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How Does Hybrid Project Management Contribute to Managing Change in a Volatile and
Uncertain Context in the Financial Services Industry:
An Interpretive Multiple Case Study

A DISSERTATION
SUBMITTED TO THE FACULTY OF THE OPUS COLLEGE OF BUSINESS,
ORGANIZATION DEVELOPMENT AND CHANGE, UNIVERSITY OF ST. THOMAS

By Matthew Charles Dewey

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF EDUCATION


April 2023

UNIVERSITY OF ST. THOMAS


We certify that we have read this dissertation and approved it as adequate in scope and quality.

We have found that it is complete and satisfactory in all respects, and that any and all revisions required by the final examining committee have been made.

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ABSTRACT

Organizations, governments, and individuals around the globe are currently experiencing Industry 4.0 (also known as the Fourth Industrial Revolution, 4IR, or I4.0), as evidenced by new disruptive technologies appearing on a global scale at an unprecedented rate. This environment might be best described as volatile, uncertain, complex, and ambiguous (VUCA). Although organizations utilize a wide range of management methods to overcome unexpected challenges, including both organization development and change management, project management has emerged as a critical strategic competency for the delivery of strategic initiatives to increase business value. Organizations are increasingly gravitating toward the use of hybrid project management (HPM), as there are many limitations associated with using waterfall project management or agile project management exclusively. The primary research question is: How do project managers perform hybrid project management (HPM) to respond to and successfully manage change? A multiple case study approach developed by Stake was used to understand the lived experiences of individuals utilizing HPM in financial services organizations. Each participant was treated as a separate case study. Five participants working for financial services organizations with at least five years' experience as non-IT project managers were interviewed. Interviews were transcribed, memos produced, and data was analyzed to establish nine significant themes. The study's findings may be beneficial to individuals, organizations, and the field regarding HPM considerations. The study yielded two proposed models: the first aims to aid individual practitioners in mastering the necessary skills and roles required for implementing HPM, while the second is a nine-step model designed to operationalize HPM in practice.

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Chapter 1: Introduction

Background

Project management is relatively young, but several landmark projects have contributed to its development. These include the Egyptian pyramids, the Great Wall of China, Stonehenge, and the Panama Canal, as well as notable advancements in aeronautics and military technology (Cleland, 2004; Frame, 1999; Seymour & Hussein, 2014). The earliest known references to project management appeared in the 1950s (Gaddis, 1959; Garell, 2013; Morris, 2011). At that time, policymakers were concerned that the United States would face an existential threat if it did not develop new technologies faster. Gaddis wrote: “the character of American technological advancement during the next five years will shape our future and determine our survival or extinction” (Gaddis, 1959, p. 97). Project management emerged in response to this urgency, representing a new approach to leading and managing during challenging and uncertain times.

The United States, under the Eisenhower Administration, faced one of the most significant security challenges in its history when, in 1957, the Soviet Union claimed military advantages due to the proliferation of its purported missile stockpile. As a result, the United States Navy committed to spending \$11 billion on the Polaris Project, which aimed to develop and deploy intercontinental submarine-launched ballistic missiles (SLBM) equipped with thermonuclear warheads (Kwak, 2005; Lenfle, Le Masson, & Weil, 2016; Seymour & Hussein, 2014). Challenged by national security concerns, a project of this magnitude, complexity, and urgency had never been conducted before (Engwall, 2012). The Polaris Project proved to be a tremendous success when the UGM-27 Polaris SLBM was launched three years ahead of schedule in 1960. Harvey M. Sapolsky authored a book in 1972 named *The Polaris Systems Development: Bureaucratic and Programmatic Success in Government*. In a review of the book,

Engwall asserted that the Polaris Project “constituted the very cradle of project management as a discipline and discusses the implications the study ought to have – but have not yet had – on project management research and practice” (Engwall, 2012, p. 596). One of the contributions of the Polaris Project to the discipline of project management is the program evaluation and review technique (PERT), which is a three-point probabilistic estimating tool used to estimate both time and cost (Johnson, 2013; Lenfle, Le Masson, & Weil, 2016; Project Management Institute, 2012):

PERT Estimation Formula

$$\text{Time Estimate} = (\text{optimistic time} + (4 \times \text{most likely time}) + \text{pessimistic time}) / 6$$

There have been differing opinions on the contribution of PERT to the Polaris Project. Some scholars have concluded that PERT provided a clear plan to keep the project on schedule and within budget. Conversely, other scholars have contended that the project's success was due to broad stakeholder support, minimal resistance, and a skilled project team whose members utilized decentralized decision-making processes, while PERT was a reporting tool (Engwall, 2012; Hornstein, 2015; Johnson, 2013; Lenfle, Le Masson, & Weil, 2016).

During the Cold War between the United States and the Soviet Union, the two nations engaged in a space race, culminating in President John F. Kennedy's 1961 decision to set the aggressive goal of sending a human crew to the moon and back. Project Apollo 11 was carried out on July 20, 1969, which resulted in approximately 400,000 people contributing to the successful landing on the moon (DiLisi, Chaney, & Brown, 2019). Upon placing his left foot

onto the lunar surface, Astronaut Neil A. Armstrong famously said, “That's one small step for a man, one giant leap for mankind” (National Aeronautics and Space Administration, 1970, p. 3).

There were several revolutionary technological innovations introduced after the 1969 lunar landing, including the personal computer developed by Stephen Wozniak and Apple Computer, the Atari video game system, the Sony Walkman, the first mobile phone (Motorola DynaTAC 8000X), the voicemail system (also known as electronic audio communications), the compact disc (CD), and significant medical achievements (Brown, 2002; Newton & Blackman, 2004).

At the onset of the 1990s, considerable changes were happening that fundamentally transformed how work was carried out. When the Clinton Administration released its Global Framework for Electronic Commerce in 1997, Al Gore, the 45th Vice President of the United States, declared insightfully:

We are on the verge of a revolution that is just as profound as the change in the economy that came with the Industrial Revolution. Soon electric networks will allow people to transcend the barriers of time and distance and take advantage of global markets and business opportunities not even imaginable today, a new world of economic possibility and progress (Hearing before the Committee on Science, U.S. House of Representatives, 1997, p. 9).

The complexity of executing many of these transformational advances heightened the importance of project management. According to Bryde (2003), project management became increasingly popular during the 1990s, evolving into *emergent project management* as more traditional project management practices were superseded. Kerzner (1992) noted that project management had been adopted in various industries, including defense, banking, healthcare,

accounting, and law. This also extends to multiple types of public organizations, encompassing federal, state, and local governments and the United Nations (Kerzner, 2009).

The evolution of project management as a field, starting from the earliest known references to it in the 1950s, was documented by academic researchers Laufer, Denker, and Shenhar (1996). They described four distinct generational styles that successively propelled project management through the 1990s (table 1).

Table 1

Evolution of Models of Project Management

Period	Central Concept	Dominant Project Characteristics	Main Thrust	Metaphor	Means
1960s	Scheduling	Simple, certain	Coordinating activities	Scheduling regional flights on an airline	Information technology, planning
1970s	Teamwork	Complex, uncertain	Cooperation between participants	Conducting a symphony orchestra	Process facilitation, role definition
1980s	Uncertainty reduction	Complex, uncertain	Making stable decisions	Exploring an unknown country	Search for information, selective redundancy Risk management
1990s	Simultaneity	Complex, uncertain, quick	Orchestrating contending demands	Directing a three-ring circus and continuously switching acts based on the crowd's response	Responsiveness
					Collaboration

Note. Adapted from “Simultaneous management: The key to excellence in capital projects” by A. Laufer, G. Denker, & A. Shenehar, (1996), *International Journal of Project Management*, 14(4), 190 ([https://doi.org/10.1016/0263-7863\(95\)00091-7](https://doi.org/10.1016/0263-7863(95)00091-7)). Copyright 1996 by Elsevier Ltd.

Shenhar and Dvir (2004) expanded on the research of Laufer, Denker, and Shenhar by presenting a conference paper discussing project management's evolution and the importance of using history to guide future research. They identified opportunities for further study based on challenges apparent at that time (table 2).

Table 2

Generations of Project Management Conceptualization

Period	Central Concept	Main Thrust	Means
2000s	Adaptation	One size does not fit all	Adaptive approach
		Connect project management to business	
	Strategic focus	Off-shore projects	Build a project strategy
	Globalization		Virtual coordination

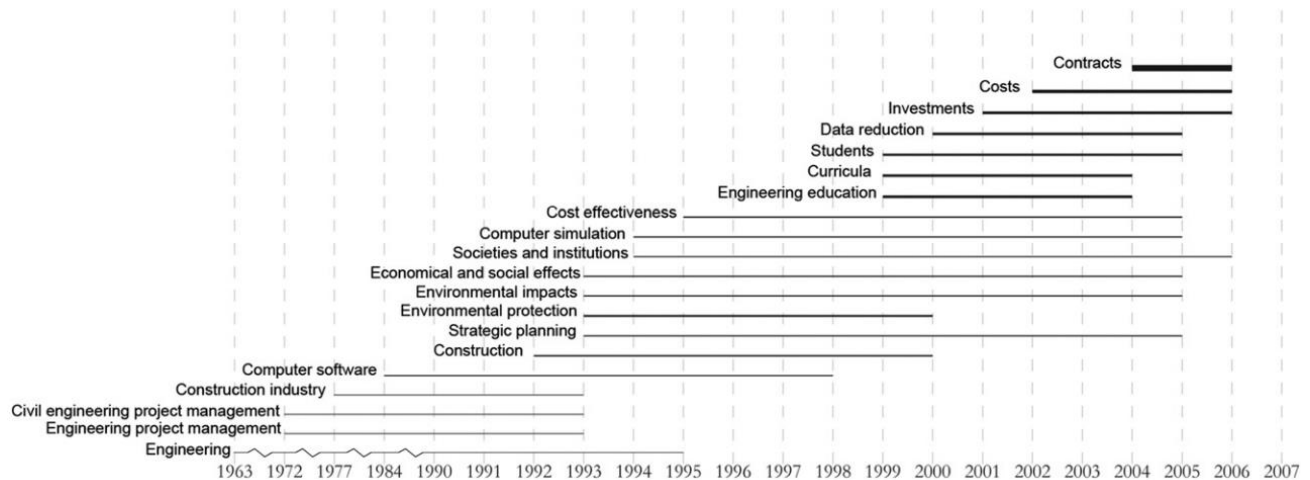
Note. Adapted from “Project management evolution: past history and future research directions” Paper presented at PMI® Research Conference: Innovations” by A. Shenehar & D. Dvir, (2004), *Project Management Institute* (<https://www.pmi.org/learning/library/project-management-evolution-research-directions-8348>). Copyright 2004 by Project Management Institute.

Kleinburg (2002) employed burst detection methodology to measure changes in keyword frequency across time as part of a meta-analysis of keyword frequency. According to Pollack and Adler (2015), the findings of Kleinburg’s meta-analysis revealed a paradigm shift in project management research, which had a narrow technical focus in the 1960s, a broader organizational

focus emphasizing strategic planning in the 1990s, and a focus on academia, data, and costs in the 2000s. Figure 1 illustrates this paradigm shift.

Figure 1

Top 20 Bursting Keywords (1963 to 2012)



Note. Adapted from “Emergent trends and passing fads in project management research: A scientometric analysis of changes in the field” by Pollack & Adler, 2015, *International Journal of Project Management*, 33(1), 242. (<https://doi.org/10.1016/j.ijproman.2014.04.011>). Copyright 2014 by Elsevier Ltd.

Current economic conditions have been volatile, uncertain, complex, and ambiguous (VUCA) (Baran & Woznyj, 2020; Jick & Sturtevant, 2017; Le Grand & Rebecca, 2019). In examining research topics in project management, we can observe a shift from a tactical to a strategic focus, and this correlation is evident in figure 1 and tables 1 and 2.

Project management has evolved in response to the conditions confronting its practitioners at the dawn of the 21st century (Seymour & Hussein, 2014). Concurrently, the

discipline of change management emerged, which management consulting firms took advantage of by pursuing new opportunities. In the late 1990s, several prominent consulting firms established change management practices to assist organizations with navigating and implementing change. These firms included Deloitte (with its Organization and Strategic Change Services), McKinsey & Company (Real Change Agents), Arthur D. Little (Accelerating Change), and Gemini Consulting (Transforming the Enterprise) (Burke, 2008; Worren, Ruddle, & Moore, 1999).

In 2001, a gathering of software developers met in Utah to discuss their dissatisfaction with the inflexible and conventional project management practices, ultimately resulting in the creation of the *Agile Manifesto*, significantly impacting project management and software development (Beck, et al., 2001). The definition of terms section offers a succinct overview of the Agile Manifesto.

According to the Project Management Institute (PMI), “projects drive change in organizations” (Project Management Institute, 2017, p. 6). The success of a project depends on the seamless integration of change management and project management functions (O’Donovan, 2018). Change management is also known by other terms such as strategic business configuration, organization development, or business transformation. Organization development offers valuable tools and techniques to design planned change interventions (Jones & Recardo, 2013). While the above disciplines contribute to the achievement of specific organizational outcomes, W. Warner Burke, a leading authority on organizational change, cautioned:

Former French President Charles de Gaulle once stated, “I have come to the conclusion that politics are too serious to be left to the politicians.” Similarly, organizations are too complex to be governed by traditional theories of organizational theory, organizational

behavior, organizational development, and strategic management alone (Burke, 2014, p. 26).

Today, organizations are faced with rapid technological change and are fighting for survival in what is commonly referred to as the *project economy* (Schmitz, Mahapatra, & Nerur, 2019; Tolbert & Parente, 2020; Gemino, Blaize, & Serrador, 2020).

Problem Statement

Organizations, governments, and individuals around the globe are currently experiencing Industry 4.0 (also known as the Fourth Industrial Revolution, 4IR, or I4.0), evidenced by new disruptive technologies appearing on a global scale at an unprecedented rate. This environment might be best described as volatile, uncertain, complex, and ambiguous (VUCA) (Baran & Woznyj, 2020; Jick & Sturtevant, 2017; Le Grand & Rebecca, 2019). Radical transformations are expected across virtually all industries (Kurzweil, 2001). These transformations will introduce significant disruptions “in the next 10-15 years [that] will completely change the structure of the global economy” (Sergi, Popkova, Bogoviz, & Litvinova, 2019, p. 19).

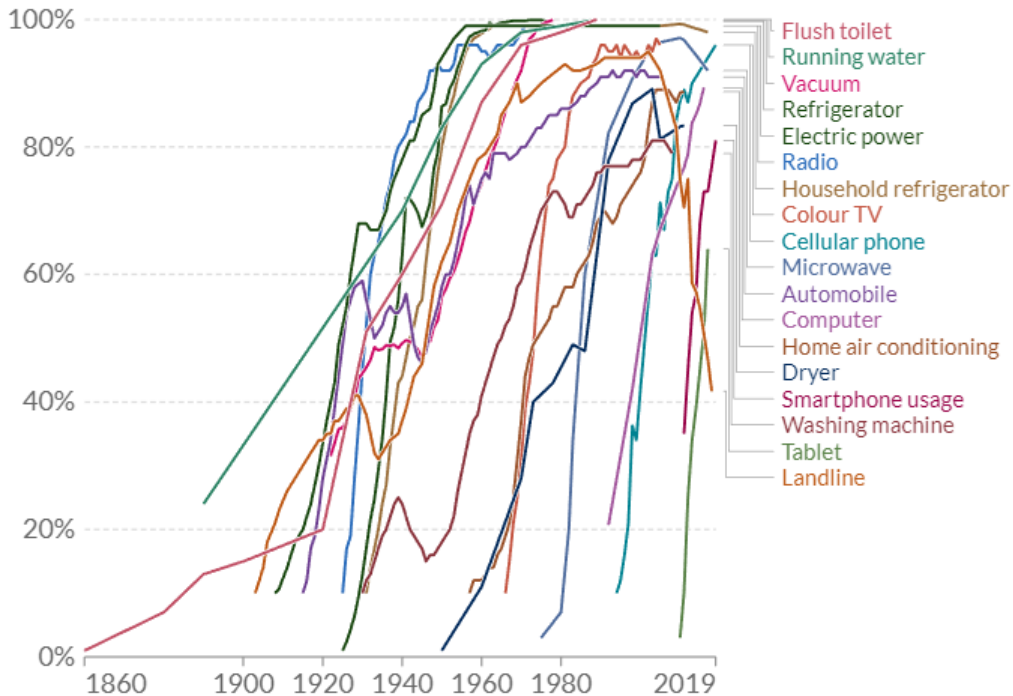
Numerous studies have concluded that organizations must increase their competitive capacity, production or service capacity, financial return on investment, and generation of customer value in response to market innovations (Cameron & Green, 2012; Dwivedi, et al., 2021; Le Grand & Rebecca, 2019; Papadakis & Tsiropis, 2018). Disruptive changes are being introduced worldwide by new organizations that are challenging well-established and experienced firms in every industry (Nerur, Mahapatra, & Mangalaraj, 2005; French & Bell, 1999). This has created a heightened sense of urgency for organizations of all sizes across all sectors to implement changes that will allow them to remain competitive and relevant in markets in which they hold dominant positions (Hass, 2007; Nieto-Rodriguez, 2021).

The term *Industry 4.0* may describe this period on a macro level. However, other terms describe its transformative developments, such as smart manufacturing, smart factories, digital transformation, the Internet of Things (IoT), intelligent manufacturing, and the industrial internet (Sergi, Popkova, Bogoviz, & Litvinova, 2019). The maturation of Industry 4.0 will require organizations to become highly efficient through greater automation and improve their positioning with better knowledge-based systems, data integration, and technology management (Le Grand & Rebecca, 2019). Many organizations are pursuing significant business transformational (BT) projects to realign their operating models with new business strategies to keep pace with advances in the blockchain, cyber-physical systems, digital cryptocurrencies, artificial intelligence (AI), virtual reality (VR), quantum computing, big data, and other emerging technologies (Nieto-Rodriguez, 2021; Paquette & Frankl, 2015; Richard, Pellerin, Bellemare, & Perrier, 2021).

Consumers are also adopting commercialized technologies at an unprecedented rate. Emerging products and ideas are spreading rapidly due to exponential technological advances that have increased connectivity, improved communication, and established infrastructure (Ozcan, 2018). Ray Kurzweil, a pioneering inventor, prominent futurist, and Director of Engineering at Google, predicted that technological change in the 21st century will occur “so rapid and so profound that it represents a rupture in the fabric of human history” (Kurzweil, 2001). Kurzweil implied that the technological advancements in the 21st century would be nearly a thousand times greater than those in the 20th century. To highlight some of this rapid change adoption already underway, figure 2 provides a historical account of U.S. households adopting transformative technologies from 1860 to 2019.

Figure 2

Share of U.S. Households Using Specific Technologies (1860 to 2019)



Note. Adapted from “Technology Adoption” by Ritchie & Roser, (2017), Published online at OurWorldInData.org. (<https://ourworldindata.org/technology-adoption>). Copyright 2017 by Our World in Data. In the public domain.

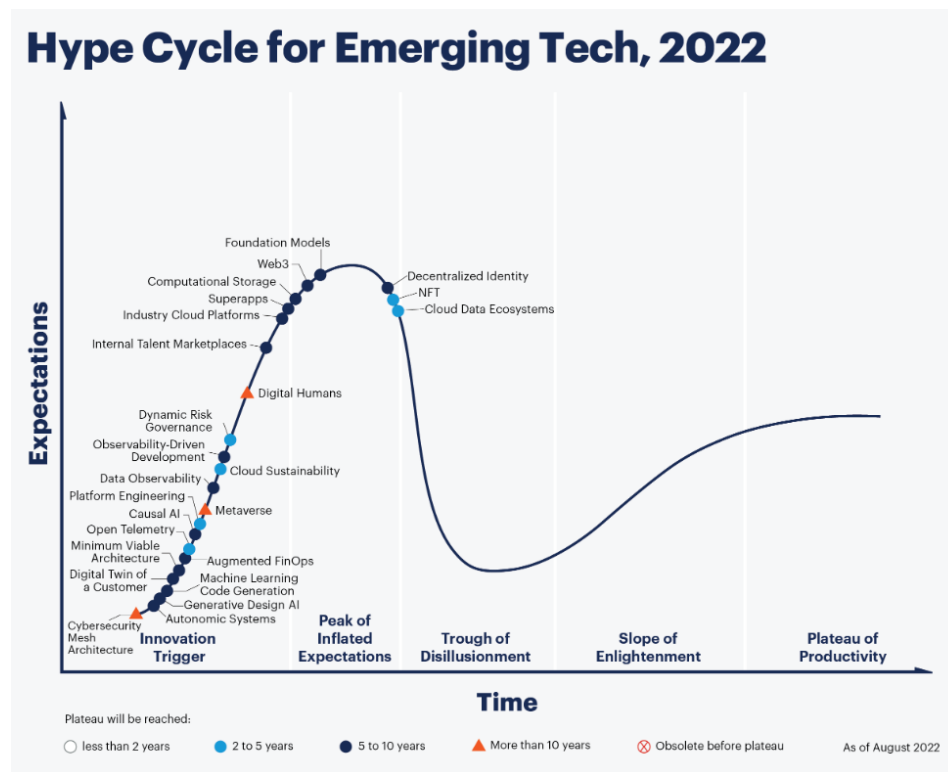
According to data, modern emerging technologies are adopted much more rapidly than their historical predecessors. For example, the tablet computer reached a 50% adoption level in U.S. households in just five years. Not surprisingly, as smartphones and mobile phones have gained popularity, landline usage has plummeted.

Gartner, a preeminent advisory, research, and consulting firm, provides technology-related insights and analysis to organizations globally. Gartner provides an annual report of emerging technologies that help organizations make critical decisions on technology initiatives.

According to its website, “The 2022 Gartner Hype Cycle features emerging technologies and distills insights from more than 2,000 technologies into a succinct high-potential set” (Gartner, 2022). The top 25 emerging technologies identified by Gartner, which organizations may view as potential strategic technological priorities, are presented in figure 3.

Figure 3

Gartner Hype Cycle for Emerging Tech, 2022



Note. Adapted from “What’s New in the 2022 Gartner Hype Cycle for Emerging Technologies” by Gartner, (2022), (<https://www.gartner.com/en/articles/what-s-new-in-the-2022-gartner-hype-cycle-for-emerging-technologies>). Copyright 2022 by Gartner.

Figure 3 includes several of the emerging technologies highlighted at the beginning of this section. The data above represents predictions around implementing transformative technologies

such as artificial intelligence within the next 5-10 years, followed by the *Metaverse* and *Digital Humans* in 10-plus years.

According to the Big Ideas 2023 report by ARK Investment Management, LLC, disruptive innovation platforms, led by artificial intelligence, are expected to experience a 40% annual growth rate during this business cycle, resulting in a potential increase in market value from \$13 trillion to \$200 trillion by 2030 (ARK Investment Management, LLC, 2023).

According to ARK, it is projected that by 2030, the productivity of knowledge workers will increase by more than four times, which could lead to a global labor productivity surge from approximately \$32 trillion to over \$200 trillion in less than seven years.

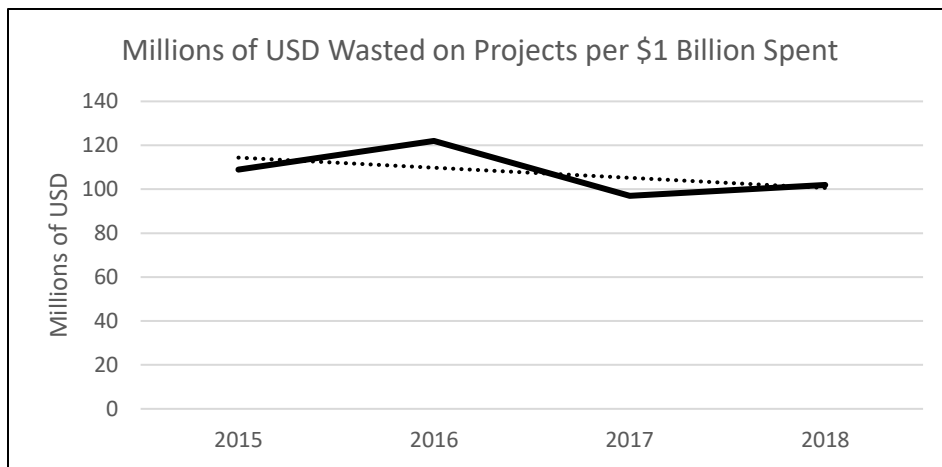
Business executives, project sponsors, and other key stakeholders are increasingly calling upon project managers to deliver completed projects faster and increase the number of planned projects within the organization (Vrchota, Rehor, Marikova, & Pech, 2021; Project Management Institute, 2013). Project managers are individuals who are skilled at executing and delivering projects. A *project* is “a temporary endeavor undertaken to create a unique product, service, or result” (Project Management Institute, 2021, p. 245). Traditional project management approaches have typically favored a sequential, waterfall methodology, where each phase of a project must be completed before moving on to the next. However, in recent years, there has been a growing trend toward approaches that prioritize minimizing time to market, reducing risk, and providing a quick return on investment. One such approach is Agile Project Management (APM) (Fair, 2012; Gemino, Blaize, & Serrador, 2020; Le Grand & Rebecca, 2019; Papadakis & Tsiropis, 2018; Špundak, 2014).

Project managers have consistently struggled with high failure rates for projects. Project failures can have profound impacts, such as missed deadlines, the creation of something with

little to no value, and the risk of bankruptcy (Implementation Management Associates, 2018; Hass, 2007; Paquette & Frankl, 2015; Wong, Scarbrough, Chau, & Davidson, 2005). The PMI collects data on project failure rates and publishes them annually in its global *Pulse of the Profession* report. According to the 2018 report, companies lose \$1 million every 20 seconds or nearly \$2 trillion in project expenditures annually (Project Management Institute, 2018). For the period 2015 to 2018, a total of \$107.5 million was wasted for every \$1 billion spent on projects during the period, with a slight year-over-year increase as shown in the trendline in figure 4 (Project Management Institute, 2017; Project Management Institute, 2016; Project Management Institute, 2015).

Figure 4

Millions of U.S. Dollars Wasted on Projects per \$1 Billion Spent



Note. While the figures are denominated in U.S. dollars, the percentage of waste is pertinent to any currency.

The presented data for 2019 and 2020 were not in the same format, but they indicate a plateauing trend. In 2019, project spending waste was approximately 12%, and in 2020, it slightly decreased

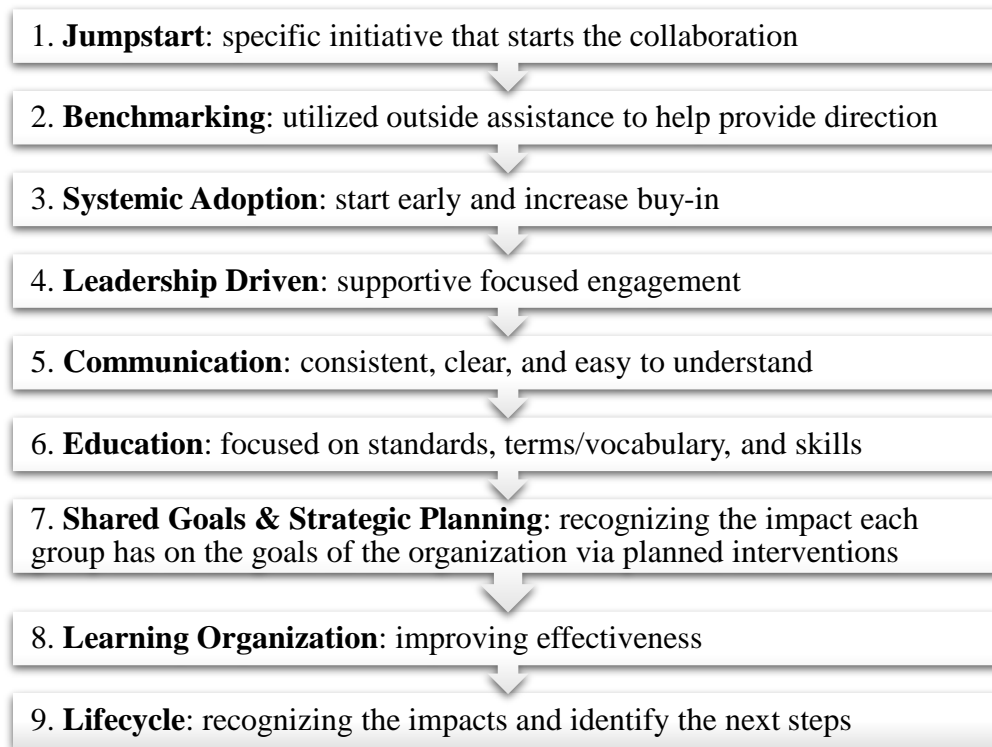
to 11.4%. This equated to roughly \$120 million and \$114 million in waste per \$1 billion spent, respectively (Project Management Institute, 2020; Project Management Institute, 2019).

Despite recent improvements in cross-coordination between project management and change management roles in tactical areas such as practices, policies, and communications, a shared understanding of the roles is often lacking, shared attitudes and behaviors are vital to each project, and cultural assumptions drive what does and does not get done (O'Donovan, 2018). The high monetary cost of project failure illustrated in figure 4 signals an opportunity for project management and change management to identify and implement meaningful improvements to mitigate these significant financial losses (Hornstein, 2015; Paquette & Frankl, 2015).

Providing significant value in the shortest possible time does not necessarily require a linear, normative method of thinking. Although best practices evolve and lessons learned from the waterfall and agile methodologies can benefit experienced project managers, a comprehensive understanding of best practices that address both methodologies and how they intersect with change management is essential to a project's long-term viability and maximum adoption (Paquette & Frankl, 2015). Pool (2017, pp. 69-70) developed a nine-step blended model encompassing organization development and project management activities (figure 5).

Figure 5

Model of Collaboration between Organization Development and Project Management



Purpose of Study

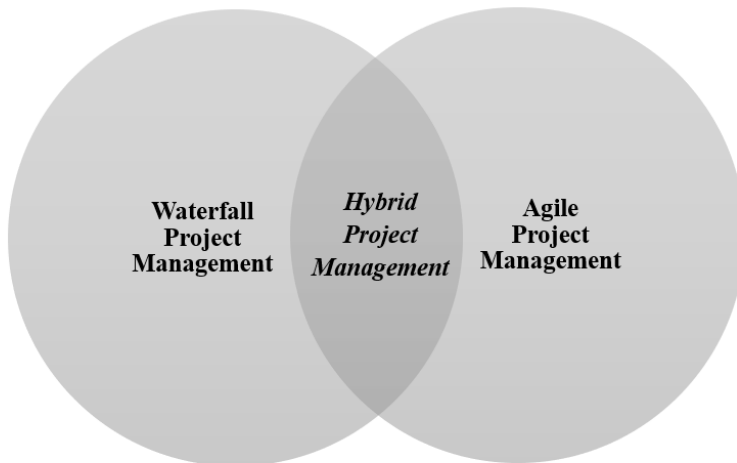
The rate of change faced by organizations in virtually every industry is increasing exponentially due to Industry 4.0, the VUCA business environment, and the project economy (Cameron & Green, 2012; Dwivedi, et al., 2021; Le Grand & Rebecca, 2019; Papadakis & Tsiropis, 2018). Although organizations utilize a wide range of management methods to overcome unexpected challenges, including both organization development and change management, project management has emerged as a critical strategic competency for the delivery of strategic initiatives to increase business value (Paquette & Frankl, 2015; Suikki, Tromstedt, & Haapasalo, 2006).

Although many experienced project managers have used waterfall or APM methodologies, organizations are increasingly gravitating toward the use of hybrid project

management (HPM), as there are many limitations associated with using waterfall project management or APM exclusively (Gemino, Blaize, & Serrador, 2020; Papadakis & Tsiropis, 2018). Because HPM is an emerging topic in project management, we need to understand how it contributes to improvements in change management functions and impacts the role of project management practitioners. To better visualize the HPM concept, a Venn diagram (figure 6) shows the intersection (represented by darker shading) of waterfall project management and APM. This area is the focus of this research.

Figure 6

The Intersection of Waterfall and Agile Project Management



While some work has been done to blend project management and organization development, further research is needed to go deeper into change management.

Research Question

My primary research question is: How do project managers perform hybrid project management (HPM) to respond to and successfully manage change? Specifically, this study seeks to answer the following sub-questions: (a) What do project managers consider to be the

essential elements of HPM? (b) How do project managers view HPM and its contributions to organizational change management and improvement? (c) How has change management been included when HPM and APM methods such as Kanban or Scrum have been utilized? (d) What is most effective for managing projects amid the volatility, uncertainty, chaos, and ambiguity (VUCA) of Industry 4.0?

Potential Contributions to Theory and Practice

According to a 2017 study, a growing number of organizations are turning toward APM and HPM methodologies, and 71% are using agile or hybrid approaches occasionally or more frequently than in the past (Papadakis & Tsiropis, 2018; Project Management Institute, 2017). A global study conducted in 2020 evaluated 477 projects across multiple industries to determine how often HPM approaches were used relative to agile and traditional waterfall methodologies. The results showed that HPM was utilized in most projects (52%), while traditional and APM methodologies were employed in 33% and 15% of the projects, respectively (Gemino, Blaize, & Serrador, 2020).

Given the considerable number of organizations adopting HPM methodologies and the limited literature available on the subject, this study holds great significance for project managers, organizations, and the broader project management field, as noted by Reiff and Schlegel (2022). It may benefit practitioners by advancing the profession and helping scholars to understand related phenomena. Finally, it may offer project managers a more thorough understanding of hybrid project management, which may be of interest or necessity to those leading projects.

Personal Reflection

During the late 1990s, I was provided with the opportunity to begin my career as a project manager at First Bank Systems (currently known as U.S. Bank) at its Operations Center located in St. Paul, Minnesota. I was assigned to the mergers and acquisitions team and tasked with integrating a segment of retail banking operations of First Bank, headquartered in Minneapolis, Minnesota, and U.S. Bancorp, headquartered in Portland, Oregon, following their acquisition. While my undergraduate education was in business administration and management, I lacked formal project management and banking training. In response, I enrolled in the Master of Business Administration (MBA) program at the University of St. Thomas (Minnesota), with a concentration in Finance. This program provided me with broad exposure to multiple courses, including but not limited to financial management, investment analysis, corporate finance, financial markets and institutions, managerial accounting, marketing, international business law, and organizational theory. Nonetheless, my passion for managing projects and implementing change persisted.

In 2001, I co-founded a 501(c)(3) non-profit organization called Friends of Africa Education (FOAE) focused on *building capacity* (schools) and *increasing access* (scholarships and sponsorships) to education in sub-Saharan Africa, notably Tanzania, and Kenya. This came after a trip I took in 1998, during which I was profoundly moved by the vast number of young people living without parents because of the HIV-AIDS epidemic that devastated that particular region. In certain regions, it appeared as though an entire generation was absent, with a noticeable absence of adults while youth and the elderly were present. My friends from Tanzania taught me that the Swahili phrase *Elimu ni ufunguo wa maisha* translates to “Education is the key

to life” in English. Building schools and increasing access to education was one answer to address this challenge.

Although obtaining the first U.S. dollar from American donors seemed daunting, the stories about the children were compelling and easy to share. Utilizing project management techniques, our organization created a well-defined plan and effectively communicated the stories in a relatable manner, enabling donors to envision how their contributions would be used to make a difference. This approach proved to be powerful, resulting in significant contributions of hundreds of thousands of dollars from individuals and organizations. By combining impactful storytelling with effective project planning, we were able to establish a meaningful connection with donors and demonstrate the potential impact of their contributions. This opportunity provided me with invaluable and transformative experiences that enabled me and others to positively impact countless lives of youth and contribute to the local community in ways that seemed unimaginable when I first arrived in Tanzania. The power of possibility is real.

After several trips to Tanzania, I deeply admired the local people's incredible resourcefulness and innovative mindset. One of my most memorable experiences was learning about an ingenious mobile phone-based money transfer service called M-PESA, which addressed significant access challenges in the regional banking industry. This transformative solution was new to me, as it was not yet available in the United States. In an area where many individuals lacked sufficient access to financial services, particularly in rural regions, this service allowed them to conduct digital transactions from virtually anywhere. Today, mobile phone apps like CashApp, Venmo, Zelle, and Paypal have become commonplace in the United States and elsewhere, having matured significantly. These experiences have undoubtedly influenced my perspectives on how I see the world.

As a seasoned project manager, I have successfully led numerous complex and demanding projects for some of the most prominent financial services organizations in the United States and Canada. Through my experience, I have observed that my client organizations are subject to significant stress in their efforts to remain competitive and relevant. The current economic environment is characterized by volatility, uncertainty, complexity, and ambiguity (VUCA) (Baran & Woznyj, 2020; Jick & Sturtevant, 2017; Le Grand & Rebecca, 2019). Initially, I utilized traditional waterfall project management methodologies at the beginning of my career, and this was considered too slow and less responsive to change. It was only later that I became familiar with the agile project management (APM) methodology (early 2000s), which yielded mixed results depending on the organization. Some organizations are better at this than others. In response to numerous challenges, the hybrid project management (HPM) methodology has emerged and has been increasingly utilized recently with many organizations.

During my undergraduate honors capstone course at Waldorf University in Iowa, President William E. Hamm taught a segment and shared a valuable life lesson with his students. He advised us to “read the environment and watch the competition,” which is a crucial skill to carry into the business world (William E. Hamm, personal communication, May 1996). Having worked on a diverse range of projects, I have gained a unique perspective on how organizations respond to VUCA challenges in the professional world.

The motivation behind this study has been driven by the knowledge I have acquired from the University of St. Thomas Organization Development (OD) doctoral program, along with my academic and professional experiences, including those in sub-Saharan Africa, and a strong desire to identify more effective methods of managing projects and change.

Definition of Terms

Agile. Although numerous definitions exist for *agile*, one that aligns most closely with this research topic is “the ability to create and respond to change. It is a way of dealing with, and ultimately succeeding in, an uncertain and turbulent environment” (Agile Alliance, 2020).

Agile Project Management (APM). In 2001, multiple software developers met at a ski resort in Utah and developed the Agile Manifesto, which had profound implications for project management and software development. The Agile Manifesto was a formal written proclamation of four fundamental values, and 12 principles (the latter listed in table 3) established to guide an iterative and people-centric approach to software development. The four values are:

[i]ndividuals and interactions over processes and tools; working software over comprehensive documentation; customer collaboration over contract negotiation; and responding to change over following a plan. While there is value in the items on the right, we value the items on the left more (Beck, et al., 2001).

Table 3

Agile Manifesto Principles

No.	Principles Behind the Agile Manifesto
1	Our highest priority is to satisfy the customer through early and continuous delivery of valuable software
2	Welcome changing requirements, even late in development. Agile processes harness change for the customer’s competitive advantage
3	Deliver working software frequently, from a couple of weeks to a couple of months, with a preference for the shorter timescale
4	Businesspeople and developers must work together daily throughout the project
5	Build projects around motivated individuals. Give them the environment and support they need and trust them to get the job done
6	The most efficient and effective method of conveying information to and within a development team is face-to-face conversation
7	Working software is the primary measure of progress

8	Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely
9	Continuous attention to technical excellence and good design enhances agility
10	Simplicity—the art of maximizing the amount of work not done—is essential
11	The best architectures, requirements, and designs emerge from self-organizing teams
12	At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

Note. Adapted from “Manifesto for Agile Software Development” by K. Beck, M. Beedle, A. van Bennekum, A. Cockburn, W. Cunningham, M. Fowler, . . . D. Thomas, (2001) (<http://agilemanifesto.org>). Copyright 2001. In the public domain.

APM is an approach that emphasizes human communication and feedback, adaptation to change, and the delivery of practical results during a project's lifecycle.

Change Management. *Change management* does not have a singular definition but utilizes basic structures and tools to control organizational change efforts (Kotter, 1996).

Hybrid Project Management (HPM). *HPM* is generally defined by the borrowing, mixing, and blending of agile and waterfall or plan-driven processes to tailor project-specific methodologies (Project Management Institute, 2021; Gemino, Blaize, & Serrador, 2020; Tolbert & Parente, 2020; Schmitz, Mahapatra, & Nerur, 2019).

Kanban. Toyota introduced *Kanban* in the 1950s. It is derived from two Japanese words, *kan* and *ban*, which translate to *a signal card*. Kanban is used in just-in-time manufacturing to reduce supply chain waste between when a customer places an order and when payment is collected. It is also used to eliminate non-value-added waste and minimize overproduction. Application of Kanban in the context of project management utilizes a *Kanban board* that lays out stages or phases for tracking the status of a work item (table 4). Index cards or sticky notes are frequently used to track individual items.

Table 4*Kanban Board Sample*

Backlog	Ready	Analyze		Develop		Test	
		Doing	Done	Doing	Done	Doing	Done

Note. Adapted from “An Approach to Optimizing Kanban Board Workflow and Shortening the Project Management Plan” by N. Damij & T. Damij, (2021), *IEEE Transactions on Engineering Management*, 1-8. (<https://doi.org/10.1109/TEM.2021.3120984>). Copyright 2021 by IEEE.

Organization Development (OD). Numerous definitions of *organization development* can be found in the literature (French & Bell, 1999; Bierema, 2010). Cummings and Worley offered a clear definition as “a system-wide application and transfer of behavioral science knowledge to the planned development, improvement, and reinforcement of the strategies, structures, and processes that lead to organizational effectiveness” (Cummings & Worley, 2005, p. 1).

Project. A *project* is “a temporary endeavor undertaken to create a unique product, service, or result” (Project Management Institute, 2021, p. 245).

Project Management. According to the PMI, “*project management* is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements” (Project Management Institute, 2017, pp. 10–11).

Scrum. Considered a lightweight agile method, a daily *scrum*, sometimes called a daily stand-up meeting, is defined by the PMI as “a brief collaboration meeting during which the project team reviews its progress from the previous day, declares intentions for the current day,

and highlights any obstacles encountered or anticipated” (Project Management Institute, 2021, p. 179).

Waterfall. The *waterfall* methodology, also known as the traditional project management methodology or predictive life cycle, involves establishing the triple constraints of scope, schedule, and cost in the early stages of the project life cycle and then carefully monitoring the scope throughout the project's duration (Project Management Institute, 2017).

The waterfall methodology can be used in a wide variety of contexts, but Fair (2012) suggests that it be used for the following:

- Detailed, long-term project plans with a single timeline,
- Definitive and rigid project management and team roles,
- Projects in which changes in deliverables are discouraged and costly,
- Projects that require a fully completed product at the end of the timeline,
- Projects with contract-based approaches to scope and requirements,
- Projects with customer involvement only at the beginning and end, and
- Linear-phased approaches that create dependencies.

Waterfall project management may also be called stage-gate project management: a linear process in which the stages are treated as phases and the gates are validation and reflection points.

Summary

It is exceptionally challenging for organizations to remain competitive and relevant in the current VUCA environment. They must take risks and invest significant money to implement change and achieve their strategic objectives (Baran & Woznyj, 2020; Jick & Sturtevant, 2017; Le Grand & Rebecca, 2019). Organizations utilize a wide range of management methods to

overcome unforeseen challenges, but project management has become a critical strategic competency for delivering critical initiatives and increasing the value of enterprises (Paquette & Frankl, 2015; Suikki, Tromstedt, & Haapasalo, 2006). Many experienced project managers utilize waterfall and APM methodologies, but organizations are rapidly moving toward HPM (Lalic, Lalic, Delic, Gracanin, & Stefanovic, 2022; Papadakis & Tsiropis, 2018; Paquette & Frankl, 2015; Project Management Institute, 2017; Tolbert & Parente, 2020). We must better understand how HPM contributes to organizational change management improvements and impacts project managers, organizations, and the field in our project-driven economy.

Chapter 2: Literature Review

This chapter provides context and justification for the study through a review of related literature. The review process included examining books, peer-reviewed journals, industry publications, conference papers, speeches, and dissertations. This review begins by addressing the project economy, and that discussion is followed by a chronological account of the principal project management methodologies, including their histories, evolution, and adoption. A brief history of organization development and change management and the growing significance and implications for change management and project management follows this. Lastly, a brief review of project management, the volatile, uncertain, complex, and ambiguous (VUCA) environment, and the financial services industry is provided.

The Advent of the Project Economy

The PMI, which has a 50-year history, is the premier professional association for those engaged in project management, program management, and portfolio management (Project Management Institute, 2021). Through education, collaboration, and research, the PMI supports more than three million professionals worldwide (as of 2019) who work in the *project economy*, in which individuals and their work are fundamentally organized around projects (Nieto-Rodriguez, 2021). According to the PMI:

Organizations are undergoing a fundamental paradigm shift in which projects are no longer adjacent to operations but instead primary to how work gets done and problems get solved. In today's C-suite—and tomorrow's—it is the portfolio that disrupts, that innovates, that expands and thrives. In many ways, the organization is its projects—led by a variety of titles, executed through a variety of approaches, and focused

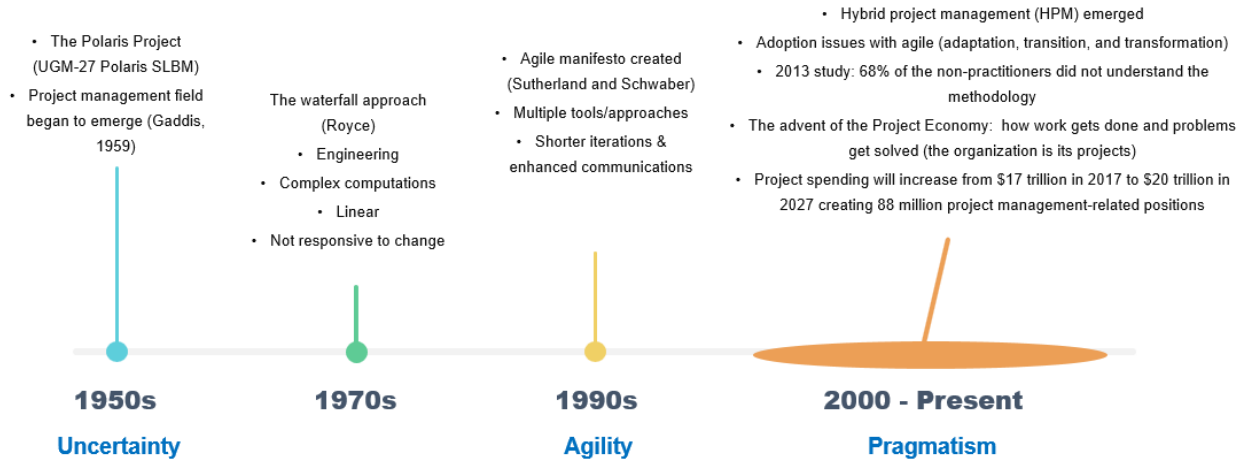
unwaveringly on delivering financial and societal value (Project Management Institute, 2020, p. 2).

Nieto-Rodriguez (2021) asserted that the realization of the project economy is dependent on leaders of organizations reacting to and implementing changes that provide resources, knowledge, experience, and capabilities to projects that deliver maximum value to an organization's stakeholders.

Globally, organizations must find ways to keep pace with changing market conditions that contribute to the project economy. Nieto-Rodriguez (2021) predicted that project spending will increase from \$17 trillion in 2017 to \$20 trillion in 2027, creating 88 million project management-related positions. By 2050, the population of the continent of Africa is estimated to be approximately 2.4 billion people. According to Richardson (2019), Sunil Prashara, the CEO of PMI, proposed that meeting the needs of the growing population would necessitate building 65,000 new homes every day for the next 30 years, in addition to constructing schools, hospitals, and roads. Parashar predicted that the scarcity of fresh water, the potential to convert large areas of the Sahara Desert into alternative energy sources, the impacts of population growth on oil-producing nations, and the need for entire nations to remain competitive will present the opportunity for transformational project work.

The Historical Progression of Project Management

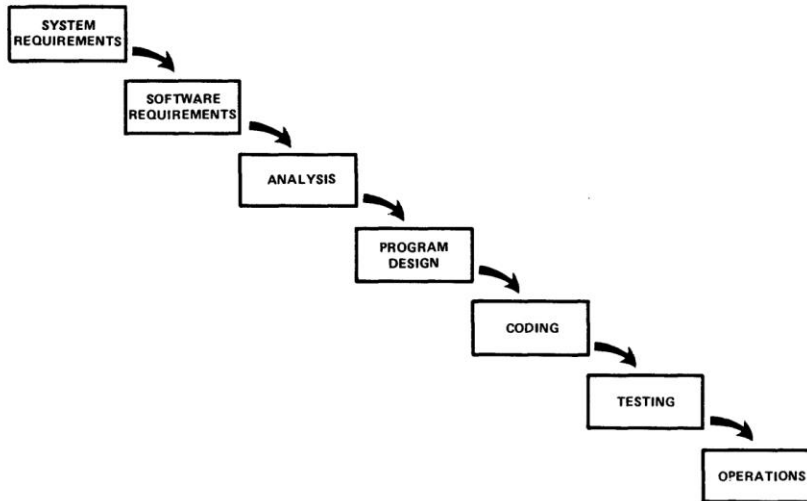
Starting with the Gaddis (1959) article mentioned in chapter 1, the project management discipline has roots in the 1950s and was inspired by geopolitical uncertainty. It has evolved over the past 70 years leading to approaches to address increased levels of change, uncertainty, and complexity. Figure 7 illustrates the progression of the field.

Figure 7*Progression of the Project Management Field (1950s to Present)*

Project management emerged out of the need to solve complex problems during uncertain times in the 1950s. Organizations eventually demanded a more flexible approach, hence the *agility* period that began during the 1990s. As a result of the sweeping changes necessary to incorporate APM into the framework of agility, the era of *pragmatism* promoted by HPM defines the period between 2000 and the present (E. Owens, personal communication, April 21, 2022). The following four sections provide a chronological account of the project management field.

The Waterfall Project Management Methodology

During the early stages of project management, when the primary focus was on engineering and developing complex computer programs, Royce (1970) developed a model based on his experience developing software for spacecraft missions. This model, which later would be called the waterfall approach, is illustrated in figure 8.

Figure 8*The Original Waterfall Approach to Project Management*

Note. Adapted from “Managing the development of large software systems” by W. Royce, (1970), *In Proceedings of IEEE WESCON*, 8, pp. 328-338. Copyright 1970 by The Institute of Electrical and Electronics Engineers, Inc.

Royce viewed the waterfall model as a sequence of phases in which each subsequent phase builds upon the previous one with increasing detail. Each phase must be completed before moving on to the next. Criticisms of this approach include: an inflexible approach, lack of a feedback loop, no room for improvement, underestimation of resources, lack of collaboration, and an over-reliance on initial requirement documentation (Bogdan-Alexandru, Andrei-Cosmin, Sorin-Catalin, & Costin-Anton, 2019). Numerous articles have been written on alternative project management methodologies that are more responsive to change, and these alternatives fall into the category of APM.

The Agile Project Management (APM) Methodology

The origin of APM can be traced back to the Toyota Production System (TPS), a revolutionary lean manufacturing system developed in the 1950s that yielded continual iterative improvements (Modransky, Jakabova, Hanak, & Olah, 2020; Cobb, 2015). Challenges in delivering projects on time, within budget, and within scope using traditional waterfall methods resulted in the development of the TPS. Toyota's TPS system influenced project management and contributed to the development of APM (Cervone, 2011). In the 1990s, Jeff Sutherland and Ken Schwaber, APM pioneers, created the scrum framework and contributed to the Agile Manifesto (Raharjo & Purwandari, 2020; Beck, et al., 2001).

Following the advent of APM, Nerur, Mahapatra, and Mangalaraj claimed that “most organizations cannot ignore the agile wave, but for organizations steeped in the traditional systems development methodologies, adoption of agile methodologies will likely pose several challenges” (Nerur, Mahapatra, & Mangalaraj, 2005, p. 74). While APM is rooted in the outcomes in the Agile Manifesto and influenced by Toyota's TPS, two of its critical departures from traditional waterfall methodologies are significant. First, risk is mitigated and minimized by focusing on shorter iterations of clearly defined deliverables (Cobb, 2015). Secondly, communication with key partners is emphasized over generating voluminous documentation during development. Combining shorter iterations with improved communications helps a project team adapt quickly to changing requirements and address uncertainty (Cervone, 2011; Zasa, Patrucco, & Pellizzoni, 2021).

Numerous authors (Conforto, Salum, Amaral, & Da Silva, 2014; Cervone, 2011; Schwaber & Beedle, 2001; Zasa, Patrucco, & Pellizzoni, 2021) contended that APM is not

necessarily a single methodology but rather a set of tools or approaches. These include, among others:

- Scrum,
- Kanban,
- Lean,
- Crystal,
- Feature-driven Development (FDD),
- Dynamic System Development Model (DSDM),
- Extreme Programming (XP),
- Scrumban,
- Adaptive Software Development (ASD),
- Agile Unified Process (AUP), and
- Disciplined agile delivery.

Those who use APM must be able to take a holistic view of all aspects of the project. This will maximize efficiency and achieve business objectives by effectively integrating people, processes, and tools (Cobb, 2015). Organizations can benefit from these and other APM approaches to become more agile (Ciric, Lalic, Gracanin, Palcic, & Zivlak, 2018). Agile projects are characterized by change as the norm, not the exception (Lalic, Lalic, Delic, Gracanin, & Stefanovic, 2022).

As APM has gained popularity, it has become a mainstream practice (Ciric, Lalic, Gracanin, Palcic, & Zivlak, 2018; Durbin & Niederman, 2021). The flexibility of APM techniques in the face of uncertainty and dynamically changing market conditions has attracted countless organizations pursuing IT and non-IT projects (Conforto, Salum, Amaral, & Da Silva,

2014; Paquette & Frankl, 2015; Kitzmiller, Hunt, & Sproat, 2006). As a result of dynamic market conditions, innovative projects have become more prominent, making it difficult to establish a thorough plan, making APM an attractive alternative (Bianchi, et al., 2022; Ciric, Lalic, Gracanin, Palcic, & Zivlak, 2018). The next section includes a review of literature on challenges organizations must overcome when implementing APM techniques.

Challenges Faced by Organizations When Implementing APM

Organizations worldwide have had mixed results in establishing frameworks to embrace APM. A 2020 systematic literature review evaluated 23 peer-reviewed articles on organizations' challenges in implementing APM (Raharjo & Purwandari, 2020). Potential solutions were mapped to common challenges (table 5) by leveraging the Project Management Body of Knowledge (PMBOK) areas of knowledge (Project Management Institute, 2017).

Table 5

Mapping of APM Challenges to Solutions

Challenge	Mapped Solution
Project Integration Management	
Estimation	<ul style="list-style-type: none"> • Use of a Bayesian network • Agile effort estimation
Coordination with multiple teams	<ul style="list-style-type: none"> • Agile tailoring • Tailoring guidelines for PMBOK and Prince2
Project Scope Management	
Quality of requirement engineering	<ul style="list-style-type: none"> • Collect requirements • Recommend industrial practices • Use guidelines to fit roles to specific demands
Project Schedule Management	
Traditional scheduling model	<ul style="list-style-type: none"> • A modified multi-mode resource-constrained project scheduling model for software projects (MRCPS)
Iteration length	<ul style="list-style-type: none"> • Guide for optimal iteration length
Project Stakeholder Management	
Organization culture	<ul style="list-style-type: none"> • Project stakeholder management, communication management, and resource management
Lack of management and customer support	<ul style="list-style-type: none"> • Management participation during Agile coaching • Manage stakeholder engagement process

Project Resource Management	
Agile team formation and collaboration	<ul style="list-style-type: none"> • Agile team model • Develop and manage team process • Role and responsibility guideline-based dynamic system development method (DSDM) approach
Lack of technical and cross-functional skills	<ul style="list-style-type: none"> • Develop and manage team process • Agile team development guide
Team coordination and decision-making	<ul style="list-style-type: none"> • Agile team development guide
Team maturity	<ul style="list-style-type: none"> • Framework for maturing Agile team development

Note. Adapted from “Agile Project Management Challenges and Mapping Solutions: A Systematic Literature Review” by T. Raharjo & B. Purwandari, (2020), *Proceedings of the 3rd International Conference on Software Engineering and Information Management*, 126. (<https://doi.org/10.1145/3378936.3378949>). Copyright 2020 by Association for Computing Machinery.

The reviewers (Raharjo & Purwandari, 2020) concluded that stakeholder management presented the most significant challenges, which include agile adaptation, agile transition, and agile transformation. Additional challenges included project integration, scope, schedule, and resource management.

The agile and waterfall methodologies differ in several significant ways, which can affect the choice of methodology for a project. Table 6 presents a summary comparison of project management approaches for agile and waterfall methodologies.

Table 6*Comparison of Agile and Waterfall Project Management Methodologies*

Aspect	Agile	Waterfall
Success Measurement	Business value	Conformation to plan
Project size	Small	Large
Management style	Decentralized	Autocratic
Perspective on Change	Change adaptability	Change sustainability
Culture	Leadership–Collaboration	Command–Control
Documentation	Low	Heavy
Emphasis	People-oriented	Process-oriented
Cycles	Numerous	Limited
Domain	Unpredictable-Exploratory	Predictable
Upfront Planning	Minimal	Comprehensive
Return on Investment	Early in project	End of project
Team size	Small-Creative	Large

Note. Adapted from “A comparison between agile and traditional software development methodologies” by M. Awad, (2005). *University of Western Australia*, 43. Copyright 2005 by University of Western Australia.

A 2013 qualitative study of a software development company (Zone24X7) and an airline (Sri Lankan Airlines) in Sri Lanka examined agile awareness, the reasons why agile methods were being used, and the challenges and benefits of using an APM framework (Safwan, Thavarajah, Vijayarajah, Senduran, & Manawadu, 2013). Results suggested that although agile and APM offer a lightweight and straightforward methodology, APM did not command overwhelming favor. 68% of the non-practitioners were either unaware of APM or needed help understanding APM. When asked about their adoption of agile management, 55% of respondents

reported that they chose it to keep up with the changing market environment, and 28% said that they used the technique because of its benefits. According to a survey of organizations in the US and Canada cited by Safwan et al. (2013), 14% of respondents were using APM, and 49% expressed a desire to adopt it. The challenges they felt that APM presented were a lack of proper documentation, organizational culture, and knowledge about APM. Agile methods can be used for projects with significant uncertainty and solve complex problems (Laird, 2016). Even though the study was carried out in 2013, some of the challenges emphasized by the authors still hold relevance. These include the IT industry's inclination towards APM, while other sectors face considerable barriers to adoption.

According to Conforto, Salum, Amaral, and Da Silva (2014), organizations that employ traditional waterfall methodologies are often limited by the existing conditions and enabling factors for the successful implementation of APM. Non-IT-companies that have leveraged waterfall methods have discovered several APM implementation challenges, including:

- The need to assign a dedicated project team that can work full-time,
- Difficulties in securing appropriate and qualified team resources, and
- The need to field a large yet disciplined team.

Despite the organizational challenges of operationalizing APM, the literature suggested there must be trade-offs when determining the best project management methodology:

Agile and traditional project management are not at war with each other. Companies cannot apply just one methodology to all their projects in a change-driven world. Instead, they need a toolbox of approaches—among them agile and traditional project management, certainly, but also design thinking, change management, and product development—and then must build competencies in all of them throughout their organizations (Nieto-Rodriguez, 2021).

While many experienced project managers have used waterfall or APM methodologies, organizations are increasingly gravitating toward the use of hybrid project management (HPM), as there are many limitations associated with using waterfall project management or APM exclusively (Gemino, Blaize, & Serrador, 2020; Papadakis & Tsiropis, 2018). Because HPM is an emerging topic in project management, the next section provides a brief evolution based on the literature.

The Evolution of Hybrid Project Management (HPM)

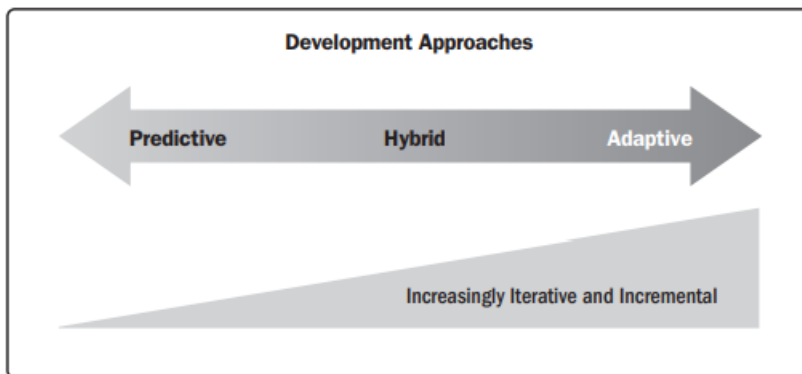
A significant amount of change has occurred in the field of project management over the last twenty years (Gablas, Ruzicky, & Ondrouchova, 2018). Numerous methodologies available to project management practitioners can be used to manage projects (Conforto, Salum, Amaral, & Da Silva, 2014; Niederman, Lechler, & Petit, 2018). Traditional and agile project management approaches are well-established in research and practice, but HPM is rapidly emerging (Gemino, Blaize, & Serrador, 2020; Reiff & Schlegel, 2022). Achieving agility with HPM does not require organizations to relinquish the stability provided by traditional project management approaches (Barlow, et al., 2011). In 2022, a literature review concluded that due to varying characteristics among organizations, such as business capabilities, team structure, and knowledge, many are only able to partially adopt APM practices outside of software development (Bianchi, et al., 2022).

Despite the flexibility of HPM, there is a tug-of-war between advocates of APM and those who are steadfast proponents of more traditional approaches (Gemino, Blaize, & Serrador, 2020). A universal approach to project management does not exist in the current VUCA environment (Lalic, Lalic, Delic, Gracanin, & Stefanovic, 2022). While this study is not focused

on the software development aspects of information technology projects, the PMI produced a visual of the development approaches in a spectrum that contemplates the underlying project management methodology, as seen in figure 9.

Figure 9

Development Approaches Across Spectrum of Methodologies



Note. Adapted from “A Guide to the Project Management Body of Knowledge (PMBOK Guide) Seventh Edition” by Project Management Institute, (2021), 35. Copyright 2021 by Project Management Institute.

Despite a slight difference in terminology, the predictive approach in figure 9 on the left reflects waterfall project management. In contrast, the adaptive approach on the right corresponds to APM when Kanban or Scrum might be used.

A study conducted in 2020 evaluated 477 projects across multiple industries and countries to determine how often HPM approaches were used relative to agile and traditional waterfall methodologies. The results showed that HPM was utilized in the majority of the projects (52%), while traditional and APM methodologies were employed in 33% and 15% of the projects, respectively (Gemino, Blaize, & Serrador, 2020). No significant differences in project success were assessed based on budget, scope, or quality. However, stakeholders

concerned with business, product, and strategic success were more satisfied with agile and hybrid projects than traditional projects (Niederman, Lechler, & Petit, 2018). The study results showed a significant inclination towards scrum as the preferred methodology, followed by waterfall, rolling wave planning, and the Kanban method, due to HPM's ability to integrate these methods (see table 7).

Table 7

Project Approaches and Methodologies

Project Approaches				
<i>Project Elements</i>	<i>Traditional</i>	<i>Hybrid</i>	<i>Agile</i>	<i>Total Projects</i>
Total # of projects	157	249	71	477
<i>Project Methodologies</i>	<i>% of traditional using method</i>	<i>% of hybrid using method</i>	<i>% of agile using method</i>	<i>% of all projects using method</i>
Waterfall	67.5%	51.0%	7.0%	49.9%
Scrum	8.3%	59.0%	81.7%	45.7%
Rolling wave	13.4%	20.9%	5.6%	16.1%
Kanban	1.3%	17.7%	33.8%	14.7%

Note. Adapted from “Agile, Traditional, and Hybrid Approaches to Project Success: Is Hybrid a Poor Second Choice?” by A. Gemino, H. Blaize & P. Serrador, (2020), *Project Management Journal*, 1-15. (<https://doi.org/10.1177/8756972820973082>). Copyright 2021 by Project Management Institute.

As organizations strive to respond to the demands of innovation, they must maintain a balance between the unique characteristics of their environments and projects with the need to respond more quickly to their environments (Azenha, Reis, & Fleury, 2021). As HPM has a dominant position internationally, this study suggests that its use might assist organizations in achieving their goals.

Reiff and Schlegel (2022) performed a literature review in 2022 to explore the definition, benefits, challenges, suitability, and prerequisites of HPM. The review commenced with 453 papers on the topic and eventually narrowed down to 22. The authors identified the advantages and disadvantages of HPM, as well as the success factors or prerequisites necessary for its implementation. Key aspects of HPM are provided in table 8.

Table 8

Summary of Key Aspects of HPM

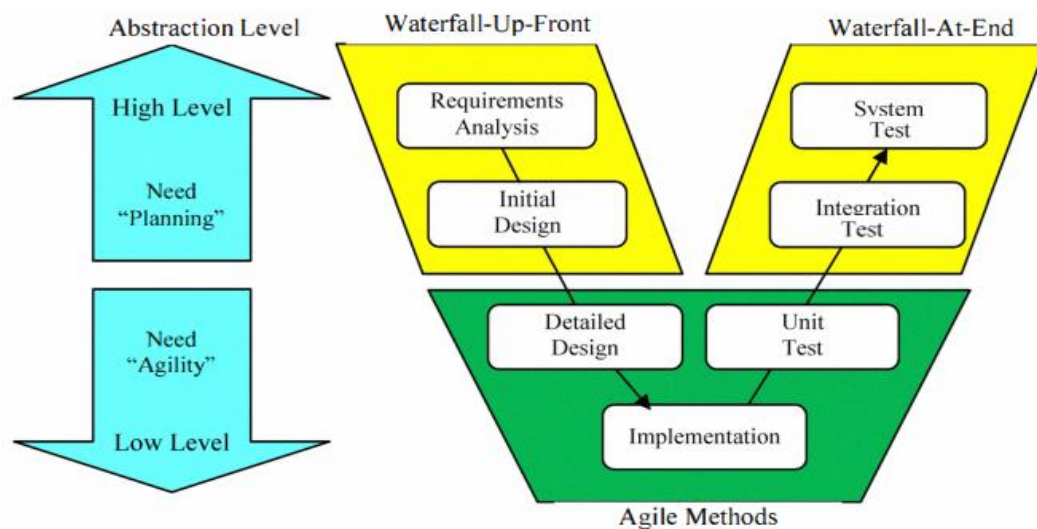
Advantages-Benefits	Disadvantages-Challenges	Prerequisites-Success Factors
Efficiency improvement Maximization of project success, better result Flexible response to changes Rapid achievement of project goals at lower cost Higher creativity in finding solutions	Comprehensive methodological knowledge required Training and familiarization required Increased administrative effort High level of transparency and communication is necessary	Clear coordination, high-level planning, detailed documentation A high number of team members, well networked, open to new methods Use customer-centric approaches First, develop a landscape framework Good tolerance for altercations Already successfully used traditional approaches, a broad knowledge of agile methods Involvement of experienced consultants

Note. Adapted from “Hybrid project management –a systematic literature review” by J. Reiff & D. Schlegel, (2022), *International Journal of Information Systems and Project Management*, 45-63. (<https://doi.org/10.12821/ijispm100203>). Copyright 2022 by IJISPM.

Takeaways from this literature review suggested that HPM commands several advantages but requires experienced practitioners and sufficient training and knowledge of the other methodologies to be effective. The HPM approach allows project managers to take a more flexible, adaptive approach to project management, using various methodologies as needed while still integrating traditional structures into the process (Špundak, 2014). This can help manage complex projects with a mix of predictable and unpredictable work and achieve better alignment with the organization's goals, objectives, and culture (Papadakis & Tsiropis, 2018; Schmitz, Mahapatra, & Nerur, 2019). To better visualize HPM in practice, scholars developed a hybrid model for the IT industry that encourages waterfall-up-front, agile in the middle, and waterfall-at-end in figure 10.

Figure 10

A Hybrid Model for Software Development and Project Management



Note. Adapted from “A Hybrid Model for IT Project with Scrum” by T. Hayata & J. Han, (2011), *Proceedings of 2011 IEEE International Conference on Service Operations, Logistics and Informatics*, 285-290. (<https://doi.org/10.1109/SOLI.2011.5986572>). Copyright 2011 by IEEE.

According to its authors, the hybrid V-model's high-level abstractions, like user and system requirements, are better suited for waterfall-based planning, while low-level abstractions such as design, implementation, and testing are more compatible with agile methods. The model was proposed as a solution to the challenge faced by organizations in effectively blending agile methods into their development styles due to lack of evidence on how and when to do so. Many project teams have struggled to combine different methodologies with agile methods in their organizational realities (Hayata & Han, 2011).

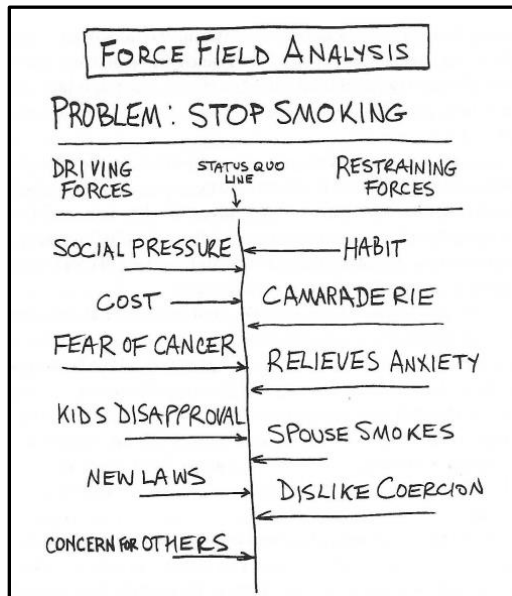
The Historical Progression of Organization Development and Change Management

The American Industrial Revolution, or Second Industrial Revolution, started in the mid-19th century, pitting workers against management and creating class and ethnic conflicts among the population (Mirvis, 2006). The scientific management theory, developed by Frederick Taylor at the time, regarded organizations as machines and workers as tools to be controlled by management to increase productivity (Burke, 2008; Weisbord, 2012). Although he had collaborated with Taylor several times, Henry L. Gantt eventually rejected Taylor's rigid management philosophy. Instead, he believed that employees could increase their productivity by utilizing their cognitive abilities to influence their earnings. This idea was illustrated in his famous *Gantt chart*, also referred to as a bar chart (Darmody, 2007; Seymour & Hussein, 2014). As told by Weisbord, Darmody, Seymour, Hussein, and other authors, Gantt profoundly contributed to project management since Gantt charts are some of the most effective tools presently employed by the project management profession for planning and execution. A 2006 survey of 750 active project managers revealed that the Gantt chart ranked the fourth most used

tool out of 70 practical tools and techniques used in project management (Besner & Hobbs, 2008).

Kurt Lewin is considered the pioneer of organization development and is credited with laying the foundation for the field of change management (Scherer, Alban, & Weisbord, 2016). He created one of the most influential change management models by operationalizing the concept of unfreezing, changing, and refreezing (Galli, 2019; Bierema, 2010). This is widely considered a model of planned change, which involves an intentional process of disrupting the current social equilibrium (unfreezing), creating movement (changing) towards a more desirable future state, and then solidifying this new equilibrium (refreezing) to maintain the change (Bushe & Marshak, 2015). Several authors considered this model the fundamental or classic model for managing change (Cummings, Bridgman, & Brown, 2016; Robbins & Judge, 2009; Sonenshein, 2017).

Lewin believed workers valued the ability to be creative, resulting in increased job satisfaction. The focus on productivity should go beyond the perspective that higher output equals better wages. According to Weisbord, Lewin created the formula $B = f(p, e)$, which means that “Behavior (B) is a function (f) of a person (p) and environment (e)” (Weisbord, 2012, p. 85). Scherer, Alban, and Weisbord (2016) acknowledged this formula as one of Lewin's most significant contributions to organization development. It provided a foundation for Lewin's concept of *force field analysis*, which is a change management framework that considers the forces that support a desired outcome and the opposing forces that hinder it (refer to figure 11).

Figure 11*Kurt Lewin's Force Field Analysis*

Note. Adapted from “Productive Workplaces: Dignity, Meaning, and Community in the 21st Century (25th Anniversary Edition),” (2012), 86. Copyright 2012 by Jossey-Bass.

Figure 11 illustrates an example of a person who wishes to stop smoking and the forces that work to support and oppose the goal. According to Weisbord (2012), the behavior (B) of a smoker (p) is determined by Lewin's formula, which multiplies the impact of the social environment (e) of the driving forces on the left and the restraining forces on the right. The status quo line in the middle may be altered by strengthening the driving forces and weakening the restraining forces (French & Bell, 1999; Bierema, 2010).

According to Scherer, Alban, and Weisbord (2016), the impact of Kurt Lewin's contributions to organization development and change management has been significant, despite his death at 57 in 1947. The authors contended that the organization development field in the

United States grew out of a leadership training program in the summer of 1946 conducted by Lewin. The Connecticut State Inter-Racial Commission invited Lewin to conduct a race relations training program for community leaders, which later came to be known as a *T-group* (or training group), with a focus on the roots and impact of interethnic prejudice (Burke, 2006; Mirvis, 2006; French & Bell, 1999; Adelman, 1993). Scherer, Alban, and Weisbord noted that Lewin's team included Ron Lippitt, Lee Bradford, and Kenneth Benne, and each played a significant role in developing group dynamics and influencing the field.

Lewin's followers adopted the unstructured T-group model for individual development in workplaces and public workshops (Scherer, Alban, & Weisbord, 2016; Burke, 2006; French & Bell, 1999). The authors asserted that consultants and researchers discovered that people had changed drastically yet struggled to practice new norms in traditional systems. By improving the community and organizational life, organization development began to flourish, inspired by consultants committed to action research and influenced by T-groups (Mirvis, 2006). Another author claimed T-groups "represented the search for authenticity and existential truth in an organizational world characterized by control and truth" (Grieves, 2000, p. 349). The invention of *percept language* by John and Joyce Weir allowed individuals to provide feedback to themselves while employing others as projection screens. John Scherer developed the Leadership Development Intensive (LDI) to combine personal, team, and organizational transformation within the context of the broader system (Scherer, Alban, & Weisbord, 2016).

The creation of *action research* by Lewin during this era was another significant contribution to the field (Bierema, 2010). It may be defined as follows:

Action research is the process of systematically collecting research data about an ongoing system relative to some objective, goal, or need of that system; feeding these data back

into the system; taking actions by altering selected variables within the system based on both the data and the hypotheses; and evaluating the results of actions by collecting more data (French & Bell, 1999, p. 130).

Lewin recognized that change involved taking action as reported by Adelman (1993) who quoted Lewin as saying, “No action without research; no research without action” (Marrow, 1969, as cited in Adelman, 1993, p. 8). The key to achieving a successful action requires analyzing the situation accurately, considering all possible solutions, and choosing the most appropriate solution to solve the problem (Burnes, 2006). Scherer, Alban, and Weisbord (2016) claimed that gathering data for planning subsequent change interventions is foundational to organization development.

During the 1960s, Douglas McGregor, renowned for his management models known as Theory X and Theory Y, proposed that managers could adopt one of two opposing worldviews, leading to distinct workplace consequences (Scherer, Alban, & Weisbord, 2016; Mirvis, 2006). The authors contended that McGregor's Theory X model resembled his father's and grandfather's rigid and primarily negative view of human nature as dominated by sin and distrust. In contrast, his Theory Y model was based on his quest to pick a different path with a more positive outlook on life. In sum, theory X managers believed that people are naturally lazy, selfish, and self-centered and must be monitored, managed, or controlled. Theory Y managers maintained that people are predisposed by nature to want to perform well, contribute, learn, and grow. They needed direction and help through feedback and coaching to manage themselves to achieve their best. In 1960, McGregor's book, *The Human Side of Enterprise*, shook the business world by offering a rational, research-based explanation for how individuals can inspire others. McGregor

influenced much of organization development's positive attitude toward people and the potential of teams and organizations (Scherer, Alban, & Weisbord, 2016).

Eric Trist and Fred Emery, social scientists, developed the *sociotechnical system (STS)* concept in the 1960s. This idea asserted that the interactions of people (a social system) with tools and techniques (a technical system) is not random but a matter of choice (Weisbord, 2012; Grieves, 2000; Burke, 2006). French and Bell (1999) contended that the approach significantly departed from traditional thinking. Its goal was to revolutionize how non-executive staff were assigned roles and responsibilities, thereby transforming the division of work among workers, managers, and others. Weisbord noted that Trist was skilled in effectively communicating the impact of organizational choices by making the social, technical, and environmental consequences of each clear and easily understandable. Trist and Emery later introduced the *search conference* approach designed to involve a broad base of stakeholders to generate solutions for complex organizational problems (French & Bell, 1999).

Organization development began to focus on social justice and progressive values in the 1970s, and practices such as *process consultation*, *process redesign*, *action learning*, and *conflict negotiation skills* were widely used (Scherer, Alban, & Weisbord, 2016). Furthermore, organization development was viewed as a planning framework that utilized a holistic approach to connect an organization's mission with top-down planning and a linear process to drive change through behavioral science interventions (Grieves, 2000). However, Mirvis argued that scholars in the 1970s began to question the "mechanistic application of OD to problem solving" (Mirvis, 2006, p. 53). He suggested that Chris Argyris, a prominent scholar in the field also influenced by Lewin, believed that many organizations were dysfunctional due to their hierarchical structures, which limited communication and the flow of information between employees and managers.

Mirvis contended that using simplified cause-and-effect diagrams for planned change was less practical at the time due to the inherent complexity of the change process.

During the 1980s, new approaches to organization development emerged that aimed to build upon existing models and address increasingly complex organizational challenges with practical solutions. These marked a departure from earlier decades' idealistic and socially oriented approaches. According to French and Bell (1999), David Cooperrider and Suresh Srivasta identified notable drawbacks with action research, including an excessive emphasis on addressing issues and taking action and a need for more ability to generate new theories. Consequently, a new approach, *Appreciative Inquiry*, emerged, which centers on highlighting the positive elements of an organization instead of focusing solely on its problems (Scherer, Alban, & Weisbord, 2016; French & Bell, 1999). Appreciative Inquiry is "a collaborative and highly participative, system wide approach to seeking, identifying and enhancing the 'life giving forces' that are present when a system is performing optimally in human, economic and organizational terms" (Watkins, Mohr, & Kelly, 2011, p. 22). French and Bell (1999) suggested that Appreciative Inquiry incorporates several principles, including an appreciation-based approach, which should be applicable, provocative, and collaborative.

In the 1990s, change management gained popularity, and it borrowed fragments of fundamental theories and practices from organization development (Grieves, 2000). John P. Kotter, a renowned author, speaker, and thought leader in leadership and change management, wrote a book entitled *Leading Change* in the 1990s, which presented a practical framework for managing change in organizations, drawing on examples from various industries to illustrate each step in the process. In the book, Kotter outlined an eight-step model for leading change, summarized in table 9.

Table 9*John Kotter's Eight-Step Model for Leading Change*

Step	Action
1	Increase Urgency
2	Build Guiding Team
3	Develop the Vision
4	Communicate for Buy-in
5	Empower Action
6	Create Short Term Wins
7	Don't Let Up
8	Make Change Stick

Note. Adapted from “Leading Change” by J. Kotter, (1996). *Harvard Business School*. Copyright 1996 by Harvard Business School Press.

According to Kotter (2006), succeeding in a change requires sequentially following each step. However, Bolman and Deal (2006) disputed that this model is linear as steps overlap and sometimes change agents need to revisit prior steps. According to Kotter, step 1 has a high failure rate, over 50%, as executives frequently lack patience or become paralyzed by potential risks. Step 2 emphasizes achieving “minimum mass” early on to avoid hindering change (Kotter, 2006, p. 242). Step 3 involves communicating the vision effectively, with Kotter stating, “if you can’t communicate the vision to someone in five minutes or less and get a reaction that signifies both understanding and interest, you are not yet done with this phase of the transformation process” (Kotter, 2006, p. 245). In step 4, leaders who lead by example achieve better outcomes.

Step 5 involves removing obstacles for people as more individuals become involved in the change effort. Step 6 involves celebrating short-term goals and highlighting the benefits of the planned changes. Step 7 may become problematic if victory is declared too soon. Finally, step 8 is reached when the change becomes a part of the organization's culture and is ingrained in how things are done.

While Kotter achieved notoriety with change management contributions, including making the *New York Times* best-seller list on multiple occasions starting in 1997, some critics have noted that the book lacks external or academic sources to support its ideas (Appelbaum, Habashy, Malo, & Shafiq, 2012). Additionally, scholars have compared Kotter's model and Lewin's earlier work on change management (Grant, 2016). Kotter's eight-step model remains widely recognized and utilized for leading planned change efforts.

The ADKAR model by Jeffrey Hiatt and Prosci is another well-known change management approach. ADKAR is an acronym that represents five stages of change: awareness, desire, knowledge, ability, and reinforcement. As the ADKAR model focuses on individual-level change, the author contended, "Successful change, at its core, is rooted in something much simpler: How to facilitate change with one person" (Hiatt, 2006, p. 1). Hiatt acknowledged the contributions of organization development scholars such as Peter Block and Richard Beckhard played a significant role in shaping the model. In addition, he credits change management experts John Kotter and William Bridges for their influence on the model.

Change management and organization development share numerous contributions between disciplines. While Lewin is credited with laying the foundation for the field of change management (Scherer, Alban, & Weisbord, 2016), Bushe, and Marshak argued that the field

results from many ideas and methods from academics, change agents, and consultants that resulted in many social constructs based on social sciences and norms (2015). While traditional organization development was focused on a *diagnostic* approach to change, newer models have emerged, including *dialogic* organization development. The authors argued that dialogic organization development is focused on the mindset of the change practitioner, which affects how organizations can be reimagined. Storch (2015) claimed that dialogic organization development “sees change as constant and ongoing, which results in some very different perspectives” (p. 197). Organization development is widely recognized as a highly effective strategy for responding to the changes that are constantly taking place in the marketplace and society at large (French & Bell, 1999). The progression of organization development and change management coincides with the rise of project management which is discussed in the next section.

The Rising Importance of Change Management and Project Management

The evolution of projects and methods leads to crucial changes in an organization’s operations. Nieto-Rodriguez (2021) contended that the purpose of projects is to enable constant change, although the operationalization of projects is merely temporary. The dynamic marketplace demands that organizations aggressively embrace change. These conditions demand that executives, leaders, and managers adapt to changes and motivate their teams for improved performance under changing circumstances (O’Donovan, 2018; Hornstein, 2015; Project Management Institute, 2013; Cameron & Green, 2012).

Change management receives less attention from project management teams in some organizations, and this is also lacking within project management research (Crawford, Aitken, & Hassner-Nahmias, 2014; Hornstein, 2012). Projects are considered successful or unsuccessful

based on whether the organization adopts or abandons their outcomes (Hiatt, 2006; Project Management Institute, 2013). Therefore, it is essential to incorporate both project and change management to achieve success. Despite being distinct fields, they are interconnected and interdependent (O'Donovan, 2018; Hornstein, 2015).

Researchers in Australia conducted a quantitative study in 2014 that focused on project management and organizational change management and produced findings applicable to both fields (Crawford, Aitken, & Hassner-Nahmias, 2014). 140 individuals participated in the study, with 56% employed in project management, 26% in program management, and 18% in change management. The majority worked in the financial services sector, while the remaining participants were primarily employed in engineering and government. The study revealed that successful projects employed both project management and change management methods, and identified two key critical success factors:

- Facilitate business integration by considering the organization's strategy, culture, and capacity for change, and
- Business decisions are made with a holistic perspective.

Based on their findings, Crawford, Aitken, and Hassner-Nahmias argued that project managers frequently adopt crucial practices that enable the success of change management initiatives.

These practices include building support by gaining the confidence of influential individuals and networking, engaging stakeholders by creating an environment that encourages participation, and establishing training plans for stakeholders. Additionally, project managers manage and adjust their communications to accommodate the characteristics and needs of their intended audience (Crawford, Aitken, & Hassner-Nahmias, 2014).

In 2005, a study was carried out to investigate 411 organizations implementing change projects. The study revealed that the leading cause of resistance was a lack of awareness (Prosci, 2005, as cited in Hiatt, 2006). Moreover, Hiatt stressed that project managers must “communicate the business need for change and explain why the change is necessary; provide the compelling reasons for the change and emphasize the risk of not changing” (Hiatt, 2006, p. 6). Hiatt contended that individuals internalize awareness through various factors, including their perception of the current situation, how they view problems, the credibility of the source of information, exposure to misinformation or rumors, and the degree of contestability regarding the reasons for change.

The PMI is committed to advancing project management through regular publication of articles that promote rigor and standards in the profession. Their PMBOK guide is updated periodically, providing a global perspective on changes in the project management profession and offering guidance on the most effective approaches for achieving project benefits and value (Project Management Institute, 2021). Older editions of the PMBOK had limited references to change management (Hornstein, 2015). The PMBOK seventh edition, released in August 2021, embraced several popular change management models that may help project managers with organizational change management. Some change management models are primarily linear (for example, Virginia Satir’s Change Model and William Bridges’ Transition Model), whereas others (for instance, ADKAR and John Kotter’s eight-step model in table 9) are more focused on ensuring that change occurs in a system.

Frequently, organizations mistakenly believe that project managers, program managers, or business analysts are responsible for managing change within their organization (Hornstein, 2015). In recent years, numerous scholars have written about the lack of direction given to

project managers and the project management field to address organizational change; this underscores the many unmet opportunities for further research into theory and practice (Crawford, Aitken, & Hassner-Nahmias, 2014; Conforto, Salum, Amaral, & Da Silva, 2014; Garfein, Horney, & Nelson, 2013). Hornstein (2012) argued that the success of a project should be evaluated not only based on the implementation of the knowledge areas and process groups outlined in the fourth edition of the PMBOK, but also on the level of employee engagement from the start of the project. In the case of organizational change, dedicated resources with change management training and experience may be more effective than a project manager who lacks the required experience to address the human and cultural aspects of the change (Crawford & Nahmias, 2010). Towards this end, organizations and academic institutions should provide more training in the theory and practice of organizational change management to project managers. In addition, they should be more deliberate about including qualified change management resources on project teams (Hornstein, 2015).

Organizational Culture Impacts on Project Management and Change Management

Organizational culture is a constantly evolving phenomenon shaped by individual interactions and behaviors within an organization (Schein, 2010). Schein emphasized that culture is not just something that surrounds us, but also something that lives within us. Schein contended that organizational culture is nuanced with various levels that “range from the very tangible overt manifestations that you can see and feel to the deeply embedded, unconscious, basic assumptions that I am defining as the essence of culture” (Schein, 2010, p. 23). He also argued that overt manifestations such as espoused beliefs, values, norms, and rules of behavior are used to reinforce an organization’s culture.

According to Hornstein (2015), different organizations place varying levels of importance on project and change management, which is reflected in their support level. These disciplines are considered burdensome in some organizations, necessary in others. To ensure that various stakeholders receive value, most organizations must maintain consistency in their project execution and result measurement (Le Grand & Rebecca, 2019). They argued that the failure to execute projects and accurately measure their results consistently can lead to the widespread perception that projects and changes are painful and potentially disastrous. This can result in preserving the status quo or even failure. Since many organizations must become project-oriented to survive in the VUCA environment, a culture that supports project and change management is essential (O'Donovan, 2018).

The Financial Services Sector, VUCA, and Project Management

The financial services sector is widely recognized as being among the most highly regulated industries. Traditionally, financial services organizations have been relatively conservative. Neirotti and Paolucci (2007) observed that financial services organizations tend to maintain bureaucratic and top-down command-and-control structures, which are more compatible with the waterfall project management methodology due to its greater emphasis on control, as opposed to the more flexible APM approach. Additionally, introducing innovation and fostering collaboration can prove difficult for employees in a hierarchical workplace with strict reporting structures and centralized control.

The financial services industry operates in a challenging environment characterized by volatility, uncertainty, complexity, and ambiguity (VUCA). These conditions significantly impact the operations and strategic decision-making of financial institutions in the sector. Financial institutions must navigate an increasingly challenging landscape with heightened

market volatility, economic uncertainty, regulatory and technological complexity, and ambiguity regarding the industry's future. Blockchain, cloud computing, AI, and the IoT pose threats to the banking industry, with blockchain having the most influence while being the least developed (Zheng, Xie, Dai, Chen, & Wang, 2018). Although the usage of blockchain in the banking industry can lower costs and speed up interbank settlement procedures, it also poses a challenge to banks and their fundamental existence as intermediaries. Still, banks must embrace and adapt technology to be competitive (Cahill, Baur, Liu, & Yang, 2020). Additional challenges for the financial services sector surfaced in a joint statement on cybersecurity risks issued by the U.S. Federal Deposit Insurance Corporation (FDIC) and the Office of the Comptroller of the Currency in 2020 (Federal Deposit Insurance Corporation & Office of the Comptroller of the Currency [OCC], 2021). The statement emphasized significant threats driven by geopolitical challenges that will require financial service organizations to initiate projects to mitigate system, network, data, and critical business function risks as quickly as possible.

The VUCA environment facing organizations requires a more adaptive approach to how their project teams operate. Financial institutions are adapting to this VUCA environment by investing in technology, developing more robust risk management systems, and diversifying their business models to be more agile. The VUCA environment facing organizations requires a more adaptive approach to how their project teams operate. The literature offers numerous options to help organizations become more agile and effectively handle project uncertainty.

Summary

The term *project economy* has been coined to describe how organizations are adapting their project work to become more agile in response to change. As organizations and project managers have realized that traditional waterfall project management methodologies are too slow and need to deliver more value to keep up with the pace of change, they have turned to alternative approaches (Rebaiaia & Vieira, 2014). Organization development, a field with roots dating back to Kurt Lewin, has influenced the field of change management, with contributions being shared between the two. Project management is closely aligned to change management, as it is used to drive results and has a range of methodologies available. Although the concept of APM has been around since the 1990s, organizations still need help in adopting and implementing it. As a result, HPM has emerged as a promising alternative and is the focus of this study.

Chapter 3: Methodology

This dissertation research aimed to understand how experienced project managers view HPM and its contributions to organizational change management improvements in financial services organizations. To achieve this, I used a multiple case study approach developed by Stake (2006) to understand the lived experiences of individuals utilizing HPM in different organizations. Each participant was treated as a separate case study.

Epistemology

Epistemology is a term that emerged circa 1856 and derived from the Greek terms *epistēmē* and *logos*, which translate to *knowledge* and *reason*, respectively, in English (Merriam-Webster, 2001). Epistemology is explained by “how we know what we know” (Crotty, 1998, p. 8). To better understand how the participants are experiencing HPM in their organizations, I used interpretive epistemology as the framework for this study. When the lived experiences of others can be used to help confirm the understanding or truth of a given phenomenon, this approach may be appropriate. Social constructivism offers an ontological perspective based on the notion that individuals create reality within the social environment being studied (Creswell, 2013; Creswell, 2003; Crotty, 1998; Burrell & Morgan, 1979). In an interpretive research study, meaning is socially constructed as participants apply meaning to their individual experiences, and their words are interpreted by the researcher, who conducts interviews and makes observations to synthesize and analyze what is said (Stake, 1995). Creswell’s (2013) definition of interpretive research included the use of an inductive method to extract emergent ideas through various forms of data collection, such as interviews, observations, and analysis, followed by the identification of patterns or themes and the preparation of a final report that includes

participants' voices, the researcher's actions and reflections, and a description and interpretation of the problem.

Methodology

Interpretive case study research methodology leverages data based on “multiple meanings of individual experiences, meanings socially and historically constructed, and with the intent of developing a theory or pattern” (Creswell, 2003). Creswell asserted that the researcher who conducts this type of research employs a ground-up approach with an openness to participant experiences and the agility to adapt or clarify questions or develop new questions during the data collection period. A significant advantage of case study research is that it can be applied in real-world situations. Torraco argued that “case study research offers significant benefits for those seeking to develop theory in new, largely unexplored areas and for organizational phenomena that are particularly complex and paradoxical” (Torraco, 2002, p. 371).

Research that employs data collection from more than one case is termed a multiple case study. Stake defined a *case study* as the “study of the particularity and complexity of a single case, coming to understand its activity within important circumstances” (Stake, 1995, p. xi). Stake maintained that multiple case study research involves individual cases that share a common characteristic through which “the cases are somehow categorically bound together” (Stake, 2006, p. 6). The number and type of individual cases studied depend on the nature of the research inquiry. However, in this study, the common characteristic of the participants was that they work as project managers in financial service organizations that regularly utilize some form of HPM.

I used the multiple case study approach Stake (2006) developed to collect perspectives and lived experiences from project managers working in different financial services organizations that utilize HPM. The literature is replete with material on waterfall and APM for practitioners and organizations, including outcomes studies, but only some such studies exist for HPM. This study was considered an interpretive multiple case study since it focused on five participants from more than one organization. In general, the findings of this interpretive case study cannot be generalized to other cases or disparate industries but could be of use to many practitioners and organizations. Researchers, practitioners, and organizations may learn new information about HPM from this research and gain a better understanding of what factors contribute to the success of change management.

Methods

Interpretive case study research offers flexibility in data collection. The researcher can leverage multiple sources of information, including interviews, focus groups, questionnaires, surveys, organizational documents, and observations, to yield rich data collection (Creswell, 2013). I collected data for this study by conducting individual participant interviews and offering contextual knowledge as an experienced scholar-practitioner in project management.

Participant Selection

Access to participants is essential to any research endeavor. “Convenience sampling involves the selection of sample members based on easy availability or accessibility” (Swanson & Holton III, 2005, p. 50). Data obtained from participants should be based on relevant experiences and potentially helpful to others in the field. According to Stake, the following three criteria should be considered by the researcher:

- “Is the case relevant to the quintain?”

- Do the cases provide diversity across contexts?
- Do the cases provide an excellent opportunity to learn about complexity and contexts?" (Stake, 2006, p. 23).

My career includes experience as a project management practitioner in healthcare and financial service organizations. This study focused on participants working in financial services organizations. I have been involved in dozens of projects incorporating waterfall, agile, and, most recently, HPM approaches with varying degrees of success. Agile and APM were introduced 20 years ago to respond to changing marketplace conditions while addressing organizational change efforts. However, organizations need help to develop core competencies and transform their business models to become fully agile.

Data was collected from five participants working for financial services organizations in an employee or external consultant capacity and with at least five years' experience as non-IT project managers. Theoretical saturation was achieved with this sample. Since this was a multiple case study, I ensured that the participants collectively represented two or more distinct organizations that satisfied the data collection criteria, as data should originate from more than one case and more than one organization. To minimize bias, I collected data from participants with whom I do not have a close working relationship and whom I have not worked directly on past projects. I utilized LinkedIn, a widely used social networking site, to get in touch with existing connections and form new ones. I also contacted the local Minnesota Project Management Institute (PMI) chapter to locate individuals that met the study's parameters. The following criteria were used to identify participants for the research study:

- a) The participant must have at least five years of experience as a project manager in a non-IT project management capacity and at least two years of experience with a financial services organization,
- b) The participant must have experience with both waterfall project management and APM approaches (more specifically, Kanban or Scrum) and an understanding of HPM methodologies, and
- c) The participant can be an employee, consultant, or unemployed at the time of the interview.

Upon receiving approval from the Institutional Review Board (IRB) at the University of St. Thomas to commence the study, I emailed 19 potential participants who met the above criteria to secure participation. I outlined the study's objectives and introduced myself as a student-practitioner, and doctoral student enrolled in the Organization Development program at the University of St. Thomas. I asked for a referral to a potential participant who met the criteria if the intended recipient did not meet the requirements, did not have time or interest, or knew of someone more suitable. Participants were screened in advance based on the above criteria and as outlined in the invitation to participate in Appendix B.

Initially, I limited my participant search to individuals living in or working for organizations in Minneapolis-St Paul, Minnesota. However, the study included two individuals from outside the region, one from California and the other from North Carolina. Participants were asked to participate in an interview with semi-structured open-ended interview questions. The questions posed to participants are in the qualitative interview guide in Appendix A.

Privacy and Confidentiality

All written communications with participants were conducted electronically. Although I collected email addresses to contact participants and schedule interviews, I did not include email addresses or IP addresses in the final report. There is no personally identifiable information associated with the individual responses. To protect the confidentiality of the participants, their identity was not disclosed in any published material. Interview data were digitally recorded and safely stored on the University of St. Thomas OneDrive, with access restricted to me. All handwritten notes were converted into an electronic document stored on the University of St. Thomas OneDrive and promptly destroyed after the research had been completed. Per the University of St. Thomas Institutional Review Board (IRB) guidelines, the signed consent forms will be maintained for at least three years after the study's completion before being securely disposed of by shredding.

Data Collection

Gliner and Morgan (2000) defined *qualitative data* as subjective observations that are difficult to evaluate or categorize and are often acquired through open-ended interviews, observations, and documents. I used semi-structured open-ended interview questions to collect data for the study. The questions posed to participants are contained in the qualitative interview guide in Appendix A. Interviews were scheduled with study participants based on mutual availability and were completed during the summer of 2022. As a result of the COVID-19 pandemic and other health concerns, participants were given a choice to complete the interview via video-conferencing technology using Microsoft Teams or in person. Although all interviews were conducted virtually, I took adequate measures to help the participant identify a location with sufficient privacy and noise control as appropriate for the interview.

Before the data collection process began with the interview, I built a rapport with each participant by engaging in a casual conversation. Then, I reviewed the study's parameters to complement the email sent out during the participant selection process. I subsequently reviewed the consent form (see Appendix C) each participant signed before the interview. I reminded each participant that the interviews would be digitally recorded so that they could be transcribed for data analysis and interpretation. I informed each participant that the recorded interview would not be shared with others, all data would be anonymized and protected, and pseudonyms would be used for each participant as outlined in the privacy and confidentiality section of the consent form. I informed each participant that there would be time for additional questions or statements at the end. Finally, with their permission, I asked each participant to review my notes and transcript following the interview. I informed participants that I would give them sufficient time to review the material and respond with edits or feedback to ensure that I captured the information accurately and avoided bias or misinterpretation.

The interview officially started when I informed the participant that the interview was being recorded. As I asked questions, I took notes, including observations and quotations, as well as details of ah-ha moments and anything else that I found relevant to the study. Based on the participants' responses, I asked other probing questions when necessary to clarify specific points or collect additional data that may have been helpful to the study. At the conclusion of the semi-structured interview questions, participants were given the opportunity to share any additional statements or information relevant to the study. The recording was terminated upon completion of the interview, and gratitude was expressed to each participant for their valuable time and contributions to the study.

Research Instrumentation

I developed over 25 probing questions addressing the primary research question: How do project managers perform hybrid project management (HPM) to respond to and successfully manage change? There are also four sub-research questions outlined in chapter 1. Appendix A contains the research questions and probing questions. After asking the participants questions designed to get to know them better, my questions were designed to collect data to support the following, with a particular focus on the research question underlying the study:

- Participant experiences with HPM,
- The most effective project management methodologies,
- The role of project manager differences that may exist when HPM is used, as opposed to waterfall, Kanban, or Scrum,
- The HPM approach and mindsets within organizations,
- How we might perform project management in a way that allows us to create change, respond to change, and deal with uncertainty,
- Change management and intersections with project management,
- Training and experience required to succeed in an HPM environment, and
- Additional suggestions and recommendations related to the topic of HPM.

Within-Case Data Analysis

In a qualitative study, the analysis gives meaning to the data that have been collected; first impressions and observations are taken apart (Stake, 1995). I used interview data, and other documentation collected for the analysis and looked individually at each participant (case). I documented my personal experiences separately in a journal that did not influence this study. I

created a profile of the study participants, including the participant pseudonym, industry, role, years of experience, and case title for each participant (table 10).

Cross-Case Analysis

To identify themes, subthemes, and fundamental differences that emerged from the data in each case, I systematically coded the data using NVivo software. This enabled me to identify recurring themes, subthemes, and any fundamental differences that may have arisen from the data. I utilized findings from individual participant cases to address the essential question of the research quintain (Stake, 2006). Through this structured approach, I gained a comprehensive understanding of the data and addressed critical questions posed by the research.

Researcher Bias

As the researcher and scholar-practitioner of the Organization Development program at the University of St. Thomas, I learned about the *use of self or self as an instrument*, which is defined as “the conscious use of one’s whole being in the intentional execution of one’s role for effectiveness in whatever the current situation is presenting” (Jamieson, Auron, & Shechtman, 2010, p. 5). My experience as an external project management consultant across multiple financial services firms and learnings throughout my career may be a source of bias. The research participants in this study likely did not share this combination of experience and learning, so the interview questions were structured accordingly. The views, experiences, and opinions of others are unknown. I minimized my personal biases wherever possible to ensure study integrity and credibility.

Summary

In this chapter, I described the research methodology, the participants, the type of data collected, how the data were analyzed (both within-case and cross-case analysis), and other

measures related to privacy and confidentiality. I utilized a multiple case study approach Stake (2006) developed to collect perspectives and experiences from project managers from three financial services organizations. This methodology was appropriate to understand the lived experiences of individuals utilizing HPM in different organizations. Chapter 4 presents the findings of the interviews and data analysis, which includes individual and cross-case analysis.

Chapter 4: Research Findings

The aim of this dissertation research was to gain insight into the perceptions of experienced project managers regarding the relationship between HPM and enhancements in organizational change management within financial services organizations. There is an increasing trend among hiring managers and organizations seeking project managers with HPM experience or a combination of agile and waterfall project management experience throughout many industries. The primary research question was: How do project managers perform hybrid project management (HPM) to respond to and successfully manage change?

Interview Process

During the summer of 2022, five individual participants who met the criteria for participation in the study were interviewed. A Microsoft Teams session was conducted for each interview through the University of St. Thomas network. Every participant consented to have their interview recorded digitally. All participants expressed reservations about disclosing their employer's name before the interview. Some supplied follow-up communications in response to the invitation to participate email (Appendix B). Others wanted assurances that actual names would not be disclosed or published. To address these concerns, the informed consent form (refer to Appendix C) was presented to each participant and signed by the participant and myself before the interview.

Furthermore, the qualitative interview guide (Appendix A) proved highly beneficial in alleviating last-minute concerns before collecting verbal consent to initiate the recorded interview. The interview duration was within the range of 60 to 90 minutes, in accordance with the expected timeframe stated in the initial email invitation. Table 10 provides each participant's

pseudonym, industry, role, years of experience, and distinctive case title.

Table 10

Profile of Study Participants

<i>Pseudonym</i>	<i>Industry</i>	<i>Role</i>	<i>Experience (years)</i>	<i>Case Title</i>
<i>Becky</i>	Financial Services	Senior Project Manager (Consultant)	30+	Case Number 1: Get it done
<i>Tyler</i>	Financial Services	Senior Project Manager (Consultant)	20	Case Number 2: Complex is OK with me
<i>Mary</i>	Financial Services	Project Manager (Employee)	25+	Case Number 3: The dot connector
<i>Adam</i>	Financial Services	Manager of Project Managers (Employee)	15+	Case Number 4: The critical success factor
<i>Sarah</i>	Financial Services	Senior Project Manager (Consultant)	25+	Case Number 5: The puzzle solver

Data Analysis

The interviews were recorded digitally using Microsoft Teams software at the University of St. Thomas. Interviews were transcribed and saved on the University of St. Thomas OneDrive with a unique file name that I can only access. To analyze the unstructured text and audio, which were critical inputs for this study, QSR International's NVivo software was employed as it is a powerful tool often used by qualitative researchers.

Chapter 3 mentioned that research employing data collection from more than one case is a multiple case study. Stake defined a *case study* as the “study of the particularity and complexity of a single case, coming to understand its activity within important circumstances”

(Stake, 1995, p. xi). Stake further asserted that multiple case study research involves individual cases that share a common characteristic through which “the cases are somehow categorically bound together” (Stake, 2006, p. 6). Consequently, the data analysis has been presented in two sections in this chapter. The first section comprises the individual case analysis, which includes five case studies, each identified by their respective titles and pseudonyms for every participant, as presented in table 10. The second section addresses the cross-case analysis, which outlines the significant themes that surfaced from the data analysis.

Individual Case Analysis

This section provides a detailed description of each case, including a summary of findings for each case based on an interview outline that investigated eight key areas:

- Brief background and participant introduction,
- Hybrid project management (HPM),
- Most effective project management methodologies,
- Impacts to the role of the project manager when HPM is used,
- Mindset and HPM,
- Best approaches to create change, respond to change, and deal with uncertainty,
- Change management and the role of the project manager, and
- Training opportunities and HPM.

Furthermore, each case contains direct quotes from the participants, researcher observations, and a summary of essential information.

Case Number 1: Get it Done

At the time of the interview, Becky worked as a Senior Project Manager for a prominent financial services company based in Minneapolis, Minnesota, in a consulting capacity. Previously, she worked as a program manager at another major financial services institution for over 10 years. With over 30 years of project management experience in the financial services sector, she was just several months away from retirement at the interview. Becky obtained the Project Management Professional (PMP) designation from the Project Management Institute (PMI) many years ago. Becky has supported multiple business units throughout her career and has often acted as a liaison between business and technology teams.

When asked what she liked most about being a project manager, Becky stated, “I like being part of change and being part of being in a decision-making role, without having direct reports. I like working with people and through people to get things done.” She claimed to be proficient in guiding people through change and considered herself highly competent in introducing initiatives that “add value to the business.” Becky expressed that project management is always exciting as there is never a dull moment in the job. She enjoys the dynamic nature of the work, where each day is unique and different from the last.

Hybrid Project Management. Becky was eager to discuss HPM because she has been practicing something similar for years. She acknowledged that the PMI recently embraced HPM and suggested that it has become a “novel buzzword.” When asked to define her understanding of HPM, Becky offered that the approach need not be restricted to a particular methodology. Instead, various strategies should be used to achieve the project’s objectives within the allotted time, schedule, and budget. She added, “you should use the best things out of any method you can to make that project successful.”

Upon further questioning her previous experience as a project manager, she admitted that she did not adhere to the Project Management Book of Knowledge (PMBOK) published by the PMI. Instead, she utilized best practices from multiple sources and implemented them. Becky acknowledged that she “naturally gravitated to a hybrid approach” and found this “more natural than other methodologies.”

Becky asserted she has not worked for a company with a prescribed project management methodology. She stated, “I do not think companies in this day and age really are looking at any one methodology.” Moreover, when it comes to projects with information technology teams, she said:

They have a bunch of different kinds of methodology and software development methodologies. And I am seeing a lot of pieces of them. Nobody calls them stand-ups and says we are using a hybrid methodology, and they seem to be blending it that way.

Becky recognized that offshore companies, which usually adhere to the PRINCE2 (Projects in Controlled Environments) standards, more prevalent in the United Kingdom, Europe, and Australia, are also incorporating various practices derived from agile and waterfall methodologies.

When asked a probing question about HPM benefits, Becky said, “you can pick and choose. You are not boxed in and locked in. And if it does not work, you can deviate and do something else.” Becky noted that business teams often convene in a room and establish their desired outcomes by documenting their requirements, which is typically more consistent with the waterfall methodology. However, when solving more complex problems or introducing something completely new, she said, “you probably are going to have a hard time articulating

what it is.” Becky reiterated that the HPM methodology offers the most flexible approach as “you can start going one path and go down a path in a project. And if you hit a roadblock, you can try something else.” Her final argument on the benefits of HPM is that may help with speed to market.

The final probing question in this section addresses the challenges of HPM. Becky quickly suggested, “Well, if you are a person who likes to have boundaries, it is hard to describe a hybrid approach, right? There is not a map, a methodology map, or roadmap that you could show somebody.” She suggested it might be necessary to “utilize multiple methodology maps” in conjunction with one another. In her words, “you may have to stack six methodology maps on top of each other.” Additionally, she acknowledged that changing course can be a challenge for many individuals, especially those on a project team.

Most effective project management methodologies. While most of Becky’s career has been with one major financial services firm, the dominant project management methodology she has used is considered waterfall. Becky acknowledged that information technology teams began experimenting with agile methodologies early on but said, “[it is not] pure agile; it is always some variation.” Becky pointed out the challenges that arise between business, which typically prefers waterfall, and information technology, which favors agile methodologies. She said:

You always had to work together to understand deadlines because you are using different tools, probably chart your deadlines. So, you always had to work very closely, make sure the communication was excellent, to make sure that you were all on the same page.

Becky expressed concerns about the need for more transparency between business and information technology because each group used a different type of software for tracking and

planning purposes. At times, the information technology team did not allow business resources to use or share specific tools. She argued, “You should all be using the same tool or not use it at all.”

Based on her past experiences, Becky believed that agile project management approaches, specifically scrum, are only sometimes the most effective option. She pointed out that often the projects would fall behind schedule and said, “in agile, you know, they keep saying you can make up that time. But they were falling so far behind that they can actually almost hide the fact that they were falling behind.” According to Becky, enhanced controls are critical when a project manager or team attempts to correct course.

Becky expressed her belief that people favor the waterfall methodology due to its familiarity, but this preference does not necessarily translate as the best option. She cautioned that in case of being stuck, it is essential to have the flexibility to incorporate tools from other methodologies to overcome challenges. One example she cited is the spaghetti map, which she considers a powerful tool for resolving complex process issues. Becky's favored methodology is HPM, which allows for integrating the most effective concepts from various methodologies. She remarked, “As long as you understand how to use it, bring it along and try it.”

Impacts on the role of Project Manager when hybrid is used. When asked how she has evolved as a project manager when HPM methodology is used, her response was grounded in her PMP training by saying continuing education requires the project manager to learn and adapt over time.

Becky shared that when guiding a team through a project, the PMI provides a roadmap on moving from start to finish, but it is not essential to inform individuals about the specific phase

they are in. As a project manager, her responsibility was to guide the team through each stage rather than focusing on the phase itself. When implementing HPM, it is critical to ensure a seamless transition. Becky emphasized that the key to a successful outcome is “to keep things seamless for the project team.”

Becky likened adapting to various project management methodologies to mastering a new language. It requires a solid understanding and proficiency in each, along with an awareness of the context in which you operate. One of the challenges is the ability to adapt to different approaches, which doesn't come naturally. She highlighted that the project manager's role has evolved to be more of a director, guiding team members instead of micromanaging them. Becky made an interesting comment that I underlined in my notes and picked up from the transcription: “in this day and age where change happens so fast, you have to blur the lines.”

Mindset and Hybrid Project Management. According to Becky, CEOs, and other leaders expect project management teams to deliver results and successfully move projects from one stage to the next. However, prescribing a particular project management methodology can be daunting, especially when the company culture needs to shift to accommodate a new approach. Becky emphasized that projects must be completed promptly, especially when significant financial resources are at stake. From the perspective of CEOs and leadership, they are less concerned with the process and more interested in the outcome. As Becky noted, “they do not care how it’s done, but they want to know that it will work... it should not be a total failure.”

Becky suggested that a hybrid approach may be the solution to meet the demands of rapid change. She explained that a hybrid approach involves a defined methodology that takes pieces from different successful approaches to reach the desired outcome. Massive changes can be

challenging to implement, requiring substantial time to get people on board. Ultimately, leaders prioritize results over the process, as Becky pointed out.

Best approaches for creating change, responding to change, and dealing with uncertainty. Becky used an analogy to describe the process of addressing change, comparing it to a large onion. She explained that tackling change requires breaking it down into smaller, manageable pieces for people to handle. While most people see change as a big elephant in the room, Becky preferred using the onion analogy as it seemed more appropriate than discussing how to chop up an animal. To engage people in a change initiative, Becky suggested that project managers present a roadmap and encourage teams to think in smaller pieces. She emphasized that cookie-cutter approaches may work for certain projects but not for complex and fast-moving ones.

Change management and the role of the Project Manager. Becky's extensive career experiences have equipped her with a strong understanding of change management and project management. As a project manager, she believed it is crucial to coach people about change by helping them understand the experience and recognize its importance. According to Becky, program and project owners do not focus enough on change management, though she has noticed a positive shift towards it in recent years. She emphasized that change management is crucial for the success of any project or product. Becky argued that projects inherently involve change management, and she emphasized the importance of addressing potential issues with change management upfront.

Further, change management and project management are not separate but intertwined, with change management starting right from the beginning of a project. Becky also believed that

change is happening rapidly because consumers demand more from the marketplace. Her final thoughts were, “right when you start initiating a project, you are in change management mode.”

Training opportunities and Hybrid Project Management. According to Becky, soft skills are vital to being a proven and impactful project manager. While hard skills are helpful, they can be learned, and soft skills are harder to acquire. Becky said, “You have got to be able to communicate succinctly. You have got to be able to interact with people on all different levels. And you [must] be able to manage conflict.” She claimed, “what gets you noticed and moves you in your career is those soft skills, your people skills. Your ability to work with people, to work through people, and move people from point A to point B.” Her direct response to my question on training was, “So, the training that you got to focus on in the hybrid project environment is people skills.”

Becky again drew upon the onion analogy when asked whether managers and stakeholders require additional training on HPM. She asserted that the project management office (PMO) should provide project managers with the necessary training but did not feel that leaders require specialized training in this area. As Becky noted, leaders prioritize results, and she questioned whether a typical manager needs to understand HPM. In concluding remarks on this topic, Becky suggested that too much emphasis on getting support from the top and walking the talk could exhaust companies. She said, “In this day and age, they just do not have the time for that anymore.” Becky stressed that the project management field must take the lead and deliver results, with or without leadership involvement.

Case Number 2: Complex is OK with Me

Tyler is a charismatic individual who was working as a Senior Project Manager in a consultant capacity with a leading financial services firm in Minneapolis, Minnesota, for the past five months at the time of the interview. Previously, Tyler worked for two-plus years at another major financial services organization with a significant regional footprint in Minneapolis, Minnesota. Tyler reported that he has almost 20 years of project management experience with a combination of experience in financial services, retail, and medical sectors.

Tyler has managed a diverse array of projects throughout his career. He has overseen projects involving Wall Street firms, led multiple regulatory initiatives, developed new products for internal and client purposes, contributed to several technology initiatives, and created operational efficiencies that resulted in cost savings. Tyler once led a project that saved his company several million dollars annually by introducing a digital workflow that reduced risk exposure through enhanced compliance with the U.S. Department of Housing and Urban Development (HUD) guidelines.

When asked about his favorite aspect of being a project manager, Tyler responded that he enjoys the diversity it offers. He explained that each project presents a unique set of challenges, such as the individuals involved, the nature of the work, its complexity, and the associated risks. Tyler expressed that he appreciates the variety in his work, stating, “I just like things being different.”

Hybrid Project Management. Upon being asked to define HPM, Tyler referred to technology initiatives and agile project management methodologies. He explained that HPM involves integrating the traditional approach with agile, using user stories to make both

methodologies work together. However, when asked how his organization has defined HPM, Tyler cited challenges he had seen with two organizations grappling with this issue. He observed that the roll-out of both the traditional methodology and the new agile approach is often a compromise or a battle, resulting in mixed results. Tyler said, “So, it has not gone too well, I guess, from what I have seen at both firms. There are kind of some challenges that might be further questions down the road.”

Tyler mentioned that one advantage of HPM is flexibility. According to him, this flexibility is beneficial when unexpected things arise during a project. Tyler said, “So, if something suddenly comes up, you are like, oh shoot, we did not think about that.” He explained that with HPM, the team can quickly identify the impact of the change and find ways to adjust the project accordingly. Tyler also acknowledged that he has seen this approach work effectively in some of his projects.

When discussing challenges with the HPM approach, Tyler identified four areas of concern: transparency with reporting, agile teams needing to be more confident, a lack of collaboration with agile teams, and a lack of understanding of what agile means.

Notes from the interview highlight reporting progress as a significant challenge in terms of transparency in project status or reporting. Tyler provided an example where project managers required assistance tracking their progress on an APM project and utilizing a traditional status reporting structure. Another challenge is that agile teams can become overly confident and report no issues meeting deadlines until just days before, when they realize that they cannot meet the timelines. A third challenge arises when agile teams fail to build relationships or collaborate with more traditional teams. Tyler is convinced that many people do not fully understand what agile

entails, mistaking it for just being flexible with the approach, without utilizing tools and techniques like stories, backlogs, and burn rates. When prompted for additional examples, Tyler stated that people need a comprehensive understanding of agile.

Most effective project management methodologies. When asked about his preference for the most effective project management methodology, Tyler paused before responding, “I think I do like hybrid.” He indicated that if you do enough of the structured work up front, like requirements using waterfall, “you have hopefully less change later on.” Then, agile techniques can be introduced, which brings flexibility. As mentioned in the challenges earlier, Tyler cited that the challenges are real, and it is “like trying to put a square peg in a round hole” when trying to provide transparent reporting on hybrid projects. Tyler emphasized the need for visual standards for reporting on hybrid projects as people tend to be visual.

Impacts on the role of Project Manager when hybrid is used. Tyler shared an interesting insight from a previous project he managed at his financial services firm. He explained that while the project management office (PMO) had a strong track record of “getting stuff done” by delivering projects using more traditional waterfall approaches, other parts of the organization had fully adopted agile project management methodologies. When Tyler was assigned to the project, the product owner, who was not a trained project manager, took on many aspects of project leadership. This resulted in the PM's role becoming more diminished, almost like a project coordinator. Tyler felt like he was an overpaid resource as a result of the division of roles and responsibilities.

Tyler began his career with the Project Management Professional (PMP) designation from the PMI, but let it lapse due to a short-term career change. Upon returning to the project

management profession, he acknowledged that structured training helped him develop some standards. He emphasized that establishing solid relationships, having strong communication skills, and keeping people engaged is critical.

Regarding the future of the project management profession, Tyler believed that the role of project manager will continue to evolve as technologies such as artificial intelligence (AI) and offshoring become more prevalent. However, he anticipated a new variation of agile project management (APM) or HPM to emerge.

Mindset and Hybrid Project Management. Tyler has observed a trend over the past few years whereby the leadership in companies he has worked with has increasingly embraced agile project management. In some cases, firms that previously resisted it are now requiring employees from the PMO to take agile training classes. He claimed that the pace at which organizations adopt agile varies tremendously but thinks the leadership of each organization is influential with adoption. He also believes that some resistance to agile and HPM methodologies may stem from past negative experiences, as those who had rough beginnings during the learning phases may be hesitant to embrace it fully. Tyler is confident that agile and hybrid methodologies are here to stay, given their demonstrated benefits.

In one of his prior roles, Tyler worked for an organization trying to adopt an agile project management culture. To accomplish this, outside talent was brought in, people were placed at the Director level, and an “Agile Center of Excellence” was created. In addition, frequent team meetings and lunch-and-learn sessions focused on agile project management were held. He said, “the senior directors” and other leaders reinforced the shift.

Best approaches for creating change, responding to change, and dealing with uncertainty. Providing structure is the first thing that came to mind for Tyler when asked questions about what works best in a VUCA environment. He believes that in such chaotic situations, a little bit of structure can help people understand what's going on. Because there is so much chaos, Tyler argued, “we have to put a little bit of structure in here” to look at something and understand what that might mean. Using an analogy, he said, “being the driver of the bus in a way to kind of control kind of what goes in and out of the bus and making sure it does not, you know, crash through a fence or go over a cliff or blow through a stoplight, when you had all this different stuff coming from all these different areas at once.”

According to Tyler, another vital role of the project manager is to ensure “the right people are involved in decisions or groups are not left out” so that awareness is there up front. He argued that this becomes particularly valuable when there is a need to change course or pivot.

Tyler emphasized the importance of comprehending the big picture and communicating this to people in a complex environment. He said, “we thought we were going to do this, we found out it no longer makes sense. Let us stop moving forward.” A competent project manager must possess confidence and the ability to work with individuals, even if there are personal differences, to achieve the project's aims.

Tyler noted that in order to meet the speed-to-market demand, some critical project tasks such as testing, and pilot release efforts are being sacrificed. This compromises the quality of the minimum viable product and raises concerns by asking, “is it even going to be a valuable product for the client?” Tyler believed that this approach causes preventable issues after implementation.

Change management and the role of the Project Manager. From Tyler's experience, the change management role is sometimes taken on by the project manager, while at other times, it is handled by a dedicated change manager. However, the importance of the change piece is often overlooked, and larger firms with a dedicated change management team have more successful project implementations.

Tyler's response to whether program or project owners place enough emphasis on change management for projects depends on the strategic objectives of the underlying project. There is no room for error in regulatory projects, and a heavy emphasis is placed on change management functions. In contrast, owners sometimes give it an afterthought for other projects and prioritize completing the project before dealing with change management. Additionally, if the project is focused on revenue generation, leaders will try to utilize change management whenever possible.

Tyler also offered thoughts on the demands and capacity of assigned change management practitioners. For the firms that support this role, he argued that these resources are frequently overallocated as they are “often split amongst too many things that they cannot spend as much time as they want on your project;” this defeats the purpose of having the change management resources engaged.

According to Tyler, coordinating change management is more challenging when using HPM than with traditional approaches, as the project's overall picture may not become clear until the end. He pointed out that in HPM, it can be challenging to provide stakeholders and change managers with a comprehensive visual representation. Tyler emphasized the importance of providing a complete picture since visual aids are helpful in understanding complex information.

To conclude this section, Tyler emphasized the importance of recognizing and valuing the role of change management. Experienced change management professionals often have firsthand knowledge as end-users or possess a natural ability to understand the needs of end-users. Tyler suggested that change management professionals may ask pertinent questions like, “Hey, have you thought about this? Or we have done this in the past to make the product better. Or maybe a better, smoother implementation.”

Training opportunities and Hybrid Project Management. Tyler strongly advocated for providing project managers with more training in HPM. He acknowledged that although he has received agile project management training from another organization, he hasn't had many opportunities to utilize it in his daily tasks. Tyler believed that continuous learning is crucial and that investing in more training can help project managers become better practitioners.

When questioned about the most valuable type of training for project managers, Tyler highlighted the need for education in specific software tools such as dashboards, JIRA, and Confluence from Atlassian. He also emphasized the importance of ongoing learning through refresher training, lunch and learn sessions, and personalized training tailored to each role within traditional and agile project teams. Tyler offered examples of previous projects where he had to address knowledge gaps in agile project management when joining a new team. Overall, Tyler believed improved training across the organization would be beneficial.

Furthermore, Tyler strongly believed that project owners and stakeholders would also benefit from increased training and awareness. He shared an example where a senior leader in the technology division worked with business partners who lacked understanding or appreciation for project management's rigor, including project structure, methodology, and the role of a

business analyst and project manager. To address this issue, the senior leader created a formal, role-based training course “to help stakeholders and project team members understand the overall project strategy and make informed decisions.” Tyler's boss considered this training initiative as one of the best things he had ever seen done, as it opened people's eyes to the right way of doing projects.

Case Number 3: The Dot Connector

Mary, a professional based on the east coast, generously made time for an interview despite her busy schedule. She works for a large financial services company and has more than a decade of experience managing various projects and programs, both in waterfall and agile settings, making her an excellent fit for this study. Mary's favorite aspect of being a project manager is having a broad view and taking satisfaction in connecting the dots, which is a valuable skill in her role.

Hybrid Project Management. When questioned about her interpretation of HPM, Mary stated that her answer varies depending on her position and obligations. In her previous position, she explained that it involved concentrating on dependency management due to project collaborations with third-party vendors. Based on her current role, she believes that “hybrid project management means being an agent of change or a champion of change.”

Mary indicated that her employer has a strategic initiative to become an agile organization from the top down. As a result, solid internal awareness and several change efforts are in place to support the transition. Nevertheless, she observed that “different organizations are at different stages of their transformation, and so while the organization that I support is fully product-centric, many outside organizations that drive change that requires our products to do

work. They are not there yet.” She indicated a significant amount of clash and chaos within her organization due to competing priorities and a lack of resources. When asked if her organization has defined HPM, Mary responded, “I would say that it has not been.”

Mary identified the potential benefits of HPM for project sponsors, stating that it could give them a better sense of control. She explained that hybrid approaches provide a longer-term view, which may be more appealing to sponsors who prefer to see a one-to-three-year range instead of just the next few quarters. According to Mary, “at that strategic level, I think they like, their comfort level is seeing that longer range maybe, you know, one-to-three-year range, rather than the next few quarters. And so, I think that is where the hybrid potentially provides benefit.”

However, Mary also acknowledged the challenges associated with HPM, such as “constant replanning and constant reprioritizing.” She explained that, in her experience, things do not always go as planned, so project managers must be constantly adjusting and mitigating. Mary noted that HPM involves a larger volume of change within the planning process compared to traditional waterfall approaches.

Most effective project management methodologies. When asked about her preference for the most effective project management methodology, Mary continued to lean into HPM but thought of an additional challenge called tooling. In her view, agile teams use a distinct set of tools while traditional project managers use a completely different set, which poses an additional reporting challenge for leadership, especially given her employer's ongoing agile transformation effort. Mary noted that traditional project management metrics such as percent complete and color-coding are not applicable to agile methodology. As a result, project managers have

improvised by using Microsoft Excel alongside their primary tool, JIRA by Atlassian, “to develop an interim hybrid approach to share project status” with leadership.

Mary stated that her organization is currently caught in between waterfall and agile methodologies, which she considers to be HPM. She views hybrid as the transformational stage from a waterfall to an agile approach. However, she believes that her organization's ultimate goal is to fully adopt agile methodology, despite her preference for HPM. Mary emphasized the importance of project tailoring, a concept defined by the PMI, as opposed to having a preferred methodology for all projects. Based on my notes and observations, Mary's organization is moving towards becoming a fully agile project management shop.

Impacts on the role of Project Manager when hybrid is used. Mary described her role in HPM as a “dot connector,” emphasizing the need for project managers to have a deep understanding of both business and technology, and to involve critical individuals to troubleshoot issues when necessary. She recalled her early days as a project manager, working within the traditional waterfall approach, where each phase of the project had a clear delineation and routine. However, as project management has evolved and become more complex, Mary has had to operate at a higher level of detail, while also maintaining a broader view of the project's overall goals. This has required her to develop subject matter expertise in the areas driving the project.

Mary also highlighted her organization's varied approaches to project management, with some project managers assigned to specific verticals to develop subject matter expertise, while others are allocated to new verticals without prior experience. Given a choice, Mary prefers to

align herself with a specific domain as she believes it is “a game-changer” when leading successful projects.

When asked about the future of project management, Mary is confident that there will always “be a need for a role that has a skill set, that can see the big picture, articulate the big picture in a way that is meaningful to different audiences” and connect the dots. Mary also emphasized the importance of being a servant leader and how this aligns with the tenets of agile project management. She believes that the most effective project managers will demonstrate key proficiencies and that individuals with project management skills will continue to be in demand regardless of how people choose to define the role.

Mindset and Hybrid Project Management. Mary reaffirmed that her organizational leadership has a strategic initiative to become an agile organization from the top down as part of a large-scale agile transformation effort. She acknowledged that this requires significant cultural and behavioral changes to be successful, saying, “There's a lot of pressure and a big challenge to achieve this.” Mary also noted that organizational leaders have had to learn to take small incremental steps instead of large-scale changes, and quoted a leader who said, “Don't let perfect stand in the way of good,” which reflects the cultural shift within the organization.

Mary also discussed the love-hate relationship that project managers in her organization have with their role. While project managers were not always valued in the past, there is now a renewed appreciation for the role as a crucial connector that holds things together. She noted that the perception of the role has ebbed and flowed over time, but ultimately, there is a recognition of the need for project managers with a broad overview and the ability to act as glue to keep projects on track.

Best approaches for creating change, responding to change, and dealing with uncertainty. When asked about the best approaches to use, Mary did not want to confine herself to a rigid technique, instead favoring a more flexible approach, which she referred to as project tailoring. She mentioned using the Clifton Strengths' Strengths Finder tool and identified empathy as one of her top strengths. For Mary, empathy is vital for connecting with her team and adapting to their needs. She acknowledged that conflicts can arise during projects and that project managers play a critical role in resolving them. Mary's final thoughts on this section are that the chemistry and experience of the project manager are significant contributing factors to the success of a project and team.

Change management and the role of the Project Manager. Mary emphasized the crucial role of project managers in the change management process. She believed that the project management methodology employed determines the requirements for managing change, and the project manager is responsible for overseeing and documenting any changes.

In response to whether program or project owners prioritize change management, Mary expressed concern that they do not focus on it enough. She said, "Yeah. Not engaged enough, and not engaged enough until something blows up." She thinks that program or project owners tend to prioritize the budget and schedule over change management.

When asked for suggestions to improve how project managers handle change management, Mary highlighted a significant gap between the project team and project or organizational leadership. She believes that there is room for improvement and that current standards should not be considered best practices.

Training opportunities and Hybrid Project Management. Mary emphasized the importance of project managers receiving more training in HPM, specifically tailored to their organization. She cited the ongoing large-scale agile transformation in her organization and the self-directed nature of the available training as potential barriers to its effectiveness. Mary suggested that more application of HPM processes to tools would be helpful in additional training or content.

When asked if other stakeholders or project sponsors need more training and awareness on HPM, Mary responded, “so, emphatic, yes!” Mary also believes that stakeholders and project sponsors would benefit greatly from more training and awareness in HPM, particularly in building and operating within a product-centric organization. She stressed the need for better direction from top leadership as her organization transitions from a project-based to a product-based approach.

Case Number 4: The Critical Success Factor

Adam has a diverse background that includes work with business and technical teams and over 15 years of project-related experience. As a manager of project managers for a large financial services firm, he emphasized the importance of achieving results and keeping a constant focus on critical success factors. He believes that project managers must be able to identify the most critical elements of a project and do whatever it takes to get things done. They should be able to answer the question, “what is the most critical thing here?”

Observing the unique styles and performance levels of different project managers, Adam identified essential competencies such as entrusting the team to perform, effective communication, milestone and task identification, team building, relationship building with other

teams, and process focus. He stressed that understanding critical success factors is key to the success of both the project and the project manager, regardless of their individual style.

Hybrid Project Management. Adam compared project management to war and stated that just like in war, project managers need to utilize all the tools available to them, including project methodology. He believes that project managers need to set up each project differently as one size does not fit all. During the initiation phase, he uses the traditional waterfall approach to establish project scope and milestones but then uses a mixture of project management methodologies depending on team dynamics, schedule, and other capabilities. Adam thinks that his organization needs to define HPM more clearly.

When asked about the benefits of HPM, Adam emphasized the importance of selecting the most suitable methodology and tools to succeed, citing issues where the traditional waterfall methodology could be faster, while using an agile methodology requires clear objectives. He prefers starting with waterfall and then expanding options to other methodologies, including hybrid.

Regarding the challenges of HPM, Adam stressed the need for a clear goal when using a hybrid approach. He believes that if project managers start with waterfall to set the stage and identify significant decisions and then turn towards some form of agile, immediate results can be quickly generated. No other challenges were mentioned, as long as the goals and critical success factors were identified early on.

Most effective project management methodologies. Adam was asked about the most effective project management methodologies, and he indicated that he had seen both success and failure in projects that exclusively used either waterfall or agile methodologies. He also

mentioned that some of the most significant project failures had been in projects that used a waterfall methodology, where the budget, timeline, or both were vastly exceeded. Adam prefers a hybrid project management methodology and emphasized the importance of keeping the end goal in mind and doing whatever it takes to achieve it.

Impacts on the role of Project Manager when hybrid is used. Adam's response was surprising when he said, "It is unfortunate that [hybrid] methodology was not introduced early enough and still is not formally announced and handled, but I always have handled it the hybrid way." Adam continued, "That is where I found all my success in my career."

Adam has experienced resource and schedule waste with large waterfall projects due to the leadership's lack of timely decisions causing frustration. He argued, after the critical success factors have been identified, it has proven beneficial to incorporate agile methodologies into these projects.

Adam predicted that project management will remain in high demand for several years, and while waterfall and agile methodologies will remain fundamental, he expects HPM to become more prevalent. He said, "I believe the methodology will evolve to be more hybrid, and it could even include a third or fourth methodology, but still be considered hybrid." Adam concluded by stating that industry-specific project management methodologies would continue to evolve in sectors such as medical devices, space travel, and financial services, among others.

Mindset and Hybrid Project Management. Adam acknowledged that his leadership committed to completing a large-scale agile transformation effort. He indicated that the organization invested significant resources to train everyone on agile transformation, including the shift in mindset and roles.

Adam is cautiously optimistic that his organization will achieve its large-scale agile transformation. While some devout proponents view this as a silver bullet solution, others have already encountered challenges and potential failures within projects, which is eroding confidence. As Adam mentioned earlier in the interview, he believes that sticking to one methodology is not the solution, and the idea of doing anything and everything to get things done needs to be balanced with what works best for each project.

When discussing how project management has contributed to the agile mindset, Adam emphasized the importance of sufficient training and experience for the project team, regardless of the methodology used. He believes that following a disciplined methodology is crucial to achieving results, which ultimately leads to project success.

Best approaches for creating change, responding to change, and dealing with uncertainty. Adam believes that in a VUCA environment, project managers need to possess a thorough understanding of the business. This knowledge will enable them to comprehend the current state and swiftly adapt to a new future state resulting from the VUCA environment. In addition, he thinks that the *three P's*, namely “people, process, and politics,” are always in play and must be mastered to become an optimal project manager. Adam stressed the importance of excellent listening and comprehension skills and suggested that any weakness or deficit in the above-mentioned skills is a recipe for failure.

Change management and the role of the Project Manager. Adam suggested that project managers and their teams must always operate in a start-up mode when working on change efforts, regardless of whether the change is planned or unplanned. He added that outside of the project or product team, his organization has multiple levels of leadership, including committees,

that are involved in directing change management efforts. There is a constant need to prioritize and reprioritize projects and products based on impacts.

When asked if program or project owners focus enough on change management, Adam firmly believed that it is hit or miss. He suggested that leadership at the highest levels of an organization should have a thorough understanding of projects before making hasty decisions. Adam also emphasized that project managers should have a 360-degree view and understanding of the business and technology. They should be able to clearly understand the project's goal and answer questions such as “why are we doing this?” Finally, Adam stressed that project managers need to be knowledgeable and not all have met this requirement.

Training opportunities and Hybrid Project Management. Adam responded with an emphatic yes when asked if project managers require more training in HPM. He explained that project managers must have a strong foundation in project management methodology and a clear understanding of the project’s intended outcomes. Furthermore, Adam believed organizations can derive better value for their money by providing various training to develop their employees’ project management skills.

In response to whether other stakeholders or project sponsors need more training and awareness in HPM, Adam again responded with a yes. He stressed that different roles require different types of training to strike a balance between micromanagement, macro-management, and high-level management. Adam reiterated his preference for HPM and noted that each project could evolve its hybrid methodology, emphasizing that it is not a one-size-fits-all approach. In closing, he said, “The ultimate goal is to get things done.”

Case Number 5: The Puzzle Solver

Sarah exuded confidence in her abilities to run projects from the get-go. Sarah was working as a Senior Project Manager in a consultant capacity for a leading financial services firm in Minneapolis, Minnesota, for several months at the time of the interview. Sarah has worked with most of the large financial institutions in the Minneapolis area and has experience working with the Big Four consulting firms.

Throughout her career, Sarah has overseen a range of projects, including managing major regulatory compliance initiatives and significant technology and business process upgrades. Some of these projects have impacted thousands of financial advisors, clients, and home office users. She also led a project to improve accounting systems, driven by policy changes following the Enron failures in the 1990s. When asked about her favorite aspect of being a project manager, Sarah enjoys variety, the steep learning curve, and piecing together team dynamics, much like solving a complex puzzle.

Hybrid Project Management. Sarah recounted her project management career history, which began in the 1990s at the Big Four consulting firms. She noted that each firm had its own plan-based waterfall methodologies, and managing a multi-country project management office under these traditional methodologies presented significant challenges. Sarah sought alternative project management approaches and had her first “a-ha moment” in 1998 when she realized the need for a hybrid method.

When asked how her current organization defines HPM, Sarah acknowledged that while many organizations use it, there is a lack of clear definition. She noted that some individuals understand the value of alternative project management approaches while others do not, and that

adopting an agile mentality can be difficult. In her words, “agile mentality is hard to get people to.”

Regarding the challenges of HPM, Sarah believed that establishing the right mindset and finding enough time to expose people to repeated practices are significant barriers in today's time-constrained world. She also noted the issues of time and scope creep and the need for an iterative budget, requirements, design, and strategy evaluation. To address some of these challenges, she said, “You know you got to always be able to iteratively look at the budget, iteratively look at requirements. Iteratively look at your design. Iteratively look at your strategy.”

Most effective project management methodologies. When asked about the most effective project management methodologies, Sarah explained that the role of the project manager could differ depending on the project, with business project managers, technical project managers, and overall project managers being common positions. She added that a good project manager should deeply understand the project's details, including tasks and issues that require rework. In her opinion, a project manager shares similarities with a scrum master. Sarah admitted that she had not used Kanban methodology before but emphasized that most projects are hybrid and said, “Everything is hybrid...at the end of the day.”

Impacts on the role of Project Manager when hybrid is used. Sarah's career has progressed from the role of a subject matter expert (SME) to that of an expert in program and project management. She noted that as she started managing larger teams for more complex projects, her skills improved with experience. Sarah recognized that valuable lessons can be learned from both successes and failures.

According to Sarah, many organizations require assistance in properly utilizing project management offices (PMOs). She has observed PMOs transitioning from centralized to decentralized, and some organizations require guidance in establishing them. Sarah is optimistic about the future of project management and believes that program managers will be in higher demand.

Mindset and Hybrid Project Management. Sarah noted that technical teams initially embraced adopting agile project management in the early 2000s, but business teams have taken longer to adopt the methodology. This has created challenges for both her current and previous organizations. She mentioned that many business analysts and project managers from a business background might not be familiar with agile or APM. As a result, there are often challenges with adoption. However, Sarah believes a program manager who understands multiple methodologies can bridge this gap.

Sarah shared an example of a previous company that successfully implemented an agile project management framework to achieve process improvements quickly and incrementally, leading to the broader adoption of new project management methods within the organization. When asked about project management's contribution to the agile mindset, Sarah stated that there had been an increasing focus on it over the past two years, with more discussions occurring now than in the last ten years.

Best approaches for creating change, responding to change, and dealing with uncertainty. Sarah now recognizes the importance of a communications plan, which she previously undervalued, and she believes it has more value to a project than some may realize. Additionally, Sarah emphasized the need for project managers to be explicit with deadlines to

prevent confusion and ensure that tasks are completed on time. She advocates for using Gantt charts, as they are a powerful visual tool that can keep people on task regardless of the underlying methodology used.

However, Sarah warned that poor decision-making is the leading cause of project failures, based on her experience. For instance, she cited an example of a hasty business decision to partner with a vendor that was a poor fit. The project team had to change vendors, and the project manager was expected to deliver results within a tight timeline which jeopardized the entire project.

Change management and the role of the Project Manager. Sarah emphasized the importance of having a dedicated change management team or function in leading organizations. This allows for greater focus on communication and training, which can lead to smoother project implementations. In some organizations, she has had to take on this role herself and found that it can greatly benefit specific projects. Sarah believes that change management is crucial for the success of any project, stating that “the whole project is a change, right? It is all hands on deck.” However, she felt that program or project owners often do not give enough attention to change management and tend to view it as a secondary concern.

Training opportunities and Hybrid Project Management. Sarah acknowledged the significant value in project managers pursuing the Project Management Professional (PMP) certification from the PMI, but is not certified herself. However, she cautioned that the certification is only a starting point, and real-world experience is crucial and cannot be taught in a classroom setting. Sarah also warned that certified project managers must remain open to new ways of working and not become too focused on simply checking boxes or following a linear

process. She emphasized the importance of having a strategy upfront and being prepared for unexpected challenges.

Regarding additional training for project managers, Sarah argued that having a good mentor and gaining experience are the most important factors. She does not think that project owners or stakeholders need to be trained in specific project management methodologies. Moreover, she said, “I do not think it matters to them. I think what matters to them is that their projects happen, and they are done well. They implement. They do not care if it is a hybrid or waterfall.” In short, projects need to be completed successfully within scope, schedule, and budget.

Cross-Case Analysis

The cross-case analysis aimed to identify similarities and differences between cases and patterns that can be used to develop generalizations or theories about the phenomena being studied. After analyzing each case, I completed a cross-case analysis of all five cases to identify significant themes from the participant interview data. Theme identification was made possible after coding the interview transcripts using NVivo software. I was searching for similarities and differences between cases that addressed the primary, sub-research, and probing questions as outlined in the qualitative interview guide (Appendix A). The following themes emerged from the analysis:

- A more flexible approach with HPM,
- Change agent role essential for implementing HPM,
- Directing rather than managing for HPM,
- Articulating critical success factors is vital for HPM,

- The HPM toolkit is inadequate,
- Training on HPM is needed,
- Embedding change management up front is critical,
- Soft skills are essential for HPM, and
- Agile transformation paradigm shift embraced by senior leaders.

Three or more subthemes supported each central theme. Each theme is described below with an overview, including participant quotes, my interpretations and observations, several key points, and a summary.

Theme 1: A More Flexible Approach with HPM

Participants were asked to respond to questions relating to their experiences with HPM. HPM is perceived by participants as more flexible and iterative and provides practitioners with the option of using multiple methodologies. Leaders have embraced HPM by linking agile and waterfall together. While APM may have laid the foundation for flexibility, HPM is more flexible due to the increased number of tools available to project managers. Participants believed that any means necessary should be used to achieve a successful project outcome.

Project managers now routinely allow for lessons learned or reflective discussions along the way to assess what is working and what is not. Sarah insightfully said, “you have to deconstruct your failures.” To exploit opportunities and eliminate or reduce mistakes, project managers and project teams need to understand answers to questions such as what went right, what went wrong, and what needs to be improved. This activity should occur regardless of the underlying project management methodology employed.

The participants appeared to largely favor HPM, while most expressed concerns about the limitations of the traditional waterfall methodology. Becky suggested that she had been using HPM for over twenty years before it even existed and said, “I truly believe in it because intuitively, when I started becoming a project manager, this is the way I managed projects.” In his response about using a single methodology such as waterfall when managing his projects, Adam mentioned, “it is like a war, not one size fits all. The ultimate goal is to get things done.” If the waterfall methodology is chosen over agile or HPM, Adam stated, “You have to have [a] long-term vision [when] using waterfall methodology, all decisions are made, quicker decisions are made early in using a waterfall.”

The caveats with HPM include an understanding that flexibility also requires more planning and re-planning. It may be challenging for those who like to plan once and adhere to it if they are not open to making changes as circumstances change. Changing priorities and reprioritizing items (e.g., conducting a backlog grooming exercise) impact the planning process. It is also important to note that this approach requires a project manager who can understand and navigate the different methodologies and decide which approach to use and how to combine them effectively.

Theme 2: Change Agent Role Essential for Implementing HPM

HPM requires the project manager to play the role of a change agent. The participants stressed the importance of this trait, with Mary stating, “I think hybrid project management means being an agent of change or a champion of change.” Project managers must consistently seek support at all organizational levels and walk the talk. Managing change is an integral part of every project. The importance of this change agent role is magnified by the increased pressures

for organizations to achieve speed to market. Because project managers are handling many projects, change management has taken on an increasing level of importance.

Moreover, project managers should ensure that their project teams are familiar with other methodologies, especially if HPM is new to the team. Sarah stressed that clear language must be established with standard ground rules to ensure that all members of the project team and leaders are aware of what is happening. In addition to leading, educating the team is another crucial role that the project manager should perform and is essential to help HPM thrive within its host organizations.

Theme 3: Directing Rather than Managing for HPM

In project management, the term project manager implies a sense of command and control. According to some participants, an effective project manager should demonstrate an alternative leadership style by providing clear guidance and direction to the team. This contrasts with managing and controlling the actions of others. Becky drew upon her extensive experience to emphasize that HPM requires project managers to be adept at moving individuals and teams along while keeping them within guardrails by concentrating on the critical success factors, and teams are becoming increasingly autonomous. The team is empowered to make decisions and solve problems independently by providing support and resources as needed. The project team should be evaluated to determine project success or failure, not just the project manager. For this reason, the role of the project manager as a director is crucial.

Theme 4: Articulating Critical Success Factors is Vital for HPM

At the helm of a project team, a project manager must clearly articulate critical success factors. Participants emphasized the importance of not overlooking critical success factors saying

that project managers who can effectively do this are typically far more successful in their role. Clearly defined critical success factors operate as guardrails to ensure that the project team focuses on the essential tasks, not things that take up time with little or no direct benefit. Additionally, articulating the big picture in a way that is meaningful to different audiences is also a vital role of the project manager. Mary suggested project managers “have to have [their] ear to the ground...to be able to connect the dots for people.”

While some project managers are adept at articulating project details at a higher level, opening the hood and understanding some intricate details is also essential. To be effective as a project manager, Mary claimed, “I cannot stay at the 50,000-foot level. I need to get in and truly understand.” Project managers need to be able to answer questions such as:

- What is the business objective?
- What are we trying to achieve?
- How does technology support this?

Some projects are so complex and significant that the major milestones are often lost in the shuffle. Becky compared a project to an onion as an analogy. The project manager should break the onion into smaller pieces and explain the components in detail, and provide a roadmap that relates the pieces to the whole. When done well, this gives people a sense of alignment and keeps them focused.

Theme 5: The HPM Technical Toolkit is Inadequate

It was noted by all participants that the technical tools available to project managers in both HPM and APM environments pose challenges. A standard tracking tool used by project

managers is Microsoft Project, while a leading tool used by APM (typically the scrum master and product owner) is Jira by Atlassian. In some cases, project managers do not have access to both tools but are somehow expected to track and manage progress on the entire project. In one case, the participant reported that she was not granted access to a particular tool due to licensing fees. To be able to track and report progress transparently within HPM, it is necessary to have access to the best information available. Despite this, a couple of participants expressed dissatisfaction with the available tools on the market and were hopeful that a more helpful solution would emerge.

When discussing tools that can be helpful to project managers, a couple of other ideas emerged. A spaghetti diagram is one of Becky's preferred tools for correcting issues with a process. Having learned this at another organization, she has consistently used it on other projects. There are benefits to using tools outside of project management, such as Lean Six Sigma. However, caution should be exercised when incorporating these methods into a project that is often under-resourced and operating on a compressed schedule. Overall, the most effective tools for HPM may be those that support both traditional and agile methodologies and provide a centralized place to manage tasks, collaborate with team members, and track progress.

Theme 6: Training on HPM is Needed

Despite HPM's flexibility and an array of tools, it lacks some structure and is difficult to understand, resulting in training being required. Training was also identified as a critical challenge in a 2022 literature review on HPM (Reiff & Schlegel, 2022). Consequently, more training may be beneficial and is something that participants unanimously suggested. As Becky said,

Well, if you are a person who likes to really have boundaries, it is hard to describe what a hybrid approach is, right? There is not a map, a methodology map, or a roadmap that you could show somebody; I do not think. You would have to have like six methodology maps stacked on top of each other and say, well, you know, we start out here, and it sounds like you should know project management deciding the roadmap to get from point A to point Z.

Considering that HPM combines aspects of waterfall and APM, participants reported that many people within their organizations continue to need help understanding APM. There are several common challenges associated with APM, including the lack of clear direction and goals, the difficulty managing scope, the difficulty managing progress, the difficulty managing change, and the difficulty predicting the outcomes of projects. Some teams extensively utilize APM successfully, while others have struggled and had mixed results. Participants reported that teams more focused on information technology (e.g., software development) have been more successful with APM. For teams that struggle, resistance from team members can impede progress and has been a challenge for project managers when implementing APM.

It is noteworthy that Tyler previously worked with a company that implemented a robust training program for projects. The training was divided into different levels based on the role. Typically, a sponsor or executive sponsor can only know some details. However, they should clearly understand the overall project strategy and be prepared to make informed decisions. Middle-level management needs to be more involved and requires more data with day-to-day decision-making and greater awareness of issues, risks, dependencies, and other factors. Subject matter experts (SMEs) and other project team members have access to even more detail. They need to understand some of the rigor around crucial project management activities such as

documenting requirements, participating in design sessions, conducting comprehensive testing, and other critical project activities. As a result, the structured training prepared stakeholders at all levels to understand their roles and responsibilities while helping the project manager maximize participation in key project activities.

Conflating projects and products frequently causes conflicts and confusion, according to some participants. Mary acknowledged that she has worked with project resources that need to be more explicit about their roles in the newer product-centric organization undergoing a major agile transformation.

Theme 7: Embedding Change Management Up Front is Critical

Chapter 1 defined a *project* as “a temporary endeavor undertaken to create a unique product, service, or result” (Project Management Institute, 2021, p. 245). Inherently, change is part of every project, and participants voiced concerns about leaving change management out of the room until implementation planning commences. Becky argued, “Change is going to happen. It is at the outset, so you better be thinking about how you are going to manage that change or what you are going to do about it.” In support of this, Tyler affirmed, “you are in change management mode at the beginning [of a project].”

The role of the project manager in change management is to lead and facilitate the change management process, including:

- Identifying potential changes to the project and assessing their impact,
- Communicating changes to the project team, stakeholders, and other related parties,
- Developing and implementing a plan to manage the changes,

- Monitoring and controlling the implementation of changes to ensure they are executed correctly,
- Evaluating the effectiveness of the changes, and
- Communicating the status of changes to all stakeholders and project team members.

Change management is a continuous process throughout the project, not just at the beginning or end. Project managers must anticipate, identify, and manage the changes proactively so that the project stays on track and all stakeholders have their needs met.

Participants reported that some organizations have mature change management departments, while others claimed that this responsibility lies entirely with the project manager and, ultimately, the sponsor. Several examples of projects encountering adverse implementation outcomes were shared. A common theme was a need for more focus on change management, including establishing a robust change management plan as part of the implementation process, usually led by the project manager. Change management departments often need to be more appreciated, and in at least one instance, qualified change managers are in short supply. According to Mary, leadership in her organization typically overlooks the importance of change management until “something blows up.”

Others cautioned that change management is a specialized field and that project managers could be more adept at change management. Feedback suggested that a dedicated change management team or department is the most desirable model for managing project-related change.

Theme 8: Soft Skills Are Essential for HPM

Collecting a certification or attending a short course to gain exposure to a new project management methodology can help open doors. However, some soft skills are crucial to success for project managers. Becky stated, “what gets you noticed and moves you in your career is those soft skills, your people skills.”

Effective communication skills remain highly sought after for project managers, especially in the context of HPM. As defined in chapter 1 and referenced within the participant interview guide, HPM is “the borrowing, mixing, and blending of processes from agile and plan-driven methods to tailor project-specific methodologies” (Schmitz, Mahapatra, & Nerur, 2019, p. 1). As a result, project managers must be able to communicate succinctly both vertically (upward and downward) and laterally within an organization. Additionally, knowing how to motivate teams is another trait that is deemed important for project managers. As Adam put it, “There is a fine line between micromanagement, macro management, and high-level management.” While motivation and communication are different, the project manager must do both simultaneously with stakeholders at all levels.

Conflict management is another critical skill that participants believed is best developed in the field rather than in the classroom. In project management, conflict management refers to identifying, addressing, and resolving conflicts. Conflicts can occur between project managers, stakeholders, or even within the project team itself. A couple of participants argued that conflict could not be resolved by simply avoiding it altogether. The project manager must have leadership and negotiation skills to facilitate conflict resolution discussions.

Theme 9: Agile Transformation Paradigm Shift Embraced by Senior Leaders

A growing number of established organizations are investing heavily in agile transformational programs. Agile transformation is a paradigm shift in how organizations approach project management and software development. It includes a focus on flexibility, collaboration, and customer feedback. The agile approach emphasizes the ability to respond to change and adapt to new requirements instead of following a fixed plan. Senior leaders have embraced this approach to improve efficiency, productivity, and customer satisfaction by adopting an agile methodology and changing the organizational culture and management.

Several participants indicated that these programs are spread over several years; in all cases, they have yet to be completed entirely. In one case, the program is a significant strategic priority with significant financial and other resource commitments. Leaders are trying to make this pivot so that their organizations can respond to changes and implement new products faster to maintain a competitive advantage in the marketplace. However, this significant change affects so many people across the organization that there have been challenges with organizational adoption. Participants noted that more training on the transformation is needed and needs to be noticed by leadership.

Some leaders have historically resisted the idea of APM and agile transformational programs. Participants agreed that leaders formerly drew issues with a need for more control over scope and budget in the past. The idea of not knowing the complete scope was paralyzing for some leaders. While organizations and leaders can be slow to change, they are becoming more accepting of its use now that agile has been around for over two decades.

Summary

This chapter covered various aspects of the research process, including the interview process, data analysis, individual case analysis, cross-case analysis, and the emergence of nine thematic findings based on the interview data. The main research question addressed in this study centered on how project managers carry out hybrid project management to effectively respond to and manage change. A rich source of data was collected by conducting interviews with five participants and using eight key interview questions along with 25 probing questions. The themes discussed may be helpful for scholar-practitioners. Chapter 5 includes the discussion of findings, limitations of the study, implications for practice, suggestions for future research, and a conclusion.

Chapter 5: Discussion

It is exceptionally challenging for organizations to remain competitive and relevant in this current economic environment that is characterized by volatility, uncertainty, complexity, and ambiguity (VUCA) (Baran & Woznyj, 2020; Jick & Sturtevant, 2017; Le Grand & Rebecca, 2019). To implement change and achieve their strategic objectives, organizations must take risks and invest significant amounts of money (Baran & Woznyj, 2020; Jick & Sturtevant, 2017; Le Grand & Rebecca, 2019). Project management has become a strategic competency to deliver successful projects (Paquette & Frankl, 2015; Suikki, Tromstedt, & Haapasalo, 2006).

Although many experienced project managers have used waterfall or agile project management (APM) methodologies, organizations are increasingly gravitating toward the use of hybrid project management (HPM), as there are many limitations associated with using waterfall project management or APM exclusively (Gemino, Blaize, & Serrador, 2020; Papadakis & Tsiropis, 2018). Given that HPM is a developing area within the project management domain, we need to understand how project managers apply it to respond to and manage change in an organizational context.

This final chapter includes a discussion of findings from chapter 4, along with their potential implications and impacts for individual project management practitioners, organizations, and the field at the macro level. Furthermore, it discusses the study's limitations, implications for practice, recommendations for future research, and, ultimately, a conclusion.

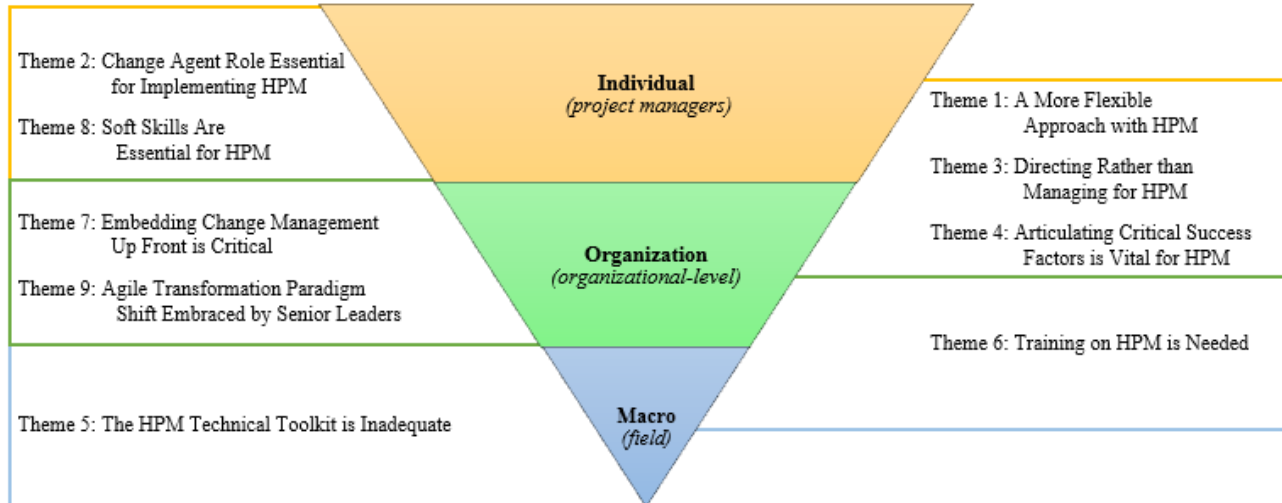
Discussion of Findings

The primary aim of this qualitative interpretive multiple case study was to investigate how project managers apply hybrid project management techniques to effectively respond to and manage change in an organizational context. This study was guided by the following central research question and supporting sub-questions: How do project managers perform hybrid project management (HPM) to respond to and successfully manage change? Specifically, this study sought to answer the following four sub-questions: (a) What do project managers consider to be the essential elements of HPM? (b) How do project managers view HPM and its contributions to organizational change management and improvement? (c) How has change management been included when HPM and APM methods such as Kanban or Scrum have been utilized? (d) What is most effective for managing projects amid the volatility, uncertainty, chaos, and ambiguity (VUCA) of Industry 4.0?

The findings presented in chapter 4 revealed nine significant themes that are interpreted in the context of the research questions in the following sections. Through this interpretation, a deeper understanding of the underlying implications of these themes will be provided. Figure 12 illustrates how these themes impact and align to the individual, organization, and macro levels in the context of the project management domain.

Figure 12

A Model of Thematic Impacts of Hybrid Project Management (HPM) on the Individual, Organization, and Field at the Macro Level in the Project Management Domain



Note. The figure displayed above depicts a three-tiered inverted pyramid. The top tier, represented in orange, corresponds to the individual level, the area most affected by the study. The middle tier, depicted in green, corresponds to the organization level. The bottom tier, illustrated in blue, represents the entire project management field at the macro level. All thematic findings from chapter 4 have been plotted against this structure. The five themes identified on the left-hand side are predominantly aligned to one of the primary levels (individual, organization, or macro). In contrast, the four themes on the right-hand side have implications for more than one primary level.

The following sections will provide an in-depth discussion of the implications and impacts of each theme at the individual, organization, and field at the macro level in the project management domain. At the end of each section, a figure illustrates vital considerations by the abovementioned three levels.

Individual Level Impacts

The participants in the study unanimously expressed a clear preference for HPM due to its adaptability to unique project requirements, unlike the traditional waterfall methodology, which was perceived as too slow and overly inflexible. This is consistent with the literature, as organizations have also discovered that traditional waterfall project management methodologies need to be faster and deliver more value to keep up with the rate of change (Rebaiaia & Vieira, 2014). However, participants had varying confidence levels about using APM exclusively, which is also consistent with the literature (Gemino, Blaize, & Serrador, 2020; Papadakis & Tsiropis, 2018). One participant claimed to have been using HPM for over two decades and argued it is an intuitive way of managing projects. Another highlighted HPM's ability to blend traditional reporting techniques with flexibility, enabling project managers to communicate effectively with traditional leaders. Participants also viewed HPM as a practical alternative to both waterfall and APM methodologies, balancing traditional and agile practices for managing projects.

The 2022 literature review by Reiff and Schlegel (2022) confirmed the participants' preference for HPM, as it highlights the importance of flexible responses to changes (see table 8). HPM's focus on flexibility, adaptability, and responsiveness is a significant advantage for project managers in today's rapidly changing business environment, allowing them to manage change effectively while delivering successful projects. This aligns with previous research emphasizing the importance of responding quickly to changing requirements and circumstances in project management (Cameron & Green, 2012; Dwivedi, et al., 2021; Le Grand & Rebecca, 2019; Papadakis & Tsiropis, 2018). Therefore, HPM's emphasis on flexibility and responsiveness gives project managers the necessary tools to manage change effectively and successfully deliver projects.

The HPM methodology necessitates that project managers assume the responsibility of a change agent. Participants emphasized this characteristic using terms such as “agent of change” or “champion of change.” To effectively manage change, project managers must continuously seek support across all levels of the organization and lead by example. Given the heightened demands for organizations to achieve speed to market, managing change has become a crucial aspect of every project. Additionally, the role of the change agent has become even more crucial as project managers are handling multiple projects simultaneously.

Moreover, project managers should ensure their teams are familiar with other methodologies, especially if HPM is used. Clear language with a familiar and consistent vocabulary should be used with standard ground rules to ensure that all members of the project team and leaders are aware of what is happening and to reduce misunderstandings. In addition to leading, educating the team is another crucial role that the project manager should perform and is essential to help HPM thrive within its host organizations.

Although some project managers may work alongside change management practitioners in their organizations, it is vital to acknowledge that the change agent role should not be exclusive to them. Project managers have a crucial role in managing change and ensuring the success of their projects. HPM provides an excellent opportunity for project managers to be more intentional about incorporating the change agent role into their daily operations.

Participants argued that successful project managers must have a combination of technical and soft skills, including essential soft communication skills, confirming Reiff and Schlegel’s (2022) assertions of the significance of providing transparency of communication in HPM (see table 8). Project managers must interact effectively in vertical and lateral directions

within an organization. Along with communication, the ability to inspire teams is another crucial soft skill for project managers. Notably, participants argued that soft skills play a critical role in advancing project managers' careers.

Project managers must also have the skills to lead and motivate teams efficiently to achieve project success while balancing micromanagement, macro-management, and high-level management. More specifically, some participants argued that an effective project manager should demonstrate an alternative leadership style by acting more as a director and less of a manager. This contrasts with managing and controlling the actions of others.

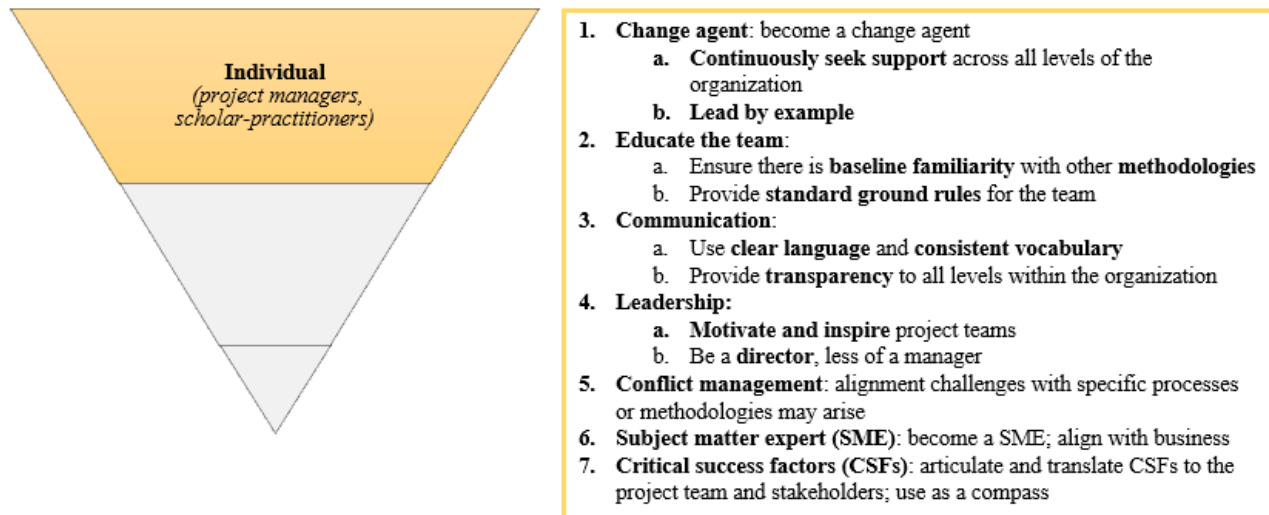
Conflict management is another essential soft skill for project managers. Conflict in project management refers to any disagreement, dispute, or divergent opinions that may develop between project managers, stakeholders, or project team members. Some participants noted that conflicts occur when project teams are not aligned with specific processes or methodologies, including HPM. Project managers must be able to lead and negotiate to encourage dispute-resolution talks, and project managers need to recognize, confront, and resolve disagreements. Although conflict management skills can be learned in the classroom, study participants felt that practical experience is where they are most effectively learned. As a result, to succeed in the industry, project managers must concentrate on honing these vital soft skills. This supports the research questions investigated in this study and the need for more training, as evidenced by theme 6.

Project managers should have a deep understanding of the project team's dynamics, strengths, and weaknesses. Participants suggested that they must be skilled in communication, conflict resolution, and team building, enabling them to create a positive and productive work

environment. This allows the team to focus on the project's goals and objectives while ensuring that the team's individual needs and preferences are met. By adopting a collaborative and inclusive approach, project managers can foster a sense of ownership and accountability among the team, leading to better project outcomes.

According to participants, the project manager's role varies depending on the methodology used. In the case of HPM, project managers must thoroughly understand critical success factors and the business to be highly effective. Given the time constraints of most projects, it may be optimal for project managers to have subject-matter expert (SME) knowledge in a particular competency and align this with the project team. However, if this is not feasible, learning curves may hinder progress depending on the organization's and project's complexity. While a process-oriented project manager may still provide value, some participants suggest that HPM requires a greater level of involvement and understanding.

The discussion of thematic findings highlighted several implications and impacts at the individual project manager level. These findings suggest that individual project managers should consider and implement certain practices to maximize the benefits of HPM. The most notable items that surfaced are summarized below in figure 13.

Figure 13*Key Considerations for Individual Project Managers When Utilizing HPM*

Note: Participants in this study overwhelmingly favored HPM due to its flexibility, adaptability, and responsiveness. The above figure summarizes the key factors that individual project managers should consider (within the box with an orange border) when utilizing HPM. It is important to note that this list is not exhaustive but a compilation of data collected from the questions asked during this study.

Organization Level Impacts

Change management is an essential component of successful project implementation, but organizations need to be more consistent in who takes responsibility for it. While some organizations have well-established change management departments, others expect the project manager and sponsor to assume ownership. Participants highlighted several examples of adverse implementation outcomes due to a lack of focus on change management. A common theme was the need for a more robust change management plan as part of the implementation process, with the project manager often taking the lead.

It was also noted that change management teams are sometimes undervalued within organizations, and in some cases, there is a shortage of qualified change managers. Participants pointed out that leadership in some organizations overlooks the importance of change management until something goes wrong. One participant reported that leadership in her organization typically overlooks the importance of change management until “something blows up.” This lack of emphasis on change management can lead to adverse outcomes.

While some participants argued that project managers are well-equipped to manage change, others suggested that it is a specialized field that requires dedicated change management teams or departments. In either case, it is essential that organizations recognize the value of change management and ensure that it is given the necessary resources and attention. Participants suggested that change management departments should be appropriately staffed and supported, and qualified change managers should be secured whenever possible. Participants widely contended that it is crucial for organizational leadership to recognize the value of change management and to prioritize and allocate the necessary resources to ensure its success.

Some organizational leaders have begun to adopt HPM due to its ability to link agile and waterfall methodologies. Consistent with other studies, findings from participant interviews suggest that practitioners are drawn to HPM for various reasons. A 2020 study that evaluated 477 projects across multiple industries and countries to assess the frequency of HPM approaches relative to agile and traditional waterfall methodologies. Findings revealed that HPM was used in 52% of the projects (Gemino, Blaize, & Serrador, 2020). While some projects may require a prescriptive methodology, others are left to the project manager and project teams to figure out independently. For organizations that are caught in the crossfire of traditional and APM methodologies, HPM has emerged as a plausible option.

While HPM may offer a more flexible approach, it needs more structure and, in some cases, a clear understanding of what it is. While traditional and agile project management approaches are well established in research and practice, Gemino, Blaize, and Serrador (2020) argued that there is a tug-of-war between advocates of APM and those who are steadfast proponents of more traditional approaches. Several participants confirmed this, with Becky stating that describing a hybrid approach can be challenging for people who prefer boundaries, as there is no methodology map or roadmap to follow. Tyler also expressed concerns that many individuals may need to comprehend APM better, regardless of their roles and responsibilities. Lacking a foundational understanding of APM could lead to issues. Therefore, project teams and stakeholders need a better understanding of what HPM is and why it is the most suitable approach in some instances. Organizations may need to find ways to allow project teams and stakeholders to have a foundational understanding of project management methodologies and clarify roles and responsibilities.

One of the essential thematic findings from the participants that commanded overwhelming favor is the need for training on HPM to overcome several challenges previously mentioned. Several participants indicated that their organizations require assistance in comprehending what APM entails and how it functions. Similar issues were identified in a 2020 systematic literature review and a 2013 study of Zone24X7, a software development company, and Sri Lankan Airlines (Safwan, Thavarajah, Vijayarajah, Senduran, & Manawadu, 2013). If HPM is to be widely implemented, a higher level of training may be required to address gaps within project teams or organizations. To help project teams and stakeholders understand their roles and responsibilities from the outset, Tyler suggested a role-based training program could be

a viable option. Additionally, a literature review conducted in 2022 on HPM identified training as a critical challenge (Reiff & Schlegel, 2022) (see table 8).

An increasing number of organizations have invested significantly in agile transformation programs with varying degrees of success. As stated by Nieto-Rodriguez, organizations “need a toolbox of approaches—among them agile and traditional project management, certainly, but also design thinking, change management, and product development—and then must build competencies in all of them throughout their organizations” (Nieto-Rodriguez, 2021). Most participants acknowledged that such programs are ongoing in their current organizations, but they have yet to be fully completed.

Leaders are pursuing transformational opportunities to enable their organizations to respond quickly to market changes and implement new products, thus maintaining a competitive edge (Niederman, Lechler, & Petit, 2018). However, this significant change affects so many people across the organization that there have been challenges with organizational adoption (Raharjo & Purwandari, 2020). Participants noted that more training on the transformation is needed and needs to be noticed by leadership. As organizations seek to implement these agile transformational programs, findings from the literature review and participants might prove helpful.

The term project manager in project management typically denotes a sense of command and control. However, some participants argued that effective project managers should exhibit a different leadership style by assuming a director role, providing clear guidance and direction to the team instead of managing and controlling their actions. One participant noted that HPM necessitates project managers to steer individuals and teams while keeping them on track by

focusing on critical success factors and promoting increasing autonomy. The team is empowered to make decisions and solve problems independently, with the project manager providing support and resources as necessary. Organizations need to find ways to support this.

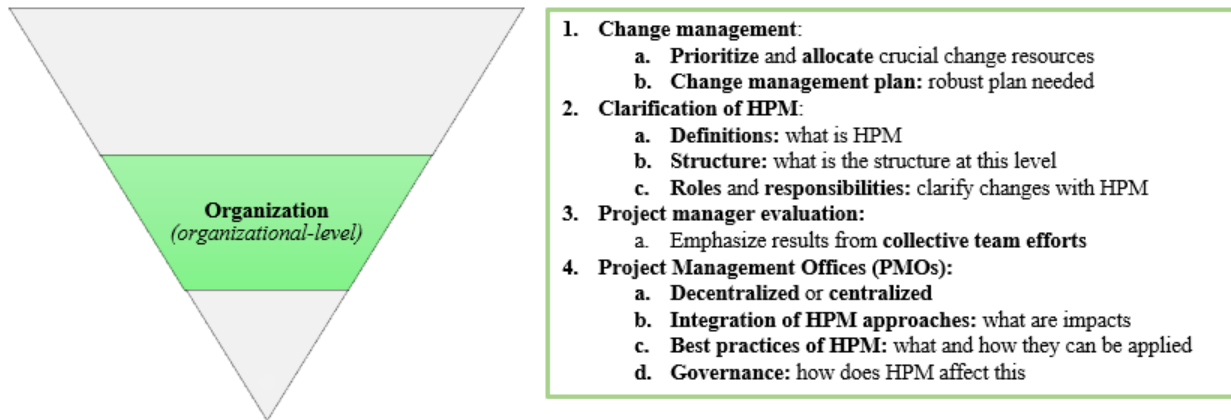
In HPM, project success or failure should be attributed to the project manager and the entire project team. Hence, the project manager's role as a director is crucial. The project manager should not focus on managing and controlling but on leading and inspiring. By cultivating a culture of trust and collaboration, project managers can encourage their teams to work independently, take responsibility for their work, and achieve project success. Therefore, in HPM, the success of the project is assessed based on the team's collective efforts, not solely dependent on the project manager's performance. Organizations may need to evaluate how project managers and project teams are evaluated and ensure that there is greater emphasis on project team performance. Additionally, the role and responsibilities of the project manager may need to be evaluated if HPM is the methodology of choice for an organization.

Project management offices (PMOs) are crucial in establishing and standardizing project management methodologies throughout an organization. In the context of HPM, it is vital for PMOs to integrate these approaches into current processes and methodologies while ensuring alignment with the organization's objectives and culture. Sarah noted that centralized PMOs are transitioning towards decentralized models in many organizations. Is this trend because organizations have recognized that project managers are more effective when they possess extensive subject matter expertise (SME) in each area? While this research does not primarily focus on the role of the PMO and HPM, several related questions come to mind:

- How can PMOs effectively integrate HPM approaches into existing processes and methodologies, and what impact does this integration have on their operations and performance?
- What are the best practices and lessons learned for PMOs in implementing HPM, and how can they effectively apply these practices in their own projects?
- How will HPM impact the future operations of PMOs?
- How will PMOs adapt their project governance strategies considering HPM?

Although the questions above are limited, organizations must confront these challenges and determine what works best for their culture and project teams. The role of the project manager and PMOs will continue to evolve as organizations seek to improve project performance and deliver results. The use of HPM may significantly impact how project managers and PMOs operate, and it is crucial to understand its implications to implement it effectively. Ultimately, the ability to adapt to various approaches and methodologies, considering the specific requirements and objectives of each project and organization, is a crucial factor for successful project management outcomes.

The discussion of thematic findings highlighted several implications and impacts at the organization level. These findings suggest that organizations should consider and implement certain practices to maximize the benefits of HPM. The most notable items that surfaced are summarized below in figure 14.

Figure 14*Key Considerations for Organizations When Implementing HPM*

Note: The above figure summarizes the key factors organizations should consider (within the box with a green border) when implementing HPM. It is important to note that this list is not exhaustive, but a compilation of data collected from the questions asked during this study.

This section discussed the importance of change management in project implementation and highlighted the need for consistent responsibility and recognition of its value by organizations. It also discussed the emergence of HPM, its use as a viable methodology, and the need for training and understanding methodologies.

Macro Level Impacts

All participants highlighted challenges while utilizing technical tools in HPM and APM environments. While Microsoft Project is a commonly used tracking tool by many project managers, APM practitioners frequently use Jira by Atlassian. In some cases, project managers are only given access to a single tool, which may not provide the necessary functionalities to track and manage the entire project. One participant even reported that she could not access a

particular tool due to additional licensing fees. In order to track progress transparently in HPM, it is crucial to have access to the best information available.

Participants broadly expressed dissatisfaction with current software options and hoped for more innovative and practical solutions to emerge. This highlights the need for software vendors to develop more user-friendly and efficient software that better aligns with the needs of project managers. Additionally, participants note that using multiple tools in the same project adds to the complexity of managing and reporting project progress, indicating a need for more integrated tools to handle multiple project management methodologies effectively. Based on participant feedback, there is no dominant software on the market that effectively addresses HPM at present.

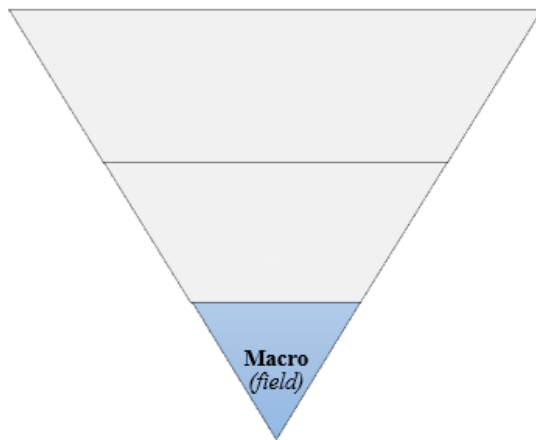
Although tools are crucial, participants noted that the success of a project is not solely dependent on the choice of tools used. Instead, the expertise of the project manager and the project team in utilizing the selected tools is critical. Therefore, project managers need to acquire the necessary training and skills to use the tools at their disposal. Additionally, using standardized tools and techniques across an organization can easily enable project managers to switch between different projects and methodologies.

While the availability of technical tools can aid project managers with HPM, they may also present challenges affecting project success. The use of multiple tools in the same project may result in complexity, and the need for more innovative, integrated tools that better align with the needs of project managers is becoming increasingly important. However, it is essential to remember that the success of a project ultimately lies in the expertise of the project manager and the project team, and standardized tools and techniques can be valuable resources in this regard.

The discussion of thematic findings highlighted several implications and impacts for the field at the macro level for the project management domain. These findings suggest that associations, training institutions, software vendors, and others who support the project management domain should consider and implement specific considerations to support HPM in practice. The most notable items that surfaced are summarized below in figure 15.

Figure 15

Key Considerations for the Field at the Macro Level to Support HPM in Practice



1. **Project management software:**
 - a. **Effective software needed:** current tools are lacking
 - b. **Integrated tools:** better tool integration needed
 - c. **User-friendly:** more intuitive tools needed
 - d. **HPM centric:** need a software solution for HPM
2. **Training:**
 - a. **HPM:** need more industry-level training on HPM
 - b. **Waterfall / Agile / HPM:** more awareness needed on the intersections, differences, similarities, and operationalization

Note: The above figure summarizes the key factors institutions at the macro field level should consider (within the box with a blue border) to support HPM in practice. It is important to note that this list is not exhaustive, but a compilation of data collected from the questions asked during this study.

Implications for Practice

The challenges posed by the VUCA environment have a significant impact on the operations and strategic decision-making processes of all organizations. In response to these challenges, organizations must develop strategies that address the complex regulatory landscape, rapidly changing technological innovations, and unpredictable economic conditions.

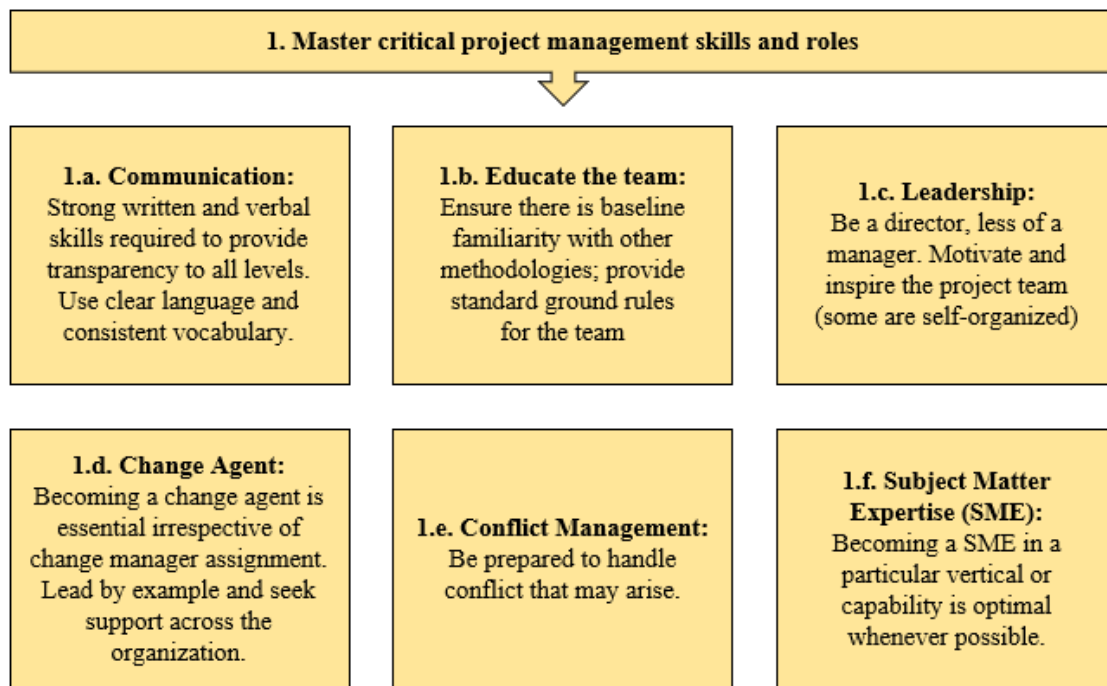
Emerging technologies such as artificial intelligence, blockchain, and cryptocurrency present a significant challenge for financial institutions, as these innovations have the potential to disrupt conventional business models. To remain competitive in this VUCA environment, financial institutions must invest in emerging technologies, implement robust risk management systems, improve customer service, reduce costs, and diversify their business models to be more agile and adaptable. By doing so, they can better position themselves to meet the challenges of the future and achieve long-term success.

There is a strong demand for project management professionals. There is also a growing demand for project managers who understand HPM. A 2020 study that examined different project management approaches (Gemino, Blaize, & Serrador, 2020) suggested that HPM holds a dominant position internationally (see chapter 2). Organizations have discovered that traditional waterfall project management methodologies are not fast enough and do not deliver enough value to keep up with the rate of change (Rebaiaia & Vieira, 2014). While APM is a concept that has been introduced previously, it has shown much promise since being introduced in the 1990s. However, despite its promise, organizations still face difficulties in terms of adoption and implementation, leading many to adopt HPM. Gaining a more robust understanding from experienced practitioners is essential to increase understanding for practitioners and organizations. Figure 16 presents a proposed model that individual project managers can

reference for six key skills and roles that should be mastered when employing HPM. This may serve as a valuable reference for guiding project managers in achieving proficiency when leading HPM initiatives.

Figure 16

Proposed Model of Critical Skills and Roles Needed for Individual Practitioners Utilizing HPM



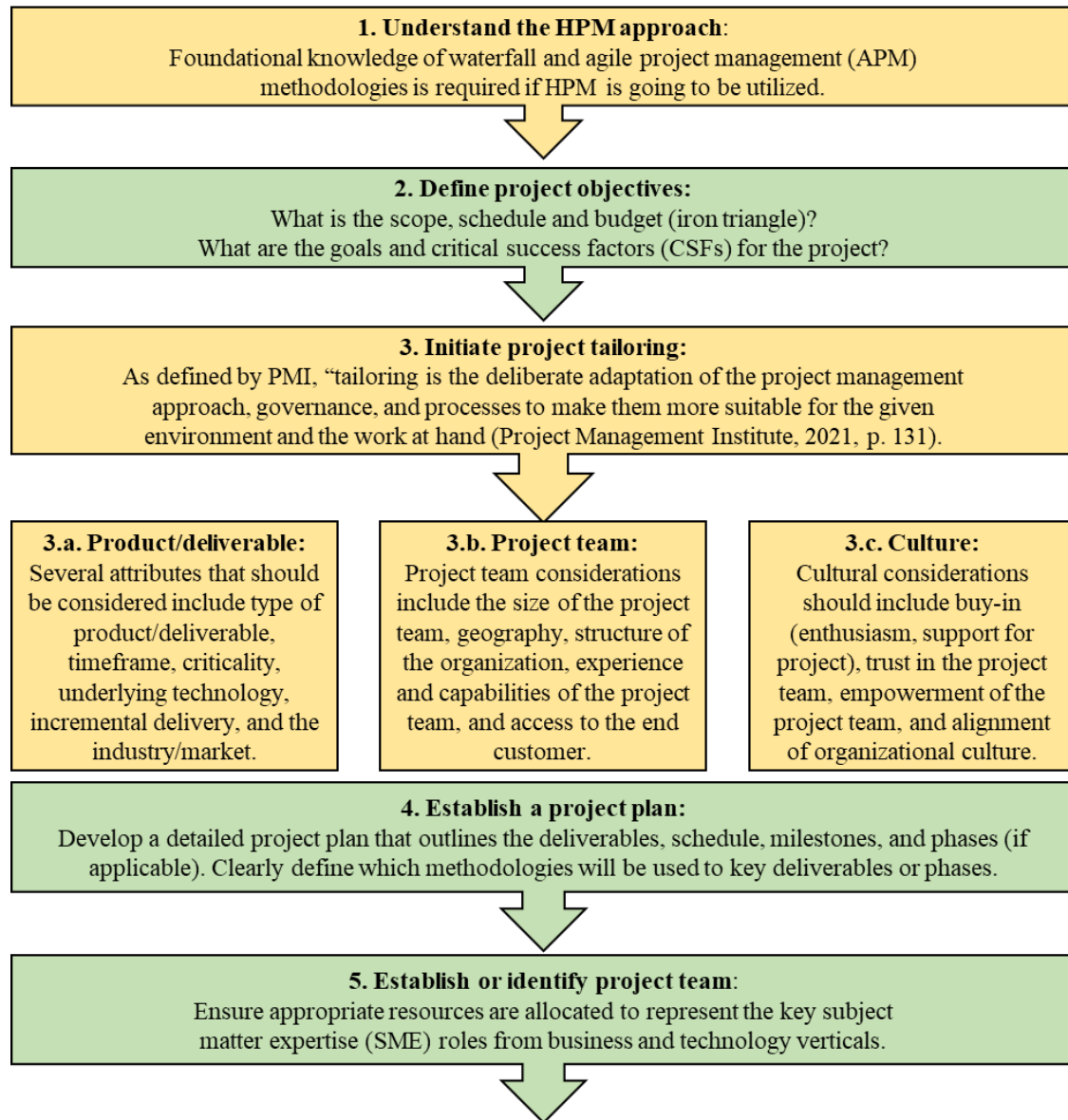
Note: The critical skills and roles highlighted in figure 16 were identified as significant findings by participants in this study. It is essential for individual project managers to develop expertise in these areas and integrate them into their daily approach when using HPM.

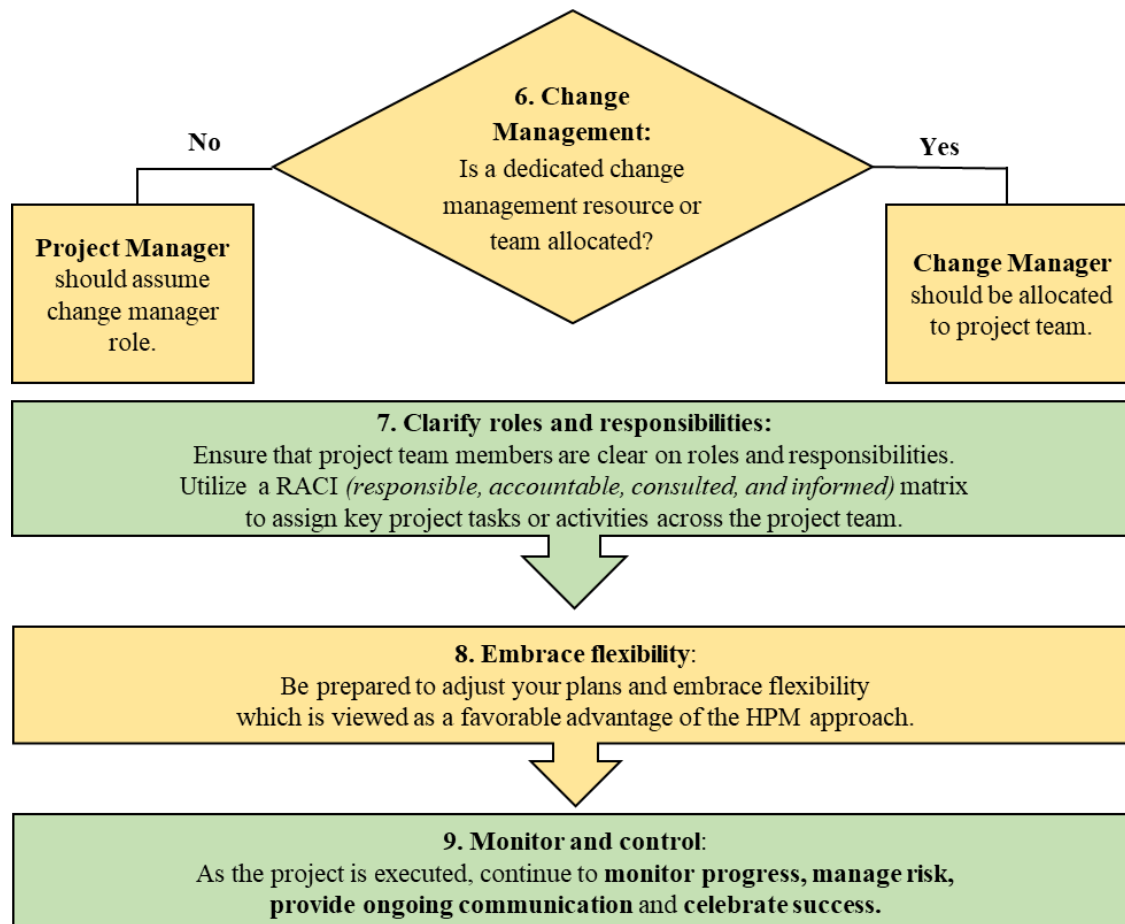
Implementing HPM into practice requires additional considerations that build upon the critical skills and roles described in figure 16. To facilitate the effective implementation of HPM, a proposed model consisting of nine steps is presented in figure 17. The steps in the light gold

color are direct contributions from this study, while the steps colored in green are considered common or standard practices within the field.

Figure 17

Proposed Nine-Step Model of Hybrid Project Management (HPM) Implementation for Practice





Note. Information on initiate project tailoring in step 3 is partially adapted from “A Guide to the Project Management Body of Knowledge (PMBOK Guide) Seventh Edition” by Project Management Institute, (2021), 131-152. Copyright 2021 by Project Management Institute.

Figure 17 provides a visualization of the HPM process, allowing project managers to better grasp the interrelationship between each step. This model draws on participant data from this study, the researcher's contextual knowledge, and input from external sources as cited. As such, it may serve as a valuable reference and guide for project managers to follow throughout their project management endeavors.

Limitations of the Study

Several limitations of this study should be discussed. When using an interpretative multiple case study approach, findings may not be generalizable to a larger population (Stake, 1995). This study was limited principally by its size, with a sample size of five. While a smaller sample size has been used, theoretical saturation has been achieved. The five participants in this study were actively engaged in the financial services sector, so their experiences cannot be generalized to other cases or disparate industries. However, they could be of use to other practitioners or organizations. Following the participant selection guidelines (see chapter 3), the participants worked as project managers or had sufficient experience as project managers within their organization at the time of the interviews. The study did not include other project resources, such as program managers, project management managers, scrum masters, product owners, business analysts, developers, or other stakeholders, who might provide different perspectives. In addition, the interview questions from the qualitative interview guide (Appendix A) focused primarily on participant experiences within the financial services sector. There were instances in which participants referred to other industries by providing examples or drawing upon other experiences.

As the interviews were conducted virtually using Microsoft Teams, I could not make eye contact with the participants or observe non-verbal behavior. Virtual interviews are known to pose difficulties in terms of creating a comfortable environment, building trust, and maximizing engagement between participant and researcher. Participants chose not to use their cameras, so audio was the medium of communication used during the interview. Although the participants may have been more comfortable in an environment of their choosing, distractions may have

adversely affected the quality of their responses. To mitigate this, questions were repeated as necessary to ensure that participants had adequate opportunities to understand and respond.

Suggestions for Future Research

Results from this study may inspire other scholar-practitioners of organization development or project management to find better ways to manage projects in this highly dynamic and complex landscape of a VUCA environment as defined in chapter 1 (Baran & Woznyj, 2020; Jick & Sturtevant, 2017; Le Grand & Rebecca, 2019). While the scope of this study was limited to case studies from the financial services sector, there may be value in extending the research to other industries to broaden its applicability further. Additionally, expanding the sample size to include a diverse range of project team members with varying levels of experience, and engaging in interviews with stakeholders who can provide insights on the primary research question from their unique perspectives may lead to more robust and generalizable outcomes for the study.

Since more training on HPM commanded overwhelming favor based on the participant interview data from this study, comparing practitioner data pre- and post-training may be interesting to see how their perspectives might change. This may be accomplished via a simulation for HPM such as the *Change Management Simulation* provided by Harvard Business School Publishing (Hill & Judge, 2010). As part of such a simulation, participants could be faced with many scenario-based decisions and actions amid a limited time frame to attempt delivery of a successful project. Poor or incorrect choices along the way would adversely affect the outcome, whereas making informed or correct decisions would increase the chances of success. Collecting data before and after the simulation may help obtain valuable information and insights.

Future quantitative research might include conducting a correlational study to identify any relationships that exist between the hybrid project management features, including the critical project management skills and roles specified in figure 16 identified in this study, and successful project outcomes. The model proposes that project managers who utilize HPM should possess and employ six essential project management skills and roles. A future study may assess the proficiency of communication skills (1.a), ability to educate the team (1.b), leadership (1.c), change agent role (1.d), conflict management skills (1.e), and domain-specific subject matter expertise (1.f) of project managers. Some of these were corroborated through findings from another study (Reiff & Schlegel, 2022). Additional features could be evaluated based on the degree of adherence to the model. Findings could be used to support or refute the key project management skills and roles as suggested by the model.

With the growing use of HPM, it is crucial to understand the relationship between cost, risk, and HPM usage. A further study could explore the possible negative impacts of HPM on cost and risk. Although table 8 highlighted some of the drawbacks and difficulties of HPM, such as the need for comprehensive methodological knowledge, training and familiarization, increased administrative effort, and a high level of transparency and communication, more detailed information on these factors should be considered.

Finally, since many well-established organizations tend to have formal project management offices (PMOs), a quantitative study could be designed to collect data from PMOs to determine the extent of HPM usage, if any. Data could be collected that attempt to understand how HPM may impact PMO operations, the approach on governance, and future plans to utilize HPM. Additionally, since a number of participants mentioned that their organizations are

engaged in strategic agile transformation programs, it would be worthwhile to examine how these organizations intend to use HPM within the context of their PMO operational guidelines (if at all).

Conclusion

This qualitative interpretive multiple case study aimed to explore the central research question: How do project managers perform hybrid project management (HPM) to respond to and successfully manage change? In the present era, characterized by rapidly advancing technology and a project economy (Schmitz, Mahapatra, & Nerur, 2019; Tolbert & Parente, 2020; Gemino, Blaize, & Serrador, 2020), organizations face significant stress in their efforts to maintain viability in the volatile, uncertain, complex, and ambiguous (VUCA) environment that has been frequently referenced throughout this study. Despite these challenges, project management remains crucial in successfully delivering projects from start to finish, enabling organizations to achieve a range of objectives and goals (Paquette & Frankl, 2015; Suikki, Tromstedt, & Haapasalo, 2006).

The discipline of project management has a rich history dating back to the 1950s when it was first established in response to the geopolitical uncertainties of the time (Gaddis, 1959; Garell, 2013; Morris, 2011). Over the past seven decades, the field has continually evolved, adapting to increasing levels of change, uncertainty, and complexity. Organizations have consistently sought to refine their approaches to project management, beginning with the traditional waterfall methodology in the 1950s and later evolving to the APM methodology in the 1990s. This pursuit has led to a growing pragmatism and a shift towards the HPM approach (Papadakis & Tsiropis, 2018; Project Management Institute, 2017; Paquette & Frankl, 2015; Tolbert & Parente, 2020; Nieto-Rodriguez, 2021).

This study may illuminate project management, and learnings may benefit scholar-practitioners and organizations caught in a crossfire between two dominant project management methodologies that may be more effective when blended. Despite the current limitations in the practice and literature, there is a growing demand for a more flexible approach to project management, referred to as HPM, in this study. While many unanswered questions require further investigation, the increased interest in this topic highlights the need to further examine and understand this innovative approach to project management.

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Appendix A:
Qualitative Interview Guide

Topic: How does Hybrid Project Management Contribute to Managing Change in a Volatile and Uncertain Context: An Interpretive Multiple Case Study

Date:

Study Participant Name: (Your actual name will not be used; instead, a pseudonym will be used)

Hello, I want to thank you for your time and your interest in contributing to this interview and study. This study aims to understand how we might manage projects to produce change, respond to change, and deal with uncertainty. Specific questions will be asked on the Hybrid Project Management (HPM) and Agile Project Management (APM) approaches. From this point forward, we will use the terms *Kanban* or *scrum* instead of APM. You will also be asked general questions relating to change outcomes. The definition that I am using for HPM in this study is “the borrowing, mixing, and blending of processes from both agile and plan-driven methods to tailor project-specific methodologies” (Schmitz, Mahapatra, & Nerur, 2019, p. 1).

This interview will be digitally recorded to transcribe the interview accurately. I will allow time at the end for questions or additional responses. I will not share the actual recording of this interview with anyone, and all data will be anonymized and protected as outlined in the privacy and confidentiality section. Data that will be anonymized as part of this study includes identifiable elements such as the names of your current or past employers, colleagues, direct reports, superiors, programs or projects, departments, and competitors. This study will consist of eight key interview questions and 25 additional probing questions. Your participation in this

study and interview in support of an academic research study is strictly voluntary. If you feel uncomfortable with me as the interviewer or the questions I am asking you, please let me know before we begin or at any point after the interview has started. Upon request, we can stop the interview. As the researcher of this study, only I will know your real name. A pseudonym will replace the actual name you provided to me for this study. This applies to all study participants and is documented in the privacy and confidentiality section of this study. Do you have any questions or concerns before we begin?

If there are no additional questions, do I have your permission to proceed with the recorded interview? Yes No

Question 1: My initial question set is designed to get to know you better.

- a) Please begin by describing your current role.
- b) How long have you been in this role?
- c) Please describe your other experiences as a project manager in financial services.
- d) What do you like most about working as a project manager?

Question 2: Tell me more about your experiences with hybrid project management.

- a) What does hybrid project management mean to you?
- b) How has hybrid project management been defined by your organization?
- c) What are the benefits of using this approach?
- d) What are the challenges of using this approach?

Question 3: What do you think has been most effective in terms of project management methodologies?

- a) Please describe your experiences with waterfall, Kanban, Scrum, or hybrid project management in current and/or past projects.
- b) Please include how the technique was used and how it impacted your project and project team when it was used.
- c) Please describe the project management methodologies you prefer to use and why.

Question 4: Is your role as project manager different when hybrid project management is used, as opposed to waterfall, Kanban or Scrum?

- a) How have you evolved or how has your role changed as a project manager when hybrid project management has been used?
- b) What do you do differently now compared to when you first started working as a project manager?
- c) What do you see happening in the field of project management going forward?

Question 5: In your organization, does the hybrid project management approach create a different mindset?

- a) Is your organizational leadership trying to become more agile? If so, could you give me any details about that? What do you know or what have you heard from other stakeholders in your organization about trying to become more agile?

- b) Have you heard anything from other stakeholders in your organization about attempts to become more agile? Could you give me some examples of projects or initiatives that were designed to help your organization become more agile? Were they successful?
- c) Have you worked for other financial services organizations? If so, what attempts did they make to become more agile? Could you give me some examples of projects or initiatives that were designed to help your organization become more agile? Were they successful?
- d) How do you think that project management has contributed to the agile mindset in general?

Question 6: How might we perform project management in a way that allows us to create change, respond to change, and deal with uncertainty?

- a) What do you think works best as a project manager in this context of volatility, uncertainty, chaos, and ambiguity?
- b) What is not working?

Question 7: Let us talk about the change management aspects of projects that you currently manage or have managed in the past.

- a) Who is or has been responsible for the change management aspects of your projects?
What has been your role in this process?
- b) Do you think that program or project owners place enough attention on change management for projects? Why or why not?

- c) In what ways have you incorporated elements of change management into hybrid project management?
- d) During projects involving waterfall, Kanban, Scrum or hybrid project management, how has change management been applied?
- e) What do you think could or should be done differently?

Question 8: What training have you received, and what experience do you have to succeed in a hybrid project management environment?

- a) Do you think that project managers need more training in this area?
- b) If so, what type of training would be most suitable?
- c) Do you think that managers, project owners, and other stakeholders need more training/awareness related to this topic? If so, what type of training and awareness do they need and how should it be delivered?

Question 9: Can you please share additional suggestions and recommendations related to the topic of hybrid project management?

- a) Are there areas that you think need improvement?
- b) Is there anything you would like to add related to this topic?

If not, I will end the recording at this time, and I would like to thank you for your time and contributions to this study.

Appendix B:

Invitation to Participate Email to Study Participants

Email Subject Line: Collecting voices from project managers on managing projects that produce change, respond to change, and deal with uncertainty (Research Study Project Number: 1916393-1)

Dear [Study Participant Name]:

My name is Matthew Charles Dewey, and I am a doctoral student in the Organization Development and Change program at the University of St. Thomas. As part of my dissertation, I am seeking volunteers who may be interested in participating in a study. My study is entitled: *How does Hybrid Project Management Contribute to Managing Change in a Volatile and Uncertain Context: An Interpretive Multiple Case Study*. This is a letter of invitation to participate in this study. This study aims to understand how we might manage projects to produce change, respond to change, and deal with uncertainty. Additionally, this study may reveal useful insights for project managers and the project management profession.

If you agree to participate in this voluntary study, you will provide your consent to me to include your responses as part of my data collection and analysis. No personally identifiable information will be associated with your individual responses. Data that will be anonymized as part of this study includes identifiable elements such as the names of your current or past employers, colleagues, direct reports, superiors, programs or projects, departments, and competitors. You have the right to withdraw from the research with no penalties of any kind. There are no penalties or consequences if you choose not to participate. Should you decide to withdraw, data

collected about you will be destroyed unless it is already de-identified or published and I can no longer delete your data.

Based on your LinkedIn profile, you appear to qualify for this study based on these criteria:

- a) The participant must have at least five years of experience as a project manager in a non-IT project management capacity and at least two years of experience with a financial services organization.
- b) The participant must have experience with both waterfall project management and APM approaches (more specifically, Kanban or Scrum), and an understanding of HPM methodologies.
- c) The participant can be an employee, consultant, or unemployed at the time of the interview.

If you believe you do not meet the criteria, or if you simply do not have the time or interest, I welcome introductions to others in your organization who meet the criteria.

If you choose to participate, here's what you will be expected to do:

- Participate in a voluntary 60–90-minute interview with me related to the study.
- The location of the interview can be in person or via videoconferencing (using technologies such as WebEx by Cisco, Microsoft Teams, or Zoom); given the ongoing COVID-19 pandemic, accommodations will be made to ensure your safety needs are met.
- You will be one of five (possibly more) participants that will participate in this study.
- I will record our interview, with your permission, so that I can transcribe our conversation to be used for data analysis and interpretation for my educational

dissertation; this will also ensure that I accurately capture things you tell me while answering my prepared list of open-ended interview questions.

- I may need to follow up with you to clarify information and/or ask for more information within approximately 60-90 days from our initial interview.

If you would like to proceed with this voluntary study or have more questions, please contact me via email on mcdewey@stthomas.edu.

Sincerely,

Matthew Charles Dewey

Doctoral Student Candidate

University of St. Thomas

Appendix C:
Informed Consent

Research Participation Key Information

Research Study Project Number: 1916393-1

How does Hybrid Project Management Contribute to Managing Change in a Volatile and Uncertain Context: An Interpretive Multiple Case Study

What you will be asked to do:

Participating in this study has no known risks.

You are being asked to participate in an interview using semi-structured open-ended interview questions. Additional time will be granted for follow-up questions or statements after the interview.

The time commitment is about 60-90 minutes, and the study will take place at an agreed upon location or via videoconferencing using technologies such as WebEx by Cisco, Microsoft Teams, or Zoom. Given the ongoing COVID-19 pandemic, accommodations will be made to ensure your safety needs are met.

Please read this form and ask any questions you may have before agreeing to be in the study.

You are invited to participate in a research study about hybrid project management and how it is being used by project managers so that I can gain a better understanding on how it contributes to improvements in change management functions as well as the impacts it might be having on project managers. The title of this study is “How does Hybrid Project Management Contribute to Managing Change in a Volatile and Uncertain Context: An Interpretive Multiple Case Study.”

You were selected as a possible participant and are eligible to participate in the study because you have at least five years of experience as a project manager in a non-IT project management capacity and at least two years of experience with a financial services organization. You also have experience with both waterfall project management and agile project management (APM) approaches (more specifically, Kanban or Scrum), and an

understanding of hybrid project management (HPM) methodologies. Eligibility is not based on employment status at the time of the interview.

The following information is provided to help you make an informed decision about whether you would like to participate or not.

What will you be asked to do?

If you agree to participate in this study, I will ask you to do the following things:

- Participate in a voluntary 60–90-minute interview with me related to the study.
- The location of the interview can be in person or via videoconferencing (using technologies such as WebEx by Cisco, Microsoft Teams, or Zoom); given the ongoing COVID-19 pandemic, accommodations will be made to ensure your safety needs are met.
- You will be one of five (possibly more) participants that will participate in this study.
- I will record our interview, with your permission, so that I can transcribe our conversation to be used for data analysis and interpretation for my educational dissertation; this will also ensure that I accurately capture things you tell me while answering my prepared list of open-ended interview questions.
- I may need to follow up with you to clarify information and/or ask for more information within approximately 60-90 days from our initial interview.

What are the risks of being in the study?

The study has no known risks.

Here is more information about why I am doing this study:

This study is being conducted by myself, Matthew Charles Dewey, a doctoral student candidate at the University of St. Thomas in Minneapolis, Minnesota, USA in the Organization Development and Change Program, along with my Research Advisor, Dr. Rama K. Hart, Associate Professor in the Department of Management at the Opus College of Business. This study was reviewed for risks and approved by the Institutional Review Board at the University of St. Thomas.

The purpose of this study is to answer the primary research question which is: How do project managers perform hybrid project management (HPM) to respond to and successfully manage change?

Sub-questions supporting this research include:

- What do project managers consider to be the essential elements of hybrid project management (HPM)?
- How do project managers view HPM and its contributions to organizational change management and improvement?
- How has change management been included when HPM and agile project management (APM) methods such as Kanban or Scrum have been utilized?
- What is most effective for managing projects amid the volatility, uncertainty, chaos, and ambiguity (VUCA) of Industry 4.0?

We will use the information we collect by including data within a dissertation that will be published and publicly accessible.

There are no direct benefits for participating in this study.

While I can never guarantee complete confidentiality in research, I believe your privacy and confidentiality are important. Here is how I will do my best to protect your personal information:

Your privacy will be protected while you participate in this study. **You will have control over the date and time of the study, the location, and what you choose to share.** To ensure privacy, I will not collect email or IP addresses from you. No personally identifiable information will be associated with your individual responses. Data that will be anonymized as part of this study include identifiable elements such as the names of your current or past employers, colleagues, direct reports, superiors, programs or projects, departments, and competitors. I will retain all records, ensure confidentiality, and publish nothing that will reveal the identity of you or any other research participants. If the interview is done in person, I will ensure that we secure a room with privacy and free from distractions. If the interview is done virtually, I will ensure that my surroundings are secure and that I will be the only one present from my location to ensure privacy.

The records of this study will be kept as confidential as possible. We save your information in the most secure online location available to us at the University. We cannot guarantee confidentiality

because data security incidents and breaches may occur. In any reports I publish, I will not include information that will make it easy to identify you. The types of records I will create include:

- Interviews will be recorded digitally, and the files securely stored on University of St. Thomas OneDrive and only accessible by me.
- Following the interview, transcripts will be created by me. After the transcripts have been completed, I will erase the audio recording of our interview.
- All hand-written notes will be converted into an electronic document stored on University of St. Thomas OneDrive and immediately destroyed after the research has been completed.

All signed consent forms will be kept for a minimum of three years once the study is completed. Institutional Review Board officials at the University of St. Thomas have the right to inspect all research records for researcher compliance purposes.

This study is voluntary, and you have the right to withdraw from the research with no penalties of any kind.

Your participation in this study is entirely voluntary. Your decision whether to participate or not will not affect your current or future relations with your employer or the University of St. Thomas. There are no penalties or consequences if you choose not to participate. If you decide to participate, you are free to withdraw at any time without penalty. Should you decide to withdraw, data collected about you will be destroyed unless it is already de-identified or published and I can no longer delete your data. You can withdraw by simply stating verbally or in written form that you are no longer comfortable as a participant in this study. You are also free to skip any questions I may ask.

Who you should contact if you have a question:

My name is Matthew Charles Dewey. You may ask any questions you have now and at any time during or after the research procedures. If you have questions before or after we meet, you may contact me at (612) 987-5812 or mcdewey@stthomas.edu. Additionally, you may contact my dissertation advisor, Dr. Rama K. Hart, at (651) 962-4454. Information about study participant rights is available online at <https://www.stthomas.edu/irb/>. You may also contact Sarah Muenster-Blakley with the University of St. Thomas Institutional Review Board at 651-962-6035 or muen0526@stthomas.edu with any questions or concerns (reference project number 1916393-1).

STATEMENT OF CONSENT:

I have had a conversation with the researcher about this study and have read the above information. My questions have been answered to my satisfaction and I consent to participate in the study. I am at least 18 years of age. **I give permission to be audio recorded during this study.**

You will be given a copy of this form to keep for your records.

Signature of Study Participant

Date

Print Name of Study Participant

Signature of Researcher

Date

