De Smet, A., Lackey, G., Lurie, M., Murarka, M., & Handscomb, C. (2017, December). The five trademarks of agile organizations. McKinsey & Company.  
<https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/the-five-trademarks-of-agile-organizations>
- Aghina, W., Handscomb, C., Salo, O., & Thaker, S. (2020, May 20). The impact of agility: How to shape your organization to compete. McKinsey & Company.  
<https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/the-impact-of-agility-how-to-shape-your-organization-to-compete>
- Alzoubi, A. Y. (2016). Organizational agility: a literature review. *International Journal of Business and Management*, 11(5), 286-296.
- Annosi, M. C., Giustiniano, L., Brunetta, F., & Magnusson, M. (2018). The emergence of new organization designs: Evidence from self-managed team-based organizations. In P. Boccardelli, M. C. Annosi, F. Brunetta, & M. Magnusson (Eds.), *Learning and innovation in hybrid organizations: Strategic and organizational insights* (pp. 255-266).

- Appelbaum, S. H., Calla, R., Desautels, D., & Hasan, L. (2017). The challenges of organizational agility (Part 1). *Industrial and Commercial Training*, 49(1), 6-14. <https://www.emerald.com/insight/content/doi/10.1108/ict-05-2016-0027/full/html>
- Appelbaum, S. H., Calla, R., Desautels, D., & Hasan, L. N. (2017). The challenges of organizational agility (Part 2). *Industrial and Commercial Training*, 49(2), 69-74. <https://www.emerald.com/insight/content/doi/10.1108/ict-05-2016-0028/full/html>
- Baeza, C. (2021, March 4). BBVA leads the implementation of agile methodologies in Spanish companies. BBVA. <https://www.bbva.com/en/bbva-leads-the-implementation-of-agile-methodologies-in-spanish-companies/>
- BBVA. (2019a, June 12). *Agile methodology: The revolution of the ways of working*. <https://www.bbva.com/en/innovation/agile-methodology-la-revolution-ways-working/>
- BBVA. (2019b, October 7). *Agile at BBVA: A journey of continuous transformation*. <https://www.bbva.com/en/innovation/agile-at-bbva-a-journey-of-continuous-transformation/>
- BBVA. (2019c, November 20). *Single Development Agenda: The solution to aligning strategy and execution*. <https://www.bbva.com/en/single-development-agenda-the-solution-to-aligning-strategy-and-execution/>
- Beck, K., Beedle, M., Van Bennekum, A., Cockburn, A., Cunningham, W., Fowler, M., Grenning, J., Highsmith, J., Hunt, A., Jeffries, R., Kern, J., Marick, B., Martin, R. C., Mellor, S., Schwaber, K., Sutherland, J., & Thomas, D. (2001). *The 12 principles behind the Agile Manifesto*. Agile Alliance. <https://agilealliance.org/agile101/12-principles-behind-the-agile-manifesto/>
- Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. (2023). Digital business strategy: Toward a next generation of insights. *MIS Quarterly*, 37(2), 471-482. [https://www.researchgate.net/publication/282543175\\_Digital\\_Business\\_Strategy\\_Toward\\_a\\_Next\\_Generation\\_of\\_Insights](https://www.researchgate.net/publication/282543175_Digital_Business_Strategy_Toward_a_Next_Generation_of_Insights)
- Bhattacharyya, D., Dietz, M., Edlich, A. Höll, R., Mehta, A., Weintraub, B., Windhagen, E. (2023). *The great banking transition: The global banking annual review 2023*. McKinsey & Company.

<https://www.mckinsey.com/industries/financial-services/our-insights/global-banking-annual-review-2023>

- Brosseau, D., Ebrahim, S., Handscomb, C., & Thaker, S. (2019, May). The journey to an agile organization. McKinsey & Company.  
<https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/the-journey-to-an-agile-organization>
- Brühl, V. (2022). Agile methods in the German banking sector: Some evidence on expectations, experiences and success factors. *Journal of Business Economics*, 92, 1337-1372.  
[https://www.researchgate.net/publication/362041706\\_Agile\\_methods\\_in\\_the\\_German\\_banking\\_sector\\_some\\_evidence\\_on\\_expectations\\_experiences\\_and\\_success\\_factors](https://www.researchgate.net/publication/362041706_Agile_methods_in_the_German_banking_sector_some_evidence_on_expectations_experiences_and_success_factors)
- Calnan, M., & Rozen, A. (2018). ING's agile transformation – Teaching an elephant to race. *Global Business and Organizational Excellence*, 37(6), 6-17.  
[https://www.researchgate.net/publication/337011819\\_ING's\\_Agile\\_Transformation-Teaching\\_an\\_Elephant\\_to\\_Race](https://www.researchgate.net/publication/337011819_ING's_Agile_Transformation-Teaching_an_Elephant_to_Race)
- Cowell, N., Roseman, A., Etingue Kum, M., Valenti, J., & O'Callaghan, R. (2024). Winning in the era of digital banking [Report]. Deloitte Digital.  
<https://www2.deloitte.com/content/dam/Deloitte/us/Documents/financial-services/us-winning-in-the-era-of-digital-banking-pov.pdf>
- Davis, J. P., Eisenhardt, K. M., & Bingham, C. B. (2009). Optimal structure, market dynamism, and the strategy of simple rules. *Administrative Science Quarterly*, 54(3), 413-452.  
<https://journals.sagepub.com/doi/10.2189/asqu.2009.54.3.413>
- Dickson, R. K. (2024). Organizational resilience as the springboard for organizational success in a turbulent business environment. *International Journal of Business and Management Invention*, 13(3), 22-30.  
[https://www.researchgate.net/publication/389804331\\_Organizational\\_Resilience\\_as\\_the\\_Springboard\\_for\\_Organizational\\_Success\\_in\\_a\\_Turbulent\\_Business\\_Environment](https://www.researchgate.net/publication/389804331_Organizational_Resilience_as_the_Springboard_for_Organizational_Success_in_a_Turbulent_Business_Environment)
- Doz, Y. L., & Kosonen, M. (2008). *Fast strategy: How strategic agility will help you stay ahead of the game*. Pearson Education.

- Eilers, K., Peters, C., & Leimester, J. M. (2022). Why the agile mindset matters. *Futures*, 143, Article 102999.  
<https://www.sciencedirect.com/science/article/pii/S0040162522001822>
- Eurofound. (2013). *Anticipating and managing the impact of change. Restructuring trends in retail banking: Case study on ING (The Netherlands)*. Publications Office of the European Union.  
<https://www.eurofound.europa.eu/system/files/2022-09/wpef22039.pdf>
- Falance, R. J. (2012). Organizational agility: Beyond lean. *International Journal of Business and Social Science*, 3(23), 1-8.
- Fonstad, N. O., & Salonen, J. (2021, September 16). Four principles for realizing strategy with innovation (MIC CISR Research Briefing No. XXI-9). MIT Sloan Center for Innovation Systems Research.  
[https://c isr.mit.edu/publication/2021\\_0901\\_FourPrinciples\\_FonstadSalonen](https://c isr.mit.edu/publication/2021_0901_FourPrinciples_FonstadSalonen)
- Forcano, R. (2018, July 16). HR goes agile: A case study in BBVA. BBVA.  
<https://www.bbva.com/en/opinion/hr-goes-agile-case-study-bbva/>
- Fowler, M., Highsmith, J. (2001, August). The Agile Manifesto. *Software Development Magazine*.  
[https://www.hristov.com/andrey/fht-stuttgart/The\\_Agile\\_Manifesto\\_SDMagazine.pdf](https://www.hristov.com/andrey/fht-stuttgart/The_Agile_Manifesto_SDMagazine.pdf)
- Franco, M., Guimarães, J., & Rodrigues, M. (2022). Organisational agility: Systematic literature review and future research agenda. *Knowledge Management Research & Practice*. Advanced online publication.  
<https://doi.org/10.1080/14778238.2022.2103048>
- Fulea, M., Mocan, B., Dragomir, M., & Murar, M. (2023). On increasing service organizations' agility: An artifact-based framework to elicit improvement initiatives. *Sustainability* 15(13), Article 10189.  
<https://www.mdpi.com/2071-1050/15/13/10189>
- Giovine, C., Lerner, L., Thomas, R., Singh, S., Kakulavarapu, S., & Chung, V. (2024). Extracting value from AI in banking: Rewiring the enterprise. McKinsey & Company.  
<https://www.mckinsey.com/industries/financial-services/our-insights/extracting-value-from-ai-in-banking-rewiring-the-enterprise>

- Giustiniano, L., & Cantoni, F. (2022). Between sponge and titanium: Designing micro and macro features for the resilient organization. In P. Boccardelli, M. C. Annosi, F. Brunetta, & M. Magnusson (Eds.), *Learning and innovation in hybrid organizations: Strategic and organizational insights* (pp. 167-190).
- Goldman, S. L., Nagel, R. N., & Preiss, K. (1995). *Agile competitors and virtual organizations: Strategies for enriching the customer*. Van Nostrand Reinhold.
- Google Cloud. (n.d.). *BBVA: leading finance in digital workplace transformation and cybersecurity*. <https://cloud.google.com/customers/bbva>
- Greiner, L. E. (1998). Evolution and revolution as organizations grow. *Harvard Business Review*, 76(3), 55-68.
- Gremme, K.-M., & Wohlgemuth, V. (2017). Dynamic capabilities: A systematic literature review of theory and practice. *European Journal of Management Issues*, 25(1), 30-35. [https://www.researchgate.net/publication/320284791\\_Dynamic\\_capabilities\\_a\\_systematic\\_literature\\_review\\_of\\_theory\\_and\\_practice](https://www.researchgate.net/publication/320284791_Dynamic_capabilities_a_systematic_literature_review_of_theory_and_practice)
- Griffith, T. L., Majchrzak, A., & Giustiniano, L. (2023). Hyperloop transportation technologies: Practices for open organizing across VUCA contexts. *Journal of Organization Design*, 12(1), Article 7. <https://link.springer.com/article/10.1007/s41469-023-00141-1>
- Gulati, R. (2007). Silo Busting: How to execute on the promise of customer focus. *Harvard Business Review*, 85(5), 98-108.
- ING Group. (2024). *Annual Report 2023*. <https://www.ing.com/Investors/Financial-performance/Annual-reports.htm>
- Harraf, A., Wanasika, I., Tate, K., & Talbott, L. (2015). Organizational agility. *The Journal of Applied Business Research*, 31(2), 675-686. <https://core.ac.uk/download/pdf/268105389.pdf>
- Holsapple, C. W., & Li, X. (2008). Understanding organizational agility: A work-design perspective. *Journal of the Association for Information Systems*, 9(10), 635-670. <https://apps.dtic.mil/sti/tr/pdf/ADA486893.pdf>

- Kerr, W. R., Gabrieli, F., & Moloney, E. (2018). Transformation at ING (A): Agile. (Harvard Business School Case No. 818-077, Rev. 2017, 2018). Harvard Business School Publishing.  
<https://www.hbs.edu/faculty/Pages/item.aspx?num=53838>
- Lawrence, W. W. (2015). Developing dynamic capabilities for bank turnaround. *World Review of Business Research*, 5(3), 197-212.  
[https://www.researchgate.net/publication/355719719\\_Developing\\_Dynamic\\_Capabilities\\_for\\_Bank\\_Turnaround](https://www.researchgate.net/publication/355719719_Developing_Dynamic_Capabilities_for_Bank_Turnaround)
- Lu, Y., & Ramamurthy, K. (2011). Understanding the link between information technology capability and organizational agility: An empirical examination. *MIS Quarterly*, 35(4), 931-954. <https://www.jstor.org/stable/41409967>
- Lyytinen, K., Rose, G. M., & Yoo, Y. (2002). The disruptive nature of information technology innovations: The case of internet computing in systems development organizations. *MIS Quarterly*, 27(4), 557-596.  
[https://www.researchgate.net/publication/220260133\\_The\\_Disruptive\\_Nature\\_of\\_Information\\_Technology\\_Innovations\\_The\\_Case\\_of\\_Internet\\_Computing\\_in\\_Systems\\_Development\\_Organizations](https://www.researchgate.net/publication/220260133_The_Disruptive_Nature_of_Information_Technology_Innovations_The_Case_of_Internet_Computing_in_Systems_Development_Organizations)
- Mahnič, V. & Drnovšek, S. (2005). Agile software project management with Scrum. *Informatica*, 29(1), 233-240.  
[https://www.researchgate.net/publication/228967959\\_Agile\\_Software\\_Project\\_Management\\_with\\_Scrum](https://www.researchgate.net/publication/228967959_Agile_Software_Project_Management_with_Scrum)
- Marchwinski, C., & Shook, J. (2007). *Lean lexicon: A graphical glossary for lean thinkers* (4<sup>th</sup> ed.). Lean Enterprise Institute.
- Mataveli, M., Ayla Calvo, J.C., & Gil, A. J. (2023). The role of intellectual capital and service agility in banking service provision: The perspective of Brazilian export companies. *Journal of Intellectual Capital*, 24(1), 154-179.  
[https://www.researchgate.net/publication/361591483\\_The\\_role\\_of\\_intellectual\\_capital\\_and\\_service\\_agility\\_in\\_banking\\_service\\_provision\\_the\\_perspective\\_of\\_Brazilian\\_export\\_companies](https://www.researchgate.net/publication/361591483_The_role_of_intellectual_capital_and_service_agility_in_banking_service_provision_the_perspective_of_Brazilian_export_companies)
- Meredith, J. R., & Francis, D. (2000). Journey towards agility: The agile wheel explored. *The TQM Magazine*, 12(2), 137-143.

[https://www.researchgate.net/publication/235282763\\_Journey\\_towards\\_agility\\_The\\_agile\\_wheel\\_explored](https://www.researchgate.net/publication/235282763_Journey_towards_agility_The_agile_wheel_explored)

- Milinkovich, N., Kamath, S., Catlin, T., & Chung, V. (2025). The future of AI in the insurance industry. McKinsey & Company.  
<https://www.mckinsey.com/industries/financial-services/our-insights/the-future-of-ai-in-the-insurance-industry>
- Nafei, W. A. (2016). Organizational agility: The key to organizational success. *International Journal of Business and Management*, 11(5), 296-309.  
[https://www.researchgate.net/publication/301535032\\_Organizational\\_Agility\\_The\\_Key\\_to\\_Organizational\\_Success](https://www.researchgate.net/publication/301535032_Organizational_Agility_The_Key_to_Organizational_Success)
- Nawab, S., Nazir, T., Zahid, M. M., & Fawad, S. M. (2015). Knowledge management, innovation, and organizational performance. *International Journal of Knowledge Engineering*, 1(1), 43-48.  
[https://www.researchgate.net/publication/281191599\\_Knowledge\\_Management\\_Innovation\\_and\\_Organizational\\_Performance](https://www.researchgate.net/publication/281191599_Knowledge_Management_Innovation_and_Organizational_Performance)
- Nguyen, T., Le, C.V., Nguyen, M., Nguyen, G., Lien, T. T. H., & Nguyen, O. (2024). The organizational impact of agility: A systematic literature review. *Business Research*. Advanced online publication.  
<https://link.springer.com/article/10.1007/s11301-024-00446-9>
- Pina e Cunha, M., Giustiniano, L., Neves, P., & Rego, A. (2022). Improvising agility: Organization as structured-extemporaneous hybrids. In P. Boccadelli, M. C. Annosi, F. Brunetta, & M. Magnusson (Eds.), *Learning and innovation in hybrid organizations: Strategic and organizational insights* (pp. 205-217).
- Pina e Cunha, M., Clegg, S., Gaim, M., & Giustiniano, L. (2023). The agile organization: The fall of the traditional pillars (Part II: Task design and allocation). In M. Pina e Cunha, S. Clegg, M. Gaim, & L. Giustiniano (Eds.), *Elgar introduction to designing organizations* (pp. 98-113). Edward Elgar Publishing.
- Probojakti, W., Utami, H. N., Prasetya, A., & Riza, M. F. (2024). Building sustainable competitive advantage in banking through organizational agility. *Sustainability*, 16(19), Article 8327.  
<https://www.mdpi.com/2071-1050/16/19/8327>

- Rodríguez Canfranc, M., & Macía, R. (2018, November 2). Scrum, agile... BBVA's new ways of working to accelerate its transformation. BBVA. <https://www.bbva.com/en/bbvas-new-ways-of-working-to-accelerate-its-transformation/>
- Santomier, J., Söderman, S., & Kunz, R. (2020). Digital transformation and strategic sponsorship: The case of BBVA. *Sociology Review*, 16(3), 106-122. <https://apcz.umk.pl/QS/article/view/QS.2020.026/27264>
- Schotkamp, T., & Danoesastro, M. (2018). HR's pioneering role in agile at ING. The Boston Consulting Group. [https://web-assets.bcg.com/img-src/BCG-HRs-Pioneering-Role-in-Agile-at-ING-May-2018\\_tcm9-193629.pdf](https://web-assets.bcg.com/img-src/BCG-HRs-Pioneering-Role-in-Agile-at-ING-May-2018_tcm9-193629.pdf)
- Shafiee Kristensen, S., Shafiee, M., & Shafiee, S. (2021). Organization design in motion: Designing an organization for agility. In M. Cantamessa, D. C. Candi, & F. J. P. de Bont (Eds.), *Proceedings of the 23<sup>rd</sup> International Conference on Engineering Design (ICED21), Gothenburg, Sweden, 16-20 August 2021* (pp. 4071-4080). Cambridge University Press. [https://www.researchgate.net/publication/353680443\\_Organization\\_design\\_in\\_motion\\_designing\\_an\\_organization\\_for\\_agility](https://www.researchgate.net/publication/353680443_Organization_design_in_motion_designing_an_organization_for_agility)
- Shevlin, R., & Gujral, E. (2024). 2024 Digital banking performance metrics. Cornerstone Advisors. <https://info.bai.org/featured-innovation-digital-banking-performance-metrics.html>
- Sherehiy, B., Karwowski, W., & Layer, J. K. (2007). A review of enterprise agility: Concepts, frameworks, and attributes. *International Journal of Industrial Ergonomics*, 37(5), 445-460. <https://www.sciencedirect.com/science/article/pii/S0169814107000236?via%3Dihub>
- Sun, J., Sarfraz, M., Turi, J. A., & Ivascu, L. (2022). Organizational agility and sustainable manufacturing practices in the context of emerging economy: A mediated moderation model. *Sustainability*, 14(23), Article 15961. [https://www.researchgate.net/publication/365962618\\_Organizational\\_Agility\\_and\\_Sustainable\\_Manufacturing\\_Practices\\_in\\_the\\_Context\\_of\\_Emerging\\_Economy\\_A\\_Mediated\\_Moderation\\_Model](https://www.researchgate.net/publication/365962618_Organizational_Agility_and_Sustainable_Manufacturing_Practices_in_the_Context_of_Emerging_Economy_A_Mediated_Moderation_Model)
- Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, 51(1), 40-49.

<https://www.sciencedirect.com/science/article/pii/S0024630117302868>

- Tengstrand, S. N., Tomaszewski, P., Borg M., & Jabangwe, R. (2021). Challenges of adopting SAFe in the banking industry – A study two years after its introduction. In M. Paasivaara & P. Kruchten (Eds.), *Product-Focused Software Process Improvement. PROFES 2021. Lecture Notes in Computer Science* (Vol. 13071, pp. 149-165). Springer. [https://link.springer.com/chapter/10.1007/978-3-030-78098-2\\_10](https://link.springer.com/chapter/10.1007/978-3-030-78098-2_10)
- Uhl-Bien, M., & Arena, M. (2018). Complexity leadership: Enabling people and organizations for adaptability. *Organizational Dynamics*, 47(1), 9-20. <https://www.sciencedirect.com/science/article/abs/pii/S0090261616301590>
- Williams, T., & Lawler, J. (2003). Increasing agility by integrating business modeling and knowledge management. *IBM Systems Journal*, 42(3), 472-489.
- Wimox, B. H., & Someh, I. A. (2018, July 19). Accelerating data-driven transformation at BBVA (MIT CISR Research Briefing No. XVII-7). MIT Sloan Center for Information Systems Research. [https://c isr.mit.edu/publication/2018\\_0701\\_DataDrivenBBVA\\_WixomSomeh](https://c isr.mit.edu/publication/2018_0701_DataDrivenBBVA_WixomSomeh)
- Womack, J. P., & Jones, D. T. (2003). *Lean thinking: Banish waste and create wealth in your corporation* (Rev. ed.). Free Press.
- Yoo, Y., Boland, R. J., Lyytinen, K., & Majchrzak, A. (2012). Organizing for innovation in the digitized world. *Organization Science*, 23(5), 1398-1408. <https://www.jstor.org/stable/23252314>
- Yusuf, Y. Y., Sarhadi, M., & Gunasekaran, A. (1999). Agile manufacturing: The drivers, concepts and attributes. *International Journal of Production Economics*, 62(1-2), 33-43. <https://www.sciencedirect.com/science/article/pii/S0925527398002199?via%3Dihub>
- Žitkiene, R., & Deksnys, M. (2018). Organizational agility conceptual model. *Entrepreneurship and Sustainability Issues*, 6(2), 901-914. [https://www.researchgate.net/publication/326235629\\_Organizational\\_Agility\\_Conceptual\\_Model](https://www.researchgate.net/publication/326235629_Organizational_Agility_Conceptual_Model)