Agile Transformations, Culture, and the Canadian Financial Sector

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Abstract

A review of different agile methods and frameworks provides the context to evaluate scaled agile transformations. The financial sector in Canada is highly regulated, protected and considered to be among the most highly developed in the world for regulatory frameworks and oversight. (Engert, Fung, Nott, & Selody) The decision to adopt agile ways of working and transform into a responsive innovative organization focused on business agility is underway in the Canadian banking sector. The question is "to what extent does the organizational culture impact the successful implementation of agile practices in large-scale enterprises". The research focuses on a literary review of agile frameworks, scaled agile use cases in financial services and the relationship between organizational culture and the effectiveness of agile transformations. The findings point out opportunities for future research to expand understanding of scaled agile standard blueprints for implementation and clear measurements for success.

This is for academics, agile practitioners and business leaders interested in enterprise implementation of agile and scaled agile frameworks in the financial services sector.

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Chapter 1 - 168BAgile Transformations, Culture, and the Canadian Financial Sector

Transforming large financial institutions (FI) into innovative enterprises who operate with agility is difficult and takes time. Many have implemented agile methods and frameworks to enable the journey to business agility. The culture, structure, processes, and people are critical to success. This study evaluates to what extent does organizational culture impacts the successful implementation of agile practices in large-scale enterprises. Journal reviews and case studies will compare the transformation journey of Canadian enterprises in the financial sector to other large enterprises undergoing similar transitions internationally. Reviewing the transformational journeys of other large-scale enterprises will be discussed along with the nuances of the Canadian financial sector and the unique regulatory environment in which it operates.

Business agility is the ability to compete and thrive in the digital age by quickly responding to market changes and emerging opportunities with innovative, digitally enabled business solutions. (Scaled Agile, 2023) John Kotter, a best-selling author, award-winning business and management thought leader and Harvard Professor, describes the Canadian banks perfectly: "the organizations we created in the 20th century were designed much more for reliability and efficiency than for agility and speed". (Kotter, 2012) Large and designed for stability, the tradeoff of growth has become a challenge for Canadian banks. New immigrants and international students' makeup a small pool of potentially new customers in the small Canadian market. From July 1, 2022, to July 1, 2023, international migration accounted for 468,817 new immigrants. (Statistics Canada, 2023) Within Canada the "Big Five" banks benefit from a concentrated base of depositors, limited competition, and lower banking fees. They profit from economies of scale, yet these advantages vanish stepping outside Canada. (McGugan, 2023). Some have chosen international expansion south into the United States (U.S.) driving a sense of urgency to operate with agility to be competitive. The U.S. financial system has 4,236 federally insured commercial banking institutions across the country with 72,166 branches as of 2021. (Martucci, 2023). To be competitive in international markets Canadian banks must operate differently. Toronto Dominion Bank (TD) has the largest footprint in the U.S. operating in 15 states, with 1.150 + retail branches. Expansion south of the border provides growth opportunities and has sparked the implementation of large-scale agile transformation focused on business agility.

1.1 Background – The Canadian Financial Sector and Agile Adoption

Today's financial institutions are facing huge changes in technology platforms, payments processing systems, financial systems, asset, and risk management systems, while attempting to deliver services in the way customers expect in the digital age. The ability to make payments, deposits and keep track of balances in real time is expected. Difficult market conditions, fierce competition, and the need to sustain revenue growth and retain market share in an increasingly competitive landscape has caused Information Technology (IT) departments to improve efficiency, speed while maintaining controls on cost and capital expenditures. Agile development methods offer a way to meet many of these requirements.

Driven by demand for convenience banking, with online and mobile banking two of the fastest areas of growth. Many financial institutions have large and aging legacy IT infrastructure. (cprime, 2023). In addition, larger banks are consolidating by acquiring smaller independents and are inheriting older systems that they must either choose to work with or completely overhaul. The choice is complex and costly if a core business platform is surrounded by layers of maintenance code.

The Canadian financial sector is dominated by a small number of major banks characteristic of an oligopoly. The "Big Five" Canadian banks by market share include:

1. Royal Bank of Canada (RBC) – Started as the Merchants bank in 1864 by a small group of Maritime trade merchants as a private unchartered commercial bank to support their daily business activities in Halifax Nova Scotia. By April 1920 with rapid growth, they incorporated becoming the Royal Bank of Canada (RBC). Today RBC services 17 million clients worldwide operating in Canada, the US and 49 other countries globally with a revenue of $56 Billion in 2023 and 99,000 employees. (RBC, 2024)
2. Toronto Dominion Bank (TD) – Founded on February 1, 1955, as an amalgamation of the Toronto Bank and the Dominion Bank. Posted adjusted earnings of $15.1 Billion, operating in 39 cities worldwide and 95,000 employees, TD is the 6th largest bank in North America. (TD Annual Report, 2023)
3. Bank of Montreal (BMO) – The Bank of Montreal was founded in 1817, making it the oldest incorporated bank in Canada. Serving 13 million customers, operating in predominately in Canada and the United States with 47,000 employees and $29 billion in revenue for 2023. (BMO Financial Group, 2023)
4. Canadian Imperial Bank of Commerce (CIBC) – Created in 1961, through the merger of two Ontario banks, the Canadian Bank of Commerce and the Imperial Bank of Canada forming CIBC. It was the largest merger of two chartered banks in Canadian history. 48,000 employees service 14 million customers predominately in Canada and the United States. Revenue for 2023 was 23.3 billion. (CIBC, 2023)
5. Bank of Nova Scotia (Scotiabank) – Scotia Bank was founded on March 30, 1832, in Halifax, Nova Scotia. Throughout the 19th century their expansion has focused across the Americas including the Caribbean and South America. Revenue for 2023 was $ 32.32 billion with 90,000 employees globally. (ScotiaBank, 2023)

Unique to the Canadian landscape the implications have impacts to consumers and the industry overall. The characteristics of the oligopoly include:

- **Market Dominance**: The "Big Five" banks collectively control a majority of Canada's financial assets, including deposits, loans, and assets under management. Their dominance extends to various segments including retail and commercial banking, investment banking, wealth management, and insurance.
- **Limited Competition**: The oligopoly limits competition in the sector making it challenging for smaller banks and financial institutions to enter and gain traction, resulting in fewer options for consumers and potentially higher fees and interest rates.
- **Stability**: The concentration of power in few large institutions has contributed to stability in the Canadian financial system. During the global financial crisis in 2008, Canada remained steady and resilient.
- **Regulatory Framework**: Heavily regulated by government agencies such as the Office of the Superintendent of Financial Institutions (OSFI) and the Financial Consumer Agency of Canada (FCAC). These bodies oversee the sector and ensure fairness and compliance with regulations.
- **Limited Options for Consumers**: Critics argue that the oligopoly can result in higher fees, limited choices, and less competitive rates for consumers. Additionally, it is more challenging for new entrants to enter the sector and offer alternative services in financial services, insurance, and credit cards.
- **Government Intervention**: The federal government has taken steps to encourage competition and consumer protection by supporting and promoting Fin Tech startups, chartered banks, trust companies and credit unions as alternatives to traditional banking. Success has been marginal.

1.2 - What is Company Culture?

Company culture is about the shared norms, values, attitudes, and practices that form the collective identity of a company. At its best, it's the invisible glue that binds your team and sets the stage for the narratives on how employees interact daily, contributing to how the overall organizational operates. (Wong, 2023)

The culture of Canadian banks is largely driven by the regulatory environment that guides the banking system. The Office of the Superintendent of Financial Institutions (OSFI) has jurisdiction over a broad list of financial institutions including banks, trust and loan companies, insurance companies, and other financial institutions. (OFSFI, 2023) The Canadian regulatory policy tends to focus on safety and soundness. In the United States the regulatory jurisdiction is fragmented and is focused on privacy, anti-money laundering, banking access, and most recently consumer protection. (Pruss, 2015) Canada has roughly 30 domestic banks, whereas the U.S. has over 7,000. Considering the population differences in size, the U.S. is a more competitive environment where banks take more risks to grow and maintain market share. A higher risk appetite contributed to the 2008 financial crisis creating a heavy-handed regulatory environment.

U.S. regulators – The Securities and Exchange Commission recently announced charges against 11 firms for "widespread and longstanding failures" to maintain records including allowing employees to use unsupervised side channels such as messaging applications such as WhatsApp and Signal. (Son, 2023). The highly concentrated environment in Canada enables more diversification, with expansion into wealth management, insurance, deposits, loans, and brokerage services. The customer base is also very different. Canada has a large middle class resulting in less income inequality and more deposits. In contrast, the U.S. continues to experience an ever-widening income gap. (Pruss, 2015) Thus, the banking system is very different due to factors including regulation, mindset, and customer base. The Canadian culture is conservative and risk averse in all aspects of the banking business (Anand, 2009) and would be cautious around change and hence have been slow to adopt agile.

Chapter 2 - Methodology

The research focused on "to what extent does organizational culture impact the successful implementation of agile practices in large-scale enterprises through a comparison process. The comparison would evaluate different dimensions of organizations in a two-by-two matrix. Dimensions included, flat versus hierarchical, regulated versus unregulated, private versus public, small versus large. Enterprise transformations would be compared across many sectors including telecommunications, financial services, automotive manufacturing, and some innovators such as the Lego Group a private family run global company through case studies.

The research methodology employed a review of agile methods, agile adoption, implementation, metrics, and learnings across financial institutions and other large enterprises. Along with traditional peer reviewed published work "grey literature" was included to obtain current information on the Canadian banking industry and the "Big Five" banks. "Grey literature is information produced outside of traditional publishing and can include reports, policy literature, working papers, newsletters, government documents, speeches, white papers, and company annual reports." (McKenzie, 2023) A literature review, encompassing peer-reviewed articles, conference proceedings, industry reports and grey literature was conducted to understand the impact of culture on scaled agile adoption and practices.

2.1 - Search Process

The search process included the following steps.

1. Digital libraries from the Institute of Electrical and Electronics Engineers (IEEE), ResearchGate, Google Scholar, CORE, JSTOR, Social Science Research (SSRN) Web of Science, and Science Direct were searched for journal, case study, conference, news articles, annual corporate reports, industry publications and workshop papers.
2. Key words included scaled agile, agile, transformation, financial services, change management and various combinations of the above. Specific organizations such

as ING, Capital One, Standard Bank were also a focus on key word combinations as their transformations are well known in the industry and highly publicized.
3. Abstracts were read to focus on scaled agile transformations, financial services, success criteria, agile framework, culture, and measurements of success.
4. Specific focus was on agile and the "Big Five" Canadian banks along with the reason for the change.

The inclusion criteria prioritized studies focused on scaled agile methodologies within the context of financial institutions and large enterprises. The methodology considered both qualitative and quantitative research to provide a balanced perspective on the various aspects of agile adoption. Metrics and key performance indicators related to agile implementation were analyzed to gauge the success, culture, learnings and challenges encountered. Additionally, the research methodology incorporates a comparative analysis of agile adoption across different frameworks and change processes to identify commonalities and variations in practices. The synthesis of these diverse sources and methodologies contributes to a robust examination of the nuances surrounding agile methodologies, culture, and financial institutions in the Canadian context.

Early adopters were evaluated including Farm Credit Services, who transitioned in early 2003, BNP Paribas, who began their journey in 2004 and Capital One in 2006. All tackled the problem they were trying to solve differently as each was unique to each organization. (cprime, 2023) Farm Credit Services wanted to improve customer satisfaction, BNP Paribas and Capital One wanted to increase their speed to market. (cprime, 2023).

The comparison to other sectors became problematic as the operating environments of FI's were highly regulated, siloed, and large in comparison to organizations such as Lego, Rogers Communications, Nokia and Eriksson, who paled in scale and mix of services.

With a focus on Canada, Canadian FSI's were laggards and behind the U.S., Germany, France and South Africa in agile adoption. Canadian banking operating in a highly regulated environment is culturally risk averse and slow to change, suffering little impact of being a laggard while operating in an oligopoly. The United States and European FI's embraced agile in early 2000's with a great sense of urgency. Their results were impressive yet difficult to replicate. Farm Credit Services saw significant reductions in software defects, more rapid development, improved employee morale and greater customer satisfaction. (Wiss, 2008) Capital One adopted Agile and Scrum in 2004. By 2006, they saw a 70% improvement in time to market causing them to implement scaled agile enterprise wide in 2007. (Silva, 2007) In 2023, Capital One existed 1,100 agile practitioners announcing they had reached maturity and business agility no longer needing the Scrum master and coaching support. (Hruska, 2023)

Chapter 3 – Literary Review

During the late 1990's several developers questioned the linear waterfall project delivery process and questioned the effectiveness of traditional methodologies in delivering software and

products. In 2001, 17 developers met in Snowbird, Utah, to share ideas. They called themselves "organizational anarchists" (Darell Rigby, 2016). Seeking to find innovative methods and practices to speed up delivery and adapt to turbulent market conditions and changing customer needs. The group predominately represented Silicon Valley and the technology sector. The group created the "Manifesto for Agile Software Development," which outlined four key values that everyone agreed on (listed below in Fig. 1. Over the next several months the group developed 12 operating principles called "Principles Behind the Agile Manifesto." Today 'agile' is an umbrella term that encompasses several methodologies and practices to enhance customer value and speed up delivery and is leveraged outside software development to include innovation such as mobile applications development across the enterprise.

*Figure 1.*Agile Manifesto. Image of the 17 developers at a whiteboard creating the agile manifesto in 2001. Copyright 2001 by W. Cunningham

Proven and ubiquitous in Silicon Valley, agile has been around for 20 years and is now gaining traction in more traditional sectors. Lagging the world, Canadian enterprises finally started implementing agile to varying success. More recently, traditional enterprises including Canadian financial services and telecommunications companies started to implement scaled agile in 2017's, starting with Scrum. Earlier attempts had started in 2014 with pockets of success for specific waterfall projects. The practice of disbanding teams after completion of projects left little agile footprint and was difficult to foster maturity when agile practitioners moved onto other work some agile some not.

3.1 -What is Scrum?

Agile being an iterative and responsive methodology featuring high levels of cooperation, collaboration, fast effective response to change, adaptive planning and continuous improvement. The most popular agile framework is Scrum. The term was derived from a paper by Hirotaka Takeuchi and Ikujiro Nonaka who based the approach on the game of rugby. (Takeuchi, 1986) The scrum framework guides the creation of a product, focusing on value and high visibility of the progress. Working in small, cross-functional teams towards a common well-defined goal to be completed within time-boxed iterations, called 'sprints'. Each sprint is usually two weeks in duration yet can be as long as a month. The team conducts daily standups to remove impediments and maintain clarity on prioritization. A standup is usually a ten-to-fifteen-minute meeting to identify any challenges or blockers to the team meeting their commitments in the two-week sprint. It is not a status update but a meeting to make sure the team is aware and has a common understanding of any risks or impediments to meeting their sprint goals. At the end of each sprint the team showcases their work at the sprint review for stakeholders to solicit feedback and align on progress. The team then conducts a retrospective on the sprint for continual improvement. Unlike sequential project management, scrum is iterative and incremental allowing for continuous feedback and flexibility encouraging teams to self-organize and align on priorities. Using the rugby analogy, the team figures out how to move down the field when they know the goal is to get to the end zone. Focusing on value and high visibility of the progress, the team works from a backlog of prioritized items to bring the idea or product to life. The process consists of ceremonies or meetings with specific tasks to be completed while building a team mindset and operating in candor and psychological safety.

Today there are well over 30 documented Agile approaches, methods, and frameworks, all built on the values and principles of the Agile Manifesto. (Sommer, 2019) An approach is a way to reach a goal, but it could be anything such as just waiting to see if the problem goes away. A method by contrast implies an order, a somewhat organized approach. Lastly, a framework is an underlying structure that we customize to develop a finished product. (Thakkar, 2024)

Figure 2. Scrum Framework – Overview of the Scrum Framework and Process. Source scrumalliance.org

3.2 What is Scaled Agile?

Scaled agile is implemented when organizations seek to scale agile practices beyond small cross functional teams. It provides a framework for coordinating the work of multiple teams and ensuring alignment with the overall business strategy. Scaled Agile Framework (SAFe) is one of several approaches to scaling agile and is currently a popular framework for large enterprises. The implementation may vary based on the specific needs and context of an organization and is designed to help address the challenges of developing and delivering complex software and systems. For large traditional organizations it is closer to their nature structure and less daunting. All “Big Five” have implemented team based agile for project work and digital transformation. Only TD has started a scaled agile enterprise-wide transformation in the early stages of migration.

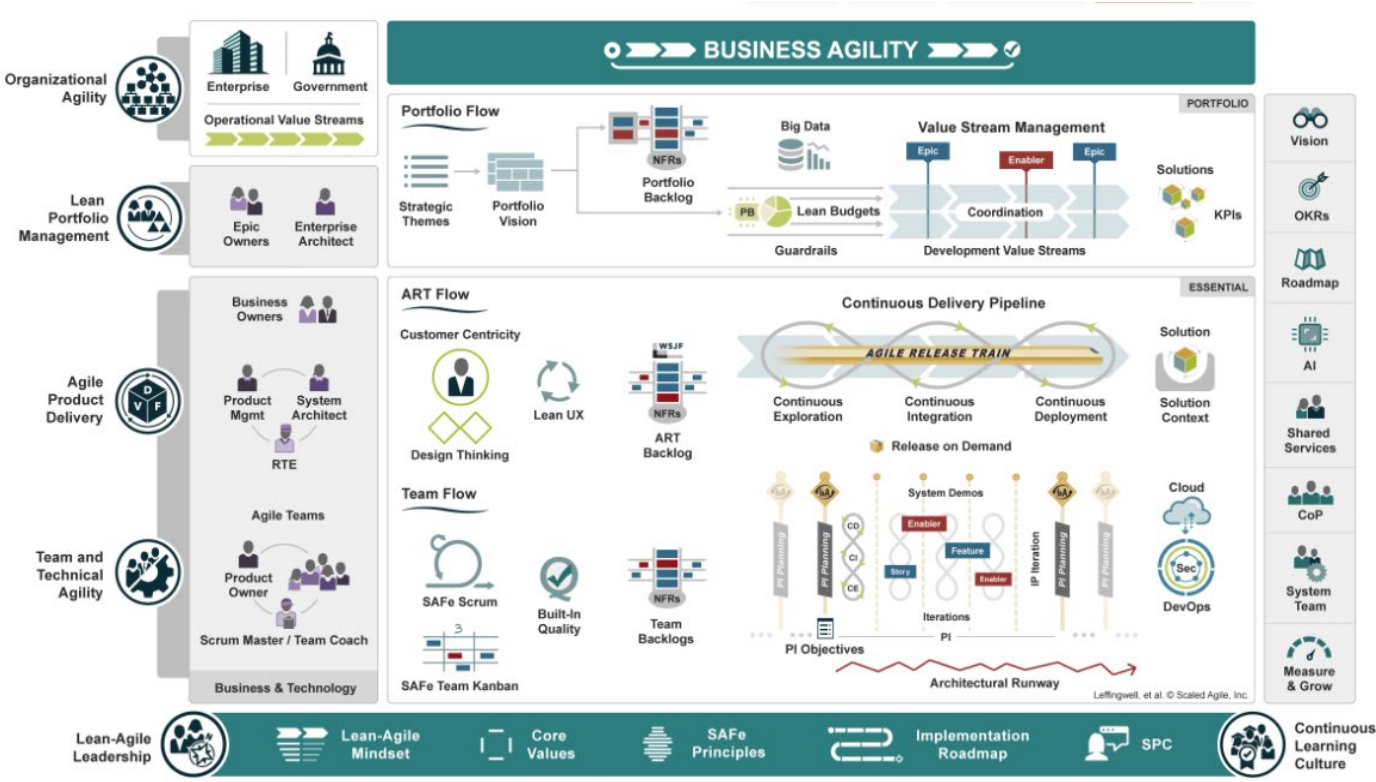

Figure 3. SAFe 6.0 Framework showing three layers of hierarchy. Source: scaledagile.com

There are several different frameworks leveraging scaled agile.

1. Scaled Agile Framework (SAFe) provides a comprehensive set of principles and practices organized into three levels: Team, Program, and Portfolio. SAFe includes roles, ceremonies, and artifacts to coordinate the work of multiple agile teams. Maintaining a hierarchy is appealing to many large enterprises with a traditional silo structure. Agile purists dislike the formal hierarchy embedded in the framework.
2. Large Scale Scrum (LeSS): LeSS is a framework for scaling Scrum to multiple teams. It retains the core Scrum framework and principles, while providing guidelines on how to apply them to larger organizations. LeSS focuses on simplifying the organizational structure and minimizing additional roles and artifacts.
3. Nexus: The Nexus framework extends Scrum to guide multiple Scrum teams in delivering a single product. It provides additional roles, events, and artifacts to address the challenges of coordination and integration in large-scale Scrum.
4. Scrum@Scale: Scrum@Scale is an extension of Scrum that is designed to scale across an entire organization. It provides a lightweight framework with a focus on

simplicity, continuous improvement, and collaboration. Scrum@Scale enables the coordination of multiple Scrum teams to deliver complex products.

5. Enterprise Scrum: Enterprise Scrum is a framework that extends Scrum principles to scale Agile practices across multiple teams and departments. It emphasizes simplicity and aligning the organization to common goals.

Each framework has its own strengths and weaknesses and are adjusted to the organization's context or project types. Many organizations tailor the framework to fit their needs and operating environment. The unique culture of the organization is often an afterthought when implementing agile and should be considered a critical component when choosing a framework. For successful implementation of agile, it is important to understand the cultural issues related to each framework and the unique culture of the organization. (Lazwanthi, 2022).

3.2.1 - Scaled Agile Transformation History

To overcome the challenges of adoption and achieve the benefits of agile in larger enterprises – organizations embark on a transformation process. (Oprins, 2019) The development and adoption of agile at scale, can be described in at least 4 successive stages:

1. Team level agile: Scrum and XP developed in the roots of Takeuchi and Nonaka. (Takeuchi, 1986) Today these frameworks are known under the umbrella of agile methods, facilitating shortened feedback loops, and aligning priorities with business needs.
2. Cross-team and program -level agile: The initial success of agile brought about a greater desire to execute larger initiatives in an agile way. Organizations began experimenting with coordinating several teams to deliver on a large scale. This led to Scrum of Scrums and other scaled frameworks.
3. Enterprise agile: Successful in some instances widespread adoption clashed with standard organizational structures and workflow.
4. Business agility: Companies and framework creators adjusted their thinking from IT-driven to organization-wide agility. (Stettina, 2021). Terms such as agile finance, agile marketing, agile sales and agile HR began to appear.

Scaled Agile Transformation How to Do It?

A study conducted by the Tilburg School of Economics and Management studied the impact of agile transformations on organizational performance across teams, programs, and portfolios. Most companies used the bottom-up (team by team) strategy (42.54%) whereas others used the department-by-department strategy (29.1%), the big-bang strategy (11.94%) and the new department strategy (7.46%). (Stettina, 2021).

Bottom-Up: Implements agile with one team at a time delivering a specific product or solution. Most common in software and product development leveraging team level scrum.

Department-by- Department: Implements by area typically starting in technology and the digital space moving each area into agile on a systematic basis.

Big bang: Everyone all at once. This is the most dramatic and disruptive approach driven by a sense of urgency like bankruptcy protection or acquisition. In some instances, all employees are told on this date you will no longer have a job and need to re-apply to work in the new organizational structure seeking to change culture, mindsets, and behaviours overnight. Painful but effective when applied in desperate times. A key factor to success is selecting talent that can adapt to change, has a growth mindset and can thrive in a new organization, expediting agile adoption and business results.

3.2.2 - Scaled Agile Frameworks

The most popular scaled agile framework is Scaled Agile Framework – SAFe where 42.11% of respondents in the Impact of Agile Transformations on Organizational Performance study implemented a version of SAFe. (Stettina, 2021)

3.2.3 - Capital Investment Required

Transformation is costly requiring capital investment of talent, tools, training, process changes, risk evolution and financial management. Depending on the size and scale of the transformation capital investment will vary but at a minimum of $4 million USD for pilots is required. (Stettina, 2021).

3.2.4 - What is Success?

Large scale agile transformation is complex and difficult. The best practice guidance is difficult to interpret as each implementation has a unique culture, talent pool, technology, organization, and transformation process. No implementation is the same. Finding validated solutions on what the result of a transformation should look like or what steps to take is difficult. (Paasivaara, 2018). The need to customize has been reported by organizations adopting agile at scale. (Paasivaara, 2018). The various scaled frameworks do not provide good blueprints for what a scaled agile enterprise should look like. Sample sizes very by sector and are small in scale.

Based on the scaling principle, the program layer builds on multiple underlying teams. While the portfolio layer builds on multiple programs respectively, they apply a different workflow which the programs within that portfolio may compete for the same resources. Progress in becoming agile may be measured in terms of agile maturity, using the five levels identified and proposed by the Transformation Maturity Model. (Laanti, 2017). See fig.4. The

Transformation Maturity Model distinguishes three common organizational levels in agile: portfolio, program and team. If maturity evolves with continued support and funding, companies move through these levels from beginner, novice, fluent, advanced and eventually world-class. (Stettina, 2021) A complex matrixed structure is difficult to measure across different organizations as many are still early in their definition of maturity or are struggling with the right metrics to meet their objectives. Hence, the measurement of success varies greatly by organization.

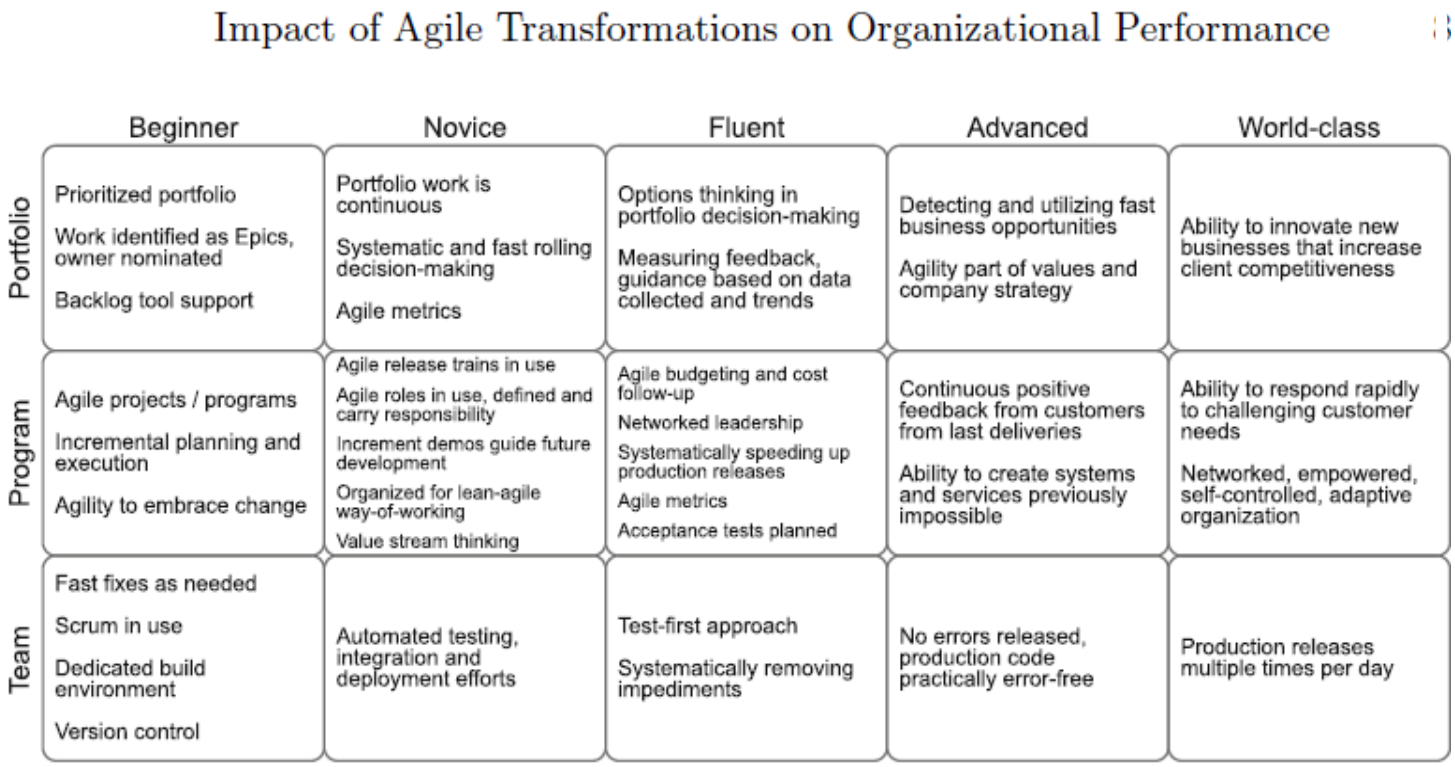

Figure 4. Transformation Maturity Model – Measuring maturity in a scaled agile framework. Source: M. Laanti, May 2017

Chapter 4 – Findings

The comparison of many different scaled implementations in financial services and other large enterprises revealed unexpected findings. Agile adoption has rapidly increased over the past two decades in all areas of an organization no longer seconded to IT. Given the relatively limited number of studies focused on scaled agile and financial services one study Agile Transformation at Scale: A Tertiary Study by Suddhasvatt Das and Kevin Gary present an extensive literacy review of scaled agile challenges and success criteria. A summary of the common challenges

included resistance to change, lack of training, and misunderstanding agile. The study influenced this work and supported common themes for challenges and success criteria. Each organization embarked on a different approach, method and often customized the framework along the journey, while having a different set of talent, processes, technology, structure, size, scope and culture. Case studies of large scale enterprise transformations revealed the problem statement and transition playbook were different and unique to the organization. BMO focused on paperless eforms, TD time to market, ScotiaBank digital transitions, and RBC technology automation. No one process or blueprint was followed. Each organization customized to suit their unique structure, leadership, and budget. Different frameworks were chosen.

Results varied. Comparisons are difficult. For example, TD introduced its Next Evolution of Work, a vision for the target operating model in a synthesis of global best practices. (Kofner, 2023). TD customized the agile related design components to create autonomous cross functional team structure that requires back-office groups to enable business lines rather than pursue function-centric initiatives. (Kofner, 2023) See Fig. 5. Taking a top-down board approved transformation is a first for one of Canada's "Big Five" banks.

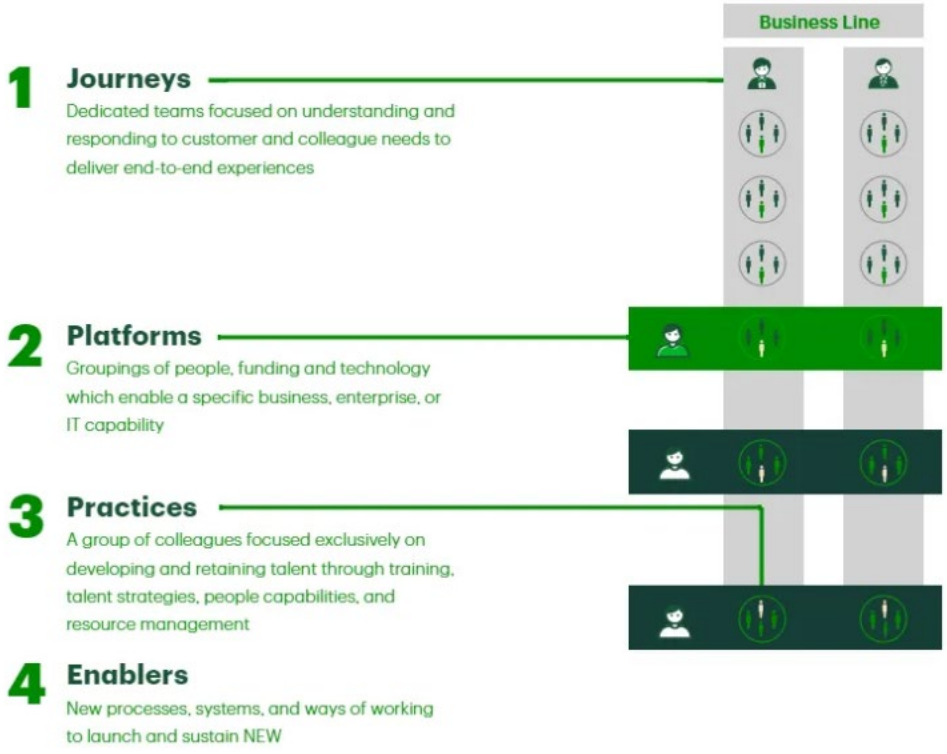

Figure 5. TD Scaled Agile Organizational Structure. Source: *(Kofner, 2023)*

BMO the third largest bank in Canada began their digital transformation using eForms and e-signature to offer a completely digital and mobile customer onboarding experience. Choosing a "fit for purpose" hybrid approach combining agile and waterfall methodologies to customize their own framework. Unique in structure, talent pool and Scrum of Scrums to align with BMO's native organizational structure and processes. The eForms program was a success as they went live in under 12 months with a full national roll-out across 940 branches. (OneSpan, 2017) Success metrics included customer satisfaction, improving new account openings, reducing forms from 44 to 26 and workflow steps from 25 to 13 weeks. Estimated saving of $ 98 M USD annually is projected once all products are converted to e-signature. (OneSpan, 2017) Very successful in moving the traditional paper process to a digital experience when opening a new bank account, the eForms transformation was a win for the customer, employees, and the business.

Measuring success and what good looks like also varied across FSI's and other agile transformations. How to measure success varied and continues to be a challenge. The shift in mindset from Level 2 to Level 3 and Level 4 (see Fig.6 Value of Enterprise-led digital transformation throughout an FSI evolution.) "is counterintuitive for enterprise leaders. In Canada, some large FSI's have pilots on Level 4, but none have scaled to this level, despite what they may say in press releases." (Kofner, 2023)

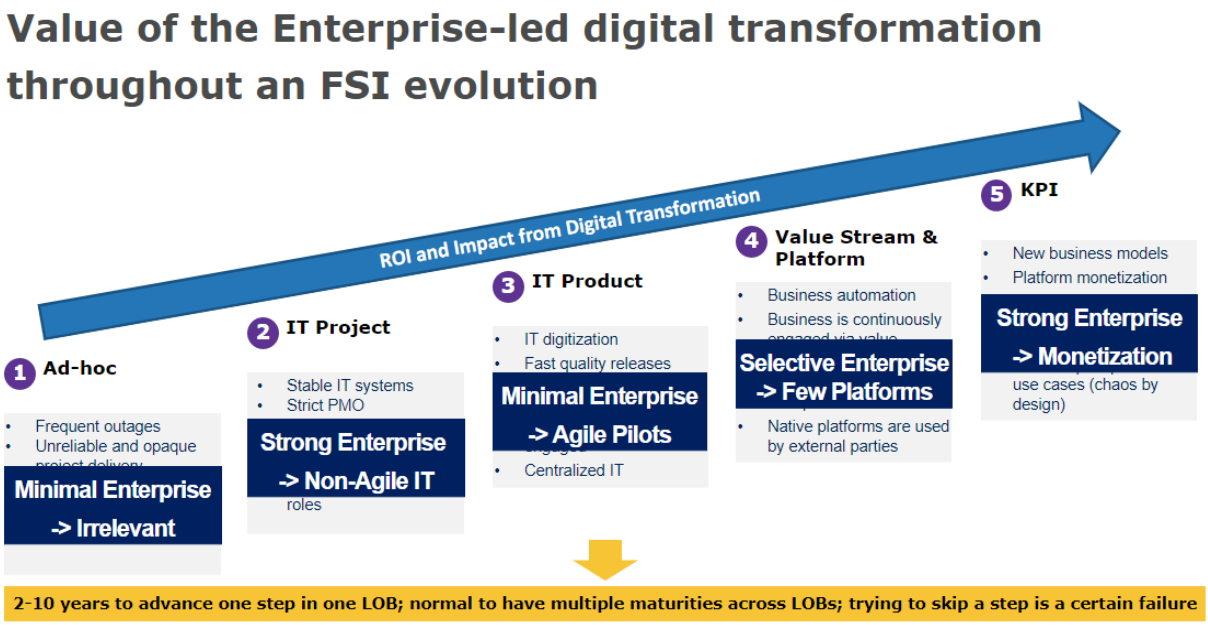

Figure 6. Steps to Value and Maturity of Enterprise led Digital Transformations. Source: *(Kofner, 2023)*

Markers of maturity were different for each organization, along with their definitions of success. How they measured and tracked progress is very different. For example, Key Performance Indicators (KPI's) are different for each Line of Business (LOB), and some have implemented Objectives Key Results (OKRs) measuring different key results. Even standard

agile measurements were defined differently. Progress and measurement across LOB's within the enterprise is lacking accuracy and standardization.

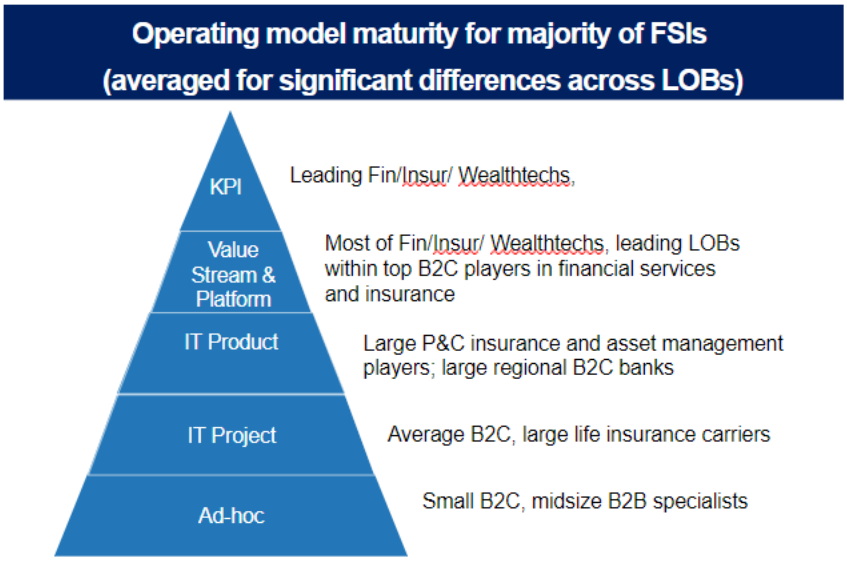

Figure 7. Operating Model Maturity Source: C-Suite Counsel

Similarities for scaled implementations included Scrum for teams and keeping three layers even if they customized the nomenclature for their organization. For example, TD has teams, product groups, and product family layer choosing terminology common to the organization. This confused talent that worked in industry standards. Rarely did the enterprises focus on automating processes or development pipelines hindering quick value delivery. For example, if teams/pods completed the development work yet had no control of the release process to production, completed features would sit in another queue waiting to be released to customers. Time to market was out of the pod/team's control.

The problem each organization was trying to solve was different and therefore, they measured their success in their own context. Given the uniqueness of each enterprise, it is difficult to have a standard measurement of success as some organizations used Objectives Key Results (OKRs), Key Performance Indicators (KPIs), cost savings, stock price, time to market, customer satisfaction, net promoter, and or some combination of agile metrics. Therefore, success was different for each entity. All experienced similar challenges including resistance to change, difficulty of implementing due to lack of understanding of agile, management not being supportive, lack of training for leadership and employees, and lack of investment. (Das, 2021) Each tackled the challenges differently. Common success factors include management and leadership support, clear communications with stakeholders in sync with each other, self-organizing independent teams, piloting with a test and learn approach, and a customized agile

approach. (Das, 2021). Given the variations of approaches, support, funding, and success measurements it is difficult to compare success in a standard manner for scaled agile implementations due to the many dimensions and different measurements. Common dimensions include productivity, responsiveness, quality, workflow health, employee satisfaction and engagement. No organization had a similar definition or method for measuring the dimensions.

4.1 Challenges in Transformation

Saddhasvatta Das and Kevin Gary conducted a study on Agile Transformation at Scale. (Das, 2021). They evaluated the current state of research in the field of scaled agile transformation and explored research gaps while identifying challenges and success factors in seven relevant peer reviewed studies and reports, seeking future research avenues. The top challenges include:

1. Resistance to change is defined as employees not willing to work in the new way.
2. Difficulty of implementing agile due to a lack of clear guidance on how to apply the agile framework to their context and environment. For example, which framework makes sense for the work kanban or scrum. New teams lacked the knowledge and understanding to advise which framework would be ideal for the work.
3. Integration and coordination with non-agile areas of the organization or dependent teams. Stakeholders not communicating leading to errors and misunderstandings of priorities.
4. Integration and getting things to all work together.
5. Training lacking in critical roles and leadership. Stakeholders have the wrong or not enough knowledge about agile.
6. Lack of investment. No budget to train or provide adequate coaching support through the transformation.
7. Measuring progress is difficult. Tracking or implementing KPIs or OKrs is completely new to the organization, making employees confused and adding cost and complexity to the many changes.
8. Resistance to change.
9. Difficulty of implementation due to a lack of clear guidance and application to environment
10. Integration and coordination with non-agile areas of the organization
11. Agile maturity across differing organizational vertical layers
12. Agile maturity across different segments in the horizontal organization

4.2 - Limitations

There are many challenges in conducting a review of cultural impacts on scaled agile transformation in Canadian FI's. First, they are a small sample size in the "Big Five" Canadian banks and each have taken a very different approach to agile adoption. Transparency in their structure, processes, culture, leadership style, talent and results are tightly held and difficult to access.

Chapter 5 - Analysis

Different patterns emerged through the focus on the Canadian banking sector's transformations and other global financial institutions.

Table 1

"Big Five Canadian Banks" Agile Adoption

Canadian Banks 2023	# Employees	Agile Framework	Areas of Operation	Age	Pilot Started
RBC	99,000	Scrum	Technology/Digital	160	2014
TD	94,000	Scaled	Enterprise	168	2017
BMO	47,000	Scrum	Technology/Digital	200	2016
CIBC	48,000	Scrum	Technology/Digital	63	2017
ScotiaBank	90,000	Scaled	Technology/Digital	192	2017

Three out of the "Big Five" have over 90,000 full time employees with an average tenue of 14 years. All were laggards in their adoptions of agile ways of working and focused on a digital first test and learn approach. Varying degrees of success given outside of digital few have large groups working in scaled agile and some have reverted to more traditional product-based delivery. Except for CIBC, all are over 150 years old, hierarchical and highly regulated. Little differentiation between them from a consumer perspective.

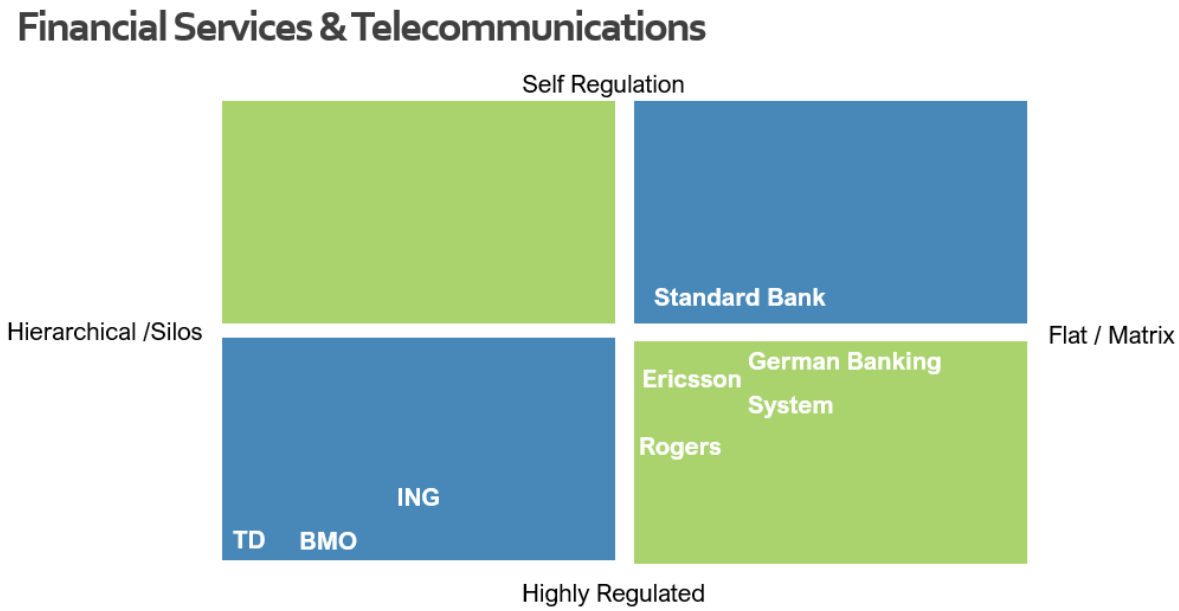

Figure 8. Matrix of organizations reviewed comparing regulated to unregulated sectors with hierarchical and flat structures.

Cultural factors such as hierarchy, structure, regulated and unregulated environments where different in international organizations but very similar in the "Big Five" banks. All operated in a control (hierarchy) culture which is focused and internal. (Barthelmess, 2021) A highly structured way of working where employees tend to do what leaders ask. The goal of the organization is to create stability, predictability, and efficiency by having strict rules and policies implemented. (Barthelmess, 2021) Geographic differences emerged along with regulatory environment. International banks tended to have less layers of hierarchy and smaller organizations. They also operated in less regulated environments.

The size and scale of transformations varied greatly. Bottoms-up generally starts in technology or has been driven by digital transformation. Success in pilot projects sparks interest in expanding adoption on teams. Scaled agile is emerging in yet lacks examples of large numbers of employees working at scale. For example, TD currently has 12,000 employees transitioning into NEW ways of working, the largest for any FSI. Employee attitudes, structure, and organizational norms influence the adoption and sustainability of agile practices within a large enterprise. While evaluating culture as an impact to scaled agile transformations, an interesting finding that became obvious is that "culture" is unique to every organization, country and team, a major factor in transformation change adoption and very difficult to alter without leadership support.

5.1 Scale of Transformation

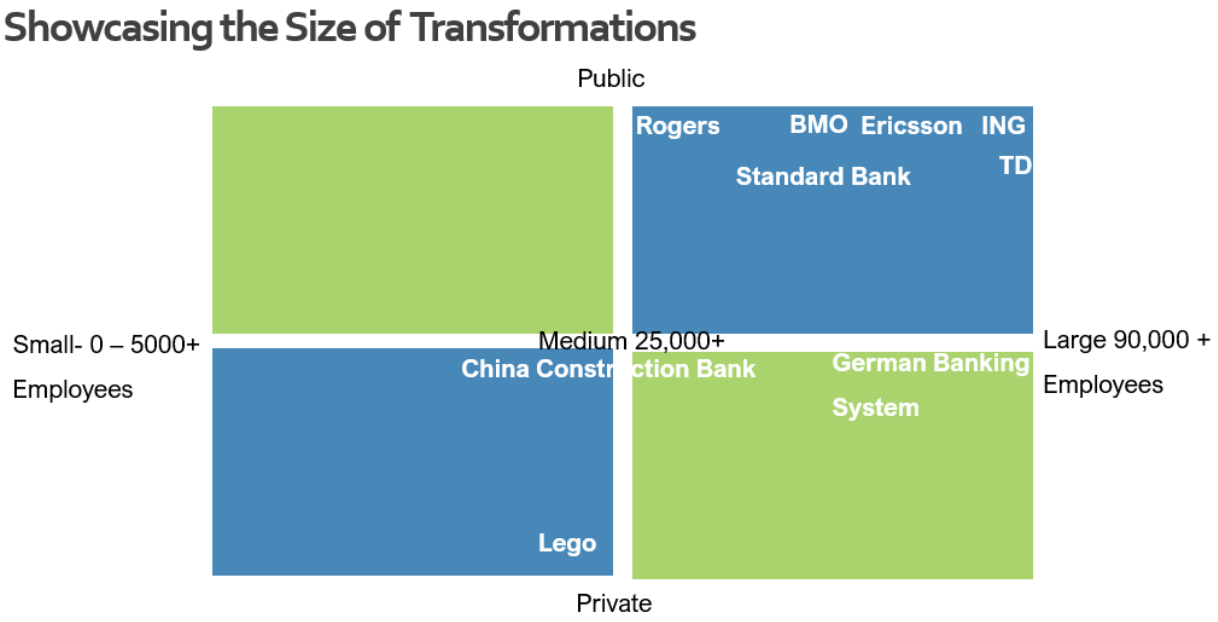

Figure 9. Matrix comparing number of full time employees and public or private organizations. `

Success metrics were different for each organization as customization of framework and process was commonplace. Common challenges emerged, resistance to change, difficulty of implementing due to lack of understanding of agile, management not being supportive, lack of training for leadership and employees, and lack of investment. (Laanti, 2017) Common success factors include management and leadership support, clear communications with stakeholders in sync with each other, self-organizing independent teams, piloting with a test and learn approach, and a customized agile approach. (Das, 2021). Given the variations of approaches, support, funding, and success measurements it is difficult to compare success in a standard manner for scaled agile implementations due to the many dimensions and different measurements. Common dimensions include productivity, responsiveness, quality, workflow health, employee satisfaction and engagement.

Chapter 6 - Conclusion

ING's agile transformation journey went from a bottom-up initiative to a strategic imperative, from a country -specific to a group-wide scaled transformation. (Calnan, 2019) A similar sense of urgency is lacking in the "Big Five" Canadian banks, although they have undertaken agile transformations in various forms and scope. The OFSI risk outlook for 2024 includes market downturn, climate change, and cyber threats. (Barnea, 2023) The transition to an agile enterprise enables business agility to address the challenges of the modern world. The

research question “to what extent does organizational culture impact the successful implementation of agile practices in large-scale enterprises was hindered by a small sample size of the “Big Five” Canadian banks and their very similar cultures and operating environment. The research focused on the relationship between organizational culture and the effects exploring how cultural factors such as leadership support, employee understanding, and collaboration norms influence the adoption and sustainability of scaled agile practices within a large enterprise. While reviewing similar transformation journeys in international FSI’s it became apparent that each transformation journey is unique in method, and framework along with the need to customize to suite the organization. The benefits of agile transformations are recognized as productivity, responsiveness, quality, workflow health and employee satisfaction. (Stettina, 2021)

Successful agile transformation embeds a deep philosophical change in how ideas are nurtured, how organizations are structured, and how cultures embrace openness and innovation. (Barroca, 2020) The unique characteristics of culture and the Canadian environment displayed the limitations and need for more research. Scaled agile is relatively new and operates with similar challenges and success criteria as team based agile. The challenge is at scale those challenges are more amplified and harder to solve requiring more study and standardization of success and framework adoption.

The conservative risk averse culture is systematic and permeates throughout the financial services industry underpinned by federal regulations. Thus, the cultural differences across the Canadian banking sector are miniscule. Analyzing papers comparing transformation across the globe was also difficult, lacking a common perspective, different operating environments, and having a different sense of urgency. For example, ING was forced to restructure choosing scaled agile as the framework and methodology to change. (Calnan, 2019)

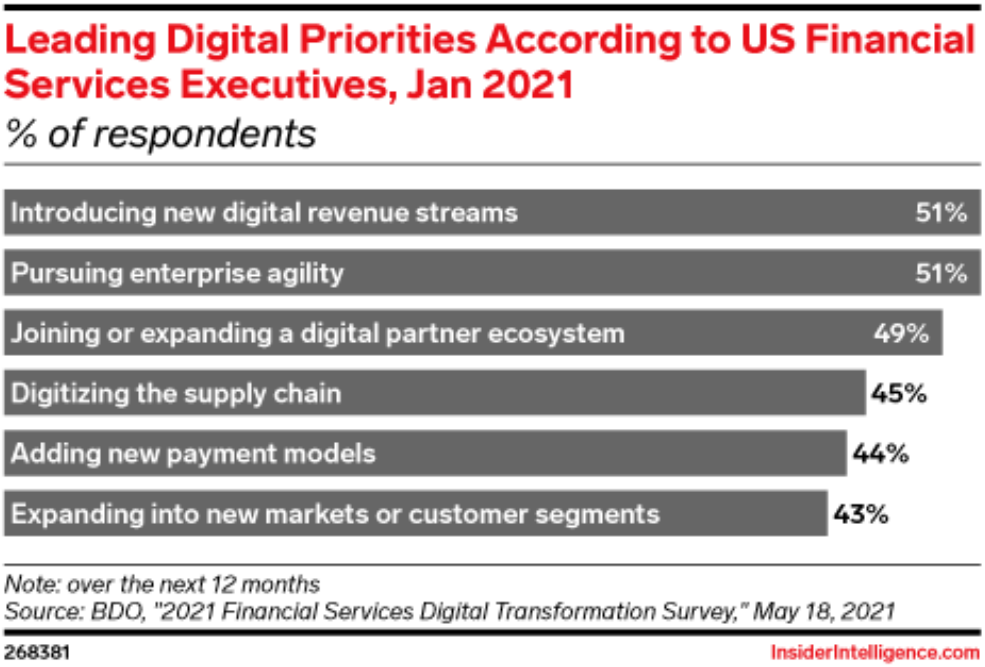

Figure 10. Financial Services Executive Priorities for 2021 Survey Results. Source: Insider Intelligence

With challenging economic times ahead more FSI's are focused on business agility providing more examples of scaled agile transformations. Culture will still be the hardest to address. Autonomy, risk-taking, collaboration, transparency seem intuitive. And yet, when employees are asked to advance the operating model, they are resistant to change and often don't know how to enable autonomy. Humans strive for the stability of higher status, and this can make it difficult to share power with the less senior employees and vigorously debate ideas with peers. (Kofner, 2023) Top leadership support and engagement remains the number one success factor in large-scale agile transformations. (Russo, 2021) Inevitably successful transformation will mean changing people which in turn will change culture. Although scaled agile adoption is widespread and growing in popularity, research of the phenomenon is still in its infancy and clear measurements, best practices blueprints and purpose-oriented frameworks are yet to be standardized.

References

Anand, A. (2009, March 31). *Canada's Banks: Conservative By Nature*. Retrieved from University of Toronto Faculty of Law: https://www.law.utoronto.ca/blog/faculty/canadas-banks-conservative-nature

Barnea, A. (2023, April 23). *How expansion into the US could hurt the stability of Canada's banking system*. Retrieved from Toronto Star: https://www.thestar.com/business/how-expansion-into-the-u-s-could-hurt-the-stability-of-canada-s-banking-system/article_831a3e26-0512-55be-a535-6c5b03a4dd47.html

Barroca, L. C. (2020). Agile Transformation Workshop: A Summary & Research Agenda. *ATRANS*, (pp. 147-154). Online.

Barthelmess, P. B. (2021). Preparing Agile Transformation: A Framework for Assessment of the Organizational Culture Readiness. *Applied Business and Economics* , 251-265.

Beerbaum, D. (2020). Towards an agile organization in the Financial Service Industry . *RegSafe*, 1-28.

Bergqvist, J., & Gordani, N. (2018). *Large-scale agile transformation.* Gothenburg, Sweden: Chalmers University of Technology.

Berkani, A. C. (2019). Triggers analylsis of an agile tranformation; the case of a central bank. *Procedia Computer Science*, 449-456.

BMO Financial Group. (2023, October 31). *Shareholders Report*. Retrieved from Annual Report: https://www.bmo.com/ir/archive/en/bmo_ar2023_CFS.pdf

Calnan, M. R. (2019). ING's Agile Transformation - Teaching an Elephant to Race. *Journal of Creating Value*, 1-20.

CIBC. (2023, October 31). *CIBC Quick Facts*. Retrieved from CIBC.com: https://www.cibc.com/en/about-cibc/corporate-profile/quick-facts.html

cprime. (2023, 07 04). *Agile Adoption by the Financial Services Industry* . Retrieved from cprime: https://www.cprime.com/resources/blog/agile-adoption-financial-services-industry/

Darell Rigby, J. S. (2016, April 20). *The Secret History of Agile Innovation.* Retrieved from Harvard Business Review: https://hbr.org/2016/04/the-secret-history-of-agile-innovation?registration=success

Das, S. G. (2021). Agile Transformation at Scale: A Tertiary Study. *Workshops*, 3-11.

Engert, W., Fung, B. S., Nott, L., & Selody, J. (n.d.). Restructuring the Canadian financial system; explanaitons and implications.

Hruska, A. (2023, January 20). *Capital One Cuts 1,100 Tech Jobs*. Retrieved from Banking Dive: https://www.bankingdive.com/news/capital-one-cuts-1100-tech-jobs-agile/640861/

IDC . (2012). *IDC - Worldwide Vertical Markets It Spending 2010-2015 Forecase:* . Needham: IDC.

Joachim Hasebrook, M. L. (2017). Transfomraiotn of traditional banks rigid hierarchies to agile network organisations. *Banking Hub*, 1-6.

Kevin Johnston, G. G. (2017). Standard Bank: The Agile Transformation. *Journal of Information Technology Education: Discussion Cases*, 1-22.

Kofner, Y. (2023, May 6). *TD Bank Announces Real Agile, But Would Its Executives Do Hard Things?* Retrieved from FSI Digital Weekly : https://fsidigitalweekly.substack.com/p/td-bank-announces-real-agile-but

Kotter, J. P. (2012, November). *Competitive Strategy - Accelerate*. Retrieved from Harvard Business Review: https://hbr.org/2012/11/accelerate

Laanti, M. (2017). Agile Transformation Model for Large Software Development Organizations. *Scientific Workshops* , 19.

Lazwanthi, M. R. (2022). Cultural Impact on Agile Projects: Universal Agile Culture Model (UACM). *International Conference on Information and Communication Systems (ICICS)* (pp. 292-297). Sydney, Australia: Charles Sturt University.

Maria Paasivaara, B. B. (2018). Large-scale agile transformation at Ericsson: a case study. *CrossMark*, 2550-2596.

Martucci, B. (2023, May 25). *Number of Banks in the US. How Many Are There?* Retrieved from Money Crashers: https://www.moneycrashers.com/number-banks-us/

McGugan, I. (2023, May 25th). *Canadian banks bent on international expansion lag those that stay home, Veritas report argues*. Retrieved from theglobeand mail.com: https://www.theglobeandmail.com/investing/markets/inside-the-market/article-bank-earnings-veritas-report/

McKenzie, J. (2023, September 19). *Grey literature: What it is & how to find it.* Retrieved from Simon Fraser University Library: https://www.lib.sfu.ca/help/research-assistance/format-type/grey-literature

OFSFI. (2023, July 12). *About Us*. Retrieved from Office of the Superintendent of Financial Institutions: https://www.osfi-bsif.gc.ca/Eng/osfi-bsif/Pages/default.aspx

OneSpan. (2017, April 4). *BMO: Digital Transformation in Personal Banking*. Retrieved from OneSpan Analyst Report: https://www.onespan.com/resources/celent-bmo-digital-transformation-personal-banking

Oprins, R. J. (2019). Evolution of Scrum Transcending Business Domains and the Future of Agile Project Management. *International Conference on Agile Software Development* (pp. 244-259). Montreal: Springer, Cham.

Paasivaara, M. B. (2018). Large-scale agile transformation at Ericsson: A Case Study. *Empir Software Eng*, 2250-2596.

Pruss, L. (2015, October 2). *The Difference Between Banking in the US and Canada*. Retrieved from The Financial Brand: https://thefinancialbrand.com/news/bank-culture/comparing-united-states-canadian-banking-systems-54467/

RBC. (2024, January 04). *Welcome to the History of RBC*. Retrieved from RBC: https://www.rbc.com/en/about-us/history/

Russo, D. (2021). The Agile Success Model: A Mixed Methods Study of a Large Scale Agile Transformation. *ACM* , 111:1-111:45.

Scaled Agile, I. (2023, July 13). *SAFe Studio*. Retrieved from SAFFe Studio: https://scaledagileframework.com/business-agility/

ScotiaBank. (2023, January 1). *ScotiaBank Annual Report*. Retrieved from ScotiaBank: https://www.scotiabank.com/content/dam/scotiabank/corporate/quarterly-reports/2023/q4/Annual_Report_2023_EN.pdf

Silva, K. D. (2007). *The Growth of an Agile Coach Community at a Fortune 200 Company.* . Capital One Financial Corporation, IEEE .

Sommer, A. F. (2019). Agile Transformation at LEGO Group. *Research Technology Management*, 1-32.

Son, H. (2023, August 8). *Banks hit with $549 million in fines for use of Signal, WhatsApp to evade regulators' reach*. Retrieved from CNBC:

https://www.cnbc.com/2023/08/08/regulators-hit-wall-street-banks-with-549-million-in-penalties-for-record-keeping-failures-.html

Statistics Canada. (2023, September 27). *Canada's demographic estimates for July 2023: record high population growth* . Retrieved from Statistics Canada: https://www150.statcan.gc.ca/n1/daily-quotidien/230927/dq230927a-eng.htm

Stettina, C. J. (2021). The impact of Agile Transformation on Organizational Performance: A survey of Teams, Programs & Portfolios. *Institute of Advanced Computer Science*, 86-102.

Takeuchi, H. N. (1986). The New New Product Development Game. *Harvard Business Review Magazine*.

TD Annual Report. (2023, October 31). *Quarterly Results & Annual Report*. Retrieved from TD Bank: https://www.td.com/content/dam/tdcom/canada/about-td/pdf/quarterly-results/2023/2023-annual-report-e.pdf

Thakkar, K. (2024, January 2). *What is the difference between a Framework and Method?* Retrieved from Daily Agile : https://dailyagile.com/whats-the-difference-between-framework-and-method/

Wiss, U. (2008, February 17). Agile Software Development in the Finance Industry: How popular are agile methods in financial services. Bachelors Thesis.

Wong, B. J. (2023, August 23). *What is Company Cultlure? Definition and Development Strategies*. Retrieved from Forbes: https://www.forbes.com/advisor/business/company-culture/

Appendix A: Detailed Diagram of Scrum Framework

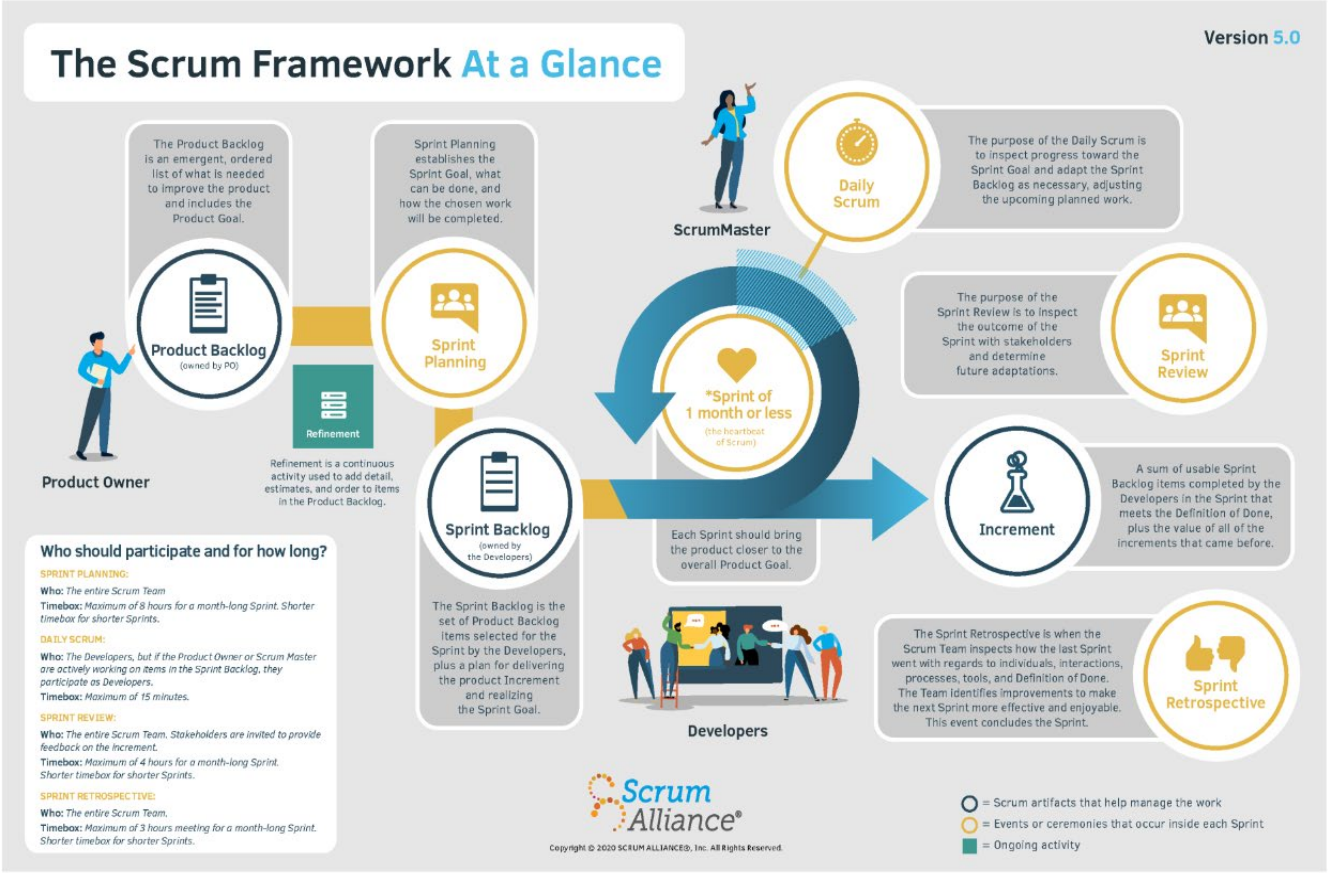

Figure 11. Detailed Guide of The Scrum Framework Source: scrumalliance.org