Technology Leader Adaptability in the Financial Services Industry: A Sense and Response Perspective

PERMISSION TO BORROW

In presenting this dissertation as a partial fulfillment of the requirements for an advanced degree from Georgia State University, I agree that the Library of the University shall make it available for inspection and circulation in accordance with its regulations governing materials of this type. I agree that permission to quote from, copy from, or publish this dissertation may be granted by the author or, in her absence, the professor under whose direction it was written or, in his absence, by the Dean of the Robinson College of Business. Such quoting, copying, or publishing must be solely for scholarly purposes and must not involve potential financial gain. It is understood that any copying from or publication of this dissertation that involves potential gain will not be allowed without written permission of the author.

Debranetta Gethers

NOTICE TO BORROWERS

All dissertations deposited in the Georgia State University Library must be used only in accordance with the stipulations prescribed by the author in the preceding statement.

The author of this dissertation is:
Debranetta Gethers
J. Mack Robinson College of Business
Georgia State University
Atlanta, GA 30302-4015

The director of this dissertation is:

Dr. Lars Mathiassen
J. Mack Robinson College of Business
Georgia State University
Atlanta, GA 30302-4015

Technology Leader Adaptability in the Financial Services Industry:

A Sense and Response Perspective

by

Debranetta Gethers

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

Of

Executive Doctorate in Business

In the Robinson College of Business

Of

Georgia State University

GEORGIA STATE UNIVERSITY

ROBINSON COLLEGE OF BUSINESS

2025

ACCEPTANCE

This dissertation was prepared under the direction of the *DEBRANETTA GETHERS* Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

Richard Phillips, Dean

DISSERTATION COMMITTEE

Dr. Lars Mathiassen (Chair)
Dr. Nannette Napier
Dr. Todd Maurer

ACKNOWLEDGEMENTS

There are many individuals who have made this journey possible. First, I would like to extend my sincere thanks to my dissertation committee for their collective insights and guidance throughout the research process. Thank you to Lars Mathiassen, Ph.D., for serving as my dissertation Chair and for your unwavering support throughout the challenges of securing a research study. Your guidance and expertise have been instrumental in shaping my understanding of rigorous, theoretically grounded qualitative research, providing me with a strong foundation for scholarly inquiry. Thank you to Nannette Napier, Ph.D., for your invaluable contributions to my qualitative approach, and to Todd Maurer, Ph.D., for your leadership expertise. I appreciate how your perspective helped shape the direction of my research, and I am very proud of this dissertation.

A special thank you to my peers at Georgia State University. Our cohort is filled with remarkable individuals whose brilliance and camaraderie have made this journey unforgettable. To my family, thank you is not nearly enough. Your sacrifice, your love, and your unwavering support have been the foundation that sustained me. To my children, you are my greatest motivation and my daily reminder of why perseverance matters. May you always know that with faith, focus, and fortitude, anything is possible. To my parents, brother, and sister-in-law, thank you for your encouragement, prayers, and practical help, which made all the difference. This accomplishment is not mine alone; it belongs to all of you. I carry your love and strength with me into every future chapter.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AI: Artificial Intelligence

APEC: Asia-Pacific Economic Cooperation

EQ: Emotional Intelligence

FinTech: Financial Technology

HIPPA: Health Insurance Portability and Accountability Act

SaR: Sense-and-Respond

ABSTRACT

Technology Leader Adaptability in the Financial Services Industry:

A Sense and Response Perspective

by

Debranetta Gethers

July 2025

Chair: Dr. Lars Mathiassen

Major Academic Unit: Doctor of Business Administration Program

The rapidly evolving world driven by technological advancements, shifting economic conditions, and regulatory changes presents challenges for leaders as they navigate their dynamic environments. As a result, adaptive leader behaviors have become increasingly important. Technology leaders, especially those in financial services, must navigate a volatile industry facing both internal and external challenges with evolving role responsibilities. As these changes accelerate, leaders must continuously sense, interpret, decide, and act in a quick and efficient manner to remain effective. As such, there is empirical and theoretical relevance in understanding how leaders individually can leverage sense-and-response cycles. Hence, the current research is designed as a case study to empirically answer the question: *How do sense-and-respond cycles enable technology leaders in the financial services industry to adapt to their dynamic environments?* As a contribution to research, it provides empirically based insights into the day-to-day behaviors of technology leaders in financial services and how a sense-and-response approach expands on leadership research. As a contribution to practice, it provides a deeper understanding of how adaptiveness drives change with insights for leaders to navigate dynamic environments more effectively.

INDEX WORDS: Adaptive leadership, sense-and-response cycles, technology leaders, financial industry

I CHAPTER 1 INTRODUCTION

The rapidly evolving world presents challenges for leaders as they navigate their dynamic environments. These challenges necessitate that leaders adapt their style and behaviors to remain effective and active. The way leaders navigate this dynamic environment and manage their teams directly shapes an organization's ability to succeed. In this context, we define a dynamic environment as a business setting characterized by constant change and opportunity, driven by rapid technological shifts, evolving market forces, competitive pressures, and shifting consumer demands (De Hoogh et al., 2005; Teece et al., 1997). Specifically, the financial services industry has transformed significantly over time while grappling with volatility and complexity (Weese, 2005). We include banking, insurance, and other institutions that deliver financial products and services to individuals, businesses, and governments as part of this evolving industry.

Further, as innovation continues to accelerate, a leader's ability to make quick, informed decisions, especially in technology-driven teams, requires new approaches to leadership. While foundational theories like transformational or transactional leadership offer valuable insights, they fail to fully address the challenges in dynamic business environments. Proponents of those theories often assume the existence of more stable environments where change is incremental rather than continuous and disruptive (Uhl-Bien & Arena, 2017). As a result, newer theories emphasizing adaptive behaviors are needed to better reflect the challenges of leading in fluid and fast-paced environments (Teece et al., 2016).

Due to the complex nature of dynamic environments, adaptative leader capabilities are critical for handling contemporary challenges (Huang et al., 2023; Yukl & Mahsud, 2010). Yukl's (2012) exploration of leadership theories, past and present, highlights research that provides empirical insights into how leaders adapt their behavior to changing situations. However, the details about the ways in which a leader, on a day-to-day basis, demonstrates adaptability in dynamic environments are limited. An examination of adaptive leader behavior will provide a better understanding of how leaders manage change, foster innovation, and empower their teams to thrive in such environments.

To address the gap in empirical leader adaptability knowledge (Yukl & Mahsud, 2010), this study leverages an engaged scholarship approach (Van de Ven, 2007). The researcher is a practitioner in business with leadership experience in the financial services industry, supporting technology organizations. To leverage this background, the goal of the research is to develop insights from similar real-world contexts with the aim of developing knowledge that addresses the phenomenon of interest (Mathiassen, 2017). The engaged method of inquiry seeks to produce relevant and impactful findings that address pressing business issues (Mathiassen, 2017; Van de Ven, 2007). By integrating academic rigor with practical experience, such engaged scholarship enhances the quality and applicability of research, ensuring that the outcomes are not only academically significant but also beneficial to the practitioner community.

I.1 Problem Context

The financial services industry has evolved over time. Shifts in the economy and more modern ways of reaching customers have altered the ways in which financial business is conducted. Modern technologies are not just influencing how financial services are delivered, but are also challenging traditional leadership practices, prompting individuals to rethink best practices to remain relevant and competitive in this industry. For leaders, the ability to sense change and adapt accordingly is becoming a critical skill set.

Moreover, the financial services industry is heavily regulated and traditionally slow to adapt (Weese, 2005). Allen and Carletti (2010) deemed the financial services industry to be the most regulated in all economies. In fact, although technological capabilities are evolving, development remains slow in practice due to regulatory restrictions and policies (Gill et al., 2015). Historically, the financial services industry remained stable, with most large institutions "content with the status quo" (Weese, 2005, p.43). Over the past several decades, the industry has entered a new era marked by increased competition, reduced profits, and dynamic change (Weese, 2005). Most recently, the proliferation of disruptive technology has accelerated the speed of change, fundamentally altering industries, business models, organizational structure, and strategies. To remain successful, institutions in the financial services industry must evolve.

Hõbe (2015) discussed the financial services landscape and the significant strategic challenges the industry faces, stressing the importance of financial institutions adapting to a very different and rapidly changing economic, regulatory, and business environment. Hõbe (2015) outlined the key drivers of change as regulatory pressure, technological advancements, shifting customer behavior, volatile economic environments, competition from non-bank new entrants, and digital transformation. Navigating what Hõbe (2015) defined as the new normal of financial services requires the close attention of leaders, a great deal of time, resources, and capital, and the urgent need for new and cost-efficient business models.

The evolution of financial services has led to the entrance of new agents in the market, known as "FinTech" institutions (Barroso & Laborda, 2022). These institutions have become competitors to traditional financial institutions. Traditional institutions are facing increased pressure as FinTech institutions leverage innovative technology enabled by a lack of clear regulatory scrutiny (Barroso & Laborda, 2022). As traditional financial services institutions lack innovation (Anifa et al., 2022), FinTech institutions have seized the opportunity to enter the industry which, as a result, has led to a revolution in the traditional financial services industry (Zhang, 2023).

For this research, we focused on traditional financial services institutions. Understanding the difference between FinTech and the traditional financial services industry provides insights into the problem context, revealing that there is a need and opportunity for transformation and technological innovation in the financial services industry. Yet, although it is becoming increasingly technology-driven, the traditional financial services industry has lagged. In this distinction between FinTech and traditional institutions, it is important to avoid conflating the abilities of the two types of institution: FinTech institutions are advancing while traditional institutions face challenges pushing forward. Importantly, Manser Payne et al. (2021) noted the significant expansion of artificial intelligence (AI) within the financial service industry ecosystems, further emphasizing how emerging technologies present both opportunities and challenges to the industry.

Financial service sector leaders bear the burden of navigating this dynamic environment, requiring a different type of leader to guide financial services institutions bearing the difference between leadership and management in mind. Weese (2005) distinguished leaders from operational managers by suggesting that great leadership in financial services should be characterized by the ability to lead organizations through changes in structure, strategy, and culture as a change catalyst. Yet, limited research has been conducted to understand the role of leadership in this industry, presenting a gap in the current literature related to this industry.

I.2 Area of Concern

Our area of concern for this study is technology leader adaptability in the financial services industry. There remains a significant gap in empirical research examining leader adaptability (Yukl & Mahsud, 2010).

Extant research has predominantly examined organization-level responses to dynamic environments, particularly as they relate to dynamic capabilities (Teece, 2007; Teece et al., 2016). While important, this focus does not fully capture or address the unique challenges individual leaders encounter, such as decision making under uncertainty, responding to internal and external pressures, and having the ability to drive innovation and transformation. As such, their lived experiences in their environments warrant a closer look.

The fast-paced nature of technology innovation requires quicker responses and adaptation. Leaders must monitor organizational cues to thrive in this new era marked by constant change, but these cues are becoming harder to identify as businesses rapidly evolve to tackle ambiguous challenges (Blass & Ferris, 2007). To navigate effectively, leaders must develop adaptive skills that enable them to sense and respond to internal and external changes, even as they remain attuned and responsive to external factors. Consistent with Crossan et al.'s (2008) observations, dynamic environments require leaders to maintain a strong individual compass and deep judgment to prevent simple and predictable responses. Moreover, leaders will be required to undergo personal renewal to adapt to changes in the environment (Crossan et al., 2008) and make complex decisions within short timeframes (Murray & Greenes, 2006) while mobilizing their teams.

London (2023) suggested that the term "adaptive" is often used glibly as a desirable characteristic of leaders, especially when tough situations arise, and leaders take rapid action toward transformational change without evaluating the value of adaptive responses. To avoid simple labeling of leaders as being adaptive, this qualitative study will solicit the opinions of participants who have verifiable leadership experience in the financial services industry.

Other industries, such as the technology, pharmaceutical, and biotechnology industries, are also dynamic and volatile due to constant technological advancements, regulatory changes, and market uncertainties. However, we restrict our research to technology leaders within the financial services industry and conduct a qualitative analysis of eight leaders to ensure literal replication across participants (Ridder, 2017; Yin, 2018) and to support engaged scholarship based on the primary researcher's knowledge of the industry.

I.3 Theoretical Framing

Yukl and Mahsud (2010) called for more research on skills and traits that determine how well a leader identifies changes in the situation, understands what types of responses are appropriate, and is able and willing to provide the type of leadership that is needed. In adopting a theoretical framework, we consider the need for leaders to quickly pivot in response to new information or changing circumstances in dynamic environments. To adapt, leaders must remain attuned to both external dynamics (what's going on out there) as well as to organizational and team dynamics (what's going on in here). Against that backdrop, the theoretical framing for this study is the Sense-and-Respond (SaR) approach. SaR is useful for managing extremely change-sensitive processes that require rapid response (Haeckel, 1995). Haeckel and Nolan (1993) emphasized that it was not senior executives who were "managing by wire," but instead middle managers. Senior executives are not as connected to the decision-making specifics. Therefore, this study will examine adaptive behaviors of this target leader group.

The SaR approach, which originated in military aviation, focuses on adaptive behaviors like sensing, interpreting, deciding, and acting in response to rapid changes. Traditionally applied at the organizational level, it is derived from the Military OODA loop (Bryant, 2006; Haeckel, 1999; Ryder & Downs, 2022). Research has indicated that sensing and responding help to identify dynamic capabilities, improve efficiency, and foster real-time responses (El Sawy & Majchrzak, 2004; Haeckel, 1999; Kumar & van der Aalst, 2006; Mathiassen & Vainio, 2007). While much of the research targets organizational responses (El Sawy & Majchrzak, 2004; Huang et al., 2004; Kapoor et al., 2005; Mathiassen & Vainio, 2007), exploring the SaR approach at the individual leader level could provide valuable insights into adaptive leader behavior.

I.4 Research Question

Against this backdrop, we pursue the following research objectives:

1) To understand how technology leaders in the financial services industry utilize adaptive leader behaviors to navigate their dynamic environment effectively and enable the success of their organizations.
2) To examine how the SaR approach contributes to the resilience and agility of leaders in the financial services industry, enabling them to respond adeptly to highly regulated environments and lead their organizations through periods of uncertainty, rapid change, and disruption.

To address these challenges and related gaps in literature, we seek to answer the following research question: *How does a sense-and-respond approach enable technology leaders in the financial services industry to adapt to their dynamic environments?* Effective leadership in dynamic environments requires more than just reactive capabilities; it also necessitates proactive strategies that anticipate change. This research question introduces the intersection of adaptive behaviors and the SaR approach to examine how technology leaders respond rapidly and effectively in the dynamic financial services industry.

I.5 Contributions

The study makes three contributions to the literature. First, it contributes to a deeper understanding of adaptive leader behavior. By examining leader behaviors in the context of a dynamic environment, we offer insights into how technology leaders navigate rapidly changing environments, navigate uncertainty, and drive strategic decision making to enable the success of their organizations. Moreover, leadership remains one of the most widely studied areas of management research and organizational behavior. This study adds micro foundations to this important body of research.

Second, the study contributes to the SaR approach, emphasizing the importance of leaders being attuned to their environment and adaptive in addressing emerging challenges and opportunities. In dynamic environments characterized by rapid and unpredictable change, technology leaders must possess the ability to perceive shifts in market demands, technological advancements, and organizational needs, enabling them to respond effectively (Heifetz et al., 2009; Haeckel, 1999). The results of this study offer a deeper understanding of how a SaR approach drives change in dynamic environments and provides insights into how continuous sensing and responding enables individual level leader adaptability.

Third, this study provides technology leaders in the financial industry with an understanding of the adaptive behaviors they can develop or demonstrate within their organization to navigate dynamic environments. The principles developed from our empirical evidence capture the details of adaptive technology leadership in the financial services industry.

I.6 Summary

In summary, this study offers practical insights by introducing a new approach for leaders, as well as theoretical insights by establishing the micro-foundations of adaptive leader behavior based on the SaR approach. As such, the study contributes to strategies that allow leaders to successfully steer their organizations through uncertainty and change.

Table 1 ***Summary of Research Design***

Problem Setting (P)	The financial services industry is volatile and faces internal and external challenges driven by technology (Hõbe, 2015) requiring leaders to demonstrate more adaptive behaviors to navigate their dynamic environment.
Title	Technology Leader Adaptability in the Financial Services Industry: A Sense and Response Perspective
Area of Concern (A)	Technology leader adaptability in the financial services industry
Framing (F)	F_A: Technology Leader Adaptability F_i: Sense-and-Respond Approach
Method (M)	An exploratory case study of eight technology leaders in the financial services industry. The research uses semi-structured virtual interviews, with each leader participating in a primary and follow-up interview. Participants are selected through convenience sampling and purposive selection.
Research Question (RQ)	How does a sense-and-respond approach enable technology leaders in the financial services industry to adapt to their dynamic environments?
Contribution (C)	CA: Provides empirical insights into leader adaptability in the financial services industry.

	CI: Contributes to theory by applying a sense-and-respond approach to the individual level adding empirical evidence and expanding on leadership research. CP: Contributes a deeper understanding of adaptive behaviors leaders can develop or demonstrate within their organization to navigate dynamic environments.

Note: Mathiassen, 2017

II CHAPTER 2 THEORETICAL BACKGROUND

This chapter establishes the theoretical foundation of this study, elaborating on concepts introduced in the Introduction. It begins with a review of the existing literature of the financial services industry, providing context for the area of concern, and its interplay with the practical context of the study. The following subsections include a review of the literature on leadership in the financial services industry followed by an examination of the concept of adaptive leadership. Additionally, we highlight the gaps in current research and the need for empirical studies focusing on how leaders adaptively navigate this industry. By anchoring the research in existing theory and identifying areas for further exploration, this foundation sets the stage for further analysis.

II.1 Financial Services Industry

The financial services industry is unique and continues to garner the interest of researchers. Research has been conducted across various geographical regions, with Europe leading the number of published papers, followed by North America and Asia (Nejad, 2016). The research has covered a wide range of topics, such as policy and regulation, competition, developing countries, crisis management, and technology (Claessens, 2009; Duncombe & Boateng, 2009; Hess, 2011; Prasad, 2010; Pye, 2005: Zhu, 2004). The 2008 US financial crisis presented an opportunity to study the economy and regulations and to scrutinize how the financial services industry adapted to unprecedented challenges (Hess, 2011). The responses of financial institutions during this global crisis revealed both strengths and weaknesses in crisis preparedness and navigating periods of uncertainty. Similarly, the COVID 19 pandemic offered a means to study the financial services industry responses to crisis. The current shift in customer demands, increased competition and the emergence of new technology in that industry has inspired researchers to explore AI adoption challenges, how technology improves processes, and its impact on customer experiences (Fares et al., 2023).

Moreover, the financial services industry has several key characteristics that distinguish it from other industries. It is heavily influenced by the market dynamics and external volatility that are inherently influential within institutions. Additionally, cybersecurity is of the upmost importance for this industry to safeguard customer data. The nature of financial transactions makes them a target for cyber criminals due to the large amounts of sensitive data that the institutions maintain (Sharif & Mohammed, 2022). As such, the industry's reliance on technology and secure operational procedures plays an important role in how these institutions can prevent, detect and recover from security breaches.

II.2 Financial Services Technology

In addition to safeguarding data, technology plays an important role in the overall operations of financial services institutions. More modern ways of navigating society impact consumer preferences. How funds flow through an increasingly global economy also requires advanced technological capabilities. Financial services institutions, such as banks and insurance companies, follow long-standing practices focused on stability, regulatory compliance, and a wide range of services. While they have improved operational efficiency through digitalization, their main goal has been to enhance existing processes. However, they now face competition from FinTech companies that offer more efficient, cost-effective, and user-friendly solutions (Jarvis & Han, 2021). This innovation from FinTech institutions is pushing traditional institutions to adapt and keep pace with technological advancements to stay competitive. Gomber et al. (2017) posited that it is not only FinTech institutions driving technological changes in the financial services industry; traditional financial service providers have also started initiatives to adopt new technologies to become more innovative.

Hõbe (2015) described the financial services industry as technologically intense and technology as a continuously important factor in the future development and competitiveness of this industry. Many of the larger financial services institutions have existed for several decades, with mergers and acquisitions over the years contributing to large institutions with complex systems, processes, and legacy infrastructure. Additionally, older financial transactions and regulatory requirements are deeply embedded in these legacy systems, requiring institutions to maintain and support outdated technology while simultaneously innovating to meet modern demands.

Navigating the regulatory intensity of this industry also requires institutions to balance innovation with compliance. The financial services industry is regulated on multiple levels, including local, state and federal. Additional oversight committees also influence this industry. Shifts in regulations can stem from regulatory reform, emerging risks, geopolitical events, and market dynamics. The rapid integration of AI also introduced new regulations that are still evolving to this day. Given the highly customer-centric nature of the financial services industry, technology must continuously evolve (Manser Payne et al., 2021). However, the interplay between regulatory requirements and legacy systems can create additional challenges. Institutions must modernize infrastructure while ensuring compliance with long-standing regulations in an increasingly interconnected and regulated financial ecosystem. These challenges require adaptive, forward-thinking leadership.

With the rapid shift toward AI capabilities, Fares et al.'s (2023) literature review examines how AI has been applied in the banking industry since 2005, presenting three key research themes from scholarly articles: AI for strategic planning, AI to enhance operational efficiency and decision-making processes, and AI to enhance customer experience. Similarly, the literature review of Ellili et al. (2023) peruses big data in the context of machine learning and AI, both of which are commonly used in the insurance industry. Similar themes emerged in addition to fraud detection and risk management. Both underscore the importance of technology in this industry yet the role of leaders in enabling technology remains limited.

Tallon (2010) empirically surveys the impact of information technology (IT) on large and small U.S. banks through surveys of IT and business executives in 2003 and 2007. Customer-focused strategies were increasingly seen as the key to competitive advantage, as demonstrated by the success of smaller banks. However, their study demonstrates that larger banks face the challenge of aligning their IT strategies with customer-focused priorities. While it shows that IT-enabled value co-creation was of paramount importance to all banks, it made clear that institutions need to look more to IT rather than non-IT resources to lead the charge toward value creation. Further, Tallon (2010) suggests that the focus of IT should extend beyond efficiency and productivity but also to other parts of the value chain, such as customers, with larger banks adopting a different approach to utilizing IT to capture the advantages that smaller banks have successfully achieved.

Moreover, Luftman and McLean (2004) identified key management concerns for IT leaders. The top five management concerns were: 1) IT and business alignment; 2) IT strategic planning; 3) security and privacy; 4) attracting, developing, and retaining IT professionals; and 5) measuring the value of IT investments. In the context of the financial services industry, IT business alignment was key. The ability to deliver innovative technologies was dependent upon a partnership between the business and IT, while delivering innovative technologies required a partnership between the business and IT. Additionally, IT leaders' ability to demonstrate strong leadership was identified as an enabler of IT and business alignment. Luftman and McLean (2004) highlighted sentiments from their financial services industry respondents, who accounted for 21% of survey respondents. One IT executive director from a Fortune 500 financial services institution noted the importance of a portfolio management governance process that facilitated discussions between IT and business partners while prioritizing IT projects and resource allocation. Another IT leader in financial services emphasized the need for IT professionals to have a better grasp of the business and suggested training aimed at new IT professionals. Last was the need for enterprise application integration to connect dissimilar systems. For financial services organizations, cultural barriers between the business and IT can impede how IT is leveraged. IT alignment was not just a technical but also a cultural challenge for these institutions. Hence, the researchers concluded that IT leaders were required to adapt to these various concerns as they navigated their roles.

II Leadership

The leadership domain has been heavily studied, with successive theories built upon previous ones. Shifts in outlooks over the years, as well as critiques, have often led to new perspectives. Similarly, new conditions have shifted our understanding and application of leadership principles. As such, scholars have chronicled the evolution of leadership styles examining historical theories and emerging trends (Avolio et al., 2009; Day et al., 2014; Horner, 1997; Nawaz & Khan, 2016). Here, we will not chronicle a detailed timeline of leadership theory development but instead highlight significant shifts that have occurred with an emphasis on the leadership gap in dynamic environments.

Definitions of leadership range from broad to narrow concepts reflecting current business, economic, political, and social conditions. As such, leadership definitions have undergone numerous shifts over the decades. In business, leadership continues to be an area of focus, given its critical role in organizational success (Spisak et al., 2015). Yukl (1989) found that scholars often defined leadership based on their areas of interest, contributing to many deficiencies. Narrowing our focus of leadership to business, we adopt a contemporary definition consistent with the work of Vroom and Jago (2007) and House et al. (2002) as: the ability to guide, motivate, and influence others to contribute to the success of the organization. Similarly, a leader is someone who demonstrates leadership in their roles and has direct influence over others. This serves as our anchor to explore existing literature on leadership and the development of interview questions.

Leadership style refers to the behaviors and approaches a leader uses to influence and manage their team (House & Aditya, 1997). It plays an important role in their success and shapes how they interact, make decisions, and drive organizational outcomes. Leadership styles are action based and can be applied differently to specific situations. Leadership theories, on the other hand, identify frameworks that explain how and why leadership works in different contexts. Theories provide a lens through which one can determine why and when certain approaches are effective.

II.2.1 *Traditional Leadership Styles*

Traditional leadership styles have focused on top-down decision making and often lack flexibility. Further, in the past, organizations have been less dynamic, which lent itself to an authoritarian and bureaucratic leadership style. A leader exerting authority over the actions of their teams suits repeatable processes and status quo environments in which settings, rules, procedures, and hierarchy are relevant. For instance, the transactional leadership style is a structured approach whereby the leader emphasizes exchanges and rewards.

Early studies of leadership traditionally concentrated on specific traits and qualities, perpetuating the belief in “natural-born” leaders while omitting other factors such as situational and context that impact leader effectiveness (Horner, 1997). Instead of style, the individual traits of a person were considered. It was presumed that leaders were naturally inclined to that role, as opposed to having the ability to develop and demonstrate behaviors of effective leadership. Behavioral and contingency theories emerged in the mid-1900s to account for what successful leaders do rather than their inherent traits and that leadership effectiveness depends on context (Horner, 1997). Transformational leaders enhance the performance capacity of their followers by setting higher expectations and generating a greater willingness to address more difficult challenges (Avolio, 1999; Bass, 1998; Bass et al., 2023). Bass et al. (2023) emphasizes that transformational leadership is at the core of what constitutes adaptive leadership, highlighting the close relationship between these two leadership theories. Transformational leaders enhance the performance capacity of their followers by setting higher expectations and generating a greater willingness to address more difficult challenges (Avolio, 1999; Bass, 1998; Bass et al., 2023).

II.2.2 *Contemporary Leadership Styles*

Contemporary leadership styles take into consideration an evolving world that is becoming increasingly more technologically intense. Globalization and shifts in workplace expectations also impact leadership styles. These factors have created a rapidly changing business landscape that leaders must navigate. As such, more niche leadership styles are pushed to the forefront of leadership research. These styles often add micro-foundations or fresh perspectives to prominent traditional styles of leadership, keeping in mind that, as Nawaz et al. (2016) suggested, no theory is completely irrelevant.

For example, Jansen et al. (2009) emphasized that leaders must adapt their leadership styles based on the dynamics of their environments. Their study focuses on transformational and transactional leadership, proposing that transactional leadership was more effective in stable environments, while transformational leadership was better suited for dynamic environments, as it fostered generative and exploratory thinking. Their qualitative study examines data from autonomous branches of a large financial services institution, controlling for corporate, industry, and country-specific differences. The findings highlight how environmental dynamics moderated the effectiveness of leadership behaviors, reinforcing the need for situational adaptability. Additionally, they called for further research into leadership characteristics in rapidly changing environments to deepen understanding of how leaders navigate complexity and uncertainty.

Avolio et al. (2009) contributed a forward-looking perspective of emerging trends in leadership styles, suggesting two key questions to ask: "what do we know and what should we know about leaders and leadership" (p. 423). That conceptual paper focuses on newer, more niche types of leadership such as leader member exchange, fellowship leadership, shared leadership and other more novel concepts. Moreover, the study of leadership in dynamic environments includes adaptive leadership (Heifetz et al., 2009), complexity leadership (Uhl-Bien et al., 2007), and flexibility leadership (Yukl & Mahsud, 2010). Terms such as flexibility leadership and adaptability leadership are often conflated; these forms of leadership require innovative thinking and novel ways to deal with new challenges and opportunities and, to be adaptive, the leader's behavior must be appropriate to the situation (Yukl & Mahsud, 2010). Flexibility, on the other hand, is often regarded as a trait or characteristic of leader behavior (Park et al., 2014).

II.2.3 *Adaptive Leader Behavior*

Adaptive leadership style is suited to navigating complex and rapidly changing environments. Unlike more structured styles, adaptability involves real-time assessment, flexible strategy adjustments, and empowering teams to embrace innovation. The factors that enable adaptive leadership represent a significant research gap, as existing leadership studies have primarily focused on the outcomes of adaptive leadership rather than the underlying mechanisms that drive it. While scholars have recognized the importance of adaptability in navigating complex, uncertain environments, limited empirical research has been conducted to identify the specific traits, processes, and organizational conditions that enable leaders to be truly adaptive. The relevance of adaptive leadership is expanding, particularly in industries that face volatility and constant disruption (Heifetz et al., 2009; Uhl-Bien & Arena, 2017).

Adaptive leadership styles require innovative thinking and novel ways to deal with new challenges and opportunities, as well as real-time strategy adjustments and flexibility (Khan, 2017; Yukl & Mahsud, 2010). To be adaptive, the leader's behavior must be appropriate to the situation (Yukl & Mahsud, 2010). London (2023) defined adaptive leadership as leaders' rapid decisions and actions in response to unexpected situations.

Leader adaptability and adaptive leader behaviors are related but distinct concepts in leadership studies. Leader adaptability can be summarized as a leader's overall ability to adjust their mindset, strategies, and decision-making approaches in response to changing circumstances. Shifts in the environment, internal or external, lead to modification of style and the adoption of new techniques to achieve desired outcomes. It is broader than specific day-to-day behaviors. Adaptive leader behaviors reflect the specific observable actions and responses a leader takes in real time to address challenges, seize opportunities, and navigate uncertainty.

While leader adaptability is an inherent capability, adaptive leader behaviors are the outward expressions of that capability in practice.

Nöthel et al. (2023) developed the adaptive leadership behavior scale, a significant advancement in the contemporary leadership research domain, which captures four main aspects of adaptive leadership behavior: 1) accurately perceiving situational demands; 2) maintaining a toolbox of behavioral strategies; 3) balancing opposing demands and appropriately; 4) flexibly applying these behaviors. This study starts with 27 statements, which were tested and refined through multiple studies and finalized as a 15-item scale validated for practical and empirical use (Nöthel et al., 2023). Some limitations of that study included language and translation challenges, common source bias, and cross-sectional analysis limiting inference of causality between adaptive leadership behaviors and the outcomes observed. Moreover, future research suggestions included insights to advance our understanding of situational and contextual boundary conditions for adaptive leadership behavior and its effectiveness (Yukl and Mahsud, 2010).

Little is known about the ways in which leaders demonstrate real-time leadership in response to fast-paced, complex environments. Studies exist that have examined the adaptability of the institution; however, it is the day-to-day behaviors of the individuals within the institution that adapt. Further research is needed to explore how adaptive leader behaviors can effectively address the growing complexities, ensuring their ability to mobilize teams, make complex decisions in shorter timeframes, and maintain leadership resilience in the face of continuous change. Therefore, this study seeks to explore individual leader adaptation.

III CHAPTER 3 THEORETICAL FRAMING

This chapter presents the theoretical framing of this study. According to Mathiassen (2017), theoretical framing helps structure collection and analyses of data. We leverage the SaR approach as a structured and systematic way to explore the problem and answer the research questions (Table 1). SaR is a managerial approach focused on real-time and data-driven responses. Adaptive leaders in today's environment must strengthen their ability to adjust quickly while maintaining a structured yet flexible approach.

III.1 Sense-and-Respond Approach

At the core of the SaR approach is a valuable framework that organizations can utilize to enhance their adaptability and responsiveness to rapid change in dynamic environments through adaptive behaviors (Haeckel, 1995), including adaptive principles and a cyclical loop of sensing, interpreting, deciding, and acting (Haeckel, 1995; Haeckel & Nolan, 1993). This approach argues against traditional "command and control" environments in favor of "context and coordination." Using the traditional "command and control" approach, navigating companies are slow and inflexible, which does not serve dynamic landscapes. Governance systems that provide for "context and coordination" maintain synergies and produce empowered teams. Additionally, a SaR organization focuses on the ability to "snap together" offerings from modular elements in response to unique inputs. Leaders, much like organizations, can develop themselves through continuous learning and development and have go-to processes and procedures that guide their behaviors. As previously discussed, research in this area often focuses on organization-level examination of sensing and responding to dynamic environments. However, institutions are comprised of people who organize, manage, and lead efforts to drive enterprise success. Thus, an opportunity exists to examine the SaR approach at the individual level.

Haeckel and Nolan (1993) provided insights into the role of information technology for organizations. According to them, IT must be an integral part of a company's strategy and technological knowledge must become a part of managerial acumen. Moreover, information should be connected, shared, and structured (El Sawy & Majchrzak, 2004; Haeckel & Slywotzky, 1999; Huang et al., 2004; Kapoor et al., 2005; Mathiassen & Vainio, 2007). This can be said about systems and leaders' engagement with their teams; leaders who manage several teams, in addition to their personal responsibilities, can leverage each team's interconnectedness to disseminate information through connections, sharing, and appropriate structures.

III.2 Adaptive Cycles

The origin of the SaR approach is based on aviation. The concept of flying by wire, as discussed by Haeckel (1995), describes how pilots react to environmental information that changes rapidly. The pilots leverage technology to aid in their decision making and responses. It is against this backdrop that the idea of manage-by-wire was introduced. Haeckel and Nolan (1993) examined this notion at the organizational level, with an emphasis on business learning loops mirroring that of the United States Air Force pilot's OODA Loop.

The OODA loop consists of four steps: observe, orient, decide, and act (Haeckel & Nolan, 1993). El Sawy and Majchrzak (2004) leverage the OODA loop to explore the ways in which real-time knowledge management enables an organization to respond quickly to evolving circumstances. They posited that an organization is better positioned to survive with the ability to cycle through the OODA loop when changes occur while remaining flexible and responsive to requisite changes triggered by the environment.

Houghton et al. (2004) addressed the need for vigilant information systems to support sensing and responding, translating the OOAD loop into four requirements for vigilant information systems. The study demonstrates faster decision-making, strategic advantages, faster reaction times, and a more connected enterprise (Houghton et al., 2004). Further, Mathiassen and Vainio (2007) explore dynamic capabilities, highlighting how small software organizations adapt resources to changing environments. They analyzed activity-level sensing and responding behavior, as well as the organization's responsiveness, incorporating SaR as an analytical framework to their study to help organizations detect changes and adjust strategies effectively. In this context, the SaR approach helped small software organizations cultivate dynamic capabilities by enhancing their ability to identify external threats and opportunities and adjust their strategies accordingly. As such, the study provides insight into how small software organizations can stay competitive and agile in rapidly evolving markets.

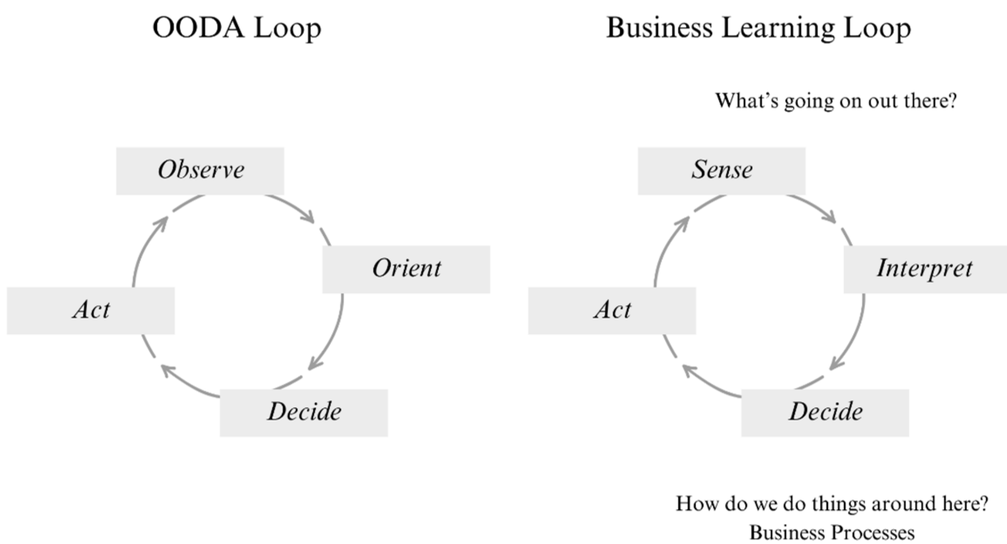
Adaptive business cycles include the cyclical loop – sensing, interpreting, deciding, and acting – i.e., picking up on environmental signals; interpreting the meaning of the signals; deciding what steps need to be taken; and acting based on the information (Haeckel, 1995; Haeckel & Nolan, 1993; Mathiassen & Vainio, 2007) (Figure 1). In dynamic environments, leaders can detect signals from within their organization, within their teams, or from the broader external environment. They then can interpret the context of the information and assign meaning to it based on their experience or learning. Quicker data-driven decisions can then be made to guide resulting actions. This approach is appropriate for making decisions faster. Adaptive individuals should resist running adaptive cycles repeatedly over static information (Haeckel & Nolan, 1993).

III.3 Sense-and-Respond Principles

In addition to an adaptive cycle SaR, approach encompasses four principles as described by Haeckel (1995).

Processes that Learn: This principle emphasizes the role of continuous learning, which can occur individually, collectively, or institutionally. Leaders must adapt their knowledge acquisition to dynamic environments with rapid change and technological shifts. Of particular interest in this study is the individual learning process of the leader. The adaptive loop is embedded in this principle. These cycles capture environmental signals to guide changes in information and procedures where technology enhances the learning process.

Figure 1 ***Adaptive Cycles***



Value-Based Governance: This includes clearly articulating the reason for being, a governance model that mobilizes the governing principles and drives accountability, and a governance process that determines how principles are updated and embedded within the organization. In dynamic environments, organizations must remain adaptable and systematically gather internal and external signals about change, clarity, and conflict.

Personal Accountability: In this context, accountability is a human-centered process that outlines desired outcomes while clarifying individual responsibilities and ensuring a clear understanding of obligations and expectations. Dynamic environments require strong accountability and clear procedures, which are essential components of governance. To effectively respond to changes in the environment, the organization must dynamically create and recreate commitments between people.

Modular Processes: Modular processes break down complex activities into smaller, independent components that can be reconfigured, combined, or replaced based on changing circumstances, allowing for greater adaptability and agility. The literature on adaptive leadership has suggested that dynamic environments require real-time responses from leaders which is enabled by modular processes that can be swiftly reconfigured to new circumstances.

To help with our understanding of how individual leaders demonstrate these characteristics on a day-to-day basis, we adopted the SaR approach as an analytical lens to explore this phenomenon. We found Haeckel's (1995) approach valuable for analyzing individual level SaR behaviors that shape real-time adaptability. The SaR cycle, along with the four principles of an adaptive enterprise, provides a clear approach to the empirical exploration of adaptive practices. Haeckel's (1995) tactic stands out for its straightforward, practical guidance on managing dynamic environments, making it highly applicable to leaders (Mathiassen & Vainio, 2007). Although the framework originated in the individual level experiences of U.S. Air Force pilots, it has not yet been fully utilized to focus on the individual unit of analysis in business to our knowledge. This study aims to explore how SaR can be applied to understand and lead technology-driven, dynamic environments. The SaR approach aligns with adaptive leadership theory, emphasizing continuous adaptation and learning.

IV CHAPTER 4 METHODS

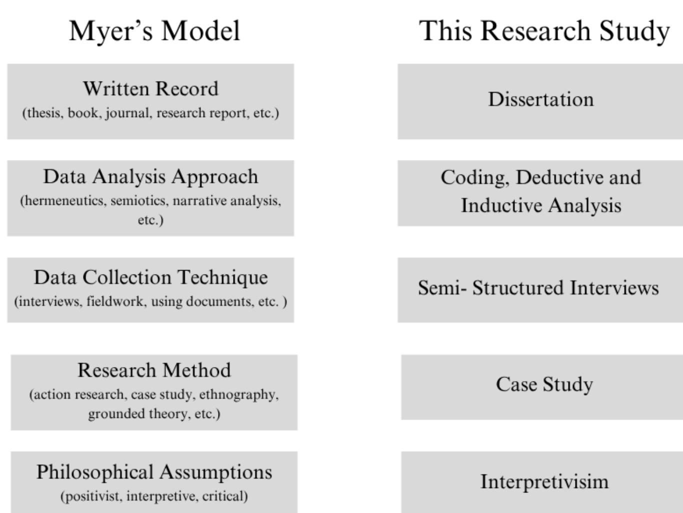
This chapter outlines the research methodology that was used to explore the question: *How does a sense-and-respond approach enable technology leaders in the financial services industry to adapt to their dynamic environments?* It begins with an outline of the research design, followed by data collection techniques. An important aspect of any qualitative research is demonstrating rigor. Accordingly, the final topic of this chapter, data analysis, details how the research systematically examined and interpreted the data to derive meaningful insights. It also highlights the steps taken to ensure a thorough and transparent analytical process.

IV.1 Research Design

As the research addresses a how question related to a practical business problem, the research design is qualitative. Myers et al. (2020) provided guidance for designing qualitative research studies. Since qualitative research helps in understanding people and what they do, i.e., behaviors, this research design allows for a more in-depth understanding of the phenomenon. As depicted in Figure 2, the study represents a doctoral business administration dissertation in the form of a case study. Semi-structured interviews are coded leveraging a priori codes (Miles & Huberman, 2002) while allowing for new codes to emerge from the rich data. Qualitative studies based on interpretivism are common among social science researchers, such as business scholars (Myers et al., 2020).

Participants for this study were collected through convenience selection (Miles et al., 2014) and purposive selection (Polkinghorne, 2005). Individuals were selected based on the researcher's professional network and referrals; participants were not solicited through close personal networks. Convenience sampling allowed the researcher to find a sample size of eight participants within the required dissertation study timeframe. Additionally, participants' leadership credentials and levels were able to be confirmed on professional platforms, ensuring they met the criteria of being a leader in financial services working for a technology team. Prior to scheduling, participants were asked to confirm if they identify as individuals committed to being adaptive leaders.

Figure 2 ***Myer's Model of Qualitative Research Design***



Note: Myers et al., 2020

Semi-structured interviews provide a flexible method to probe deeper into a participant's response to questions, yielding rich data (Marshall et al., 2013) and enhancing confidence in the findings of the study. We adopted this study design, not only to enhance the robustness and richness of data, but also to strengthen the generalizability of the insights, as patterns identified across multiple participants suggest applicability beyond individual instances. Consistent with McIntosh and Morse (2015), the interpretive type of semi-structured interview is designed to explore the participant's experiential world within specific topical dimensions. We view the participant as the knower, and the insights they provide take precedence over pre-existing insights within the specifics of the phenomenon of interest. We leveraged this data collection to support, expand, and explore gaps in existing theory, leading to new themes and views of the research domain (McIntosh & Morse, 2015).

The study research design was provided to the Georgia State University International Review Board and approved prior to any interviews being conducted. The designated research method was a case study. The key to qualitative research is that the empirical investigation contributes to the body of knowledge (Myers et al., 2020). As such, the adopted design produced rich data and detailed insights from each of the study participants, enabling us to provide a relevant contribution to theory.

IV.2 Data Collection

Each of the eight study participants participated in two interviews. The first interview was designed to ask the questions provided in Appendix 1. The semi-structured nature of the study allowed the interviewer and primary researcher to ask follow-up questions for clarity and to dive deeper into specific examples that participants provided. Semi-structured interviews were conducted based on participant availability. The average duration of the first set of interviews is fifty-two minutes and twenty-five seconds. The longest interview lasted one hour and twelve minutes, and the shortest duration was forty-five minutes. The average duration of the second set of interviews was thirty-three minutes. The longest interview lasted forty-nine minutes and the shortest lasted seventeen minutes. The interviews were conversational due to the semi-structured nature, and the primary researcher was able to dig deep into the examples and statements provided by the research to gain rich insights. Copious handwritten notes were taken during each interview. Once the primary interview was completed, the primary researcher took time to review the data and make notes in the margins of key insights and follow-up questions for each participant. The second interview was conducted to follow up on any gaps in the examples, additional questions, and to gain any additional insights. Four participants were experienced leaders, having more than fifteen years of experience. The four with less than fifteen years of experience were managing direct reports and accruing experience are depicted in Table 2.

Table 2 ***Interview Participant Information***

Pseudonym	**Position**	**Experience Level**
Eli	AVP	Experienced
Zoe	Project Manager	Developing
Mia	Director	Experienced
Eva	Engineer	Developing
Max	SVP	Experienced
Leo	Director	Experienced
Lia	Director	Developing
Sam	Director	Developing

Data were collected through verbal interviews conducted through Zoom while strictly adhering to the IRB approved research protocols. Interviews were recorded and transcribed using transcription software. Each participant was assigned a participant number during the interview so no personal identification could be obtained. The coding for the participant is stored in a secure file of the primary researcher. For the purposes of this dissertation, each participant are assigned a pseudonym to articulate the findings.

IV.3 Data Analysis

Data analysis leveraged techniques recommended in Miles and Huberman (2022). Additionally, the primary researcher received guidance from the dissertation committee chair and a member, both of whom have extensive experience conducting qualitative research. The data were analyzed in a systematic way using NVIVO version 14.23.3.

A priori codes (Appendix 2) were set up in NVIVO. Additional codes that emerged upon review of the data were added (Appendix 3). Coding not only helped to reduce the size of the data but also provided an organized way to break down the data into manageable components for further review (Myers et al., 2020). Code assignments were periodically reviewed to minimize bias and ensure consistency. As new insights emerged, words or short phrases from the participants in the transcripts were leveraged as codes (Miles & Huberman, 2002).

The primary researcher analyzed the data iteratively to ensure depth and alignment with the study's goals. After conducting six interviews, the researcher reviewed the emerging insights to assess whether data saturation had been reached and to begin identifying preliminary code alignment. Based on this review, the researcher onboarded two additional participants and conducted interviews using the same semi-structured format. In total, the researcher completed eight interviews, each contributing to a deeper understanding of the study topic and validating the initial coding framework.

Through our systematic coding and data exploration, the study uncovered novel insights into how technology leaders in the financial services industry navigate their dynamic environment and identify behaviors that may complement or expand the SaR approach. By applying SaR deductively while allowing for emergent patterns inductively, we strengthened the research's rigor and broadened its generalizability, improving our understanding of adaptive leader behavior in the SaR approach.

V CHAPTER 5 FINDINGS

Based on the exploratory investigation of the experiences of the eight participants, we establish a logical flow to present the findings. We begin with the leadership context, which underscores why the participants consider leadership adaptability important. We then present findings from our analysis of SaR behaviors demonstrated in the data. We conclude by presenting complementary behaviors that emerged in the rich data and enhance the participants' adaptability beyond the SaR approach. This structure enables a comprehensive understanding of how the participating leaders adapt in their dynamic organizational settings in relation to our research question.

V.1 Leadership Context

Through careful analysis of the data, we find that the interviewees all emphasized the need for adaptability in their leadership context. As such, leadership did not operate in isolation; it was shaped by the external and internal factors that define the organizational landscape. These contextual traits provide insight into the dynamic nature of the leaders' roles and set the stage for understanding their adaptive behaviors. Moreover, they provide cues that prompt the need for a leader to demonstrate an adaptive style. The role of these traits and their impact on the participating leaders is captured in the findings below. By examining their behaviors collectively, the study provides a nuanced understanding of how the technology leaders navigate their environment. '

Table 3 highlights how participants led through change and complexity within their organization. Eli, Leo, and Mia drove organizational shifts; Eva and Max advanced agile and tech initiatives; Lia and Sam managed global cybersecurity and financial risk; and Zoe contributed a perspective shaped by experiences outside the industry. Across roles, they encountered disruption, led diverse teams, and responded to evolving demands. Their actions underscore the critical role of adaptive leadership. They consistently pivoted, applied transferable skills, and led through uncertainty with resilience and strategic focus. These patterns clearly demonstrate the importance of adaptive leadership in navigating today's dynamic organizational landscapes.

In the following, we synthesize and detail these contextual experiences into five themes – regulatory implications, technological developments, organizational changes, financial disruptions, and leadership transitions – that capture the backdrop against which the participating leaders adapted.

Table 3 ***Summary of Study Participants' Contextual Experiences***

Participant	**Contextual Experiences**
Eli	• Offshoring resources • Team expansion • Leading multi-ethnic and multi-generational teams • Regulatory changes
Eva	• Managing technologist • Following agile methodology
Leo	• Mergers and acquisitions • Leading a multi-generational workforce
Lia	• Working in multiple countries • Cyber security threat management
Max	• Tech-adjacent leadership responsibilities • P&L management and portfolio financials • Introducing an agile framework
Mia	• Mergers and acquisitions • Managing an international team • Team member coaching and development
Sam	• Traditional financial services and FinTech • Customer-facing • Security risk management
Zoe	• Navigating an undesirable workplace culture • Transferable experience outside of financial services

V.1.1 *Regulatory Implications*

The trait of regulatory changes refers to participant discussions of regulations and audit factors that impacted their roles. The industry is heavily regulated, and audits can easily shift the focus of individuals' work while impacting their goals. Technology leaders have limited control over the timing and initiation of audits or regulatory changes, as these are often dictated by external governing bodies, compliance requirements, or industry regulations. Additionally, the global nature of the financial services industry means that they face both national and international regulatory changes. Similarly, the difference in state laws adds to the complexity of how organizations operate. For example, regulatory implications impact how technological solutions must be managed. Eli stated, *"I can't put certain data into the AI tool because we have to follow these regulations for HIPAA or for California, for example, where a bunch of our clients are in those locations."* Mia discussed her experience working for a non-US financial services company and that her intent was to learn more about the global banking industry, mentioning "*the different types of regulatory authorities and doing business all across the globe.*" From the discussions, it became evident that the regulatory landscape in the financial services industry is complex, especially for global institutions operating across multiple jurisdictions. As Mia highlighted, working for a non-U.S. bank introduces additional layers of compliance, including European Union regulations, various European regulatory authorities, and the evolving regulatory frameworks across the Asia-Pacific Economic Cooperation (APEC) region. Mia elaborated, *"I've always been just familiar with U.S. regulations and the regulatory authorities"* and now her scope had expanded to understanding *"the European Union stuff that you must abide by, all the European regulatory authorities ... and business in Asia."*

Mia emphasized how exposure to regulatory compliance from a technological perspective – such as reviewing progress reports, compiling data, and preparing information for steering committees – offered surface-level knowledge of global regulations, stating, *"I can Google all day long, but that knowledge is only going to last temporarily because I'm not deeply involved in what's required."* However, Mia sees this as an opportunity to learn and to *"embark upon new territory."*

Further highlighting the regulatory nature of financial services, Max discussed the implications of regulatory changes as they related to communicating the changes to his team. When discussing the ways in which such changes often create uncertainty for employees, Eli noted, *"suddenly, we have new regulations coming in and to address that specifically…it's getting people to understand this is not that different from ten years ago when we had this. It sounds different because it's a lot more noise, but it's not different."*

Also common amongst the participants was the notion that, due to heavy regulation and standards to maintain compliance, financial services institutions are heavily audited, both internally and externally. In addition to their normal day-to-day responsibilities, leaders must respond to audit requests, forcing them to prioritize and re-prioritize their team's work to accommodate such changes. Lia said, *"some of the challenges that I've seen in this space is an understanding of the sensitivity associated with audit,"* further emphasizing that *"audit comes in and every quarter and whatever we aimed to do gets derailed ... we must focus on the audit items. So, there's a constant reprioritization of what we want to achieve."* To mitigate the impact of audits, Eli shared often *"there were a lot of audit trails built in"* in relation to a technology onboarding project.

It became evident that the participants were familiar with the regulatory nature of their leadership context. Lia, with experience working for three major financial institutions, stated that she had *"worked with [named three companies] and one thing they have in common is that they* *are heavily audited."* Additionally, Zoe shared her experience navigating company cultural challenges that impacted the delivery of audit findings, noting that *"sometimes it's hard to meet the 30-day turnaround"* required to comply with audit requests.

V.1.2 *Technological Developments*

The participants emphasized that the role of technology professionals is characterized by intense technological developments while necessitating the oversight of individuals, processes, and technological systems, all of which must be strategically aligned to achieve desired outcomes. A clear distinction emerged between developing and experienced leaders in their adaptive approaches related to technology. Developing leaders were primarily focused on processes and technology, often exhibiting a reactive response pattern rather than proactive strategic adaptation. For example, Eva, who is responsible for a team of three to four members, stated, *"It's in my best interest to train them properly and get them to do the work they were assigned."* Notably, however, she presented no examples of strategic initiatives in her interview. Eva also said: "*The technology roadblocks are easier to solve, and you do your research, and there's usually someone else who has been there and done that. So, you try to find mentors, to see how they have achieved a solution to the roadblocks that you and the team are facing."*

Zoe shared examples of operating in technology project management roles and supporting a team by demonstrating people leadership skills, yet she also did not present any examples of strategic initiatives. Sam, too, emphasized the importance of managing people and technology but fell short of discussing broader strategic actions. Lia, however, shared examples of developing an AI governance strategy for her organization while managing her team, illustrating a more advanced adaptive behavior. Although a developing leader in this study, her leadership context is more technologically intense due to the nature of her role.

In contrast, more experienced leaders demonstrated a more holistic and anticipatory approach, integrating people, process, technology, and strategy to enable organizational agility. Eli described managing an offshoring initiative that involved coordinating people, processes, and technology, which also provided an example of the sense-and-respond approach in action. In addition to this example, Eli spoke of a transformational project as: *"Going from waterfall to agile ... [has] been a difficult transition for a lot of folks because there are people who've been doing project management a certain way for 20 to 30 years."* Eli also described a strategic leadership style choice related to technological development: "*Technology is the much easier of the two [technology or people] to navigate. You can design a solution; you can integrate new technologies together; you can craft a new experience; you can build out project plans and budgets and milestones and write code. You can do that [but], when you talk about changes with humans, it's a very, very different experience ... If you're leading an organization with 100 people, that's 100 different mindsets, 100 different opinions, 100 different belief systems."*

In addition to how the participants manage people, processes, and technology, they emphasized the pace at which technology is changing, further complicating their roles as technology leaders. Specifically related to AI adoptions, participants discussed AI to varying degrees as it relates to technological development. Lia observed *"it's possibly more disruptive than other things, but possibly not, that remains to be seen."* However, the participants consistently emphasized an element of the unknown as it relates to AI development, the security implications, and speed of adoption. Eva noted *"AI is taking off [but] established industries, I think are a little bit slower to adopt because you want to get feedback from the customers to see how much of it [AI], they want and how much of it makes sense."*

Similarly, participants shared that just because things may be changing fast externally, that does not translate to internal changes at the same rate. As Eli stated: "*there is the friction between everyone using AI in their private life and being able to ask it any question and just getting results to using it in a large, large company in a heavily regulated industry where you don't want to do things that will cause you legal issues in the future. So, at a working level, we're trying to implement these tools to try to balance that and then set expectations with senior leaders."*

Sam, on the other hand, said the use of AI represented a rapid change because *"anybody who's developing AI now is behind the curve already. So, trying to catch up, you must run twice as fast, and that's exactly what we're doing."* Sam, like other participants, supports his team's growth in developing the relevant skills needed to navigate this technological development. As it relates to technological development and managing the pace of change, leaders must not only adapt; they must also help manage the impact on their teams. Max discussed the times when technology outpaces human change, sharing that *"technology moves faster than human beings, and as leaders, we need to do our best to buffer, insulate, and meter the pace."* We found this notion to be consistent across leaders navigating, not only technological development, but also other transitions leaders face in this environment.

As such, change impacts related to technology were, to some degree, prevalent for all participants. Examples demonstrated that when technology-related changes occur, the participants adopted a more adaptive and resilient mindset, focusing on coping strategies to navigate the transition effectively. For example, Leo stated: *"We understand change is going to happen. This is a part of our world as technologists, right? We must be comfortable with change, or else this would not be the right career path course."* Additionally, considerations around security and how leaders protect the company while innovating and developing technologies are crucial. Similarly, Lia, a security professional, emphasized that there may be times where decisions are made that can be perceived as *"hindering innovation"* by *"blocking certain things"* if it is for the benefit of the company and that a core responsibility of their job is to provide information security. Eva also highlighted the need for secure technology, stating that *"you want something that manages risk and security"* and technology that prevents *"data leaks"* and is free of *"bugs."* Technology that is not tested or *"tried and done"* may have security and stability challenges. Eva observed, *"sometimes it can crash, and there are a lot of threats, and you don't want buggy features. I think that both are common across all industries, not just banking."* With new technology, there are both risk and rewards due to the newness of the technology but that can be assessed through a proof of concept, hence, *"you start small and add on."* Participants addressed the need to remain on the *"cutting edge"* with the *"latest technology,"* all while keeping developmental factors under consideration.

Lastly, participants must navigate the ways in which technology is developed and enhanced. Participants mentioned working in an agile environment in which the process was iterative in nature. Each participant either explicitly stated they work in an agile environment, or their description of their process confirmed that they work in an agile environment. Eva stated that *"these days, everybody is following agile patterns,"* while Mia shared that she has been *"working in an agile environment"* for a while. Zoe shared an experience in a technology supporting role that required providing input into the enhancement requirements for an upgrade. To foster a more seamless development process, she discussed the importance of developing standards for requirement intake and managing relationships with technical teams, stating *"we all eventually got into a conference room and started creating a standard."* Similarly, Max captured the discovery phase of development, reemphasizing that Agile methodologies are iterative in nature. He described the early stages of a project, noting that *"one of the first things* *you do is some degree of discovery. You have a general idea of what you're trying to achieve, but there's ambiguity."* This uncertainty requires adaptability and highlights the importance of embracing the unknown, as Max stated: "*In those initial moments of wonder you have to be comfortable with that uncertainty and give oxygen to it."* This finding demonstrates a mindset of innovation. Max went on to echo the importance of collaborative problem solving in dynamic environments when he observed that *"we're all derivative work."* Having adaptive processes built in helps leaders to not only navigate these complexities but also to guide their teams through periods of change and uncertainty.

V.1.3 *Organizational Changes*

The participants emphasized that organizational changes such as mergers, acquisitions, and internal restructuring created a fluid environment wherein leaders must navigate cultural integration, workforce realignments, and shifting priorities. Our findings demonstrate that these internal shifts present unique challenges that require leaders to adapt their approach as they guide their teams through transitions. Organizational changes influence the leadership context by altering priorities, redefining roles, and reshaping operational frameworks. Moreover, change management becomes a central part of their leadership responsibilities. Zoe, speaking about the different types of changes she had experienced, including organizational change, stated: "*Environments are constantly changing, so we all have to be able to put on that change management hat, coach others – or coach ourselves – and remind ourselves to stay open-minded, to be able to flex at any moment, and to handle whatever situations we might face."*

Additionally, Leo and Mia both described their experiences navigating company mergers and subsequent integration activities; they also emphasized the need to coach and care for their team during the transition. The participants emphasized that changes often bring uncertainty and anxiety, not only for employees, but also for leaders tasked with maintaining stability. Mia described the emotional toll of navigating such transitions, emphasizing the responsibility leaders have in setting the tone for their teams. She stated: *"[It] caused a lot of anxiety, not just for them, but for me as well. But they're looking at me, looking for me to hold it together because, if I'm going to panic and if I'm concerned about me, how are they going to feel?"*

This reflection highlights the need to adapt to changing circumstances while maintaining a sense of self. Balancing one's own emotions not only provides reassurance and stability for their teams but also fosters a sense of trust and confidence in leadership. By maintaining emotional composure, leaders create an environment where team members feel supported. Similarly, Leo expressed the desire to not lose a sense of self during the change, but *"that's easier said than done because we all want to work as hard as possible. We want that success that's on the other side of whatever the challenge is."* Mia further acknowledged the challenge of maintaining focus and morale amid uncertainty but reinforced the necessity of perseverance, saying that *"we still had a job to do in the midst of all that chaos."* These insights richly contextualize their environment and highlight the behaviors needed to navigate their leadership landscape.

V.1.4 *Financial Disruptions*

The financial disruption trait reflects drastic shifts caused by volatility in the marketplace. We found the keywords "volatility," "volatile," "market conditions," and "market changes" to be consistent in the data for each participant. As such, financial disruptions are an important factor in the leadership context, as they create instability and demand rapid adaptation.

Participant responses capture the volatile conditions of the financial services industry. As Sam stated: *"If you've been in this industry long enough, you know that it is a very volatile* *industry because the markets are constantly changing. The industry is ever evolving."* Experienced leaders with extensive experience in this industry navigate with know-how and an understanding of the volatility of the industry.

As part of the discussion with Eli, *"the distinction between dynamic and volatile"* emerged *"as being the same,"* with volatile having a more negative connotation than dynamic as *"dynamic just means things are changing; they're constantly moving there to volatility means things are changing, they're constantly moving."* Findings from our discussion with him captured a personal leadership motivation for this interviewee which is to *"move people from the negative [use of] volatility for example and changing that to dynamic,"* and that leaders in general should focus on the former, which has the more positive connotation. As Eli mentioned, *"part of the leader's goal is to help people see that change is constant and that it is the norm."* Eli, also noting the leader must demonstrate strength when there is volatility, explained that *"the counterbalance to that volatility is that the leader has to become the rock."* To the point that volatility and change create a high-stakes environment, Eva highlighted *"especially in financial services, you don't want any mistakes."*

V.1.5 ***Leadership Transitions***

The fifth trait addresses internal leadership transitions, highlighting the fluidity of reporting relationships – who a leader reports to and who reports to them can change over time. The findings also reveal that the ways these transitions are managed are important to maintain stability. Discussions with Max illuminated the critical role of change management during transitions in which the real challenge lay not in the *"rate"* of change but in its *"directionality"* to ensure that change is purposeful, aligned, and strategically guided. Max indicated that incremental, high-velocity change can be manageable if it follows a clear trajectory, saying that *"incremental and high velocity change that gets you from one point to the next can be a challenge, but it's an easy-to-communicate journey for the [team]."* However, when change becomes erratic and chaotic, *"like waves hitting from all directions",* it can lead to severe consequences. Max expanded on this concept by suggesting that *"if I tell you to swing hard left and then swing hard right, it's really just indecisiveness at the top of the house, and that can be really detrimental."*

In this example, the lack of strategic consistency led to *"attrition and plummeting employee satisfaction"* and a decline in overall morale. These findings capture a crucial lesson for leaders, as Max stated, which is to critically assess rapid changes and ensure they guide their teams by making sure to maintain a level of consistency on the journey. Similarly, Eli shared his experience taking on a new team, which increased his team headcount. This transition was internal to the participant. Lia also described the experience of gaining new direct reports. Learning about their new team members played a role in how they adapted their leadership style to foster an effective relationship with the various individuals. Mia, on the other hand, discussed having individuals transition off their team, creating the need to recalibrate and assume the responsibilities of the departing individuals.

Further, Mia discussed that she was experiencing leadership shifts and Max provided context to leadership transitions leading to new directions, noting the emergence of a *"new executive and new focal point."* In Mia's case, however, she experienced three changes in executives during a short period of time, again causing the need to shift priorities and adjust her style of execution to a new leader. Together, their adaptive approach enabled them to navigate the transition.

In summary, our findings show that the eight participants navigated highly dynamic environments in which various leadership traits posed unique challenges and demands. The context in which they operated profoundly influenced their need for adaptability and shaped their responses. Establishing that the participant's environment is indeed dynamic allows us to contextualize their experiences empirically. Across all eight participants, the five key traits – leadership context, technological developments, organizational changes, financial disruptions, leadership transitions – emerged as essential to effective leadership, although their significance varied, depending on individual roles and types of leadership responsibilities. Hence, a common theme throughout the findings is that these leaders are dedicated to being adaptive. Their reflections highlighted how daily responsibilities and industry pressures required continuous adaptation, reinforcing the role of adaptability in maintaining effective leadership.

V.2 Sense-and-Respond Behaviors

While Section 5.1 explored the contextual experiences of the leaders that drove their need for adaptability, we next focus on how the leaders develop and apply their ability to sense and respond in their environments. These findings capture real-world examples shared by the leaders, showcasing their capacity to sense, interpret, decide, and act in response to changing conditions. We first outline findings on adaptive cycles, followed by findings of the extent to which the eight participants engage in the sense-and-respond principles. Together, these observations provide insights into how the SaR approach contributes to the participant's ability to respond adeptly to the dynamic environments in which they operate.

V.2.1 *Adaptive Cycles*

Our findings on adaptive cycles highlight the ways in which the participants articulated experiences in sensing, interpreting, deciding, and responding to change. It became clear that the experience-level of the leaders influenced their engagement in adaptive cycles. Therefore, this section is organized as follows. We begin with experienced participants who fully engage in adaptive cycles, demonstrating high levels of engagement. Next, we turn to those who, while developing their modes of leadership, exhibit moderate engagement while detailing how their decision making adapts in certain situations but remains constrained in others. Finally, in categorizing individuals with developing experience levels, we highlight low engagement in adaptive cycles, illustrating some ability to interpret change effectively and make informed decisions. Table 4 summarizes these findings. We categorized participants as high, moderate, or low based on how actively they engaged in the four stages of adaptive cycles: sensing, interpreting, deciding, and responding to change. High-engagement participants consistently demonstrated all four behaviors. Moderate participants adapted well in some areas but showed limitations in others. Low-engagement participants showed emerging skills, occasionally interpreting change but struggling to make and act on decisions consistently.

Table 4 ***Evidence of Adaptive Cycles across Participants***

Participant	**Experience Level**	**High**	**Moderate**	**Low**
Eli	Experienced	X		
Leo	Experienced	X		
Mia	Experienced	X		
Max	Experienced	X		
Eva	Developing			X
Lia	Developing		X	
Sam	Developing		X	
Zoe	Developing			X

In their comments, participants shared examples that provided evidence of their ability to detect changes, adjust their approach or strategies, leverage prior knowledge to begin interpreting what was happening, and pick up signals in their internal or external environments. From there, these participants articulated ways in which they interpreted the data, made their decisions, and acted in a way that led to a specific outcome.

Eli described a cycle that highlighted learning from his previous experiences to navigate similar situations and demonstrated adaptability that improved his ability to pivot. Specifically, Eli shared his experience with inheriting a new team and adjusting his onboarding approach due to pressing demands. Recognizing the urgency of an initiative about which he had limited knowledge, he noted: *"I had to step in directly and manage."* However, as he assessed the situation, he found the data presented to him insufficient for making informed decisions, specifically, *"[the] data that [were] being presented to me wasn't enough for me to solve [the problem]."* Reflecting on his response, he acknowledged that while this wasn't a new challenge for him, his ability to quickly pivot stemmed from years of experience: *"The first time I did it, I probably learned some things, but I've incorporated those things now, which is why I pivoted that quickly then."*

Leo presented an adaptive loop that demonstrated his ability to grow personally. He articulated this process of periodically taking an *"honest self-assessment of skill,"* knowing that the financial services industry was ever-changing. When he senses the onset of changes, he evaluates before making decisions. In the example he gave, the action was to take courses and certifications on *"cloud computing and the automation that comes along with that"* because of *"the efficiency that it creates,"* stating it was a *"no brainer and to be quite honest, I wish I would have done it sooner."* Leo also described how an integration project was unfolding in real-time and that he was advocating for continuous communication between his team and his leadership. This created an adaptive cycle for responding to the *"rapid changes"* due to the acquisition activities they were experiencing. He observed that *"it's people that are driving the initiative . . . so paying close attention to the people is key."*

Mia's experience highlighted the way in which sensing external signals can trigger adaptive cycles. She identified early signs of organizational instability by tracking stock prices and hearing discussions about business exits. As these signals persisted, she assessed the situation as transitioning into *"a dire state."* As she had navigated multiple mergers, the element of surprise was minimized, *"so it wasn't a shock."* Her experience allowed her to stay composed and support her team through the transition. This context underscores the importance of interpreting external signals, contextualizing them internally, and making informed decisions. Mia's calm response not only helped her navigate the transition but also enabled her to more effectively support her team through the onset of the transition.

Similarly, Max described how external triggers prompt internal responses, noting, *"I was watching as the enterprise and the industry around us shifted to agile development, even if it was fumbling and bumbling, they were doing it."* This shift signaled the need to interpret regulatory implications and the impact on his company's internal processes. Upon discovering a lack of governance, Max decided to develop a transformation program. His adaptive cycle involved observation, leveraging peer-to-peer learning, prioritizing, and coordinating resources. He stated that *"through a lot of coordination and development, we were able to figure ways to accommodate [this transformation]."*

Experienced participants navigate the adaptive cycle by leveraging their context and expertise to inform decisions. When faced with the need to pivot, the participants' adaptive approaches to processing information yield positive results. These participants demonstrated a continuous capacity for learning and adaptation, reinforcing that adaptation is not a one-time event but rather an ongoing engagement with new insights and experiences.

Two leaders were observed to moderately demonstrate adaptive cycles. Through analysis of their responses, we saw evidence of cyclical adaptability, though the context of the SaR adaptive loop was unclear. Lia, for example, described investigating an external cyber-attack; her response was to work with her internal team to establish guardrails as senior leaders directed that they take action to *"block everything."* While some saw this as inhibiting innovation, Lia prioritized the company's protection. She implemented an immediate block and continuously monitored both the external and internal environments for potential threats. This observation highlights that, in situations of rapid change such as a security threat, leaders may not always sense the issue in advance but must still act swiftly. Lia emphasized that such occurrences are frequent and a priority within her leadership context.

Like Lia, Sam's adaptive cycle starts with his active pursuit of new ways to improve efficiency and integrate beneficial technology. As he put it, *"just because something has been done or that's the way it's always been doesn't mean it's the right or most efficient way."* He emphasized the importance of assessing whether a change is necessary and beneficial, noting that *"if it's new technology we need to deploy, we'll figure out the best way to incorporate it into our processes and modify them as necessary."* To enhance efficiency, he leveraged coding, explaining, *"if we can use code to automate a system instead of manually moving clients, we absolutely deploy it."* By continuously introducing technological solutions, Sam ensures the organization evolves dynamically or, as he put it, *"always looking for new ways to be more efficient is key for an adaptable manager, being open to that type of change."*

These findings demonstrate that, to some degree, these leaders have the capacity to demonstrate adaptive cycles. Through careful examination of the data related to these two participants, we found other elements of the adaptive cycles described as sensing, interpreting, deciding, and acting separately.

Two participants, both categorized as developing leaders whose responsibilities were less extensive compared to others, exhibited low adaptive cycle responses. For example, Eva shared her experience in an agile environment, emphasizing the importance of a feedback loop in the software development life cycle and the need to adapt to changing requirements. She also highlighted adapting her style based on different peer and leader dynamics, although no clear adaptive cycles were observed. Similarly, Zoe described handling an *"incident where we had to put out a lot of fires because of miscommunication,"* demonstrating a reactive response. While Zoe works in an agile environment, while her actions suggest an awareness of iterative adaptive practices, no clear adaptive cycle was evident.

In summary, the four experienced leaders, Eli, Leo, Mia, and Max, effectively navigate adaptive cycles in response to their dynamic environments. They sense changes, interpret data, make informed decisions, and act decisively. Each participant applies the adaptive cycle differently, emphasizing distinct aspects. Max and Eli are highly engaged with adaptive cycles, using sensing as a trigger for adaptation. Leo engages through ongoing self-assessment and continuous learning. Mia prioritizes recognizing external signals and taking well-informed actions.

Maintaining a high level of engagement in adaptive cycles requires staying attuned to internal and external factors. At the individual level, it involves understanding one's capabilities, refining leadership style, and continuously integrating new insights. Two developing leaders demonstrate moderate engagement in adaptive cycles, showing adaptability but with constraints. They actively pursue efficiency improvements and technology integration. While they sense changes, their data gathering remains limited. While Lia and Sam's overall cycle engagements are moderate, they exhibit strong followership in interpreting, deciding, and acting. The other two developing leaders, Eva and Zoe, demonstrate low engagement with adaptive cycles, showing awareness of adaptability but limited proactive decision making; their ability to respond iteratively to change remains minimal. However, they differ in their approach, with Zoe fully embracing decisive actions, which was evident in her response to navigating communication challenges. The findings revealed that while the SaR adaptive loop enables technology leaders to navigate their dynamic environments, adaptive cycles are not the sole mechanism for adaptation. The next section will explore the SaR principles and other complementary behaviors that support leader adaptability.

V.2.2 *Adaptive Principles*

This section describes the adaptive principles demonstrated by the participants and the degree to which their behavior aligns with these concepts: processes that learn, value-based governance, personal accountability, and modular processes. The specific context of the leaders' environment, particularly the five traits discussed in Section 5.1, made the SaR approach a valuable lens with which to examine their responses to internal and external factors related to these traits. Participants demonstrated behaviors aligned with adaptive principles to varying degrees. Regardless of their level of engagement in adaptive cycles, their ability to demonstrate these principles influenced their adaptability. Leaders who leveraged processes involving continuous learning refined their learning strategies, while value-based governance ensured alignment with organizational priorities. Personal accountability drove both ownership and decisive action, and modular processes enabled faster execution. These principles provided a structured yet dynamic foundation for navigating complexity and fostering consistent adaptation. Table 5 summarizes these findings. Consistent with Table 4, we categorized participants as high, moderate, or low as a reflection of the degree to which their behavior aligns with the adaptive principles of processes that learn, value-based governance, personal accountability, and modular processes.

Table 5 ***Evidence of Adaptive Principles across Participants***

Experience Level	**Participant**	**Adaptive Principle**	**High**	**Moderate**	**Low**
Experienced	Eli	Processes that Learn	X		
		Value-Based Governance	X		
		Personal Accountability	X		
		Modular Processes	X		
	Leo	Processes that Learn	X		
		Value-Based Governance		X	
		Personal Accountability	X		
		Modular Processes	X		
	Mia	Processes that Learn	X		
		Value-Based Governance		X	
		Personal Accountability	X		
		Modular Processes		X	
	Max	Processes that Learn	X		
		Value-Based Governance	X		
		Personal Accountability	X		
		Modular Processes	X		
Developing	Eva	Processes that Learn	X		
		Value-Based Governance	X		
		Personal Accountability			X
		Modular Processes	X		
	Lia	Processes that Learn	X		

		Value-Based Governance	X		
		Personal Accountability		X	
		Modular Processes	X		
	Sam	Processes that Learn	X		
		Value-Based Governance	X		
		Personal Accountability		X	
		Modular Processes	X		
	Zoe	Processes that Learn	X		
		Value Based Governance			X
		Personal Accountability			X
		Modular Processes		X	

Processes That Learn. The adaptive cycle operates within processes that learn, as discussed in Section 5.2.1. This section explores how learning drives adaptation and examines its role in participants' ability to adjust to change iteratively. Specifically, it highlights how participants prioritized continuous learning to strengthen their adaptability. All eight participants have actively engaged in behaviors that reinforce continuous learning, embedding it across the four phases of the adaptive cycle. As participants take specific actions, they often encountered situations that required acquiring additional information, creating new learning opportunities. For instance, during Max's implementation of a transformation project, he faced resistance from his team, explaining, "*there was a lot of pushbacks*" as team members insisted, "*no, you can't work that way because the policy says I need to do this.*" As Max gained insight into each stakeholder's priorities, he effectively challenged the rigidity of existing policies, emphasizing adaptability: *"we can rewrite this."* This exchange illustrated how leaders navigate resistance by fostering a learning mindset, questioning established norms, and driving meaningful change.

Active listening served as a critical learning pathway, enabling participants to gain insights from others. Each participant expressed the importance of listening. Mia stressed the importance of acknowledging emotions and fostering transparency, stating, *"the idea is to just hear them [team] out... I was really the only leader that they heard from."* Leo recognized his growth in active listening, noting, *"I listen a lot more. I'm more attentive to body language,"* stating, *"I think it is key to change [management]."* Eli highlighted the need to understand both words and behavior: *"I've listened to the words that the person was saying – that they don't like this – but I did not listen to the behavior they were displaying."* Max reinforced the importance of clear communication, stating that *"the ability to actually lean in and communicate with the other individual – because if something's changing, you have a piece of information, or I have a piece of information – we need to convey it to each other and understand it thoroughly."* These reflections demonstrate how active listening creates a learning process that enhances leadership effectiveness.

Every participant articulated a range of continuous learning approaches, encompassing both traditional methods – such as formal education, structured training, and mentorship – and non-traditional strategies like self-directed learning, conferences, and learning from others. Max stated: *"I think it's really important that we acknowledge that learning comes in a lot of different forms and sometimes those smaller incremental items can do just as much justice as the deeper dives that you get from formal degree paths."* All participants consistently demonstrated a commitment to seeking new knowledge and applying their insights in practice. Leo emphasized, *"[b]eing a continuous learner is key."* Eva highlighted the need for up-to-date resources in the fast-changing technology landscape, stating, *"I usually look for good resources since technology changes so fast, [for example] Udemy courses or some web topic that is relevant. And it should* *be new because versions change every year."* Eli also expressed his dedication to learning and reading books. Each participant values continuous learning as essential for navigating their leadership roles.

Cultivating organizational learning and *"paving the way,"* as Sam described, is a key leadership responsibility, especially in guiding and supporting teams. Eva reinforced this idea, emphasizing the importance of *"finding resources and sharing them"* to keep her team aligned and informed. By empowering their teams, leaders create an environment whereby continuous learning drives adaptability at both individual and organizational levels, consistent with SaR processes that learn. For example, Max encouraged team members to pursue two to three growth opportunities per year, viewing it as *"an investment in human beings and making sure that we're all doing well."* He emphasized that when individuals feel they are "*growing and you're a healthy individual, you're going to do better at work . . . It's just a win-win for all parties involved."* Similarly, Sam empowered his team to explore AI, while Mia and Leo encouraged their teams to understand the dynamics of the company's acquisition to enhance team effectiveness. Zoe fostered team collaboration to discover more efficient ways of working, and Lia promotes knowledge-sharing across her organization. Independent of how they engage in the adaptive cycle (Section 5.2.1), each participant demonstrated how they consistently prioritize and apply learning.

Value-Based Governance. Participants demonstrated value-based governance to varying degrees. According to SaR, value-based governance consists of three key elements: governing principles, governance models, and governance processes. Governing principles reflect the business context of the enterprise and its defining function – its fundamental reason for being. These principles establish what the organization will always uphold, on what it will never compromise, and why it exists. We found insights into each participant's *"reason for being"* and their defining functions as leaders. The eight participants consistently exhibited behaviors and sentiments aligned with governing principles, demonstrating a commitment to foundational values that informed their decision-making and strategic direction. For instance, Sam mentioned, *"what's important to me is having compassion and being understanding."* Other reasons for being include versatility, avoiding micromanagement, and fostering collaboration. Max emphasized his commitment to maintaining a cohesive team dynamic, stating, *"I will not cause any animosity or make myself feel more superior,"* reinforcing his belief that *"we're still one team."*

Moreover, governance models support the reason for being, while governance processes allow for the updating of governing principles. To demonstrate this connection, we made note of how Eva, who values technology stability, emphasized the need for *"a failover process . . . to revert to the previous [software] version when it comes to implementation."* For technologists, they must frequently create governance processes for their operations and systematic ways to update their processes. Sam emphasized staying on the cutting edge of technology for both the organization and its customers as his reason for being. His governance model centered on talent acquisition, stating the need to *"ensure that we always have top talent,"* while his governance process involved *"working with different departments to ensure competitive pay."* Similarly, Leo's governing principle prioritized successful audits, with alignment serving as the governance model. He explained: *"the solution is to take people with you. Do not just tell them what to do, but why we're doing this, and they will figure out the how."* Prioritization plays a key role in updating governing principles, a sentiment echoed by Zoe, who emphasized priority-based decision making.

Our findings enabled us to observe how value-based governance presents itself at the individual level. We also captured the degree to which they engage with value-based governance. The nature of Lia's role requires a high degree of value-based governance. As a security professional, her core purpose is to safeguard the company, necessitating the creation of governance models and processes to support this mission. Max and Eli, who manage multiple teams, exhibited strong individual governing principles and articulated institutional governance principles with corresponding models and processes. Both Eva and Sam's deep technical expertise provided a platform for demonstrating a high degree of value-based governance, aligning their work with structured governance principles that ensure consistency and effectiveness. Eli and Max also have a high degree of value-based governance, indicating that the more dynamic the context, the greater the need for value-based governance. Leo and Mia demonstrated moderate value-based governance as their roles continuously evolved, with shifting governing principles. However, they actively engaged with governance processes to effectively navigate these changes. In contrast, Zoe exhibited low engagement with value-based governance; while she demonstrated strong personal values, an essential leader characteristic, the interview data did not reveal a well-defined governance model or structured processes in Zoe's approach.

Personal Accountability. In this environment, personal accountability must remain dynamic. Leaders must develop processes that uphold accountability, as well as establishing clear procedures. Experienced leaders consistently demonstrated strong personal accountability, ensuring clarity in roles and responsibilities. This industry's context requires a precise understanding of who is accountable, to whom, and by when. Factors such as audits or regulatory changes require dynamic accountability and procedures to account for change and volatility. Max described a flexible leadership style where individuals are allowed to *"fall and get back up"* as a means to drive accountability, stating, *"they're going to have more accountability."* Leo stated: *"I'm fully aware that my team is looking to me for direction. If being accountable is something that I ask of them, I have to live that example."*

Lia and Sam demonstrated a high number of dynamic personal responsibilities, with an emphasis on driving personal and team accountability and procedures to facilitate adaptability. Zoe and Eva demonstrated a low degree of dynamic personal accountability. Zoe emphasized the importance of personal accountability and maintaining strong procedures to stay disciplined at an individual level. However, effective leadership requires both dynamic personal accountability and the ability to foster team accountability, ensuring adaptability in a constantly evolving environment. For instance, Max emphasized the need for adaptable accountability, stating, *"I think that accountability has to flex where it's appropriate."* Our findings confirmed that accountability exists between people, not technology. Mia reinforced this notion, highlighting that *"bringing people along that [change] journey"* fosters a shared sense of accountability, ensuring alignment and commitment throughout the process.

Modular Processes. At the individual level, we found evidence of modular processes in the way participants customize their responses to dynamic situations. This type of adaptability aligns with Stephen Haeckel's (1995) concept of modular processes, where organizations – and by extension, individuals – develop flexible, interchangeable components to effectively respond to shifting demands. In its simplest form, modularity consists of separate parts that, when combined, form a complete whole. This definition provided a feasible lens for exploring participant feedback and addressing our research question. Participants demonstrated modularity by tailoring their approaches based on context, resources, and priorities rather than rigidly following predetermined workflows or scripted responses.

Max described modifying his leadership approach based on the unique needs of his team, ensuring that processes evolved alongside organizational shifts. This reflects a modular process because it highlights an adaptive, structured approach to leadership transitions. Rather than enforcing rigid or abrupt changes, Max emphasized a flexible, incremental shift – akin to adjusting separate yet interdependent components within a system. By *"announcing the turn,"* he integrated communication as a key module, ensuring alignment, minimizing disruption, and maintaining organizational stability.

Mia leveraged modular processes by adjusting her communication style and engagement strategies to align with her team's evolving expectations. Rather than relying on static policies, participants applied iterative learning, refining their processes to enable faster responses. Zoe emphasized the importance of recurring meetings to stay on top of shifting demands, stating, *"making [meetings] recurring so that we won't lose sight of it [tasks]."* Both demonstrate a moderate degree of modularity.

Eva described an environment where customer feedback drives the work, highlighting the need to determine *"what features [the customers want] versus what we [technologists] want to develop,"* which influences shifting demands. She stressed the value of an early feedback loop to enable the creation of flexibility and interchangeable components. From an organizational perspective, she operates within an agile framework. As a leader, Eva also demonstrated strong modular processes in coordinating her team. Eva demonstrated a high degree of modular processes with her day-to-day work. Eli, Max, Leo, Lia, and Sam also demonstrated a high degree of modular processes both in their roles and leadership choices.

Moreover, Eli discussed the concept of *"code-switching,"* and emphasized the importance of understanding one's fundamental identity and adapting one's communication style. This represents a modular process because it demonstrated adaptability through interchangeable communication styles that align with different contexts. Just as modular processes allow for customization based on specific needs, this technique enabled the participant individuals to adjust their communication while maintaining their core identity, stating: *"My flex could be we're going to have a longer conversation about what you need to do."* Sam also referenced *"code-switching"* as a flexible way to shift between their roles and responsibilities without compromising who they are stating: *"there are parts of my personality, there's parts of how I approach certain issues, whether it's an issue at work or whether it's an issue at home, an issue at school, I approach it the same way."* The ability to shift delivery is an intentional yet flexible approach – similar to how modular components can be reconfigured without altering the overall system. This flexibility ensures effective professional interactions while preserving authenticity.

Lia demonstrated a high level of modularity, detailing how she added "tools" or capabilities to her skill set and seamlessly integrated them to achieve outcomes. She demonstrated her navigation of leader and team interactions by assessing *"position of influence, position of power, or position of negotiation."* Based on the required position, Lia strategically adapts her approach, interchangeably applying several methods to drive results.

In summary, the participants demonstrated adaptive principles to varying degrees. Examining participant responses through the lens of these principles provided valuable insights into the ways in which utilizing such principles can enable adaptability at the individual level. All participants exhibited behaviors that facilitate ongoing learning. Regardless of their level of experience or the specific demands of their roles, individuals who identify as adaptive leaders and operate in environments that require adaptability engage with both traditional and non-traditional learning modalities. This approach enables them to effectively navigate complexities and fulfill their daily responsibilities. Where we found varying degrees of engagement were in the areas of value-based governance, personal accountability, and modular processes. Our findings showed that the two most senior-level participants demonstrated a high degree of each principle. Their detailed accounts clearly demonstrated how they adapted, offering valuable insights into effectively implementing these principles. We found evidence of values that shaped their leadership approaches, influencing how they navigated challenges and guided their teams. Findings also indicated their ability to quickly pivot and realign accountabilities and procedures for both themselves and their teams. Both Leo and Mia, who share a similar contextual experience that was shaped by acquisition volatility, demonstrated a moderate degree of dynamic personal accountability, with Leo demonstrating a high degree of engagement with all other principles. Mia, however, also demonstrated moderate engagement with modular processes. Consistent between them are complementary behaviors that we will discuss in Section 5.3. The developing experience level of participants caused a variance in the context and roles within which they execute the four principles. All eight participants maintain approaches that allow for processing and responding effectively to change through the context of the four principles.

V.3 Complementary Adaptive Behaviors

Participants demonstrated complementary adaptive behaviors beyond the SaR approach (Section 5.2) in response to the dynamic contexts in which they operated (Section 5.1). Participants demonstrated emotional intelligence through behaviors like self-regulation, empathy, and positive framing. Participants focused on behaviors that collectively contribute to building and sustaining trust within teams, therefore enhancing collaboration and adaptability. Allowing room for additional codes and insights to emerge contributed to the richness of our findings and provided further insights into enablers of adaptability for IT professionals in the financial services industry.

Emotional Intelligence (EQ). Participants highlighted EQ as a means to demonstrate awareness and regulation of one's own emotions, as well as understanding others' emotional cues. Three participants, Leo, Max, and Mia, explicitly captured EQ as essential to adaptation while Lia, Sam, and Zoe alluded to empathy and the importance of understanding their audience to drive desired outcomes. Mia stated: *"I would say one of the things that I had to be mindful of, and it's difficult, is practicing emotional intelligence . . . because you're going through stress, and I've learned that a lot in my existing environment . . . We've had a tremendous amount of change."* Max also emphasized, *"[when] things are disrupting you if you have an empathetic lens and you're genuinely trying to understand from that person's point of view . . . it opens the door to how you can receive that information and digest it personally."* Eli distinguished "*professional skill versus technical skills*." This distinction focused on Eli's experience with the "ebb and flow" of focus in the industry. While technical skills for IT professional are viewed as *"more valuable than technical skills, there is still a base of professional skills that you will need to have [such as] communication, conflict resolution and collaboration."* We found that these discussions emphasized an awareness of shifting priorities and the need to adapt – not just technically, but also interpersonally. The emphasis on communication, empathy, and emotional cues is an important aspect of EQ. While technical skills remain important to the participants, the need to demonstrate behaviors aligned with EQ is also important.

Moreover, maintaining a balanced perspective, managing expectations, and making decisions based on what is necessary rather than personal preference contribute to emotional intelligence. Mia and Zoe stated, "*[y]ou can only control how you respond to it"* and *"manage the expectations very delicately and level set."* Zoe also shared her experience with company downsizing and the importance of empathetic communication and making "*people feel like you understand."* She stated: ***"****You have to really keep that human component in mind and put that change management hat on if you need to and come down to people's level and communicate how it's going to impact them, [by sharing] why the company is going in this direction."* In these examples, participants articulated specific behaviors that facilitated effective communication within their teams, stemming from their heightened self-awareness. These behaviors demonstrated alignment with both the SaR adaptive cycle and its four principles. At the core of SaR is the notion of real-time adaptive responses based on sensing and responding to cues. This principle similarly underscored behaviors associated with EQ.

Moreover, Max demonstrated behaviors consistent with EQ, including communication, empathy, critical thinking, objectivity, and willingness to compromise. Max stated: *"And then the last thing after communication, empathy, and critical thinking is thinking objectively. [Which is] being able to pull out and extract what is needed by both parties or the multiple parties at hand, discern what you all need to do, and recognize that a lot of times, there's compromise engaged in these items."* In addition to finding a place of compromise, Lia stated that, *"empathy is where you can draw your genuinely."* For Lia, empathy has allowed her to navigate difficult conversations with her teams and motivate them during times of uncertainty. Eva discussed the importance of training team members properly and providing encouragement, even when they don't meet expectations. Together, they enable individuals to understand diverse perspectives, manage emotions, make thoughtful decisions, and collaborate effectively to achieve shared goals.

Additionally, in this environment, shifting perspectives to view disruptions as opportunities rather than obstacles fosters resilience and innovation. Sam stated: *"We always try to break down the silos and build synergy."* Max also emphasized, *"ensuring that the team believes in the notion that they're driving an outcome instead of an output"* allowed his team to arrive at *"collective decisions"*. Lia shared that, within the financial services industry, she found that there is becoming more *"funding for innovation"* which is greatly appreciated when compared to her experiences external to this industry. This discussion emphasized Lia's ability to focus on opportunities as opposed to challenges and how the funding for innovation led to new ways of working and providing security to her company. Similarly, Mia focused on growth opportunities and "expanding knowledge" of the industry.

Building Trust. Demonstrating behaviors that build trust mobilizes teams through change and uncertainty. Leo emphasized its importance, stating, *"trust within the team is paramount to directing them and pivoting toward different things,"* adding, *"trust plays a key role, and developing that trust starts from day one."* Mia builds trust by staying present and engaged with her team while *"doing little things to keep them motivated. Being present for them [and] having constant dialogue."* Leo also sees trust as essential for leadership effectiveness: *"As a leader, we may ask our teams to do things they may not be willing to do or may not know how to do, but if there's trust, those conversations become easier."* He further noted, *"the people piece is about gaining and sustaining trust."* Lia reinforced this idea, stressing the importance of *"building upon the trust that already exists"* with both their team and peers. Additionally, Zoe acknowledged the challenges of hybrid work and intentionally kept her recorder on during meetings to build trust. Participants strengthen relationships and reduce tension by organizing informal gatherings like virtual happy hours and connection sessions. For example, Leo and Sam host virtual happy hours, while Mia supports fun activities that foster camaraderie. They also implement proactive measures to ease workplace tension through social interactions and supportive leadership. Max explained that, during rapid change, they adopt a more authoritative leadership style, even if it's not their preference. He shared an example of when he relied on the trust and relationships established before the onset of the rapid change. He hoped that his team would have the grace to allow him to decisively lead them through the crisis, emphasizing the necessity of decisive action in such situations. He stated: *"It's about building that credibility, that brand, that relationship when you're not in those dire moments so that when you are, there's potentially trust to do that."* Participants Leo and Mia also emphasized the importance of building trust so the team felt comfortable following their guidance when a situation arose.

In summary, the participants demonstrated behaviors beyond SaR to strengthen their adaptability. These complementary behaviors helped leaders navigate adaptive cycles and accelerate adaptation. Participants recognized EQ as a crucial factor in understanding and regulating emotions, both personally and in others. They highlighted skills such as communication and empathy as essential for navigating various types of changes. Unlike the adaptive cycles and principles, we did not observe a distinction in EQ and trust-building behaviors based on participants' experience levels. While Eva's demonstration of those behaviors was less prominent compared to other participants, expressions consistent with these attributes were still present in her reflections. Our observations indicated that effective communication, expectation management, and balanced perspectives were key behaviors that facilitated emotional intelligence and supported team dynamics during periods of change. These findings were consistent with the principles of dynamic personal accountability and value-based governance. Specifically, effective communication served to clarify roles and responsibilities, thereby reinforcing adaptive accountability within the context of evolving team environments.

VI CHAPTER 6 DISCUSSION

This research explored technology leaders' adaptability within the financial services industry, characterized by constant regulatory shifts, market volatility, and rapid technological change. Through rigorous qualitative analysis, the study identified and examined key adaptive behaviors that enable technology leaders to respond effectively in dynamic environments. This chapter builds on the preceding analyses to discuss the research findings in relation to the research objectives and research question. As such, it presents the empirical results as they relate to the theoretical background introduced in Chapter 2 and the conceptual framing established in Chapter 3. By aligning participant insights with established theories, the chapter highlights areas in which this study contributes a new understanding to the existing body of knowledge on adaptive leadership.

The research began with two primary objectives that supported the area of concern, technology leader adaptability in the financial services industry. These objectives examined how leaders navigated and responded to dynamic environments and identified the adaptive leadership strategies that supported organizational resilience and agility. To guide the inquiry, the study posed a research question focused on the process of adaptability—specifically, *how does a sense-and-respond approach enable technology leaders in the financial services industry to adapt to their dynamic environments?* Due to the exploratory nature of the "how" question, a qualitative methodology was most appropriate (Agee, 2009). The semi-structured interview approach allowed for rich, context-specific insights that would not have been captured through quantitative methods alone. This chapter synthesizes the key findings, demonstrates how we answered our research question, and articulates those findings' relevance to both theory and practice in leadership and organizational behavior.

VI.1 Summary of Findings

Participants' semi-structured interview data were analyzed using NVivo version 14.23.3 to organize, examine, and derive insights from the data. Our findings begin with an in-depth understanding of the leadership contexts in which the participants operate. We found that five common traits were consistent across the participants: regulatory implications, technological developments, organizational changes, financial disruptions, and leadership transitions. These traits describe the nature of the industry, together with the role and experience of the participants. These traits represent more than external forces; they serve as environmental cues that leaders can adeptly sense and to which they can respond. The complexity of these contexts compelled leaders to demonstrate agility, resilience, and strategic foresight. Some participants' contextual experiences may have been more reflective of one trait than the other due to their unique situations. For example, the participants experiencing merger activity were subjected to organizational changes to a greater degree than were the participants employed in heavy technological roles. However, the five traits were common across all participants to some degree. Although each trait was expressed differently based on personal experiences and organizational contexts, the presence of all five was consistently observed, suggesting a shared foundation in how technology leaders adapt within the financial services industry. This commonality highlights a collective leadership narrative shaped by continuous change and the need for adaptability.

Participants described themselves as adaptive individuals, and we found evidence within their leadership contexts that supported the necessity for real-time, flexible responses. Leaders demonstrated adaptability by effectively integrating new technologies and managing ongoing organizational changes. They also navigated volatility with strategic insight and responded to regulatory changes to ensure compliance, all while minimizing their impact on their teams and processes.

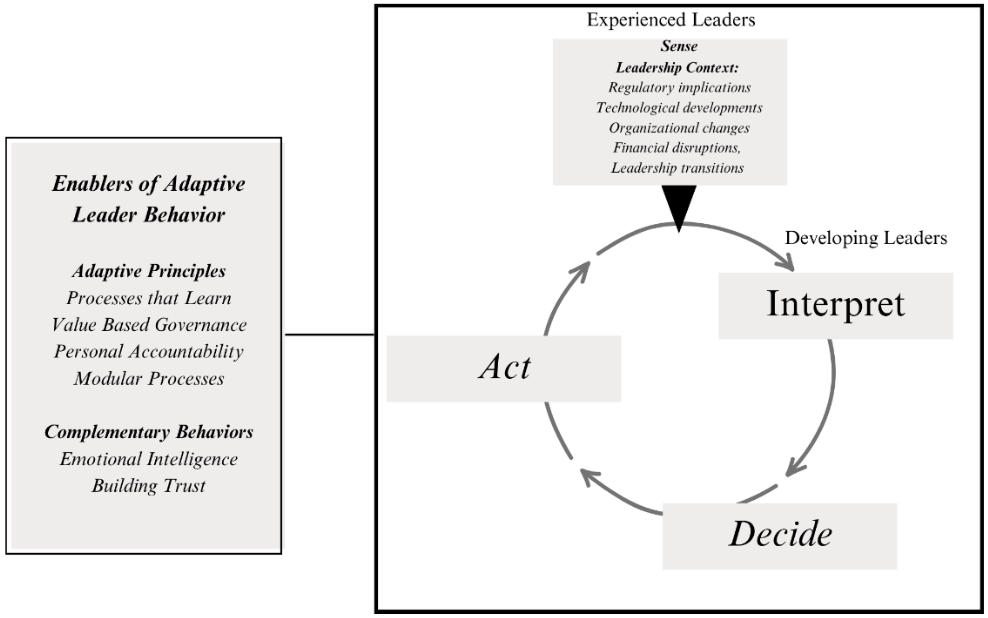
Against that backdrop, we examined the data using the SaR approach. Each participant offered empirical evidence supporting the applicability of the approach to the individual level of analysis. Adaptive cycles refer to the process by which leaders sense, interpret, decide, and act in response to changing conditions. The practice of adaptive cycles varied from one participant to the next, based on their leadership context. Experienced participants frequently initiated their adaptive cycles with a deliberate and proactive approach. They began by scanning their internal and external environments for early signals. Instead of reacting impulsively, these leaders engaged in thoughtful sensing, using their expertise, past experiences, and stakeholder input to interpret signals before deciding on actions. Throughout their narratives, clear evidence of this adaptive process emerged, one that resulted in favorable outcomes for both themselves and their teams. Rather than waiting for events to unfold, they actively identified cues of change, allowing them to anticipate shifts and adapt strategically. As supported by our findings, experienced leaders recognize the unpredictability in their environments, often stemming from regulatory changes or internal shifts. They draw on their expertise and past experiences to interpret signals and determine appropriate responses. In contrast, developing leaders typically react to external decisions or mandated changes, relying on immediate insights rather than past experiences.

Our findings show that experienced leaders use their prior experience as reference points, allowing them to focus on cues from both internal and external environments. This enables them to make informed decisions and act with greater confidence. Their approach reflected cyclic behavioral patterns consistent with the adaptive loop. Rather than being guided by linear decision making, leadership behavior was marked by repeated cycles. The contexts in which participants led shaped their need to actively sense and respond to changes in the environment. Moreover, following each action, outcomes were reassessed; environmental interpretations were refined; and strategies were subsequently adjusted.

Adaptation was not reactive but rather emerged from dynamic feedback loops and a consistent re-evaluation of leadership styles. Such cyclical engagement proved particularly effective in this leadership context. For the experienced leaders and within these conditions, adaptability was sustained over time. We observed that developing leaders often take a reactive approach to adaptation. They tend to engage with the adaptive cycle in its later stages, mainly through interpreting, deciding, and acting, rather than starting with proactive environmental scanning based on their leadership context. Their responses typically follow visible disruptions, indicating a focus on immediate challenges rather than anticipation. This may reflect their stage of leadership development, when experiential learning shapes their strategic foresight. Consistent with Nöthel et al. (2023), who identify the need to maintain a toolbox of behavioral strategies as a core component of adaptive leadership, developing leaders appear to still be building this toolbox through real-time experiences rather than drawing from a fully developed set of responses. As a result, their adaptive actions are often more reactive than anticipatory, indicating that the depth and range of strategies needed for flexible leadership are still forming.

Figure 3 illustrates the sense and response leadership context and enablers for both groups of leaders. It encompasses the key enablers of adaptive leadership, including adaptive principles, complementary behaviors, and the adaptive cycle. For experienced leaders, it demonstrates how the cycle often begins with sensing, which is prompted by leadership contexts that demanded early awareness and strategic response.

Figure 3 ***Sense and Response Leadership Context and Enablers***



The adaptive loop operates within processes that learn, whereby leaders consistently prioritize continuous learning to enhance their adaptability. Irrespective of their degree of engagement with the adaptive cycle, we found that all participants demonstrated a commitment to learning, modes of which were found to be both traditional and non-traditional, as well as valued by the participants. Participants also consistently learned from others, with active listening emerging as a critical learning pathway, enabling leaders to gain insights and improve their effectiveness. Listening and active communication emerged as complementary adaptive behaviors that also reflected EQ, as well as a mode of learning that enabled the processes that learn.

In addition to processes that learn, the four SaR principles include value-based governance, dynamic personal accountability, and modular processes. In dynamic environments, leaders must ensure alignment with personal, team, and organizational priorities. Participants who demonstrated a high degree of value-based governance held roles shaped by either their own deep technological expertise or by the specialized depth within their teams. Their roles involved indirectly overseeing multiple teams by leading the managers who were directly responsible for those teams. In many cases, the strength of a team structure contributed to their ability to govern with clarity and alignment. Similarly, leaders needed to uphold accountability and establish clear procedures due to the high degree of change and volatility within the industry. We found evidence of shifting priorities triggered by the onset of audits, changes in regulations, or broader organizational transformations. These factors contributed to the need for dynamic prioritization. The adaptability demonstrated by flexible, interchangeable components aligns with the concept of modular processes. Modular processes also enable agility for individuals. Leaders who can combine their experiences, learning, and insights respond quickly to changes or demonstrate the ability to flex their leadership style.

Our data analysis led to identifying two specific elements, EQ-based and trust-building behaviors. These behaviors emerged as complementary to adaptive cycles and adaptive principles. For example, empathy enabled leaders to better understand their teams, adjust their leadership styles, and drive meaningful outcomes. Similarly, trust empowered leaders to effectively mobilize their teams during periods of uncertainty.

VI.2 Relation to Theoretical Background

We found evidence of the leadership context in which the participants work consistent with the theoretical background in Chapter 2. Our empirical analysis confirmed that the financial services industry is indeed dynamic and complex. Study participants articulated their real-world experiences, highlighting the complexities of leadership in that industry. Their accounts illustrated challenges such as navigating constant change, balancing regulatory compliance with innovation, and responding to pressures internal and external to their firm. Through their narratives, opportunities for growth and personal renewal also emerged. Our study found that the financial services industry has historically remained stable and slow to adapt, largely due to heavy regulation, a pattern well documented in the literature (Allen & Carletti, 2010; Gill et al., 2015; Hõbe, 2015; Weese, 2015). However, the industry is now being reshaped by several shifts, and active efforts are being made to respond to evolving customer demands and the rapidly changing technological landscape. The importance of technological advancements for the industry was evident in our findings. We also confirmed that this was due to the heavy regulations and audit requirements that continue to cause progress to move more slowly. The sensitivity of data maintained by these institutions indicates that security measures must remain in place. As participants recounted, in this industry, mistakes are costly and security threats delay goals and business-as-usual activities. The need to dynamically prioritize and maintain dynamic accountabilities became evident and participants' observations revealed the realities of adaptive leadership, showcasing decision-making abilities, trust-building, and resilience in dynamic situations.

Moreover, this study addressed the significant gap in empirical research on leader adaptability in dynamic environments identified by Yukl and Mahsud (2010). This research captured both the need for adaptability and the day-to-day behaviors of adaptive leaders. The lived experiences of eight participants were closely examined using a rigorous, structured qualitative methodology, reinforcing claims that dynamic environments demand that leaders maintain a strong internal compass and exercise sound judgment to avoid inefficient responses (Crossan et al., 2008). Effective leadership in such contexts also requires continuous personal renewal that enables leaders to adapt swiftly, make complex decisions under pressure, and mobilize their teams with clarity and confidence (Murray & Greenes, 2006). Our findings highlight how continuous cycles of sensing and responding allow for quicker decisions along with following modular processes. Additionally, leaders who focus on continuous learning undergo personal renewal and encourage their teams to do the same, fostering team mobility during change and uncertainty.

Lastly, leadership continues to be an area of interest for scholars. We examined leadership based on the following contemporary definition consistent with the work of Vroom and Jago (2007) and House et al. (2002) as: the ability to guide, motivate, and influence others to contribute to the success of the organization. Our findings support this definition in that participants' adaptability enabled them to guide, motivate, and influence their teams toward a common goal. As a result, they were able to navigate various obstacles. Our findings also add empirical insights into adaptive leadership and its behaviors. We captured real-time strategy adjustments and situations that warranted leaders to be flexible.

III Relation to Theoretical Framing

This study provides a sense and response perspective as elaborated in Chapter 3 on technology leader adaptation in a dynamic industry. To our knowledge, the application of the SaR approach is very limited at the individual level. The concept originated at the individual level of analysis, and our research empirically applied this framing to the individual level. One research objective for this study was to understand how technology leaders in the financial services industry utilize adaptive leadership behaviors to effectively navigate their dynamic environment, thus enabling the success of their organizations. Evidence from our findings confirmed that the SaR principles led to favorable outcomes for the participants as they demonstrated team responses and compliance with audits and regulatory requirements. Consistent with London's (2023) definition of adaptive leadership as leaders making rapid decisions and taking swift action in response to unexpected situations, we argue that our findings highlight context and coordination (Haeckel, 1995; Haeckel & Nolan, 1993) as key enablers of leader adaptability.

We found that leaders who demonstrate a high degree of engagement with adaptive cycles demonstrated flexibility in their leadership style choices and processes. Developing leaders demonstrated commitments to adaptive practices that can strengthen their ability to increase their engagement with the adaptive cycle. Experienced leaders spoke extensively about leveraging their experience to sense shifts; therefore, developing leaders will likely, over time, grow their ability to sense. Our findings did not demonstrate speed of responsiveness. However, we confirm that data-driven decisions contributed to the participants' actions. Their detailed accounts clearly demonstrated the manner in which they adapted to a dynamic environmental context, offering valuable insights into the practical application of Haeckel's (1995) Sense-and-Respond principles.

Lastly, our focus on middle management confirmed Haeckel and Nolan's (1993) notion that, as opposed to senior executives, middle managers relate directly to operational decision making. However, we also gained the insight that developing leaders typically manage reactively, while more experienced ones are typically managing proactively by the wire, given their ability to sense the onset of an adaptive cycle. Haeckel's SaR (1995) approach offers a suitable leadership application because it aligns with the need for a real-time sensing and responding leadership styles that adapt to changing environments. Unlike traditional command-and-control styles that assume stability, the SaR approach emphasizes continuous learning loops and adaptive principles that inform decision making, making it highly relevant in dynamic industries like financial services. This model supports leaders in practicing adaptive, situationally aware behaviors, which aligns with the concept that leadership styles must be applied differently, depending on the context. Our study adds additional micro foundations to the SaR approach to include complementary behaviors. These behaviors, emotional intelligence, and building trust support leaders' response to situations and their flexibility.

Similarly, this study supports the notion that more contemporary leadership styles are needed in today's era. Traditional, static leadership models often fall short in addressing the complexity, pace, and ambiguity of modern organizational environments. As a result, we found evidence consistent with Yukl and Mahsud (2010), who emphasized that effective leaders must remain flexible in their approach to meet shifting demands.

Rather than relying on a single, fixed style, leaders must learn to flex between multiple leadership behaviors. For example, the need to be directive in moments of crisis, collaborative during change management, and visionary when setting long-term strategy was evident in the research data. This ability to strategically shift styles allows leaders to align with the needs of their teams and organizations in real time. More experienced leaders demonstrated the ability to flex their style more than developing leaders; however, developing leaders did demonstrate an understanding of the need to pivot and adjust.

Moreover, the SaR framework bridges the gap between leadership style and theory. While leadership theories explain why context matters, the SaR approach operationalizes how leaders can effectively lead in uncertain, fast-changing settings. It provides a practical, iterative process for navigating volatility, aligning closely with theories such as adaptive leadership and situational leadership, both of which emphasize responsiveness and fit. Therefore, SaR is not just a theory of leadership — it is an actionable framework that equips leaders to remain effective in real time by engaging with the complexity around them.

VI.3 Technology Leadership

The SaR approach enables technology leaders in the financial services to adapt to their dynamic contexts in five specific ways. First, it provides iterative learning cycles. Leaders who learn and continually cycle through periods of sensing and responding develop the capability to sense early signs of change and create adaptive strategies to mitigate risks or capitalize on opportunities. Technology evolves rapidly; therefore, the ability to continuously learn and effectively implement new approaches has become essential for sustained leadership and organizational success. Second, it drives a continuous awareness of internal and external signals. This allows leaders to mobilize and motivate others to address adaptive challenges collaboratively. To do so, leaders must build trust and create a sense of urgency. Third, it enables data-driven decisions, in which interpretation is an important step in the adaptive cycle as it synthesizes insights, whether they result from sensing or directives. Fourth, it fosters dynamic prioritization, including dynamic accountability but also emphasizing the need for rapid and frequent pivots. As such, dynamic prioritization is the result of rebalancing responsibilities and procedures. Last, SaR enables strategic flexibility. This includes the ability to flex leadership style and strategically align people, processes, and technology.

In addition, technology leaders need to be resilient and agile to adeptly respond to the very competitive, highly regulated and technology-intensive environments in which they typically operate. Modern technology not only influences how companies deliver their financial products and services; it also challenges traditional leadership practices for technology leaders. SaR behaviors are important contributors to such leadership, but they are not the only behaviors that support resilience and agility for IT professionals in financial services. Table 6 provides a summary of six behaviors that, based on this study, stand out as important contributors to resilient and agile technology leadership.

Table 6 ***Resilient and Agile Technology Leadership***

Behaviors	**Description**
Active Listening	Paying close attention to concerns, demonstrating empathy, and providing feedback.
Responsive Communication	Engaging in regular, transparent, and open dialogue that is relevant for the audience and situation.
Anticipating Change	Accepting the inevitability of change and maintaining a proactive attitude toward adaptation.
Emotional Intelligence	Understanding and considering the emotions, perspectives, and needs of others while self-regulating one's own emotions.
Reframing Challenges	Reframing challenges in a constructive way to encourage resilience and motivation.
Adaptive Leadership	Adjusting one's approach based on the needs of the situation and individuals involved.

In summary, this research provides relevant and impactful findings that address a pressing business issue: technology leader adaptability. We contribute novel insights to the existing leadership body of knowledge and practical insights for practitioners. By applying the SaR approach at the individual level, the study contributes empirical evidence to support the need for leader adaptability in dynamic environments and micro-foundations to existing theory. Documenting the contextual experiences of technology leaders in the financial services industry contributes new insights into how this industry operates and the unique challenges that set it apart from others. The six adaptive behaviors defined in Table 6 provide practical insights for practitioners. Leaders can utilize these behaviors to enhance their required resilience and agility. The adaptive cycle and principles of the SaR approach also provide insight into day-to-day behaviors leaders can develop to become more adaptable. Although examined in the context of the financial services industry, these behaviors would benefit other technology leaders operating in areas with a similar dynamic.

VII CHAPTER 7 CONCLUSION

This research has explored adaptability in the context of technology leaders in the financial industry through the lens of the SaR approach. It offers a comprehensive empirical analysis of the traits of their dynamic environment and the behavior necessary to navigate it effectively. The study emphasized both the challenges and opportunities leaders face, driven by regulatory implications, technological developments, organizational changes, financial disruptions, and leadership transitions. Leaders encounter these challenges while mobilizing teams and balancing the need to maintain a sense of self. Despite these challenges, leaders developed behaviors that enable adaptability. Their ability to navigate was evident in the outcomes they were able to achieve and articulate through their interviews. As such, the findings demonstrate the evolving role of leaders in a rapidly changing world.

The research was exploratory in nature and contributed to a more in-depth understanding of adaptive leadership. However, it is not without limitations. It is important to note the use of a semi-structured interview method. Due to the conversational nature of this type of interview, not all topics were discussed at the same level of detail with all participants. Additionally, a critique of semi-structured interviews is that their flexibility can introduce bias. The interviewer's reactions, follow-up questions, and interpretations may influence responses (DiCicco-Bloom & Crabtree, 2006). To reduce bias, a second round of interviews was conducted to confirm or obtain additional information from participants.

The research highlights several opportunities for future studies in the field. Our findings offer significant insights into fostering adaptability within a specific context, yet these insights can benefit from further validation. Exploratory studies serve as a foundation for deeper investigation, presenting a novel perspective that can be further developed through more rigorous research methods. An area of future research could involve conducting individual- and organization-level longitudinal studies designed to examine the process of adaptation over an extended period. Such a study would facilitate a comprehensive analysis of specific outcomes, ultimately contributing to a more nuanced understanding of adaptability. By exploring these opportunities, future research can build upon our current findings and refine strategies to further enhance adaptability. Another area of future research could include conducting quantitative assessments of adaptive leadership behaviors. By systematically measuring these behaviors, researchers can gain deeper insights into how adaptive leadership influences organizational outcomes. This approach would enable the identification of specific behaviors that contribute to effectiveness in varying contexts, ultimately enhancing our understanding of leadership dynamics in complex environments.

APPENDICES

Appendix A: Participant Interview Questions

How do you describe adaptive leadership? What characteristics do adaptive leaders demonstrate?

1. Can you describe some challenges and opportunities leaders face in dynamic work environments?
2. How do you view your roles or set of roles, professional and personal, and how do you shift between roles based on what is required at a given moment?
3. Do you have specific patterns you rely on and repeat to become more adaptable?
4. Describe ways in which you focus on continued learning.
5. Describe how procedure and accountability affect your leadership choices.
6. What values are important to you when responding to dynamic environments?
7. What role do technological advancements play in how you lead and respond to changes?
8. How do you keep yourself and your team motivated during periods of uncertainty or change?
9. Can you describe a time when you had to sense, respond to, interpret, and act on a rapid change? What did you learn from the experience?

Appendix B: A Priori Coding Scheme

Code	Sub-Code	Description
Adaptive Loop		These cycles capture environmental signals to guide changes in information and procedures where technology enhances the learning process.
	Act	Act based on dynamic execution and real-time situational awareness
	Decide	Make choices based on insights
	Interpret	Analyze and contextualize the data to identify patterns and changes
	Sense	Collect real-time data from both internal and external sources.
Modular Processes		Modular processes break complex tasks into flexible, independent components that can be reconfigured for adaptability.
Value Based Governance		Governing principles, a governance model driving accountability, and a process for updating and embedding principles.
	Governance Model	Personal accountability
	Governance Process	The way in which governance principles are updated and refined
	Governance Principles	Why are actions taken
	Leadership Values	The values that are important to a leader when responding to dynamic environments
Dynamic Personal Accountability		Owing one's actions, decisions, and outcomes
	Gaining Alignment	Gaining internal alignment from teams
	Personal Responsibility	Responsibility for one's own actions
	Trust	Building and maintaining trust
Processes that Learn		Adaptation to rapid change by focusing on personal learning
	Continuous Learning	Ongoing educational experience that extends far beyond a single workshop or seminar.
	Leadership Development	Learning new tools and new approaches to leadership.

Appendix C: Emerging Coding Scheme

Code	Sub-Code	Description
Agile		Flexible and iterative approach
	Collaboration	Collaborative approaches
	Flexibility	Openness to change and responding to evolving needs
Becoming More Adaptive		
	Active Listening	Process of fully engaging with, understanding, and responding to information
Emotional Intelligence		Ability to manage one's own emotions and understand others
	Own Emotions	ability to recognize, understand, and manage one's own emotions
	Emotions of Others	Perceiving, influencing, and responding to the emotions of others
Coping Mechanisms		Navigating uncertainty and dealing with challenges
	Managing Uncertainty	Managing uncertain situations
	Personal Renewal	Process of self-reflection, growth and personal adaptation. Renewing mindset.
	Navigating Change	Sentiments related to change frequency and change management
FS Industry Characteristics		Ways interview participants described the financial services industry
		Ways in which the industry is changing
	COVID-19	Impacts of COVID-19 on the industry and lessons learned
	Evolving	Ways in which the industry is evolved
Motivation		Self-motivation and motivation of others
	Mobilizing Teams	Motivating teams to take action
	Personal Motivation	Personal motivation is the internal drive that fuels action
Role of Technology		
	AI Adoption	Implementation of advanced analytical capabilities
	Technology Adoption	Adoption of new technological capabilities
Style of Leadership		Specific mentions "style of leadership" or "leadership style"

REFERENCES

Agee, J. (2009). Developing qualitative research questions: A reflective process. *International Journal of Qualitative Studies in Education, 22*(4), 431–447. https://doi.org/10.1080/09518390902736512

Allen, F., & Carletti, E. (2010). An overview of the crisis: Causes, consequences, and solutions. *International Review of Finance*, *10*(1), 1–26. https://doi.org/10.1111/j.1468-2443.2009.01103.x

Anifa, M., Ramakrishnan, S., Joghee, S., Kabiraj, S., & Bishnoi, M. M. (2022). Fintech innovations in the financial service industry. *Journal of Risk and Financial Management*, *15*(7), 287. doi: 10.3390/jrfm15070287

Avolio, B. J. (1999). *Full leadership development: Building the vital forces in organizations*. Sage.

Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future directions. *Annual Review of Psychology*, *60*(1), 421–449. https://doi.org/10.1146/annurev.psych.60.110707.163621

Barroso, M., & Laborda, J. (2022). Digital transformation and the emergence of the Fintech sector: Systematic literature review. *Digital Business*, *2*(2), 100028. https://doi.org/10.1016/j.digbus.2022.100028

Bass, B. M. (1998). *Transformational leadership: Industrial, military, and educational impact.* Lawrence Erlbaum Associates Publishers.

Bass, B. M., Avolio, B. J., & Jung, D. I. (2023). Predicting leadership success: Transformational leadership theory and its impact on organizations. *Journal of Leadership and Organizational Studies, 30*(1), 15–35. https://doi.org/10.1037/0021-9010.88.2.207

Blass, F. R., & Ferris, G. R. (2007). Leader reputation: The role of mentoring, political skill, contextual learning, and adaptation. *Human Resource Management*, *46*(1), 5–19. https://doi.org/10.1002/hrm.20142

Bryant, D. J. (2006). Rethinking OODA: Toward a modern cognitive framework of command decision making. *Military Psychology*, *18*(3), 183–206. https://doi.org/10.1207/s15327876mp1803_1

Claessens, S. (2009). Competition in the financial sector: Overview of competition policies. *The World Bank Research Observer, 24*(1), 83–118. https://doi.org/10.1093/wbro/lkp004

Crossan, M., Vera, D., & Nanjad, L. (2008). Transcendent leadership: Strategic leadership in dynamic environments. *The Leadership Quarterly*, *19*(5), 569–581. https://doi.org/10.1016/j.leaqua.2008.07.008

Day, D. V., Fleenor, J. W., Atwater, L. E., Sturm, R. E., & McKee, R. A. (2014). Advances in leader and leadership development: A review of 25 years of research and theory. *The Leadership Quarterly, 25*(1), 63–82. https://doi.org/10.1016/j.leaqua.2013.11.004

De Hoogh, A. H. B., Den Hartog, D. N., & Koopman, P. L. (2005). Linking the Big Five-Factors of personality to charismatic and transactional leadership; perceived dynamic work environment as a moderator. *Journal of Organizational Behavior*, *26*(7), 839–865. https://doi.org/10.1002/job.344

DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. *Medical Education, 40*(4), 314–321. https://doi.org/10.1111/j.1365-2929.2006.02418.x

Duncombe, R., & Boateng, R. (2009). Mobile phones and financial services in developing countries: A review of concepts, methods, issues, evidence and future research directions. *Third World Quarterly*, *30*(7), 1237–1258. https://doi.org/10.1080/01436590903134882

Ellili, N., Nobanee, H., Alsaiari, L., Shanti, H., Hillebrand, B., Hassanain, N., & Elfout, L. (2023). The applications of big data in the insurance industry: A bibliometric and systematic review of relevant literature. *The Journal of Finance and Data Science*, *9*, 100102. https://doi.org/10.1016/j.jfds.2023.100102

El Sawy, O.A., & Majchrzak, A. (2004). Critical issues in research on real-time knowledge management in enterprises. *Journal of Knowledge Management, 8*(4), 21–37. https://doi.org/10.1108/13673270410548469

Fares, O. H., Butt, I., & Lee, S. H. M. (2023). Utilization of artificial intelligence in the banking sector: A systematic literature review. *Journal of Financial Services Marketing*, *28*(4), 835–852. https://doi.org/10.1057/s41264-022-00176-7

Gill, A., Bunker, D., & Seltsikas, P. (2015). Moving forward: Emerging themes in financial services technologies' adoption. *Communications of the Association for Information Systems*, *36*, 205–231. https://doi.org/10.17705/1CAIS.03612

Gomber, P., Koch, J.-A., & Siering, M. (2017). Digital finance and FinTech: Current research and future research directions. *Journal of Business Economics*, *87*(5), 537–580. https://doi.org/10.1007/s11573-017-0852-x

Haeckel, S. H. (1995). Adaptive enterprise design: The sense-and-respond model. *Planning Review*, *23*(3), 6–42. https://doi.org/10.1108/eb054506

Haeckel, S. H. (1999). *Adaptive enterprise: Creating and leading sense-and-respond organizations.* Harvard Business School Press.

Haeckel, S. H, & Nolan, R. A. (1993). Managing by wire. *Harvard Business Review, 71*, 122–132. https://hbr.org/1993/09/managing-by-wire

Heifetz, R., Grashow, A., & Linsky, M. (2009, July – August). "Leadership in a (permanent) crisis." *Harvard Business Review*. https://hbr.org/2009/07/leadership-in-a-permanent-crisis

Hess, C. (2011). The impact of the financial crisis on operational risk in the financial services industry: empirical evidence. *The Journal of Operational Risk*, *6*(1), 23. https://doi.org/10.21314/JOP.2011.087

Hõbe, L. (2015). The changing landscape of the financial services. *International Journal of Trade, Economics and Finance*, *6*(2), 145–150. https://doi.org/10.7763/IJTEF.2015.V6.459

Horner, M. (1997). Leadership theory: Past, present and future. *Team Performance Management, 3*, 270–287. https://doi.org/10.1108/13527599710195402

Houghton, R., El Sawy, O. A., Gray, P., Donegan, C., & Joshi, A. (2004). Vigilant information systems for managing enterprises in dynamic supply chains: Realtime dashboards at Western Digital. *MIS Quarterly Executive, 3*(1), 19–35. https://www.yourhomeworksolutions.com/wp-content/uploads/edd/2020/10/real_time_dashboards_at_western_digital_misqe.pdf

House, R. J., & Aditya, R. N. (1997). The social scientific study of leadership: Quo Vadis? *Journal of Management*, *23*(3), 409–473. https://doi.org/10.1177/014920639702300306

House, R., Javidan, M., Hanges, P., & Dorfman, P. (2002). Understanding cultures and implicit leadership theories across the globe: An introduction to project GLOBE. *Journal of World Business*, *37*(1), 3–10. https://doi.org/10.1016/S1090-9516(01)00069-4

Huang, J. Y. H., Jiang, R., & Chang, J. Y. T. (2023). The effects of transformational and adaptive leadership on dynamic capabilities: Digital transformation projects. *Project Management Journal*, *54*(4), 428–446. https://doi.org/10.1177/87569728231165896

Huberman, A. M., & Miles, M. B. (2002). *The qualitative researcher's companion* (1st ed.). SAGE Publications, Inc.

Jansen, J. J. P., Dusva, V., & Crossan, M. (2009). Leadership for exploration and exploitation: The moderating role of environmental dynamism. *The Leadership Quarterly, 14*(1), 5–18. doi: 10.1016/j.leaqua.2008.11.008

Jarvis, R., & Han, H. (2021). FinTech innovation: Review and future research directions. *International Journal of Banking, Finance and Insurance Technologies, 1*(1), 79–102. https://doi.org/10.61797/ijbfit.v1i1.126

Kumar, A., & van der Aalst, W. M. P. (2006). Managing supply chain events to build sense-and-respond capability. *Proceedings of the International Conference on Information Systems* (ICIS 2006), 10. https://aisel.aisnet.org/icis2006/10

Khan, N. (2017). Adaptive or transactional leadership in current higher education: A brief comparison. *International Review of Research in Open and Distributed Learning, 18*(3), 178–183. https://eric.ed.gov/?id=EJ1142294

London, M. (2023). Causes and consequences of adaptive leadership: A model of leaders' rapid responses to unexpected events. *Psychology of Leaders and Leadership*, *26*(1), 22–43. https://doi.org/10.1037/mgr0000136

Luftman, J., & McLean, E. (2004). Key issues for IT executives. *MIS Quarterly Executive, 3*(2), 89–104. https://aisel.aisnet.org/misqe/vol3/iss2/5/

McIntosh, M. J., & Morse, J. M. (2015). *Situating and constructing diversity in semi-structured interviews*. *Global Qualitative Nursing Research*, *2*, 1–12. https://doi.org/10.1177/2333393615597674

Manser Payne, E. H., Dahl, A. J., & Peltier, J. (2021). Digital servitization value co-creation framework for AI services: A research agenda for digital transformation in financial service ecosystems. *Journal of Research in Interactive Marketing*, *15*(2), 200–222. https://doi.org/10.1108/JRIM-12-2020-0252

Marshall, B., Cardon, P., Poddar, A. and Fontenot, R. (2013) Does sample size matter in qualitative research? A review of qualitative interviews in Is research. *Journal of Computer Information Systems, 54*, 11–22. https://doi.org/10.1080/08874417.2013.11645667

Mathiassen, L. (2017). Designing engaged scholarship: From real-world problems to research publications. *Engaged Management ReView*, *1*(1). https://doi.org/10.28953/2375-8643.1000

Mathiassen, L., & Vainio, A. M. (2007). Dynamic capabilities in small software firms: A sense-and-respond approach. *IEEE Transactions on Engineering Management, 54*(3), 522–538. doi: 10.1109/TEM.2007.900782

Murray, A. J., & Greenes, K. A. (2006). New leadership strategies for the enterprise of the future. *VINE*, *36*(4), 358–370. https://doi.org/10.1108/03055720610716629

Myers, D., Abell, J., & Sani, F. (2020). *EBook: Social psychology* (3rd ed.). McGraw Hill.

Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods source book* (3rd ed.). Sage Publications.

Nawaz, Z. A. K. D. A., & Khan, I. (2016). Leadership theories and styles: A literature review. *Leadership*, *16*(1), 1–7. https://scispace.com/papers/leadership-theories-and-styles-a-literature-review-3ng862zwmr

Nejad, M. (2016). Research on financial services innovations: A quantitative review and future research directions. *International Journal of Bank Marketing*, *34*(7), 1042–1068. https://doi.org/10.1108/IJBM-08-2015-0129

Nöthel, S., Nübold, A., Uitdewilligen, S., Schepers, J., & Hülsheger, U. (2023). Development and validation of the adaptive leadership behavior scale (ALBS). *Frontiers in Psychology*, *14*, 1149371. https://doi.org/10.3389/fpsyg.2023.1149371

Park, S., Jeong, S., Jang, S., Yoon, S. W., & Lim, D. H. (2018). Critical review of global leadership literature: Toward an integrative global leadership framework. *Human Resource Development Review*, *17*(1), 95-120. https://doi.org/10.1177/1534484317749030

Polkinghorne, D. E. (2005). Language and meaning: Data collection in qualitative research. *Journal of Counseling Psychology, 52*(2), 137–145. https://doi.org/10.1037/0022-0167.52.2.137

Prasad, E. S. (2010). Financial sector regulation and reforms in emerging markets: An overview. *Brookings Papers on Economic Activity, 2010*(2), 1–56. https://doi.org/10.3386/w16428

Pye, R. B. (2005). The evolution of financial services in transition economies: An overview of the insurance sector. *Post-communist economies*, *17*(2), 205–223. https://doi.org/10.1080/14631370500104919

Ridder, H.-G. (2017). The theory contribution of case study research designs. *Business Research*, *10*(2), 281–305. https://doi.org/10.1007/s40685-017-0045-z

Ryder, M., & Downs, C. (2022). Rethinking reflective practice: John Boyd's OODA loop as an alternative to Kolb. *The International Journal of Management Education*, *20*(3), 100703. https://doi.org/10.1016/j.ijme.2022.100703

Sharif, M. H. U., & Mohammed, M. A. (2022). A literature review of financial losses statistics for cyber security and future trend. *World Journal of Advanced Research and Reviews, 15*(1), 138-156.

Spisak, B. R., O'Brien, M. J., Nicholson, N., & van Vugt, M. (2015). Niche construction and the evolution of leadership. *Academy of Management Review*, *40*(2), 291-306. https://doi.org/10.5465/amr.2013.0157

Tallon, P. P. (2010). A service science perspective on strategic choice, it, and performance in U.S. banking. *Journal of Management Information Systems*, *26*(4), 219–252. https://doi.org/10.2753/MIS0742-1222260408

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319–1350. https://doi.org/10.1002/smj.640

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, *18*(7), 509–533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z

Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *California Management Review*, *58*(4), 13–35. https://doi.org/10.1525/cmr.2016.58.4.13

Uhl-Bien, M., & Arena, M. (2017). Complexity leadership. *Organizational Dynamics*, *46*(1), 9–20. https://doi.org/10.1016/j.orgdyn.2016.12.001

Uhl-Bien, M., Marion, R., & McKelvey, B. (2007). Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era. *The Leadership Quarterly*, *18*(4), 298–318. https://doi.org/10.1016/j.leaqua.2007.04.002

Van de Ven, A. H. (2007). *Engaged scholarship: A guide for organizational and social research*. Oxford University Press, USA.

Vroom, V. H., & Jago, A. G. (2007). The role of the situation in leadership. *The American Psychologist*, *62*(1), 17–47. https://doi.org/10.1037/0003-066X.62.1.17

Weese, S. H. (2005). When leadership matters: The leadership gap in financial services. *Journal of Financial Service Professionals*, *59*(6), 43–49. https://www.proquest.com/docview/209616120?_oafollow=false&sourcetype=Scholarly%20Journals

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE.

Yukl, G. (1989). Managerial leadership: A review of theory and research. *Journal of Management*, *15*(2), 251–289. https://doi.org/10.1177/014920638901500207

Yukl, G. (2012). Effective leadership behavior: What we know and what questions need more attention. *Academy of Management Perspectives*, *26*(4), 66–85. https://doi.org/10.5465/amp.2012.0088

Yukl, G., & Mahsud, R. (2010). Why flexible and adaptive leadership is essential. *Consulting Psychology Journal: Practice and Research*, *62*(2), 81–93. https://doi.org/10.1037/a0019835

Zhang, Y. (2023). Fintech: Exploring the digital transformation of banking & financial services. *BCP Business & Management, 46(1), 85-91.* https://doi.org/10.54691/bcpbm.v46i.5081

Zhu, K., Kraemer, K. L., & Dedrick, J. (2004). Information technology payoff in e-business environments: An international perspective on value creation of e-business in the financial services industry. *Journal of Management Information Systems, 21*(1), 17–54. https://doi.org/10.1080/07421222.2004.11045797

VITA

Dr. Debranetta L. Gethers, DBA
Director, Strategy & Planning
dgethers85@yahoo.com (919)638-9749

SUMMARY OF QUALIFICATIONS

Established leader with expertise in strategy execution and high-visibility project management across various functions. Strong ability to support senior leadership teams in delivering strategic programs while providing right-hand support on operational activities. Excellent stakeholder management and executive communication skills.

EDUCATION

Doctorate in Business Administration (DBA) **May 2025**
Georgia State University, Atlanta, GA

Chief of Staff, Executive Education at Harvard Business School **April 2024**
Harvard University, Cambridge, MA

Master of Business Administration **May 2011**
North Carolina State University, Raleigh, NC, Finance and Marketing

Bachelor of Science Business Administration **May 2007**
East Carolina University, Greenville, NC, Finance

CONFERENCE PROCEEDINGS

D. Gethers and L. Mathiassen. *Leader Adaptability in Technology Organizations: How A Sense and Respond Approach Enables Leaders to Navigate Dynamic Environments.* The International Conference on Engaged Management Scholarship, Henley-on-Thames, London, 2024.

Accepted
D. Gethers and L. Mathiassen. *Technology Leader Adaptability in the Financial Services Industry: The Role of Sense-and-Response Cycles.* The International Conference on Engaged Management Scholarship, Los Angeles, California, 2025.

PRACTITIONER EXPERIENCE

December 2014 – present, MetLife, Cary, NC
Currently leading strategic planning across MetLife's Data Infrastructure Services, serving as Chief of Staff to the department's Vice President while collaborating with peers to support the Global Infrastructure Senior Vice President. Has held roles in MetLife focused on identifying risk, governance, and financial opportunities by partnering across functions to drive strategic decisions and process simplification as outlined below:

Director, Strategy & Planning and Chief of Staff, July 2022 – present

- Lead strategic planning to align with business trends while collaborating with leadership to translate the overarching enterprise and infrastructure strategy into actionable initiatives.
- Collaborate with key stakeholders to create quarterly technology roadmaps for database technologies, aligning with business goals, analytics needs, and currency requirements.
- Lead end-to-end monthly and annual budget process, in collaboration with finance.
- Chief of Staff responsibilities include organizing day-to-day operational activities, preparing presentation decks for Town Halls, and organizational communications.

Project Management Office (PMO) Consultant June 2018 – July 2022

- Provided financial analysis for a $200M+ project portfolio, enabling data-driven decisions and providing insights into opportunities and risk management strategies focused on translating data into succinct outputs consumable for the respective audience, contributing to $18M cost avoidance and +/- 2% on target budget variance.
- Managed multiple budgets while overseeing six strategic work streams, facilitating team meetings, updating processes, and preparing executive presentations for divestitures.

Project Management Office (PMO) Analyst, December *2014 – June 2018*

- Worked cross-functionally, ensuring timely and accurate project financial reports.
- Created financial training programs for internal stakeholders.

Inclusion/Employee Engagement Network Leadership, December 2015 – August 2024

- Led a MetLife inclusion network, overseeing a team of five peers, managing program execution, researching market trends, training new board members, and managing event budgets.
- Provided metrics and reporting to Executive Sponsors and Executive Leadership Team.

January 2014 – December 2014
Sr. Financial Analyst - RTI, Research Triangle Park, NC

- Developed project-based profit and loss statements and assisted with forecasting and reporting to ensure timely and accurate monthly funding analysis.
- Conducted accrual and billing analysis to ensure contractual accuracy.

March 2013 – January 2014
Business Analyst III - Oracle (Acquired Tekelec), Morrisville, NC

- Developed financial reports for the Consulting Services business unit post-acquisition of Tekelec by managing operational expenses and supporting financial inquiries for various workstreams.
- Created financial models and scenario analytics to assist with post-acquisition integration.

September 2011 – March 2013
Financial Analyst - Tekelec, Morrisville, NC

- Managed expense forecasting, budgeting, variance analysis, and capital expenditures, including Gross Margin Reports for global teams.

- Audited and performed scenario and vendor analysis for the sale of the Tekelec business entity.
- Analyzed finances for corporate acquisition and divestiture decision-making.

Summer 2010
Financial Analyst MBA Summer Intern - FMC Lithium, Charlotte, NC
Assisted division controller with month-end close and financial reporting. Maintained approximately $300K in project expenses and assisted with preparing blueprints and management presentations.

July 2007 – December 2008
Financial Analyst - Credit Suisse, RTP, NC
Ensured timely and accurate reporting of trading desk daily P&Ls for three product lines totaling approximately $1 million. Implemented a strategy to enhance Key Performance Indicators and Metrics Package that reduced delivery lag time by two business days and increased scope by 50%.