How to Effectively Lead Cross-Functional Teams to Drive Successful Continuous New Product Development?

A thesis submitted to

The University of Manchester

for the degree of

Doctor in Business Administration

in the Faculty of Humanities

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2017

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CONTENTS

Abstract

Digital disruption is transforming the financial services industry and innovation is paramount for companies to stay competitive. Firms need to move to customer centric, open and rapid innovation processes and a more open and collaborative culture. While there are a number of studies that look at different parts of the leadership and/ or innovation process there are very few cross disciplinary and process oriented studies that look at innovation in the context of the organisation and show how the process unfolds over time, creating a causal network across variables.

In line with the purpose of the DBA, the primary purpose of the research is focused on generating business knowledge by the study of a real business issue and application of that knowledge to practice (Manchester Business School Website, 2017). The research shows a company progress from a closed, product centric new product development process to an open and customer centric process of new product development. Through four case studies and eighteen in-depth interviews a thematic analysis is used to analyse each of the cases in detail. This is followed by a causal network analysis, establishing causal networks for key variables for each of the cases. A cross-case analysis is then performed to develop a causal network based on replication of themes across cases (Yin, 2013). The causal network shows how individual variables influence each other.

The model shows the following factors that are critical, and highlights success criteria across each factor:

a) *Leadership must be agile,* with leaders providing senior leader sponsorship and a clear vision that is focused on the customer. Having a clear vision is seen to influence stronger communication, higher team motivation and faster implementation.

b) *Cross-functional teams need to be high performing* through clear communication models that lead to fast decision making, better collaboration and positive team dynamics, that include collaborative and open team environment.

The new product development process must leverage:

c) *Customer centric product strategy,* where the market opportunity is well defined and customer needs are gathered using multiple methods.

And additionally,

d) *A rapid innovation process* that focuses on developing a minimum viable product through agile delivery, and clear governance and prioritization process. This will enable ongoing product iterations based on continuous learnings.

e) *Performance* measures need to include customer and innovation metrics.

Overall, the findings suggest that this model can help companies progress to a customer centric new product development processes and a more open and collaborative culture. The research also contributes to innovation and new product development theory by providing a process driven account of new product development and developing a causal framework of key variables.

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Abbreviations

BBA	British Banking Association
CEO	Chief Executive Officer
CM	Customer
HR	Human Resources
JAPA	Japan, Asia, Pacific and Australia
MIT	Massachusetts Institute of Technology
MLQ	Multi-Factor Leadership Questionnaire
NPD	New Product Development
NYC	New York City
OECD	Organisation for Economic Cooperation and Development
Opp't	Opportunity
PTI	Pre Tax Income
SME	Subject Matter Expert
SVP	Senior Vice President
UK	United Kingdom
US	United States
UX/ UI	User Experience/ User Interface
VP	Vice President

Declaration

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or institute of learning.

Acknowledgements

I would firstly like to thank the tremendous effort and guidance received from my DBA supervisors: Dr. Mark Batey provided incredible support, professional guidance and ongoing feedback throughout the process that kept me going, and Dr. Martin Henery provided exceptionally valuable input, feedback and recommendations throughout the research journey.

I would also like to thank the outstanding support I received from my family, who allowed me to focus on the research during summer holidays and endless weekends. Thank you to my husband Ludvik, and to my children Alexander and Diana.

1. Introduction

This introductory section will provide an overview of the research objective, the research question and the importance of the research. It will summarise a financial services industry in transformation and outline the key reasons why there is a need to innovate at greater speed by leveraging rapid, open and collaborative innovation processes. It will also give an overview of the financial services company being studied, the four different cases and why they have been selected.

1.1 Digital Disruption in the Financial Industry

The financial industry is undergoing a major transformation due to emerging digital disruption. Customer behaviour is changing because of access to technology and the fact that the world is now constantly connected. The number of mobile phone users has grown from 1% of the global population in 1995 to 73% of the global population in 2014, of which 40% are smart phone users (Meeker, 2016). The British Banking Association (BBA) predicts that by 2020, 70% of all banking will be done through mobile devices in the UK: "people wake up in the morning. They check Facebook while they get dressed, check the weather and read email over breakfast. The customer may Skype his girlfriend at work, upload a picture of his cat to Instagram at lunchtime and order his dinner via mobile on the way home. If we don't think like this, how can we catch our customer?" (BBA, 2015, p.23).

Consumer demands are quickly shifting, where 39% of millennials (those aged 18-34 years) are no longer tied to a branch experience and would consider shifting to a bank with no branch locations. Similarly, 77% of the same demographic would consider banking with non-traditional players like Square, PayPal, T-Mobile, Apple or Google,

while 56% of them would want to bank at a time that suits them, regardless of opening hours (Accenture, 2014).

A study by PwC shows that 88% of financial services institutions globally believe parts of their business is at risk due to FinTech disruption, with an estimated 24% of revenues at risk (2017). Additionally, senior executives feel they lack the ability to change at the speed required because of old and outdated infrastructure and a culture that is afraid of change (Fujitsu, 2017). New competition from financial technology firms has been accelerating over the past few years, with a number of new start-ups entering the field and disrupting elements of the financial services value chain. The 2016 global investment in FinTech grew another 11% to a total of US $17.4bn (Innovate Finance UK, 2016). New start-ups like iZettle in the payment space, Transferwise in the money movement sector and Moven in the retail banking sector focus on building outstanding value for customers and aim to provide seamless customer experience on the go with the hope of disrupting parts of the financial services value chain. Equally, big technology giants like Apple, Amazon and Google are all quickly moving into the payments and financial services sector with the launch of mobile wallets and payment services. In November 2015, these three organisations announced that they had joined forces in a financial services coalition, with an aim to make financial services more accessible, secure and affordable through technological transformation (Chmielewski, 2015).

It is paramount that financial services companies quickly adapt to the changing marketplace in order to create sustainable competitive advantage. The highest performers will be those that can continuously innovate (Accenture, 2014).

1.2 Research Objective and Question

1.2.1 Research Objective

The objective of the research is to develop a deep understanding of how an organisation in the financial services industry, that is faced with digital disruption in their industry, addresses the challenge of changing its business practices and its innovation approach to better meet the needs of the current and future consumers. The study will demonstrate the need to move to more customer centric product strategy processes to enable customer focus and speed of innovation. The aim is to develop a practical framework that will help drive continuous innovation, leveraging open and rapid innovation processes.

1.2.2 Research Question

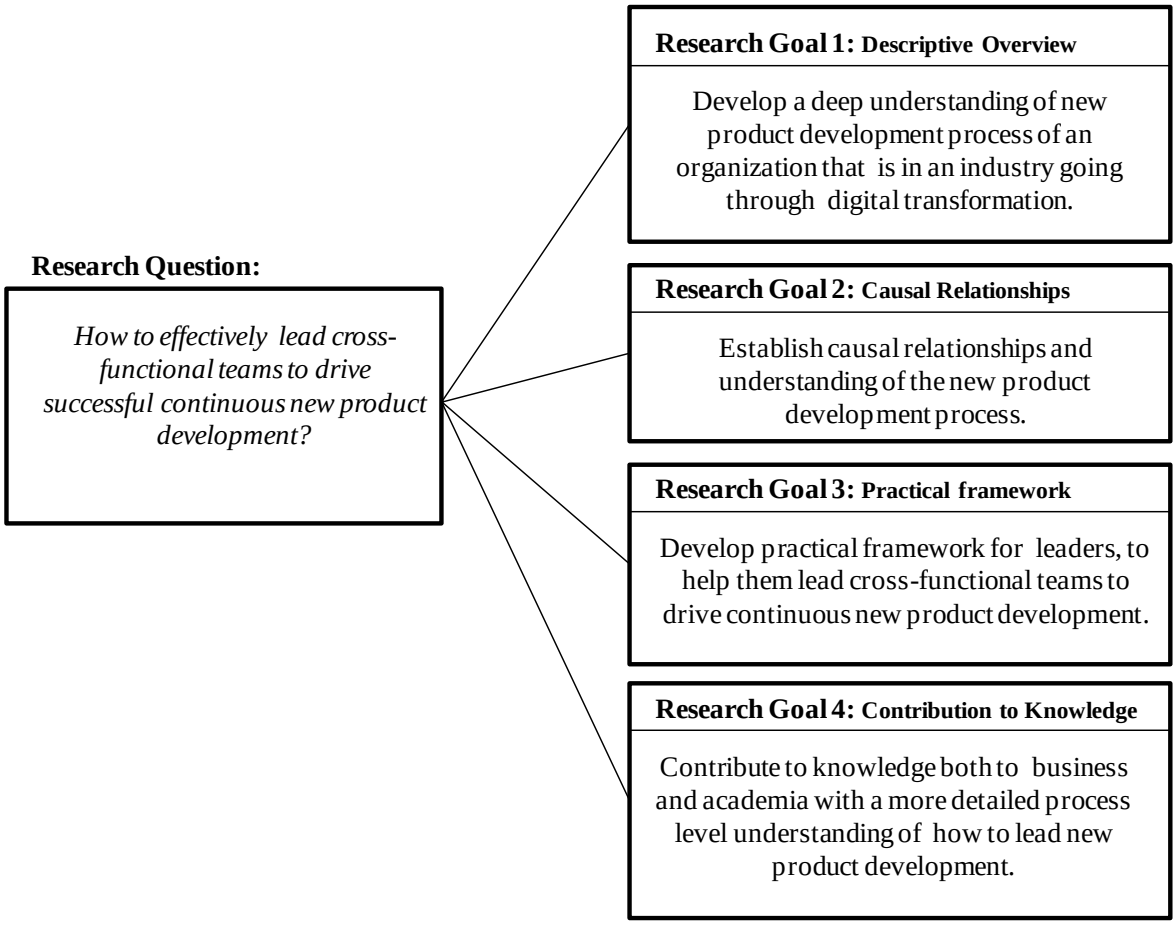
The research question as addressed in the current research is '*How to effectively lead cross-functional teams to drive successful continuous new product development?'*.

The new product development process is defined as the process of creativity and development of the product strategy, generating ideas for new products to be evolved or developed and the innovation process of bringing them successfully to the market. This is consistent with Amabile's definition of creativity and innovation (1988), in which she defines creativity as "the production of novel and useful ideas by an individual or small group of individuals working together", and innovation as "the successful implementation of creative ideas within an organisation" (p.126).

The overall research goal is to first conduct an empirical study in order to develop a deep understanding of the new product development process of an organisation in an

industry faced with the digital transformation. Secondly, the current research aims to establish causal relationships between key variables. Based on findings it will then look to develop a practical framework for leaders to drive continuous innovation. Finally, the aim of this thesis is to contribute new knowledge both in industry and academia.

Figure 1.1: Research Question



1.2.3 Role of Researcher

The researcher has over 20 years industry experience in leading innovation and change in large, multi-national organisations. The interest in this research is rooted in a passion to understand better key drivers for successful innovation leadership and how to influence change in large organisations. The researcher is interested in practical applications of tools developed to improve organisational performance. The researcher was an employee of the company studied and involved in many of the product launches from 2011-2015. The researcher left the company in 2015 and today leads a customer and innovation function for one of the biggest global banks.

1.2.4 Theoretical and Practical Contributions

As can be seen in the literature review, there is a clear gap and a need for cross disciplinary studies using integrated frameworks (Anderson at al. 2014; Fagerberg, 2003; Zhou and Hover, 2014). It is highlighted that there is a need to build more knowledge around innovation theory and practice through process studies, looking at innovation in the context of the organisation and show how the process unfolds over time (Anderson et al. 2014; Brenton and Leving, 2012; Debenham and Kaberon, 2014; Hustad, 2012; Nakata & Di Benedetto, 2012).

As a result, the study focuses on a company going through digital transformation and four product launches over the course of 4 years. This will, firstly, show within case analysis of the end-to-end innovation process and, secondly, include a cross-case analysis that shows a causal network for the new product development process.

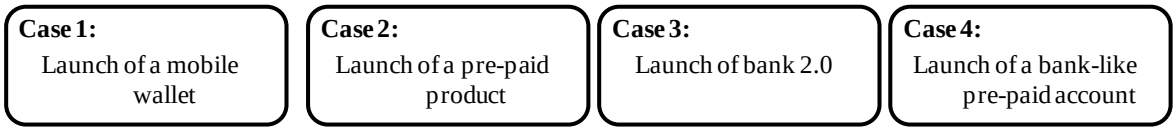
Firstly, the study contributes to theory by providing a process driven account of new product development, showing how it unfolds over time. By developing a causal framework for new product development it contributes to new product development and innovation theory.

Secondly, it contributes to practice by studying four cases of new product development in their natural setting. Through the cross-case analysis a detailed practical framework is developed for practitioners on how to lead continuous new product development.

1.2.5 Overview of the Research Approach

This research takes place within the emerging payments division of a global financial services organisation, investigating four distinct product launches within the division over a period of four years. Over these four years the company went from a closed, product centric innovation process to an open, customer centric process. These four cases represent the change in the new product development approach and are excellent case studies to demonstrate the journey and critical success factors.

Figure 1.2: The Four Cases



The research approach utilised in-depth case studies, using semi-structured interviews with template analysis to analyse the cases. Additionally, visualisation and

causal frameworks are used to establish causality. Details of the research methodology can be found on page 103. The goal was to get detailed understanding of the product launches using a critical incident analysis. The majority of the interviews were face-to-face, with two conducted via telephone.

1.3 Overview of Organisation and Cases

1.3.1 Overview of Organisation

The company is an established global financial services firm that provides consumers around the world with financial products and experiences. The company is a well recognised global brand that ranks highly on the Forbes list as one of the world´s most admired companies (Company Website, 2014). The company offers a range of products and services tailored for individuals, small businesses, mid-sized companies and large corporations. In its 2013 annual report, the company stated that it is "facing increasing competition from non-traditional players that leverage new technologies and customers´ existing card accounts and bank relationships to create payment or other fee based solutions. The company is transforming its existing businesses and creating new products and services for the digital marketplace as it seeks to enhance its customers´ digital experiences and develop platforms of online and mobile commerce. Emerging technologies also provide an opportunity to deliver financial products and services that help new and existing customer segments move and manage their money, which we are pursuing through our Emerging Payments division" (Company Annual Report, 2014).

1.3.2 Emerging Payments Division

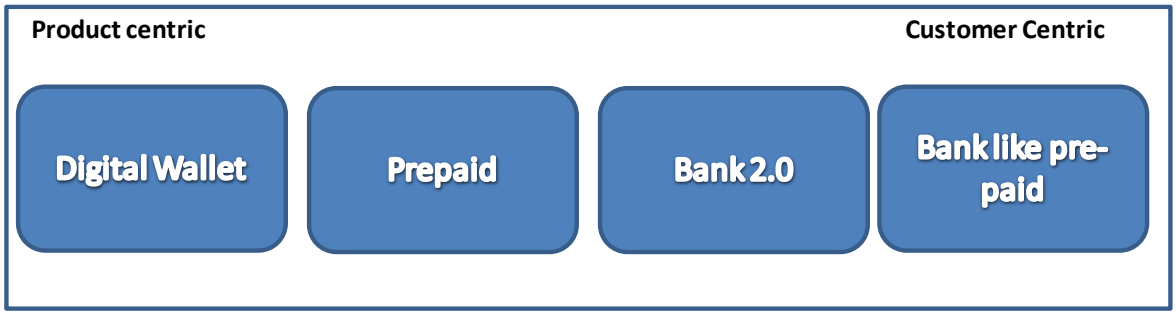
The company completed the acquisition of a next generation payment platform in 2010. It was purchased to enable the company to aggressively enter the non-traditional payments market. The platform allowed the company to compete in the peer-to-peer payments space and to develop new re-loadable payment products for new segments of the market.

Along with this, the organisation hired a senior leader from the mobile industry to lead the emerging payments division. The division was set up as a separate business unit in another building to create an environment conducive to innovation and help accelerate the pace of innovation in the payments arena (Company Website, 2010). The division's focus was to culturally move the organisation to more rapid innovation cycles and focus on a start-up like platform and software development approach to launch products and benefits quickly. According to a Senior Vice President at the company the key objectives of the division was firstly to create an environment where it would be possible to target new segments with new products; secondly to change significantly the pace at which products were delivered and thirdly to become a portal for talent within the organisation (Research interviews, 2014).

1.3.2.1 New Product Launches within the Emerging Payment Division

Over the course of four years, the division launched a number of new and innovative payment products to the US market, tailored for new and different segments of the US population. Investigating four specific product launches through the case study approach, this thesis will evaluate how the division went from a product centric new development process to a customer centric process as shown in Figure 1.3 below.

Figure 1.3: Overview of the Cases



1.3.2.2 Launch of Mobile Wallet - Case 1

The company announced the launch of a digital and commerce payment platform in early 2011. The new product was built on the platform the company had acquired. The market launch included some additional customer benefits beyond the original platform features. At the launch of the product, a Digital Wallet and a pre-paid account, which existed in a secure digital network in the cloud, offered peer to peer payments and the ability to load money from a bank account or any debit and credit cards (The Company Website, 2011). As a senior company executive noted in an interview with Bloomberg at the point of launch, “this is really the first time that the company is going to be able to address those consumers that typically would utilize either a debit card or a current account" (Bloomberg, 2011).

1.3.2.3 Launch of Pre-paid - Case 2

The company launched a pre-paid card aimed at the pre-paid segment in the US with the goal to provide a simple, low fee pre-paid alternative to consumers. As stated by a key company executive at the time of launch, "we created a simple, transparent and easy to use everyday payment card to address a real pain point that consumer have with existing

pre-paid products in the market that are laden with fees and confusing terms, including monthly maintenance fees" (New York Daily News, 2011).

1.3.2.4 Launch of Bank 2.0 - Case 3

The company launched a Bank 2.0 product in October 2012, in partnership with a major US retailer. The product combined the company's benefits and service with the value and convenience that the retailers was known for. The product combined the best of pre-paid and digital capabilities and was launched on an innovative software platform: "the product is our solution to help those that are dissatisfied with traditional banking products so they can easily and safely move, manage and spend their money. We have worked with the retailer to create a financial service that is so cost effective for consumers but still comes packed with digital capabilities to help give these consumers more choice and access when it comes to making payments", said a company senior executive at the launch (Company Press Release, 2012.)

The goal of the product was to substantially disrupt the banking industry by offering an easy to use account with low fees and attract new customer segments to the company. A study by Bretton Woods (2012) found that consumers in the US pay an average of $259 per year for a basic current account. In an interview with Harvard Business Review in early 2014, a senior company executive talked about the results of the programme: "we have over 1 million accounts, and over $1 billion has been loaded onto this product. More than 85% of the product customers are new to our company, and half are under age 35, so it is expanding our franchise" (HBR Blog, 2014).

1.3.2.5 Re-launch of Mobile Wallet as a Bank-like Pre-paid Account - Case 4

A year after the launch of Bank 2.0, the company announced a major upgrade to the Digital Wallet. The intention was to reposition the product to aggressively target the under-banked and unbanked segments in the US, that are customer segments that have limited access to mainstream financial services. The goal was to reposition the product closer to a bank-like pre-paid account that could replace a current account in the market. New features, such as ability to load cash at thousands of retail locations in the US, direct deposits, financial management capabilities and ability to add cheques through the mobile app were announced. This was all supported by a major omni-channel media campaign through TV, radio, digital and retail channels.

In June 2014, the company announced that "in the first four months of the year, we have acquired 2.4 million customers on the platform, with over one million customers acquired in the month of April alone" (Company Website, 2014).

1.4 Structure of the Thesis

Following the introductory section, section two covers the literature review, focused on the theoretical framework for the thesis and the main theories of leadership and creativity and innovation. Section three covers the research methodology in detail, the research method chosen and the outcome of the pilot study, conducted ahead of the main study. Section four is dedicated to the findings and the analysis of the four cases including causal models based on case study findings. Finally, section five presents conclusions and recommendations.

2. Literature Review

2.1 Introduction

Innovation is becoming paramount for businesses to launch differentiated products and services in today's competitive global economy. With increased competition, globalisation and pressures in the economy, it is critical for companies to stay competitive and deliver products and services that meet the needs of today's and tomorrow's consumers. Moreover, with rapid advancement in new technology, innovative business models are emerging that threaten old and established businesses.

While technology is a key factor driving a major disruption in the business models, it is ultimately the customer demands and the organisational ability to meet the needs of customers above and beyond the competition that will drive success or failure in the marketplace. As a result, it is paramount for organisations to have innovation capability that is able to proactively capture new customer needs and rapidly bring out relevant products and services that meet those needs better than the competition.

In recent years, organisations that have opened up their innovation processes and effectively leveraged partners in accelerating innovation have been able to drive significant bottom line growth. Procter and Gamble (P&G) is an example of this, whereby they accelerated their pace of innovation through their Connect and Develop programme, which acquires products from companies, or licenses the products from them, and uses the P&G brand to bring them into the market (Chesbrough and Appleyard, 2007).

Leaders need to build a culture of speed, collaboration and openness to drive innovation within multinational organisations. In order to do this, they need to be able to harness talent within the organisation by bringing together the right cross-functional teams for the right projects and empower them to effectively work together to quickly bring

innovative products and services to the market that in return deliver above average performance.

In reviewing the literature there are numerous studies on leadership as well as innovation but very limited studies that connects the two (Hill et.al, 2014). Additionally, it is highlighted that there is a real gap in studies that show leadership management and innovation in action and there is a call for more process oriented studies that show detailed context and actors involved (Anderson et al. 2014; Dinh et al. 2014; Lichtenthaler & Lichtenthaler 2009; Lichtenthaler 2011; Trott 2008; Zhou and Hover 2014).

The focus of this study is to develop a causal framework for new product development and develop a practical tool to aid the leaders and teams to drive continuous innovation in large multi-national organisations.

To support the research, the literature review is structured into the following key areas:

1. **Section 2.2 - Critical Success Factors for New Product Development and Innovation**

This section looks at the literature of critical success factors for new product development over the last few decades and through seminal work highlights key areas of focus to understand what drives success. These are: 1) Organisational culture and Leadership, including cross functional teams; 2) New product strategy and process; and 3) Performance measurement. Based on these findings the literature review is structured around these areas.

2. **Section 2.3 New Product Development Strategy and Processes**

This section gives an overview of key theories and debates in creativity. innovation and new product development process. It includes discussions of rapid innovation models including design led innovation, open innovation, agile innovation and lean innovation. In this section it is argued that there is a need to move to more open and lean innovation processes.

3. **Section 2.4 Culture & Leadership**

This section provides an overview of the key theories and debates in organisational culture. Additionally, it focuses on organisational leadership with a focus on leadership styles and approaches used to drive creativity and innovation in organisations, including: a) Transformational leadership, b) Agile leadership and c) Leadership in teams and cross-functional teams. In this section it is argued that there is considerable overlap between transformational and agile leadership and elements of both theories will be used for the primary study. It is further argued that there is an opportunity to merge these two theories for future innovation leadership theory development.

4. **Section 2.5 - Performance and Measures of Success**

This section discusses different ways to measure innovation and different metrics that can be used. It argues that there is a need to look at the end to end process of leadership and innovation and link it together with performance metrics.

5. **Section 2.6 - Conclusion**

This sections provides a summary of the literature review and argues that there is a need for process oriented research that studies leadership and innovation in action.

6. **Section 2.7 - Research Framework**

This section presents the recommended research framework to be used during the pilot study.

2.2 Critical Success Factors for New Product Development and Innovation

There have been a number of studies over the last decades on the key success factors of new product development and innovation in organisations. The topic has been researched from various disciplines and perspectives causing the literature on innovation and new product development to be fragmented.

Fagerberg argues that there is no single discipline that looks at all elements of innovation and recommends cross-disciplinary perspective to get a comprehensive overview (2003). Today it is still considered a major challenge to measure the process of innovation for both practitioners and academics due different approaches and practices. Equally, it is paramount to understand the key factors that drive successful new product development to enable continuous improvement. To build a deep understanding of the process it is important to look at innovation in the context of the organisation (Trott, 2008).

Brown and Eisenhardt conducted an in-depth analysis of the new product development literature to create an integrated model for new product development (1995).

The key findings were that the literature on new product development focused on three streams that are overlapping and complimentary:

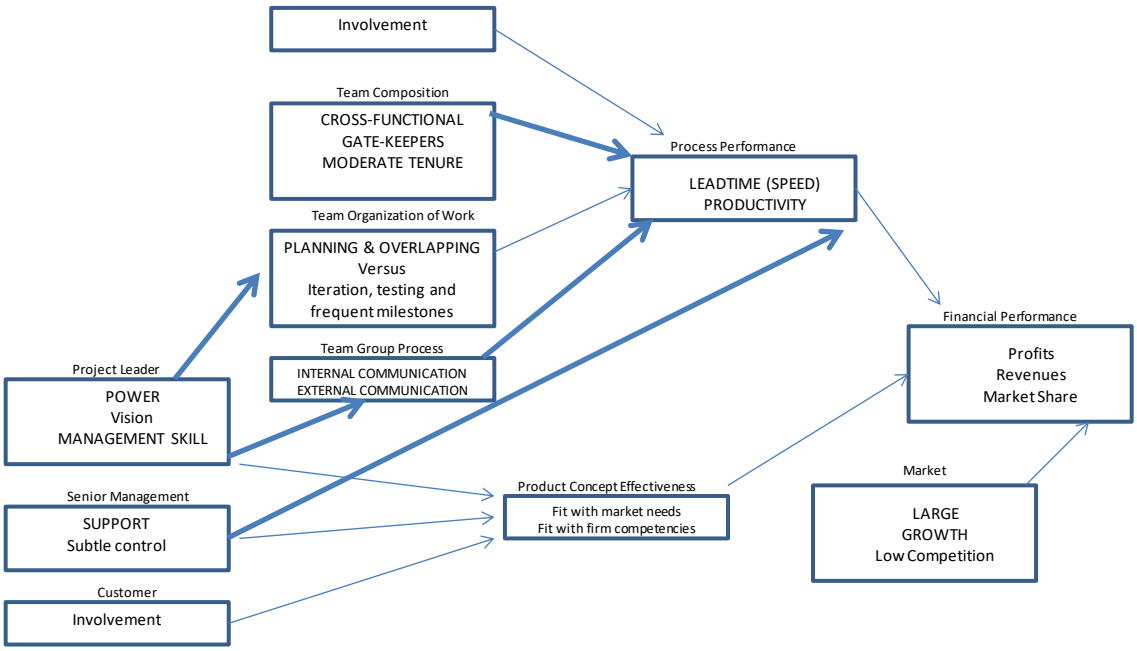
a) The rational plan perspective," that contributes a sweeping view of project development, including team, senior management, market, and product characteristics to predict financial success" (Brown and Eisenhardt, 1995, p. 366).

b) The problem solving perspective, "that has a more deeply focused view on the actual development process" (Brown and Eisenhardt, 1995, p. 366).

c) The communication web perspective, "that centers on a very specific, although important aspect of product development, namely on internal and external communication by project team members" (Brown and Eisenhardt, 1995, p.366).

By analyzing the literature in detail Brown and Eisenhardt conclude that there is need to merge these strands together into a single integrated model (Figure 2.1) that demonstrates that there are a number of factors and players that influence product performance.

Figure 2.1: Factors Affecting the Success of Product Development Projects



Capital letters and thickened lines indicate robust findings.

Source: Brown, I.S. and Eisenhardt, K. M. (1995)

Reviewing empirical literature of over 30 years Ernst (2002) concluded that the key success factors fall into the following 5 key categories: 1) The New product development process; 2) The New product Development Strategy; 3) Organisation of the project, that includes elements such as use of cross functional teams and communication between teams; 4) Culture and 5) The role and commitment of Senior Management.

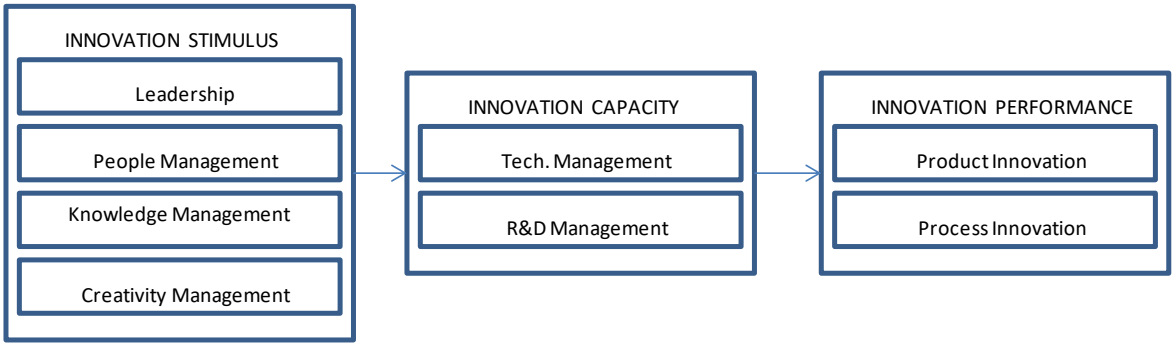
Cormican & O'Sullivan identified 5 features that they deemed critical to product innovation management. They developed a scorecard to measure and optimize the innovation process around these 5 dimensions a) strategy and leadership; b) culture and

climate; c) planning and selection which looked at the end to end innovation process from strategy to implementation; d) structure and performance which covered the area of cross functional teams and performance measurements; and e) communication and collaboration covering communication models and collaboration (Cormican & O'Sullian, 2004)

Kahn, Barczak and Moss proposed in 2006 a best practice framework organizing benchmarking data from published studies showing six themes; a) a robust NPD strategy; b) formal portfolio management process; c) formal NPD process; d) proactive market research; e) use cross functional teams and d) use standardized metrics. In 2012 Kahn et al. update the model to include culture and cross functional team climate. (Kahn et al. 2006, 2012).

Prajogo and Ahmed developed an integrated model of innovation management focused on innovation stimulus, innovation capacity and innovation performance. Their research reveals a strong relationship between innovation stimulus and innovation and again a strong relationship between innovation capacity and innovation performance. It did not show a direct relationship between innovation stimulus and innovation performance. This demonstrates the importance of looking at holistic innovation systems within an organisation.

Figure 2.2: Innovation stimulus, Innovation Capacity & Innovation Performance



Source: Pajogo, D.I. and Ahmed, P.K. (2006)

Cooper an Kleinscmidt identified 9 different factors that drive performance of new product development. These nine factors are 1) A high-quality new product process; 2) A defined new product strategy of the business unit; 3) Adequate resources of people and money; 4) R&D spending; 5) High quality new product project teams; 6) Senior management commitment; 7) An innovative climate and culture; 8) The use of cross-functional project teams and 9) Senior management accountability for new product results (Cooper and Kleinschmidt, 2007).

Summarizing these research findings you can break the success factors into five broad categories as can be seen in table 2.1. These categories are 1) Organisational culture; 2) Leadership; 3) Cross functional teams; 4) New product strategy and process; and 5) Performance measurement. The vast majority of the studies have been done through a positivitist quantitative measurement and therefore lack an in-depth process oriented insights.

Table 2.1: Summary of NPD best practice models

		Brown & Eisenhardt (1995)	Ernst (2002)	Cormican & O'Sullivan (2004)	Kahn, Barczak & Moss (2006)	Coopers & Kleinschmidt (2007)	Kahn, Barczak, Nicholas, Ledwitch and Perks (2012)
Innovation Leadership Culture/Leadership/ Cross Functional Teams	**Culture**		Culture	Culture and Climate		An innovative climate and culture	Culture
	Leadership	Senior Management Project Leader	Role and commitment of Senior management	Strategy and Leadership		Senior management commitment to and involved in the products	Leadership
	Cross Functional Team/ Communication /Project Organisation	Team Composition Team organisation of work	Organisation	Communication and Collaboration Use of cross functional teams & team leaders	Use Cross Functional teams	High quality new product project teams The use of cross functional teams Adequate resources of people and money R&D Spending	Project climate through Cross functional teams and communication
Innovation Capability New product strategy & process	**Strategy/ Market & Customer Insights**	Suppliers Customers Market	Strategy	Planning and selection	Product Strategy Portfolio Management process Proactive market Research	A defined new product strategy	Research
	New Product development Process	Process Effectiveness	NPD Process	Planning and Selection	Formal NPD process	A high quality new product process	Process
Innovation Performance Performance	**Results**	Financial Performance		Performance indicators aligned w organisational goals and encourage desired behaviours	Utilize standardized criteria and metrics	Senior management accountability for results	Research and commercialisation

Reviewing the best practice models it has been established that there are a number of factors inside and outside the organisation that impact the success of new product development and the ecosystem must be explored as a whole (Brown and Eisenhardt, 1987, Prajogo and Ahmed, 2006). As highlighted, most of these sudies were done through a quantitative measurement of key success factors. Kahn et. al identified that there

is limited research and a gap in understanding around innovation climate, culture and measures of success (2012). The literature is fragmented and lacks a practitioner and a cross disciplinary perspective. It also lacks contextual and process oriented learnings.

In 2012 the Journal of Product Innovation Management asked "What new knowledge is needed to ensure the advancement of NPD-innovation theory and practice?" (Nakata & Di Benedetto, p. 341, 2012). In a special issue it was identified that there is a need to understand how to improve the overall product development process (Hustad, 2012) as well as the importance of understanding better innovation culture including looking at leadership and teams (Debenham and Kaberon, 2012; Brenton and Levin, 2012). Furthermore, Anderson et al. (2014) and Zhou and Hover (2014) highlight the gap in cross disciplinary studies that build a better understanding of the innovation process from a practitioner perspective.

In order to understand the key success factors in detail the following chapters in the literature review are structured around a) Innovation Capability; which covers the new product development strategy and process including theories on creativity and innovation and the new product development process. b) Innovation Leadership; which covers Culture, Leadership & Cross Functional Teams and c) Innovation Performance which looks at how to measure success.

2.3 Innovation Capability: New Product Development Strategy and Processes

This section provides an overview of a) the new product development strategy and the b) the new product development process which is broken up into:

i) Key theories and debates on creativity.

ii) Key theories and debates on the innovation process.

iii) Key theories and debates on customer centric innovation.

Innovation can be divided into creativity and the innovation process. In this research, creativity will refer to the process of generating new ideas and innovation/ the innovation process will refer to the process of bringing these ideas to market in line with Amabile's definition of creativity and innovation (Amabile, 1988).

2.3.1 Product Strategy

Reviewing the literature for new product development, strategy is frequently identified as a critical success factor. Cooper and Kleinschmidt identified it as the second most important factor of success behind having a high quality new product process in place (Cooper and Kleinschmidt, 2007). The strategy includes a number of factors such as having a clear vision and a long term view of the new product development approach; incorporating clear goals and measures for success; having good communication of the vision and plans; leveraging market studies to help direct strategic priorities and making sure that the strategy is well tied to the overall business strategy (Coopers and Kleinschmidt, 2007; Cormican & O'Sullivan, 2004; Ernst, 2002; Kahn, Barczak & Moss. 2006).

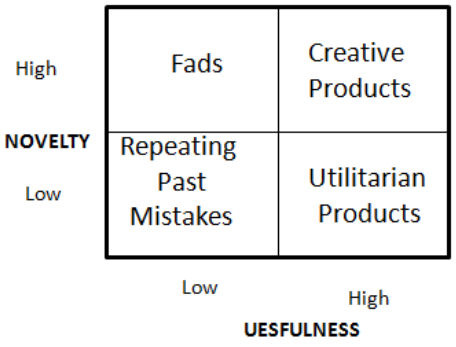
2.3.2 New Product Development Processes

In this research the new product development process is the end to end process of creativity and the innovation from the generation of the idea to the launch of the product to the market. This section focuses on the creativity and innovation process, including emerging theories on disruptive, agile, open and customer driven innovation.

2.3.2.1 Introduction to Creativity and Innovation

Creativity is an important step that is essential for innovation (Scott and Bruce, 1994). A number of definitions of creativity share a common theme of being novel, appropriate and acceptable and can be generally defined as the formation of novel, appropriate and useful ideas, products, processes or services by individuals or small groups (DiLiello and Houghton, 2004, Shalley and Gilson, 2004, Woodman, Sawyer & Griffin, 1993). In the context of organisations and creating competitive advantage, Puccio et al. (2011) define innovation as the production of original ideas that serve a specific purpose. They focus on the importance of being both useful and novel and have developed the following model in the context of defining creative products:

Figure 2.3: What makes a Product Creative?



Source: Puccio et al., 2011, p.23

Amabile describes innovation as the "successful implementation of creative ideas within an organisation" (1988, p.126). The Oslo Manual defines innovation as "the implementation of a new or significantly improved product (good or service), process, a new marketing method, or a new organisational method in business practices, workplaces organisation or external relations" (OECD/Eurostat, 2005, p.46). Essentially, it is the process of taking a creative idea, evaluating its commercial viability, and through a robust innovation process developing the idea into a product or service that is successfully launched. The Oslo Manual further divides innovation into process innovation type and scale of innovation activity carried out by the organisation (OECD/ Eurostat, 2005). Anderson et al. (2014) argue that more recent literature suggest that the distinction between the two concepts is not very clear and that creativity happens throughout the innovation process.

2.3.2.2 Key Theories and Debates on Creativity

Amabile (1988) argues that innovation in an organisation is considerably influenced by the extent of relevant skills of creativity possessed by its employees. She further argues that creativity is an outcome of an individual's accumulated creative thinking skills and experience based on the past experience, and that creative skills can be developed and trained. Bharadwaj and Menon (2000) supported this with their study demonstrating that higher levels of creativity led to significantly higher innovation performance. Creativity and innovation takes place at multiple levels within an organisation (individual, team, organisation level) and needs to be formalized and managed for maximum impact. Leadership can have significant positive impact of creativity

performance of an organisation by providing a work context that supports creativity, providing clarity and goals for delivering creative outcomes and enabling team and social settings that foster creativity (Salley and Gilson, 2004).

Creating an environment for creativity is therefore important. It has been argued that creative employees require a) autonomy, b) deadlines to drive the creativity process, c) strong feedback loop on ideas and d) flat organisational structure (Scott, 1995). Similarly, Shalley and Gilson argue that a flatter organisational structure and wider span of control by the team may be more conducive to employee creativity (2004). The challenge with this approach and structure is how transferable it is to large global organisations, which are typically not flat in structure.

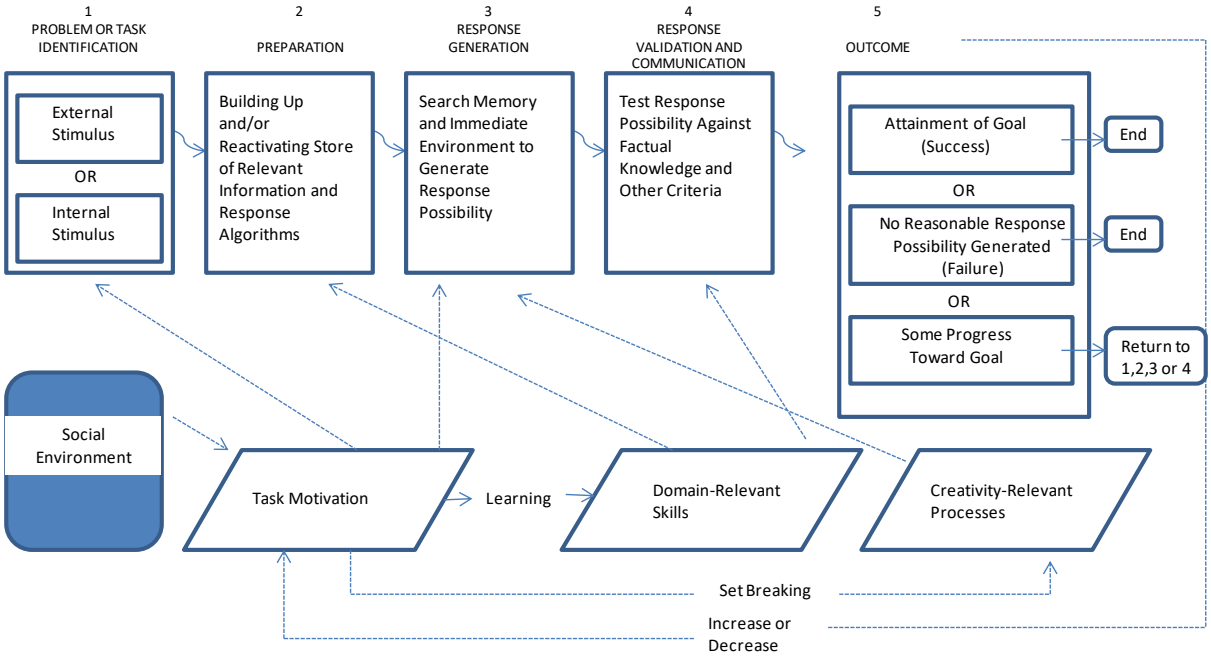
Similarly, creativity is often seen to work better in smaller, entrepreneurial environments. 'Can Creativity Scale?' - This question was raised at an event at HBS by a former entrepreneur, who now works at Google (Amabile and Khaire, 2008). To capture creativity in larger organisations processes become more important.

Leaders become critical to facilitating the team's success (Manz and Sims, 1987). They need to create a fair climate, encourage risk taking and constructive task conflict, remove uncertainty and any blame culture that exists, and foster open communication (Shalley and Gilson, 2004). Jung (2000) has identified a relationship between transformational leadership and creativity, showing that transformational leadership promoted higher levels of creativity and certain characteristics of transformational leadership, such as intellectual stimulation, may help followers look at problems from different perspectives (Jung, 2000).

Amabile put forth the componential theory of creativity in 1983 and since then it has considerably evolved. The definition of creativity is grounded in the concept that creativity is generation of ideas that are both appropriate to some goal and novel in nature. The theory suggest that "creativity should be highest when an intrinsically motivated person with high domain expertise and high skills in creative thinking works in an environment high in supports for creativity" (Amabile, 2013, p.135). The theory is shown in Figure 2.4 and identifies three components within individuals that have an impact on a person's creativity. These components are 1) Task motivation; 2) Creative-relevant processes and 3) Domain relevant skills.

Task motivation refers to how motivated the individual is in undertaking a task or a project; is it interesting, challenging or a satisfying project? People will be most creative when they are truly motivated about the task or project. Creativity-relevant processes refer to the person's cognitive style and personality that lead to risk taking, being open to different perspectives and tolerance for ambiguity, for example. Domain relevant skills refer to the person's knowledge, technical skills and expertise (Amabile, 2013).

Figure 2.4: The Componential Theory of Creativity



Source: Amabile, T. M., 1996, p. 113

Note: "The broken lines indicate the influence of particular factors on others. Wavy lines indicate the steps in the process. Only direct and primary influences are depicted." (Amabile, 1996, p.113)

The componential theory of creativity has evolved to take elements of the work environment influencing both individual and teams into account. However, it still does not consider the physical environment nor external factors like competition and economic environment (Amabile, 2013). Amabile's focus is on how the individual interacts with other group members in the context of the organisation. It does however not consider or view creativity as an organisational process. (Fortzenwengel et al., 2016).

Much of the early work on creativity research tended to take either a micro perspective, focused on individual factors such as motivation (Amabile, 1982), or a macro perspective, focused on group creativity looking at elements such as the impact

of the environment (Ford, 1996). These elements were seldom studied together (Pirola-Merlo and Mann, 2004).

The interactionist perspective of organizational creativity (Woodman, Sawyer, and Griffin, 1993) does focus on the complex interactions between the contextual and individual factors looking at the individual, the group and the organisation. It is one of the more used frameworks highlighting the interaction between the individual and the contextual setting looking at factors that enable or hinder creativity. (Anderson et al., 2014; Shalley, Gilson & Blum, 2009, Zhou & Shalley, 2010).

Pirola-Merlo and Mann (2004) demonstrated, similar to studies conducted by Ford in 1996, that creativity unfolds over time. This is further argued by Anderson et al. and that creativity and innovation is a messy process that is non-linear (2014). Paulus and Yang (2000) demonstrated that the ability to exchange ideas in a team setting gave the team the opportunity to reflect on the ideas (incubation), and as a result of having the opportunity to incubate and reflect on ideas creativity and innovation in the organisation increased. Moreover, it has been demonstrated that the highest level on innovation performance occurs when there are both individual and organisational creativity mechanisms in place within an organisation (Bharadwaj and Menon, 2000).

Perez-Freije and Enkel (2006) identified three creativity discipline models for companies depending on the speed of change in the industry it operates, focusing their efforts on detecting the influence of creative tension on the innovation control system design. Their findings suggest that creativity is indispensable for competitive innovations and it is recommended that in fast paced industries, key performance indicators should be future oriented and focused on the speed of the feedback loop,

speed of reacting to changes in the environment or frequency of monitoring the external environment, for example.

The componential theory of creativity and interactionist perspective of creativity focus on the creative outcome and the factors impacting the outcome (Unsworth & Clegg, 2010). Drazin et al. offered an alternative examination of creativity focused on creative processes (1999). Ford placed focus on studying why individuals choose to be creative Additionally, Ford argued that routine actions and creativity are competing forces. This is further supported by Drazin et. al. who argue that when faced with conflicting frames of reference, individuals use sense making to resolve conflict (Ford, 1996; Drazin 1999; Unswroth & Clegg, 2010).

The ambidexerity theory of creativity looks at the processes of how conflicting demands at a number of organisational levels are managed to drive innovation. (Bledow et. al. 2009). The theory looks at the management of both the creativity and innovation process and demonstrates that leadership, individuals and the organisation need to develop strategies to manage conflicting demands. The theory highlights strategies and tactics that can be applied at different levels in the organisation to deal with the conflict of creativity and implementation of innovation such as transformational leadership, separation of the R&D team from the implementation team and encouragement of internal and external communication. A summary of outcome can be seen in table 2.2 on the following page.

Table 2.2: Ambidexterity: The Regulation of Explorative and Exploitative Action at Multiple Organisational Levels

	Separation	Integration by active management	Integration by self-regulation
Organisation	Specialisation of an organisation either on exploration or on exploitation Separating explorative units from exploitative units (eg. research, and development) with distinct culture, incentive systems, and leadership styles Time based separation into phases of exploration and exploitation according to the punctuated equilibrium model	Providing leadership that embraces competing values and practices Supporting creativity and initiative in all sections and on all hierarchical levels of on organisation . Transformational leadership at the top of the organisation. Providing resources for innovation to all rather than just to specialised departments	Intra-organisational market of ideas and emergence of innovation champions Integration of conflicting activities in the top management team through dialectic processes of power and negotiation
Team	Segmentation of the innovation process into stages of idea generation, evaluation, selection, and implementation Reducing task and sequential inter-dependence in a team Selecting people into a team with diverse knowledge, skills and abilities to increase diversity Creating fixed and specialized roles in a team	Engaging in complementary leadership behaviours such as structuring activity, control and empowering employees to explore autonomously A transformational leader who provides a common vision for a team that integrates diversity Adapting to situational task demands and switching between leadership activities Providing external help to switch between mindset and activities Encouraging internal and external communication and facilitating skunk teams	Breadth of cognitive and behavioural complexity of team members and development of transactive memory systems and team reflexivity Emergence of shared leadership and team roles according to capabilities and task demands Political processes of selling new ideas and negotiating for resources Minority dissent as a regulating process in teams Development of skunk teams in addition to formal teams

Source: Bledow et.al. (2009)

Other more recent studies also place more focus on creativity as a process (Sonenshein, 2014; Fortwengel et. al. 2016). Zhou and Hover argue that creativity is influenced by both the context as well as the key actors in the process and argue for a more complex body of research on creativity by looking at both the actors as well as the context (2014).

2.3.2.3 Summary: Key Theories and Debates Creativity

It has been argued that individuals can be trained to be creative. It has also been argued that there are certain factors in an individual that drive creativity, such as their motivation, skill set and the environment they work in. In an organisational setting managing the creativity process is paramount through setting goals, creating an environment and support for creativity. Focusing simultaneously on individual, team and organisational creativity is likely to lead to the highest level of innovation. Current research tends to either focus on the individual perspective of creativity or on the team perspective and these elements are usually not studied together. Additionally, external environmental factors are usually excluded. The componential theory of creativity and the interactionist perspective of organisational creativity look at the relationship and interactions between the individual, the group and the organisation. On the other hand, the ambidextery theory of creativity looks at creativity processes. The study of different parts of the new product development process in isolation, focusing on either the individual or the team level calls for more cross-disciplinary approach to understanding the holistic process. Chen and Kaufmann called for a cross disciplinary to study of creativity including social and environmental context (2008). Equally, Anderson et. al. (2014) and Zhou and Hover (2014) call for more integrated frameworks and process oriented studies looking at actors and context.

2.3.2.4 Key Theories and Debates Innovation Processes

As discussed previously, the innovation process refers to the successful implementation of creative ideas to the market (Amabile, 1988). This section debates different theories and processes used for innovation and argues the need to move to a more flexible stage-gate process to support a more lean and open innovation approach.

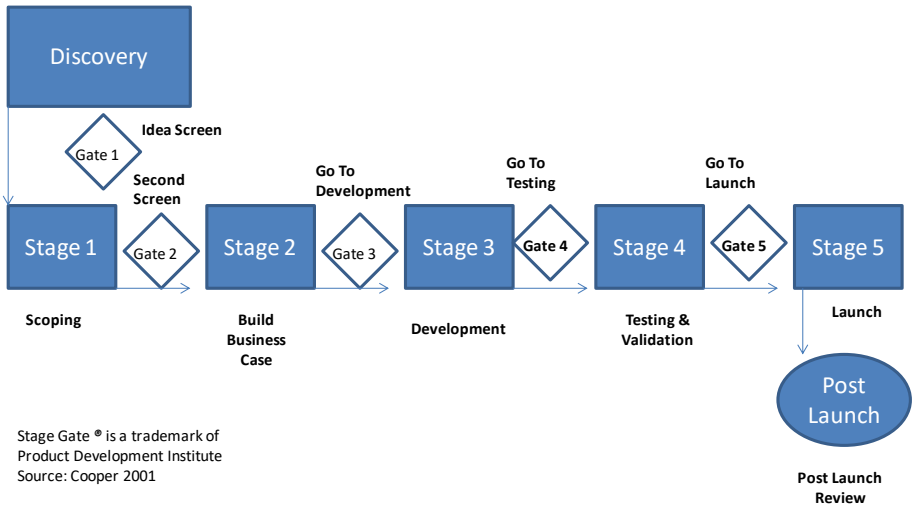
There is a high chance of failure with new product development efforts; while over 60% of the NPD projects are never launched, 40% of those that do fail to make any profits and are exited from the market (Christensen, 2003).

Cooper and Kleinschmidt (2008) identify a high quality new product process as the number one critical success factors for new product development. Key to this was having a well documented and communicated NPD process, clear definition of the product, incorporating go/ no-go decisions throughout the process and focus on quality of execution that still allows for flexibility and decision point throughout the process. Additionally, market orientation, leveraging market research and customer orientation making sure that the product is aligned with customer needs were deemed critical (Cooper and Kleinschmidt, 2008; Ernst, 2002; Cormican & Sullivan, 2004; Kahn et. al., 2012)

There are a number of different processes for new product development and innovation that companies use today. Kotler (1997, p.438) outlines an 8 step new product development process: 1) Idea generation; 2) Idea screening; 3) Concept development and testing; 4) Marketing strategy development; 5) Business analysis; 6) Product development; 7) Market testing, and 8) Commercialisation. Most new product development processes follow a stage-gate process ® that has go/ no go decisions or gateways to ensure that the

quality is met. Developed by Cooper (2001), the stage-gate system is a well-known system by companies globally to manage new product development.

Figure 2.5: Stage-Gate®: A five stage, five gate system along with Discovery and Post-Launch Review



Source: Adapted from Cooper, 2008, p. 4

Cooper (2008), argues that while the process is shown as linear it is unlikely to be linear when applied in an organisation. Cooper intends this to be a system that is adaptable for variety of different projects and processes, and argues that a number of companies have started adapting the process for open innovation and are developing leaner versions of the process.

The Delft step-by-step product innovation model follows the following elements (Buijs, 2003, p.85).

Table 2.3: Delft step-by-step Product Innovation Model

#	Steps	#	Steps
1.	Strategic Situation of the Company	12.	External Analysis
2.	Internal Analysis	13.	Generating Search Areas
3.	Evaluation	14.	Chosen Search Area
4.	External Need Analysis	15.	Internal Analysis of Bottlenecks
5.	Generating Product Ideas	16.	Evaluation
6.	Design Brief	17.	Product Development
7.	Market Development	18.	Developing Manufacturing
8.	Product Design	19.	Evaluation
9.	Product Introduction	20.	Manufacturing
10.	Distribution, Promotion and Sales	21.	Product Launch
11.	Evaluation	22.	Product in Use

Source: Buijs, 2003, p.85

Buijs (2003) argues in the analysis that the process is actually not that linear and is much more chaotic in reality. Moreover, Gronlund et al. (2010) highlight the importance of the stage-gate process in the new product development activity. However, they also highlight that it can be time consuming, bureaucratic and can reduce speed to market. In their research, they recommend an open stage-gate model towards integrating some of the principles of open innovation into the process. Furthermore it is also argued that the inflexibility of the process can result in too much rigour around stage gate reviews and in return be harmful for new product development (Sethi & Iqbal, 2008).

Whilst the stage-gate process is a critical tool for new product development, there is a need to adapt the application of the process to agile, lean and open innovation models to allow for a much more flexible and non-linear process.

2.3.2.5 Key Theories and Debates on Customer Centric Innovation Models

Over the last decade, there has been a major focus on accelerating the innovation processes within organisations. A key driver of this shift has been the digital transformation of business models and emergence of digital platforms, products and services. A number of different models have emerged from business model transformation to marketing, technology and design led transformation. These models are all more open, lean and collaborative in nature and take into account the external environment such as the consumer and the competition. A fundamental shift from a product centric to a customer centric organisation has emerged at the same time, as will be illustrated in more detail below.

In this section it will be argued that in a competitive environment, or an industry going through digital disruption, it is paramount for an organisation to become more customer centric and for companies to open up their innovation processes.

2.3.2.5.1 Move to Customer Centric Organisations

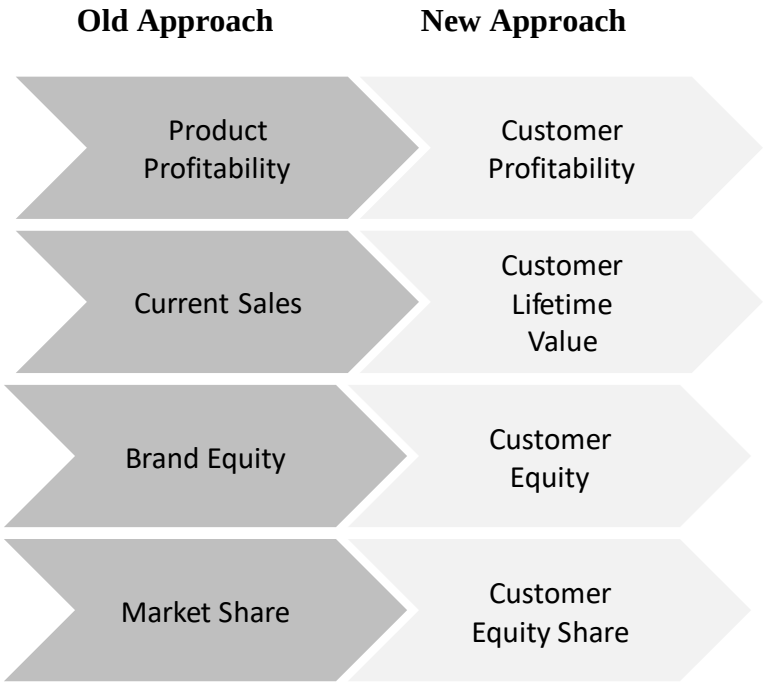
Since the 1980s, companies have increasingly focused on turning their operation from being product oriented to customer focused. The fundamental driver for this change is to solve customer problems; starting from really understanding the customer needs to building products, solutions and services to meet them. Companies like AGA and Scandinavian Airlines began to put the customer needs at the centre. This was a big shift from the product centric organisations that tended to be more internally focused around systems and processes, and their traditional approach was to look internally at product, technology, resources and product knowledge in defining the operating model

(Gummesson, 2008; Svensson and Gummesson 2008). Today, companies like Amazon, Google and Facebook have set a new standard in terms of customer experience and customer orientation. In fact, the Amazon Effect, is a term used in the industry for the significant rise in customer expectation (Phelps, 2017). Amazon has placed the customer at the centre from the beginning and in a recent letter to his shareholder, Bezos highlighted the "obsessive customer focus" to customer centricity (Bezos, 2017).

To truly turn a product centric organisation into a customer centric one, metrics need to change substantially. Metrics such as customer satisfaction, customer lifetime value and customer loyalty become much more important.

Rust et al. (2010) discuss the importance of moving from marketing products to cultivating customers, and have emphasized four critical areas of evolution of measurement:

Figure 2.6: Measuring Customer Metrics



Source: Rust et al., 2010, p.101

The first area of evolution is moving away from measuring product profitability to measuring the customer profitability. The second evolution is looking at the growth and company health based on the current sales numbers to introducing customer lifetime value in order to understand the health of the customer base. The third evolution is moving away from measuring brand equity to measuring customer equity, which is the total sum of the lifetime value of the customer base. The final area if evolution is the introduction of a customer equity share metric, which measures the total value of the customer base against the total value of customers in the market (Rust et al. 2010).

2.3.2.5.2 Disruptive Innovation Theory

Schumpeter first developed the concept of disruptive innovation which he defined as "waves of creative destruction". He argued that, "In capitalist reality, it is not that kind of competition (price competition) which counts but the competition from the new commodity, the new technology, the new source of supply, the new type of organisation - competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives" (Schumpeter, 1942, p. 84). Drucker (1993), highlights further the issue by demonstrating that the success of companies today creates rigidity that potentially hinders future and ongoing innovation.

Clayton Christensen defined and created the term disruptive innovation as a way to go after new markets or introduce new technology or products through technological innovation. He further states that companies have a tendency to focus on their existing customers and drive incremental improvements on existing products, failing to see new technology that enters the marketplace that serves new customer segments until it is too late (Christensen, 1997). At the heart of it, disruptive innovation looks to create new markets by launching new products or functionality that in return can disrupt existing markets. (Adner, 2006; Charitou and Markides, 2003; Christensen 1997; Christensen and Bower, 1996; Christensen and Raynor, 2003; Danneels 2004; Gilbert, 2003; Govindarajan and Kopalle, 2006). Christensen argues that when disruptive technologies emerge, they initially underperform against the established products in the existing market segments. However, because they are cheaper, simpler, smaller and often more convenient to use, they appeal better to fringe or new customer segments, which enables new markets to

emerge, creating a first mover advantage (Christensen, 2013). Critiques stressed the importance of separating disruptive technological innovation from business-model innovations and product innovations as they required different responses (Markides, 2006). Companies seem to have a challenge with identifying and responding at speed to the transformational threats due to the political challenges with organisational change (Dovey and McCabe, 2014).

Established well run companies today are under immense pressure with regards to growth targets, and due to this they are less likely to pursue disruptive innovation, leaving the field open for disruptors to enter and change the market dynamic. Some examples of companies that have disrupted their industries or markets are Intuit, disrupting personal tax preparation, Salesforce.com with its cloud based solution disrupting CRM systems, and Amazon.com disrupting the retail market. Christensen further expanded the theory in his book, The Innovator's Solution, where the theory evolves to disruptive innovation and includes services and business model innovations (Yu and Hang, 2010).

The popularity of the theory has without a doubt caused it to be over used and it has attracted lots of critics. Jill Lepore, a Harvard history professor, dismisses the theory claiming Christensen handpicked the cases used and she claims the theory has no predictive value. (Lepore, 2014). Other critiques have highlighted narrowness of conclusions such as assuming that customer orientation could lead to companies only focusing on existing customers when in fact customer oriented organisations define customers much broader in terms of existing and new customer segments. Additionally it is highlighted that there is no valid and reliable instrument to measure innovation disruptiveness (Danneels, 2004). This puts for example in question the recommendation of

creating a separate organisational structure for disruptive innovation as the only right avenue, as recommended by Christensen (Govindarajan and Kopalle, 2006). It has been further highlighted that the theory's validity and generalizability have rarely been tested and those that have, fail to provide confirmatory evidence for the theory. They view that stories of disruption are a good reminder for what might happen but stress the importance of applying critical thinking to the problem. They offer alternative strategies focusing on understanding the value of winning, better leverage existing capabilities and collaborate with other companies (King and Baartartogtokh, 2015). Chiaroni et al. highlighted the importance of evaluating a number of different strategies to respond and prevent disruptive innovation, pending on the situation, through summarizing literature findings (2016). The summary can be seen in table 2.4 on the next page and include strategies such as open innovation, the creation of separate organisation and use extreme users to inform new products and services.

Table 2.4: The Managerial Practices Required to Respond to the Threat of Disruptive Innovations

Managerial Practices	References
Avoid mainstream customers as unique evaluators of new products and services	Bower and Christensen (1995) Christensen and Bower (1996) Christensen (1997)
Look on the marginal utility that consumers can obtain from new products and services	Adner (2002)
Use an open innovation approach to allow established firms absorbing external knowledge capital and innovative technology solutions	Chesbrough (2005-2010) West and Gallagher (2006a, 2006b)
Exploit internal capabilities through the creation of dedicated teams	Christensen and Overdorf (2000) Kostoff et al. (2011)
Exploit managerial commitment to evaluate potential disruptors	Sull et al. (1997) Kostoff et al. (2004)
Create separate organisations – or structural ambidextrous organisations – or acquire appropriate small companies	Bower and Christensen (1995) Christensen (1997) O'Reilly and Tushman (2004) Rotemberg and Saloner (2000) Christensen and Overdorf (2000) Birkinshaw and Gibson (2004)
Build contextual ambidextrous organisations	Goshal anda Bartlett (1994) Adler et al. (1999) Birkinshaw and Gibson (2004)
Allocate financial resources in emerging markets	Colombo et al. (2014) Corsi and Di Minin (2014) Pinkse et al. (2014) Huesig et al. (2014) Kim and Min (2015) Wan et al. (2015)

Source: Chiaroni et al. (p. 5, 2016)

In summary, there are more than one approach for organisations to innovate and disruptive innovation theory might not be the only way to move forward. That said it is a good framework for corporations to use to evaluate market threats (Gobble, 2015). This aligns with King and Baatartogtosh's view that the while the theory doesn't substitute critical thinking it is a useful tool to provide early warning signals (2015).

2.3.2.5.3 Open Innovation Theory

With the organisational shift from product to customer focused approach, companies became more focused on the end to end customer experience in relation to products, platforms and value added services. A trend emerged involving the customer in the innovation process.

Expanding the innovation process to work with customers, prospects and third parties can accelerate the pace of innovation due to leveraging external platforms and capabilities from third parties and the accelerated speed of the feedback loop from customers and prospects. Open innovation is gaining ground since Chesbrough proposed the model in 2003. The concept behind the model is that companies can accelerate their innovation by combining their internal and external capabilities and using both internal and external ideas and paths to market (Elmquist et al., 2009). It opens the innovation process for knowledge exploration or acquisition of knowledge from external sources (Lichtentahler, 2010).

Customer interaction has always been important for the new product development process and customer research has been the standard way of gathering customer insights and information on the next big idea. Gruner and Homburg (2000) demonstrated that customer interaction during the early and late stages of the new product development process results in a positive impact on the product's success. At the same time, the authors showed that customer interaction during the middle stages resulted in no benefits. That is, customers have the biggest opportunity to have impact in the beginning of the process during ideation and product concept stage and again at the later stages during active prototype and launch stage.

The Internet is transforming the way companies can collaborate with their customers during the innovation process as it facilitates dialogue with customers. Companies are using virtual communities to enhance their idea generation processes and polls to test the viability of ideas (Sawhney et al., 2005). Companies such as Lego are involving customers in the development process, allowing them to create the designs that they want Lego to produce (Chesbrough, 2011).

Chesbrough views the strategy of openness as a way of increasing value creation for companies (Chesbrough and Appleyard, 2007). A number of companies like P&G, Genzyme Corporation and Chicago (the film and musical) have used open business models successfully and brought external partners into the innovation and product development process at different stages to leverage their valuable assets, resources and market knowledge in order to accelerate the innovation process. Additionally, this model helps address some of the increased pressures companies face to reduce innovation costs and accelerate speed to market. By going externally, the costs can be driven down through a partnership approach and speed to market can be accelerated (Chesbrough and Appleyard, 2007).

Implementation of an open innovation strategy within an organisation needs to consider a number of factors relating to establishing specific management mechanisms, tools, processes and structures. P&G, for example, required a complete change and endorsement in strategy from the highest level with the implementation of their Connect and Develop programme, including implementing specific incentive systems to minimise ‘not-invented-here’ attitudes (Lichtenthaler, 2010). The most critical barriers to

successfully implementing open innovation are organisational and cultural in nature such as bureaucracy and aligning innovation activities with daily activities (Vrande, et al. 2008).

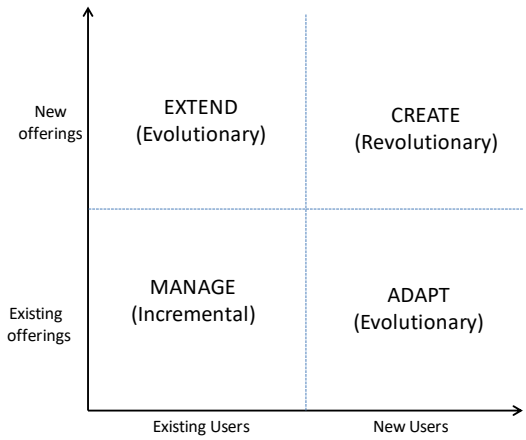
While open innovation has been widely adopted in the industry some researchers highlight the risk of the theory becoming a fad and recommend the need to keep critical thinking as concepts are adopted (Trott & Hartmann, 2009). Additionally, some learnings show that there needs to be the right environment for adoption eg. in heavily regulated industries for example the flow of information has been restricted, diminishing the impact (Trott & Hartmann, 2009) and protective employee attitudes towards opening up processes and transferring knowledge externally can reduce impact (Lichtenthaler et al. 2010). Another limitation is that the theory does not consider enough prior research in related fields such as user innovation (Lichtnethaler, 2011; Trott & Hartmann, 2009). It is highlighted that there is a deficit in research on open innovation and as result it is pointed out that there is a further need for theoretical and empirical work in the field particularity around innovation processes (Lichtenhaler, 2011; Lichtenthaler and Lichtenthaler, 2009).

2.3.2.5.4 Design Led Innovation

Tim Brown (2009) describes a design led innovation process in three iterative steps, with focus on designing the user's emotional experience and putting the customer at the centre of the process. The first step is *inspiration,* which is the identification of the problem that triggers the search for a new product or a solution. The second step is *ideation,* which is the idea generation process. The final step is *implementation,* which is the process of moving from the idea to getting the product into the market. It is an iterative and non-linear process, which focuses on learning quickly or to "fail early to succeed

sooner" (Brown, 2009 p.17). Through the inspiration phase, the team immerses in the consumer behaviour to understand the problem; it is human centred exploration that looks at the end to end customer experience. They pay special attention to extreme users and look at how the new technology can help. They also use storytelling to visualise the customer and the problem. Through the ideation process, the team continues to put the customer at the centre as they build rapid prototypes and test them with the customers, avoiding costly implementations of products that do not meet customer needs. Once the concept is ready, the team implements and post launch continues to iterate (Brown, 2009). This method uses simple "ways to grow" matrix, that can be seen in Figure 2.7 below. The ways to grow matrix is a tool to evaluate innovation efforts within an organisation and help manage the innovation portfolio by ensuring that efforts happen across the spectrum to remain competitive (Brown, 2009).

Figure 2.7: Ways to Grow Matrix



Source: Brown, 2009, p.161

2.3.2.5.5 Agile Development and Innovation

The Agile Manifesto was developed in 2001 in Utah, US by a group of software developers, with the goal of developing a better way of delivering software (Fowler and Highsmith, 2001). The manifesto recommends a focus on four key values (Agile Manifesto, 2001):

- Individuals and interactions over processes and tools.
- Working software over comprehensive documentation.
- Customer collaboration over contract negotiation.
- Responding to change over following a plan.

Nowadays, agile software development is considered a way for companies to increase the speed of product development and improve performance (Dikert et al., 2016). The state of the Agile Survey highlights that enterprise agility is increasing through organisations and 98% of the almost 4000 respondents stated that their organisations had realised success from agile projects. The top three benefits highlighted were increased productivity, improved project visibility and ability to manage changing priorities (VersionOne, Inc, 2016).

Moving from a waterfall technical process that is rigid and linear to an agile software process can cut development cycles significantly. Some of the key principles of an agile process is that work is organised in short cycles, the team is empowered to make decisions and measure its own performance, and it utilises user stories to develop the customer experience (Denning, 2013). An agile process is also an iterative one, focusing on learning through experimentation and design (Dybå and Dingsøyr, 2008). The

following comparison of more traditional development processes, such as the waterfall technology process, and the agile software development process was developed by Nerur and Balijepally (2007). It clearly identifies some of the key differences and benefits of agile development. As shown, the agile process is viewed as faster and more flexible, embracing the conflict of different ideas, and where design and implementation are intertwined.

Table 2.5: Traditional and Agile Perspectives on Software Development

	Traditional View	Agile Perspective
Design process	Deliberate and formal, linear sequence of steps, separate formulation and implementation, rule-driven	Emergent, iterative and exploratory, knowing and action inseparable, beyond formal rules
Goal	Optimization	Adaptation, flexibility, responsiveness
Problem-solving process	Selection of the best means to accomplish a given end through a well-planned, formalized activities	Learning through experimentation and introspection, constantly reframing the problem and it's solution
View of the environment	Stable, predictable	Turbulent, difficult to predict
Type of learning	Single-loop/ adaptive	Double-loop/ generative
Key characteristics	Control and direction Avoids conflict Formalizes innovation Manager is the controller Design precedes implementation	Collaboration and communication; integrates different worldviews Embraces conflict and dialectics Encourages exploration and creativity; opportunistic Manager is the facilitator Design and implementation are inseparable and evolve iteratively
Rationality	Technical/ functional	Substantial
Theoretical and/or philosophical roots	Logical positivism. Scientific method	Action learning, John Dewey's pragmatism, phenomenology

Source: Nerur and Balijepally, 2007, p.82

Agile has become an industry buzzword and a synonym for a more flexible and faster ways of operating. While there is significant management literature about the method there continues to be a need to focus on empirical studies, particularly around how to scale the method (Dyba and Dingsoyr, 2008; Dingsoyr et al., 2012; Dingsoyr and Moe, 2014; Dikert, 2016). As more organisation adapt the practice, understanding how to scale and integrate the method into large organisations becomes paramount (Dingsoyr et al. 2012; Dikert, 2016; Turetken et al., 2016).

The method was developed for small and single team projects (Boehm and Turner, 2005), and critiques argue that it is being stretched beyond its original purpose (Reifer and Erdogmus, 2003). While there is growing evidence that agile does scale and small and big organisations are benefitting from using the method, the challenges in implementing agile in big organisations still exist. Some of the key challenges identified in enabling agile in organisations are for example the organisational ability to adapt. This includes ability to change organisational culture such as reducing hierarchy, fighting resistance to change, changing business and development processes as well as communication systems (Bruno et al., 2011; Dikert et al., 2016). Looking at how agile has been scaled in practice Samsung focused on three phases: 1) Process transformation; 2) Engineering transformation and 3) Organisational transformation (Kim et al., 2016). Through these three phases the organisation will also transform and change the culture.

2.3.2.5.6 Lean Innovation

Lean thinking originates from Toyota and is credited to Ohno and Shingo. In the 1960s and 1970s, the Japanese car industry faced fierce competition and scarcity of

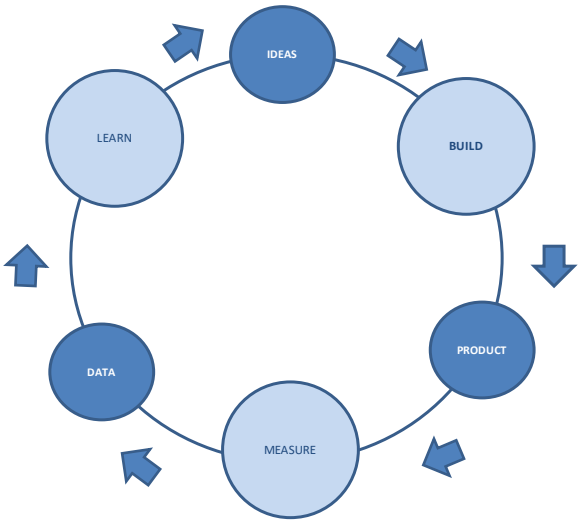
resources, so innovation like just in time production systems and lean operation management focused on eliminating waste. It took a couple of decades for the western world to realise Toyota's superiority in terms of performance reflected in the early 1990s publication "The Machine that Changed the World" (Womack et al., 1990). Through Toyota's success story managers saw the introduction of terminology like 'lean production' and 'lean manufacturing'. A central tenet of lean thinking is placed on value and value creation is seen as the same as cost reduction. Womack and Jones developed this concept further to link value creation to the customer needs, demonstrating that additional value is created by offering new services and benefits to consumers (Hines et al., 2004).

Eric Ries (2011) based his theory of the lean start up on the principles of the lean production methods of Toyota: "the lean startup takes its name from the lean manufacturing revolution that Taiichi Ohno and Shigeo Shingo are credited with developing at Toyota. Among its tenets are drawing on the knowledge and creativity of individual batch sizes, just-in-time inventory control, and an acceleration of cycle times. It taught the world the difference between value creation and waste and showed how to build quality into products from the inside out. The lean startup adapts these ideas to the context of entrepreneurship, proposing that entrepreneurs judge their progress differently from the way other kinds of ventures do" (Ries, 2011, p.18).

The lean start-up process is an approach for business model innovation that can be used equally well in a start-up environment or a large corporation. Ries (2011, p.3) defines start-up in this context as "human institution designed to create something under new conditions of extreme uncertainty". It is an iterative process for new product and service launches that aims to build, measure and learn from the feedback loop, focused on learning

as quickly as possible and iteration. This will enable customer centric product design and faster speed to market. The strategy aims to empower a cross-functional team that has a clear team leader to build and deploy minimum viable products at speed and iterate using a pivot based approach and accelerated feedback loop (Ries, 2011).

Figure 2.8: Build, Measure and Learn Feedback Loop



Source: Ries, 2011, p.75

The approach for lean was created as method for entrepreneurs and start ups. However, it is also being recommended as an approach for big enterprise (Ries, 2011; Blank, 2013; Eismann, Ries and Dillard, 2013). While the method has gained significant popularity it has not been grounded in years of practice and experience and lacks scientific foundation and academic rigour (Masai et al., 2015).

2.3.2.6 Summary Innovation Capability: Debate on Innovation Processes and Customer Centric Innovation Models

In order for companies to stay competitive in a highly transformational environment, it is critical to put the customer at the centre. The innovation process, which is often considered as one of the most critical parts of successful new product development should be tightly managed and built into repeatable processes. While the process is non-linear, it should include stage gates and a rigour to either stop unsuccessful propositions early as well as get a minimum viable product out to market quickly. The stage gate process can service well as a guide of how to manage the new product development process.

Agile, lean and design led innovation all focus on solving customer problems by paying attention to the extreme users (Brown, 2008; Ries 2011). There is an overlap in a number of the user-centred innovation frameworks such as agile, design thinking and lean start-up. These theories are user driven and focus on solving user problems and failure is an acceptable part of the process to drive learning and speed (Muller and Thoring, 2012). To turn a company into a customer centric organisation it is important to change measurements from product centric metrics to customer centric metrics (Rust et al, 2010). Technology is transforming business models and can completely disrupt a business overtime, if it does not respond to new customer centric solutions. Christensen (2013) argues that large organisations have difficulty reinventing their business models and focus more on incremental improvements. This can lead to organisations experiencing the same fate as Kodak, not seeing industry business model disruptions until it is too late to respond. One way for organisations to overcome this is to be more externally focused and build

open innovation models through partnerships and working more closely with customers and external start-ups, or businesses that can accelerate the innovation processes. Despite the fact that disruptive innovation theory has received substantial criticism it is still a great tool to for corporations to understand the external market environment and potential threats (Gobble, 2015).

While a number of the customer centric innovation models have received criticism for being grounded in practical examples rather than well documented and researched theory, they serve as a great framework to develop more customer centricity, speed and velocity into the company's new product development capability.

Chesbrough (2011) sees open innovation as a tremendous opportunity for companies to increase their value creation. For this to be successful, a cultural change must happen within the organisation allowing leaders and teams embrace this approach. Agile and lean development emphasises developing products and software at speed, being able to bring minimum viable products to market quickly, iterate and learn quickly from the customer response (Brown, 2009; Nerur and Balijepally, 2007; Ries, 2011).

2.3.3 Conclusions

Creativity is the development of a novel idea and innovation is the commercial implementation and market launch of the idea to drive accelerated business growth (Amabile, 1988). Organisations need to move to rapid, open and collaborative innovation processes to enable faster innovation. Focusing on disruptive innovation will enable organisations to look for new opportunities in new markets that will strengthen its ability to adapt to new competition and changing customer needs.

Companies need to move to customer centric and open new product development processes that are less rigid to achieve true customer led innovation at speed (Brown, 2009; Chesbrough, 2007; Ries, 2011). It is critical to put the customer at the centre of the innovation process and ensure that organisations focus on solving customer problems and deliver new and innovative solutions to make customers' lives easier. Success measures need to be conducive to this, moving from product measures to customer measures such as customer profitability and loyalty (Rust et al. 2010). A customer centric organisation that is able to launch new and innovative products and services at speed, by leveraging elements of design thinking and agile and lean processes, will ultimately be able to respond faster to changes in the external environment. It is recommended that the model explored in the pilot and primary study includes lean, open and agile innovation processes.

Even though there has been considerable research into the new product development process, Nakata and Benedetto highlight that there is a need to study how to enhance the overall development process (2012). Additionally, Anderson et al. call for more attention to process studies "using appropriate observational, diary study, real-time case study and ethnographic research approaches within organisational settings" (Anderson et al., 2014, p.38). These types of studies are believed to be very valuable as they help show processes unfold over time and give more contextual learning than questionnaires (Montag, Maertz & Baer, 2012).

2.4 Innovation Leadership: Culture & Leadership

This section looks at how to create the right environment for innovation including looking at a) the organisational culture and b) Leadership capability including how to lead cross functional teams.

2.4.1 Organisational Culture & Innovation

Organisational culture can be defined as a set of values, beliefs and assumptions that the members of the organisation share and it manifests in actions, procedures and ways the organisation operates (Lock and Kirkpatrick, 1995; Morgan 1991; Johnson and Scholes, 1984; Cook, 1998; Martins and Terblanche, 2003; James et al., 2007). Schein advised against trying to oversimplify culture and defined it across three distinct levels. Firstly, the artefacts that are visible organisational structures and processes. Secondly, the espoused values which are the strategies, goals and philosophies; and thirdly, the underlying assumption or the unconscious beliefs, perceptions and thoughts (Schein, 1992, 1999).

Leaders have an impact on organisational culture and can shape the culture of an organisation through their role and their actions (Schein 1985; 1992; Trice & Beyer, 1993; Dension & Mishra, 1995; Sarros et al. 2008). "Management create a climate not by what they say but by their actions. It is only when employees see things happening around them and things that push them towards innovation that they begin to internalise the values of innovation" (Ahmed, 1998, p. 39). Organisational culture is an important component to how well the company can innovate and can either be a driver of innovation or inhibitor. (Martins and Terblanche, 2003).

Martins and Terblanche highlight the following five factors that impact creativity and innovation that are also outlined in the table below:

- Strategy; ensuring the company has a clear vision and a purpose.
- Structure; organisational flexibility and employee autonomy, empowerment, decision making and collaboration.
- Support mechanism; such as reward and recognition and resources.
- Behaviour that encourages innovation; risk taking, conflict handling, support for change and a continuous learning culture
- Communication; that is open and transparent.

The factors highlighted align with other studies in the field such as the subscales of the KEYS instrument (Amabile et al., 1996) and studies by Hurley and Hult (1998), Ahmed, (1998), McLean (2009), Naranjo-Valencia (2010) and Hogan and Coote (2013).

Table 2.6: Factors that impact Creativity and Innovation

Strategy	Structure	Support Mechanisms	Behaviour that encourages innovation	Communication
a. Vision and Mission b. Purposefulness	a. Flexibility b. Freedom: • Autonomy • Empowerment • Decision-making • Cooperative teams and group interaction	a. Reward and Recognition b. Availability of Resources • Time • Information • Technology • Creative People	a. Mistake handling b. Idea Generating c. Continuous learning culture d. Risk taking e. Competitiveness f. Support for change g. Conflict handling	a. Open Communication

Adapted from Martins and Terblanche, 2003, p. 70

Looking at cultural factors that hinder creativity, control is highlighted. This can manifest in control in decision making or control in rewards (Amabile, 1998; Angle, 1989; Kanter, 1983; McLean, 2005; Oldham & Cummings, 1996). Additionally, hierarchal culture, including centralized decision making have been found to negatively impact innovation (Naranjo-Valencia et al. 2015).

2.4.2 Leadership & Innovation

Sundstrom and Viktorsson (2009) define the innovative organisation as an organisation that has a deep customer focus, a will to innovate and a vision for innovation. Additionally, they emphasise that innovation needs to be championed within the organisation; there needs to be great team work, outstanding communication and high involvement in innovation.

This section explores different theories of innovation leadership, seeking to understand the leadership styles best suited to innovation. A number of theories are overlapping and the goal of this section is to identify some the key characteristics and elements of leadership theories that appear to be best suited to drive innovation.

It is recommended that aspects of transformational and agile leadership theories be combined for the primary study, in addition to including cross-functional teams in the model. Additionally, an opportunity is identified to combine transformational and agile leadership theories for further innovation leadership theory development.

2.4.3 Definition of Leadership

Leadership is an expansive subject and as a result, there are many different definitions of leadership: “most definitions of leadership reflect the assumption that it involves a process, whereby intentional influence is exerted over other people to guide, structure, and facilitate activities and relationships in group or organisations” (Yukl, 2010, p.3).

2.4.4 Management vs. Leadership

There are numerous debates on the difference between leadership and management. According to Yukl (2010), a person can be a leader without being a manager because of their ability to influence people (informal leader), and it is possible to be a manager with direct reports and managerial responsibilities without necessarily being a leader.

The study of management is a large field in its own right. Drucker (1985) talks about 3 important roles of management to enable and organisation to function that focus on creating a mission for the enterprise, driving productivity and being accountable for social responsibility (Drucker, 1985). There is a clear overlap between the two fields but there are considerable differences too. Puccio et al. (2011) concludes, after analysing a number of different definitions on the differences between the two fields, that “management is focused on maintaining the present situation, while leadership is focusing on complexity and change” (p.29). For this reason, as the research focuses on organisations going through change and transformation, the literature review will only focus on key theories on leadership and not on management theories.

2.4.5 Key Debates on Leadership

A number of empirical studies have identified a positive correlation between transformational leadership, creativity and innovation. Shin and Zhou (2003) identified a positive correlation between transformational leadership and followers' creativity; Jung (2003) demonstrated a positive relationship between transformational leadership and organisational innovation, as well as a strong correlation between empowerment and an innovation-supporting organisational climate. Similarly, Gumusluglu and Ilsev (2009) demonstrated that transformational leadership has important effects on creativity, both at the individual and organisational levels, and that transformational leadership is positively correlated with organisational innovation.

However, most of these studies focus on the impact on the individual and not a group context. Jung (2001) demonstrated that transformational leadership promoted higher levels of creativity, measured by divergent thinking among group members. This finding supports theoretical and conceptual claims that intellectual stimulation may help followers look at problems from a different perspective, for example. Bass et al. (2003) and Lim and Ployhart (2004) demonstrated that transformational leadership is positively related to performance in groups.

There is an opportunity to further link existing research to explore the leadership at a project level and within the team that is best suited to drive creativity and innovation, which in return will deliver above average performance. The following section present further exploration of transformational leadership, which is positively correlated to creativity and innovation, agile leadership, which is well suited for industries going

through significant change, and the effectiveness of cross-functional teams that are typically required to conduct innovation activity.

2.4.6 Styles of Leadership to Drive Creativity and Innovation

2.4.6.1 Transformational Leadership

Transformational leadership theory was built upon earlier work by House (1977) and Burns (1978), and was first proposed by Bass in 1985 and was further developed in the following decades. The theory looks at leaders and demonstrates that certain types of leaders take an important interest in their teams and organisations, transforming people to be part of a confident group focusing on growth and achieving excellent results (Yammarino and Dubinsky, 1994).

Transformational leaders instil trust, admiration, loyalty and respect in their followers. As a result, people are motivated to go beyond expectations (Yukl, 2010). Bass (1990) describes superior leadership performance as transformational leadership that occurs when leaders are able to broaden and elevate the interests of employees, generate awareness and acceptance of their mission and inspire people to look beyond their own interests for the betterment of the group. The ability to do this requires the leader to be charismatic, meet the emotional needs of the employee and/or stimulate the employee intellectually. These leaders are more effective and their organisations do better financially.

The key characteristics of transformational leadership as defined by the Multi-Factor Leadership Questionnaire (MLQ) model are the following:

a) Charisma or Idealised Influence

Charisma, or idealised influence as Avolio and Bass (1990) refer to it, represents the highest levels of morality to which both leaders and followers decide to dedicate themselves (Bass, 1999). In the MLQ survey, the following factors are used to analyse charisma (Avolio et al., 1999, p.447):

- Proud of him/her
- Goes beyond self-interest
- Has respect
- Displays power and confidence
- Talks of values
- Models ethical standards
- Considers the moral/ethical obligations
- Emphasises the collective/mission
- Talks optimistically
- Expresses confidence
- Talks enthusiastically
- Raises awareness of important issues

b) Intellectual Stimulation

Intellectual stimulation is displayed by leaders when they inspire their followers to become more creative or innovative (Bass, 1999). In the MLQ the following factors are used to analyse intellectual stimulation (Avolio et al., 1999, p.447)

- Re-examines assumptions

- Seeks different views
- Suggests new ways
- Suggests different angles

c) Individualized Consideration

Individualized consideration is demonstrated when leaders care about employee development and focus on coaching, assignments and advancement for growth (Bass, 1999). In the MLQ, the following factors are used to analyse individualised consideration (Avolio et al., 1999, p.447):

- Individualised attention
- Focuses on the strengths
- Coaches effectively
- Differentiates

d) Contingent Reward

Contingent reward explains what is expected of the followers and what they will receive if they meet a specific level of performance. In the MLQ the following factors are used to analyse contingent rewards (Avolio et al., 1999, p.447):

- Clarifies rewards
- Assists based on effort
- Recognizes achievement
- Rewards achievement

2.4.6.2 Key Debates on Transformational Leadership

As discussed, transformational leadership is considered well suited to driving creativity and innovation (Shin and Zhou, 2003; Jung, 2003). Transformational leaders are seen to have strong values and Burns, an author whose work this theory is partially based on, anticipates that they function at a higher levels than their followers (Ciulla, 1995).

There has been considerable criticism of transformational leadership. It has been highlighted that it lacks a clear theoretical justification for why the dimensions proposed in the model are considered to be of transformational in nature and how they differ from other types of leadership (Yukl, 2010; Knippenberg and Sitkin 2013). Additionally, a number of researchers have put into question how valid the MLQ is to measure the model. It is highlighted that the measurement model is disconnected from the conceptual model, where dimensions that are represented at the conceptual level are in fact not covered at the measurement level (Lievens Van Geit & Coetsier, 1997; Knippenberg & Sim (2013); Podsakoff et al. 1990; Rafferty & Griffin, 2004).

There has also been substantial research on the negative aspects of transformational leadership, mainly relating leaders to narcissism (Sankowsky, 1995). In Hogan and Hogan's Development Survey, narcissistic personality is described as "arrogant and haughty behaviours and attitudes; grandiose sense of self-importance and entitlement" (Khoo and Burch, 2007, p.89). Additionally, Khoo and Burch (2007) link transformational leadership to histrionic personality. A histrionic personality is, according to Hogan and Hogan's Development Survey, "excessive emotionally and attention seeking; self–dramatizing, theatrical, and exaggerated emotional expression" (Khoo and Burch, 2007, p.89). The focus on the all-powerful leader and the leader-follower concept is not well

suited to a more open, agile and collaborative culture of innovation. Additionally, elements of narcissistic behaviour can lead to leadership of fear and lack of openness which will have a negative impact on innovation.

What is evident is that the research on transformational leadership has increased significantly our understanding of leadership theory including what leadership styles are better suited to drive creativity and innovation (Gumusluglu and Ilsev, 2009; Jung, 2001, 2003; Shu and Zhou, 2003). Through transformational leadership, leaders are able to create a strong vision and connect emotionally with the team. They are good communicators, encouraging different points of view, empowering people and recognising achievement (Avolio et al., 1999; Bass, 1990). It is equally important to be aware of the potential negative aspects of transformational leadership, such as narcissism and histrionic personality (Khoo and Burch, 2007; Sankowsky, 1995).

The majority of research on transformational leadership focuses on the impact on the individual, not on the group, whereas most creativity and innovation projects are driven through cross-functional teams. It is therefore important to examine leadership in teams in more detail, particularly the leadership of cross-functional teams.

Finally, while there are number of shortcomings with the theory it is important to build on prior research and contributions and evolve the leadership theory in line with the needs of organisations and businesses. For instance, as organisations become flatter and move to more agile and collaborative ways of working leadership theories need to evolve.

2.4.6.3 Agile Leadership

Agile leadership is an emerging theory in leadership. It relates to theories such as the complexity theory of leadership that acknowledges that in order to be able to effectively look at organisational leadership, more complex models of leadership are required than the hierarchical leadership models of the past (Yukl, 2010). With a more complex world leadership requires a changing approach that is more adaptive and dynamic to a fast paced and changing environment. The role of leaders will be increasingly to create an environment that allows for adaptability to drive innovation and change and to ensure that there is ongoing viability and fitness for the organisation (Uhl-Bien and Arena, 2017).

With industries going through transformation, leaders need to be willing to reconstruct their business models and this requires new and more agile types of leadership. Doz and Kosen (2010) emphasise the importance of senior management in being able to redefine its business model and venture into new business models. Their research into the information technology industry suggests that companies need to have strategic agility in order to drive business model transformation within their business. Strategic agility is split into three parts:

a. **Strategic sensitivity,** which is the ability to take an outside approach, recognising that the business model needs renewal and be willing to experiment with new and future concepts that look at future trends.
b. **Leadership unity**, which is the ability of the senior leadership team to make quick and bold decisions without politics. The leadership team is willing to openly look at new assumptions and hypotheses and develop a common ground.

c. **Resource fluidity**, which refers to organisations' ability to quickly shift resources and change capabilities building plug-and-play functionality for business systems. This gives the organisation the flexibility to transform.

Joiner and Joseph (2007) suggest that agile leaders use the following four types of agility to develop successful initiatives:

a) **Context setting agility**, the ability to read the environment to be both visionary, as well as setting tactical direction depending on the situation.

b) **Stakeholder agility**, highly agile leaders are both decisive and able to engage the stakeholder population effectively for the right dialogue for better business outcomes and greater alignment.

c) **Creative agility**, being very comfortable with a high level of uncertainty and be able to drive positive tension and draw learning from conflicting views, which leads to creative and practical solutions of very challenging problems.

d) **Self-leadership agility**, highly agile leaders are self-aware and continually seek improvement. They search for regular feedback and are willing to explore new behaviours and mindsets.

For organisations going through business transformation, there is a need to look at the overall organisational culture and take a systems perspective to change: "to focus

simultaneously on the development of agility in individual leaders, intact leadership teams and leadership cultures, leadership needs to supplement rather than replace current practices" (Joiner, 2009).

Joiner and Josephs (2007) identified that behaviours exemplifying highly agile leaders can be developed in stages. The grid in Table 2.7 below presents the different stages: expert, achiever, and catalyst. It demonstrates that only about 5% of the current management population are catalysts. What is critical is to develop a new level of agile culture, the leadership of teams, as well as the leadership of the individual.

Table 2.7: The Expert, Achiever and Catalyst Levels of Leadership Agility

	Expert	Achiever	Catalyst
Assumptions about leadership	**Tactical problem solving orientation**. Assumptions that leaders are respected and followed by others because of expertise and authority.	**Strategic, outcome orientation.** Believes that leaders motivate others by making it challenging and satisfying to contribute to larger objectives.	**Visionary, facilitative orientation.** Assumes that leadership involves the articulation of an innovative, inspiring vision and bringing the right people to transform vision into reality. Feels that leadership is about empowering others and actively facilitating their development.
Pivotal conversations	Either strongly assertive or very accommodative in dealing with differences . May flip from assertive to accommodative and the reverse. Tendency to avoid giving or requesting feedback.	Primarily assertive or accommodative with some ability to compensate with the less preferred style. Will accept or even initiate feedback, if seen as helpful in achieving desired outcomes.	Skilled in balancing assertive and accommodative styles as needed in special situations. Likely to identify and question underlying assumptions including their own. Genuinely interested in learning from diverse viewpoints. Proactively seeks and utilises feedback.
Leading teams	More a superior then a manager. Creates more of a group of individuals then a team. Works primarily one on one with direct reports. Too caught up in detail to lead strategically.	Operates like a full-fledged manager. Meetings to discuss important strategic or organisational issues are often orchestrated to gain buy-in to own views.	Intent upon creating a highly participative team. Acts as both team leader and facilitator. Models and seeks an open exchange of view points on challenging issues. Empowers direct reports. Uses team development initiatives as vehicles for individual leadership development.
Leading organisational change	Organisational change initiatives are focused primarily on incremental improvements inside unit boundaries with relative little attention to stakeholders.	Organisational initiatives include analysis of external environment. Strategies to gain stakeholder buy-in range from one way communication to solicitation of input.	Organisational change initiatives often include development of a culture that promotes teamwork, participation and empowerment. Proactive engagement with key stakeholders reflects a belief that this input will increase the quality of decisions, not just gain buy-in.

Source: Joiner, 2009, adapted from Joiner and Josephs, 2007, p.31

Comparing agile leadership to transformational leadership there is significant overlap in the leadership theories where leaders need to be visionary, decisive, encourage different views and continually seek improvement (Avolio et al., 1999; Bass, 1990; Joiner and Joseph, 2007).

Transformational leadership theory does not focus on the need for business model renewal (Doz and Kosenen, 2010). There is more focus on collaboration, joint decision making and empowerment in the agile leadership model and less focus on the leader/ follower model that is outlined in the transformational leadership model (Avolio et al., 1999; Bass, 1990; Joiner and Joseph, 2007).

2.4.6.4 Key Debates on Agile Leadership

Agile leadership is well suited for industries that are going through significant change. In agile leadership, the focus is on the importance of the contextual setting and need for flexibility based on the situation. The leadership style focuses on the need to have a clear vision and ability to engage in rapid decision making and good stakeholder management. It stretches the importance of being comfortable with uncertainty and the ability to effectively leverage conflicting views, while focusing on continuous learning and self-improvement (Joiner and Joseph, 2007). There is a need to understand the overall organisational culture and the ecosystem of leadership and team environment to drive speed and flexibility into the leadership model. Agile leadership is not a tried and tested theory, hence a future opportunity exists to merge transformational leadership theory with agile leadership theory, further exploring the most effective leadership model for innovation. Elements of both transformational and agile leadership will be included in the model tested in the primary study.

2.4.6.5 Cross Functional Teams & Organisation

Cross-functional cooperation, where people from different functions and areas are brought together to work towards a common goal, is now an established strategy to drive organisational performance (Gemser and Leenders, 2011). The relationship between leadership and a cross-functional team is two-way: "the connection of group dynamics to leadership processes is a reciprocal one: the way the leader organises, directs, coordinates, supports and motivates others in the pursuit of shared goals influences the group and its dynamics, but the leader's own actions and reactions are shaped by the group as well" (Forsyth, 2008, p.72).

2.4.6.6 Key Debates on Cross-Functional Teams

Research has identified that organisations are using cross-functional teams at least 70 to 75% of the time for new product development, as this quickens the development process and can improve the quality of products developed (McDonough III, 2000). Leveraging cross-functional teams breaks down organisational barriers and therefore enables better collaboration and faster decision making (Zeller, 2002). There is an added pressure on both the leader and the team, as cross-functional teams often have higher performance expectations, including significantly reduced cycle-times, enhanced learning and creating new knowledge for their organisation (Holland et al., 2000).

While the usage of cross-functional teams is high, success is mixed. This may be due to a number of different factors, including misalignment of cross-functional team goals and cultures versus those of the functional departments, and involvement of too many

functions (McDonough, 2000). Holland et al. (2000) outlined the following key benefits of using cross-functional teams for new product development:

1. Increased speed
2. Improved ability to handle complexity
3. Foster entrepreneurial culture
4. Enhance creativity
5. Customer focus
6. Organisational learning
7. Enhance employee motivation
8. Single point of contact
9. Better quality of information at a higher level

Functional diversity is a very powerful force in terms of driving creativity and innovation into a new product development process of cross-functional teams. At the same time, many studies have found functional diversity has no impact, or has been a barrier rather than accelerating performance. Sethi et al. (2001) identified that it did not have an impact on new product innovation, whilst Ancona and Caldwell (1992) found an inverse relationship, i.e. the more diverse the group, the less cohesiveness. Furthermore, Webber and Donahue (2001) conducted a meta-analysis on 76 studies between 1980-2001 on diversity in work groups, and found no relationship between functional diversity and team performance. Keller (2001) argues that diversity of members' background fosters communication with external sources and increases creativity, and leads to generation of new ideas and ways to solve problems. Through his research, Keller found that this was primarily due to the indirect effects of external communication, where people with diverse

backgrounds and expertise have broader external networks of information, with which they facilitate strong communication linkages. It appears to be very important to effectively manage the selection of people and apply the right leadership style to get the maximum benefit from the functional diversity within the team.

In new and innovative projects, the more risky the NPD process the more the information and knowledge needs to be developed and integrated successfully. This process is greatly enhanced through cross-functional team cooperation (Gemer and Leenders, 2011). McDonough's research suggests that the critical success of cross-functional new product development teams is through the following stages:

- Setting the right stage through clear goal setting
- Empowering the team with the required decision making power
- Assigning appropriate human resources
- Creating the right team environment for the team

Additionally, various studies have indicated that team leaders, senior managers and champions enable the team's success (McDonough III, 2000). Based on a study of 141 cross-functional product development teams, Sethi et al. (2001) found that innovativeness is positively correlated with the "strength of superordinate identity in the team, encouragement to take risk, customer influence, and active monitoring of the project by senior management".

There have been a number of studies on critical success factors in cross-functional teams. Holland et al. (2000) developed a comprehensive model, based on content analysis, which takes into consideration a multitude of factors in each category. However, one

criticism of this is its failure to give weightings to the importance of each factor. The key factors identified were:

a) Task design, which takes into account team empowerment.

b) Group composition, which focuses on the right team leader, group selection and identifying clear roles and responsibilities.

c) Organisational context, which focuses on having a clear mission from senior management, senior managers as champions, an environment supportive of teams, giving project leader the right power, having team based accountability and rewards and recognition.

d) Internal processes that focus on having clear goals, frequent and clear communication, creative problem solving, sharing of information and constructive-conflict.

e) External processes that focus on boundary management or ability to communicate externally, which gives access to rich data that in turn fuels the innovation process.

f) Group psychosocial traits, which focus on trust, flexibility, openness to learning and change and team cohesiveness.

(Holland et al., 2000).

McDonough III's (2000) model focuses on two phases: stetting the team up for success (stage setting) and equipping the team with enablers (senior management support and champions).

a) **Stage setting** elements include *goal setting*, *empowerment* of the team, *creating the right climate* for the team and *human resources* or team selection. The latter refers

to ensuring there is a good fit between the people selected for the project and the project itself.

b) **Enablers** refer to *team leadership*, *senior management support*, *project champions*, *cooperation* between the team and *commitment*, which refers to the sense of duty the team feels towards the project goal, *ownership* i.e. the sense of making a difference and *respect* the team has for each other.

Looking at cross-functional teams and innovation, West (1990) identified four team climate factors critical for innovation: a) ***Vision***, referring to shared commitment and clear objectives; b) ***Participative safety***, meaning that the team could participate in decision making and share ideas without fear; c) ***Task orientation***, which refers to a shared concern for team members for achieving a good standard of performance; d) ***Support for innovation***, which refers to the expectation of and support for innovation on a team.

When comparing the models, the themes are very similar and focus on making sure that there is clear goal setting, selection of the right team members, the teams are empowered, there is the appropriate level of senior level management support and that the team climate is managed. However, the models do not make reference to risk taking. It might be assumed that empowering the team and providing the right team climate and participative safety would allow for the right level of risk taking.

There has been limited exploration of the relationship between leadership and the impact of cross-functional team performance (McDonough III, 2000). Somech (2006) focused on the effects of leadership style and team process on performance and innovation in cross-functional teams. The model looks at both participative and directive styles of

leadership as critical styles to influence team processes and outcomes. Participative style is defined as joint or shared influence in decisions and directive, such as providing team members with a framework for decision making. The study verifies that leadership styles are more complementary than contradictory in cross-functional team setting (Somech, 2006). Previously, it had been established that both styles can be related to strong levels of team outcomes (Sagie et al., 2002). Llorens-Montes et al. (2005) argue that transformational leadership would be the most suitable leadership style to support organisational learning, communication and knowledge creation.

Leadership of cross-functional teams is critical to achieve the desired outcomes. It is important to balance directive and distributive styles, where the group has shared influence on decision making. It is very powerful to bring together a functionally diverse team, but the selection and the leadership of the team will be crucial for achieving the desired outcomes. Critically, a leader of a cross-functional team must be flexible enough to provide clear goals, active coaching of the team, empowerment and a positive team environment. This can be challenging if the overall organisational environment is not supportive.

2.4.7 Conclusions

There are numerous overlapping theories of leadership that exist. Transformational leadership theory is robust and tested, and has positive correlations with creativity and innovation at the individual and group levels. There are new and emerging theories of leadership that need to be explored in order to build a holistic model of a leadership framework conducive to innovation. For example, there are elements of other innovation

theories that help a leader become effective in managing innovation, such as taking into consideration the situation (situational leadership, adaptive leadership) (Blanchard, 1993; Graff, 1997; Yukl, 2010), empowering the team, providing shared responsibility for decision making (distributive leadership) (Bennett et al., 2003; Spillane et al., 2004), providing flexibility and celebrating diversity (servant leadership) (Andersen, 2009; Graham, 1991; Greenleaf, 1977; Hamilton, 2008).

Agile leadership is a new and emerging theory of leadership that should be explored further within the context of innovation. It addresses leadership in an environment of considerable uncertainty and highlights critical components for success, such as clarity of vision, speed of decision making, ability to be comfortable with ambiguity and a focus on learning through leveraging conflicting views (Joiner and Joseph, 2007). There are considerable similarities between transformational and agile leadership theories, although in some ways they differ. They both focus on creating a strong vision, a leader that instils confidence and optimism, focus on looking for different views and new ways of doing things, focus on team development and coaching and rewarding performance (Avolio et al., 1999; Bass, 1999; Doz and Kosen, 2010; Joiner and Joseph, 2007). Agile leadership appears to be less focused on the leader/ subordinate approach and more focused on an open and collaborative environment of leadership such as empowerment, creating highly participative culture by seeking and encouraging different points of view for rapid learning. There is an opportunity to merge these two theories of leadership into a single agile leadership theory for future theory development. Elements of agile and transformational leadership will be included in the research model.

It is important to understand the overall ecosystem of the new product development, including looking at the success factors of managing innovation projects in cross-functional teams. Some key elements that seem to be critical to the teams' success is for the team to have clarity regarding their goals and deliverables, for the leader to be a champion of the project and team, empowerment for decision making, appropriate and diverse composition of the team and clear and frequent communication between the team members. It is important to proactively manage all of these elements together to create the right environment for successful innovation. Cross-functional teams will be included in the research model.

Leadership continues to be of tremendous interest with big volumes of leadership research and leadership theories available. As a result, the understanding of the outcomes of leadership has grown tremendously. However, Dinh et al. highlight that there is still a gap in understanding the processes that impact the outcome of leadership such as impact of team, goal orientation, climate and culture (2014).

2.5 Performance

Linking the output of the enhanced innovation activity to performance is critical in order to ensure improved results and increased competitiveness in the marketplace. At the same time it is complex to quantify, evaluate and benchmark innovation activity (Frenkel et al., 2000). The treatment of how to measure innovation is fragmented both when overall corporate innovation capability as a whole is assessed as well as a specific product or service innovation capability. Based on the literature, at a high level, it can be broken up

into the input or the capabilities and activities performed and the output or the impact of these activities (Muller et al. 2005; Edison et al. 2013).

Table 2.8: Framework for Measuring Innovation

	Input	Output
Resource View	Resource dedicated to the project	# of products, services, businesses launched % of revenue for products and services introduced Change in company market value
Capability View	% of employees with innovation as a performance goal % of employees who have received training on innovation # of innovation tools and methodologies available to employees	# of new skills and competencies developed as a proportion of employees # of strategy opportunities to advance existing business # of new market entries
Leadership View	% of executives time spent on innovation % of managers with training in concepts and tools on innovation # of times during 5 – 10 years senior management has redefined companies core business	
Processes	# of ideas submitted by employees during a specific time period Ratio to successful ideas implemented to ideas submitted Average time from idea submission to commercial launch	

Source: Adapted from Muller et al., 2005, p.40

Ries (2011) talks about innovation accounting and looks at the detailed success measures of a minimum viable product. He cautions vanity metrics, such as total registered and active accounts, and recommends a detailed look at funnel metrics and cohort analysis to understand improvements and changes that have been made to the

product on an ongoing basis. He also highly recommends split testing, using test and control group, to understand the impact of any iteration to a product quickly and in detail. This will make the output actionable and improvements quickly visible (Ries, 2011).

There is little consistency of approach in the literature of how to measure innovation and what to measure when. What is clear is that it has to be a multi-dimensional measurement (Collins and Smith, 1999; Kaplan and Norton, 2001; Bremser and Barsky, 2004; Carayannis and Provance, 2008). Carayannis and Provance recommend three dimensions of input metrics, process metrics and performance metrics.

There are very few cross disciplinary studies looking at the end to end leadership and innovation process and linking it to performance. Howell and Avalio (1993) identified a relationship between transformational leadership and above average business unit performance, but the authors did not look at innovation activity or cross-functional teams.

Llorens-Montes et al. (2005) demonstrated that supportive leadership enhances team cohesiveness, organisational learning and innovation; equally, team cohesiveness further promotes the organisational learning that drives innovation, which results in improved organisational performance.

There is a clear opportunity to further relate leadership, creativity and innovation, and explore the critical success factors at each stage of the process. Looking at how to measure innovation performance will be included in the research model.

2.6 Conclusions

2.6.1 Theoretical Framework

By reviewing the literature of critical success factors for new product development it was identified, based on the best practice models, that the success factors could be broken up into 3 key categories of a) innovation leadership that includes culture, leadership and cross functional teams; b) Innovation capability, that includes strategy, market and customer orientation and the new product development process; and c) Performance or the measures of success. Based on this, the literature review was structured around these key themes.

2.6.2 Innovation Capability

Creativity is the generation of novel ideas by individuals or small groups (Amabile, 1988). Creative environment and formal creative processes are critical. Innovation is the implementation of creative ideas that pass a screening process within an organisation (Amabile, 1988). Innovative organisations have deep customer focus, clear vision for innovation, culture, processes and communication that supports innovation (Sundtrom and Viktorsson, 2009; Jassawalla and Sahittal, 2002). A stage-gate process is typically in place to support new product, process or service implementation. These processes are not linear in nature and need to further evolve to reflect this. The latest stage-gate process development within organisations takes into consideration activities such as involving customers and third parties through open innovation (Buijs, 2003; Cooper, 2008; Gronlund, 2010). It is important to further evolve the stage-gate process to allow for open and collaborative innovation processes.

Open innovation can substantially enhance the creative/ innovation capability of an organisation. Using partners or collaborating with customers can help generate new ideas and accelerate implementation timelines (Chesbrough and Appleyard, 2007). It is paramount to move the customer to the centre of the innovation process and build processes that enable speed, leveraging lean and agile methodology. This will allow the organisations to build for the future, challenge the existing business models and drive a culture of continuous innovation and change. Through this approach organisations will be able to respond faster to disruption in the external environment.

2.6.3 Innovation Leadership

Transformational leadership theory is a tested theory and shows a positive correlation with creativity and innovation, in both individual and group settings (Jung, 2003; Shin and Zhou, 2003; Sivasubramaniam et al., 2002). Transformational leaders are charismatic and able to motivate people to go above and beyond expectations (Bass, 1990; Yukl, 2010). Furthermore, agile leadership is well suited for organisations undergoing significant change. Agile leaders can set the right context by being visionary and tactically showing how to achieve the organisation's goals; they can effectively manage stakeholders, turn conflicting views into creative learnings, and are constantly looking for better ways of doing things (Joiner and Joseph, 2007). There is an opportunity to merge transformational and agile leadership theories for future innovation leadership theory development.

Creativity and innovation usually occurs through teams, and most often through cross-functional teams, whilst leadership happens both from the leader to the group, as

well as within the team. It is proven that functional diversity can enhance creativity in cross-functional teams, but this needs to be managed effectively to get the right outcome (Gemer and Leenders, 2011). Some of the key success factors of cross-functional teams are clear goal setting, empowering the team, selection of the right team members and creating the appropriate team climate (McDonough III, 2000). Additionally, senior management sponsorship and having senior management as champions is considered important for the process (Holland et al., 2000).

2.6.4 Performance

In this section a number of leadership and innovation theories and concepts have been evaluated. To enable speed of innovation in an environment that is increasingly uncertain, with heightened risk of business model disruption, it is vital that organisational culture and leadership is more customer centric, open and collaborative and the processes are more creative and innovative. Strong form of leadership is required to build outstanding creativity and innovation capabilities to set organisations apart from their competition. Leaders need to have creativity processes in place to generate a continuous flow of new competitive ideas. Additionally, they need to be able to bring together experts across the organisation to form cross-functional teams that can work together effectively in order to bring innovative products to market quickly. Increased number of innovations launched in the market place should lead to above average performance.

Measuring the impact of the creativity and innovation processes effectively is critical to ensuring that they deliver the desired outcomes of increased customer engagement, enhanced financial value, higher market share, better margins, greater speed,

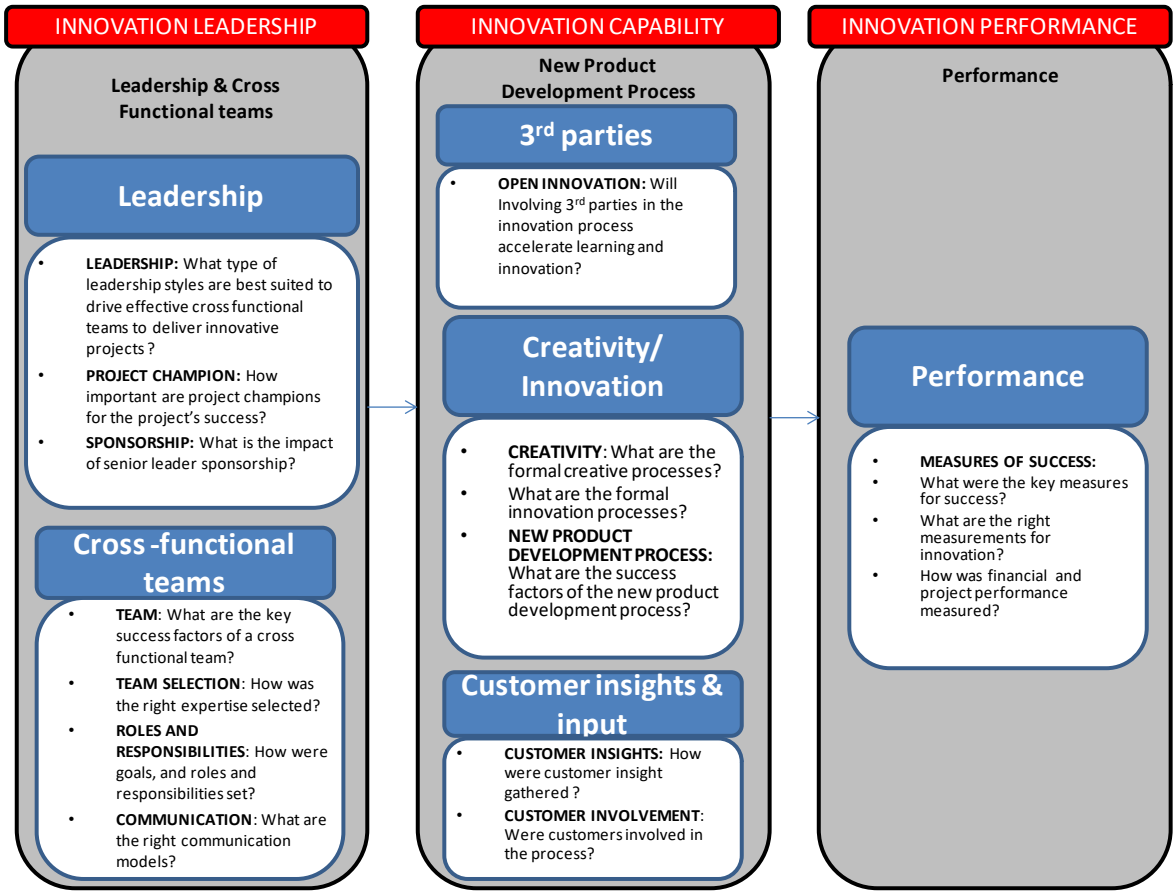
and improved learning depending upon the project parameters. Given the importance of looking to the future, metrics need to reflect not just historic measurements, but also future focused capacities. It is important to evaluate and explore metrics and ultimately the impact of the projects being analysed.

2.7 Potential Research Approach

Based on the literature review a framework 1.1. was developed as a research framework. The goal was to study the key themes in the framework for each of the four product launches to better understand what the key success factors that drive continues new product development.

Elements included in the framework tie into the literature review and are focused on a) Leadership styles, leveraging the transformational leadership theory and complexity theory of leadership; b) Cross-functional teams; c) Open innovation focused on third parties; d) Process of gathering customer and market insights; e) The creativity and innovation process and f) Measures of success. Culture was studies as part of the interaction between leadership and cross functional teams through elements such as leadership styles, decision making, collaboration and communication and as such was not a separate component in the framework. The research framework. is presented in Figure 2.9.

Figure 2.9: Conceptual Research Framework 1.1.



2.8 Originality of Research

After reviewing the literature, it was concluded that the innovation and new product development research is very fragmented and that there is no single discipline that looks at all elements of innovation. To enhance this it is recommended to conduct a cross-disciplinary process oriented study using integrated frameworks when looking at creativity and innovation (Fagerberg, 2003; Anderson et al., 2014; Zhou and Hover 2014).

Additionally, the journal of product management highlighted the need for building more knowledge around innovation theory and practice (Nakata & Di Benedetto, 2012). Trott had highlighted the in order to understand the process of innovation it is needed to look at it in the context of the organisation (2008). To that end, further gaps were highlighted around a need to better understanding how to improve the overall new product development process as well as creating a better understanding of innovation culture including looking at leadership and teams (Hustad, 2012; Debenham and Kaberon, 2012; Brenton and Levein, 2012). Anderson et al. call for more attention to process studies by using more observational and real time case study techniques to help show the process unfold over time and give more contextual learning (2014).

Given the need for practitioner understanding and ability to show the process unfold over time to give more contextual learning (Andersen et al. 2014), it was decided to conduct the research through the lens of strategy as a practice. Strategy as a practice focuses on the ability to explain how strategy is made in organisations and what some of the factors are that either enable or hinder organisations (Vaara and Whittington, 2012). Jarzabkowski (2004) argues that it focuses on the micro activities that go into formulating and executing a strategy. The approach tries to highlight how a strategy emerges through understanding of how actors interact within the context of the organisation (Jarzabkowski, 2003; 2008).

An opportunity was identified to conduct a cross disciplinary study that looks at how a company moves from a product centric/ closed innovation processes to a more open and customer centric process. The goal was to research a company that had gone through the transition by examining different product launches and looking at

the end to end new product development process. The aim was to examine the success factors across leadership and cross-functional teams; the impact of research and open innovation processes; key elements of the creativity and innovation process and the critical measures of success. Taking a case study and observational approach to the research with a strong practitioner view will enable more contextual learnings both for academia and business.

The research focuses on establishing a causal relationships between variables and a developing a practical framework for how innovation strategy is executed in large organisations. This will present a new perspective, through the lense of strategy as a practice, in evaluating the end to end new product development process.

3. Research Methodology and Pilot Study

3.1 Introduction

This section will review the ontology and epistemology behind the research, and will place the research in the realism paradigm. The research methods recommended for the research will be reviewed in detail and the outcomes of the pilot study will be discussed.

3.2 Ontology

3.2.1 Introduction

It is important to place research in an appropriate research paradigm. A paradigm can be described as the conceptual framework that the researcher chooses to work with (Perry and Sobh, 2005). Ontology refers to the philosophical assumptions regarding the nature of reality (Easterby-Smith et al., 2008) and epistemology deals with the relationship between the researcher and reality (Perry and Sobh, 2005). Easterby-Smith et al. (2008) categorise the research paradigm into three main categories: positivism, relativism and social constructivism[1]. Guba and Lincoln (1994) divide them into four research paradigms as can be seen in Table 3.1 on the following page.

[1] *Easterby-Smith et al. (2008) label the paradigm as social constructionism, whereas Guba and Lincoln (1994) refer to it as constructivism. In this research the work constructivism is used to refer to the paradigm.*

Table 3.1: Basic Belief System of Alternative Enquiry Paradigms

Paradigm	Positivism	Realism	Critical Theory	Constructivism*
Ontology	**Naïve realism:** Reality is real and apprehensible	**Critical realism:** Reality is "real" but only imperfectly and probabilistically apprehensible and so triangulation from many sources is required to try to know it	**Historical realism:** "Virtual" reality shaped by social, economic, ethnic, political, cultural and gender values, crystallized over time	**Critical relativism:** Multiple local and specific "constructed" realities
Epistemology	**Objectivist:** Findings are true	**Modified objectivist:** Findings are probably true	**Subjectivist:** Value mediated findings	**Subjectivist:** Created findings
Methodology	**Experiments/ surveys:** Verification of hypotheses: chiefly quantitative methods	**Case studies/ convergent interviewing:** Triangulation, interpretation of research issues by qualitative and quantitative methods	**Dialogic/ dialectical:** Researcher is a "transformative intellectual" who changes the social world within which participants live	**Hermeneutical/ dialectical:** Researcher is a "passionate participant" within the world being investigated

Source: Perry et al. (2000, p16) based on Guba and Lincoln (1994)

3.2.2 Positivism

The ontology behind positivism is that there is a single truth that is measurable and can be studied (Denzin and Lincoln, 2011). Positivism focuses on measuring the world through objective methods, as opposed to a subjective measurement (Easterby et al., 2008). Positivism uses a quantitative approach to verify hypotheses as facts or law (Denzin and Lincoln, 2011). The researcher and the topic of research are considered to be independent entities and that the researcher can study the object without having any influence of it. The

approach starts with hypothesis that are either proven or dis-proven through quantitative data inquiry (Guba &Lincoln, 1994).

3.2.3 Realism

The ontology behind realism is that the researcher does not believe in a single truth, but on a number of perspectives from the participants (Creswell, 2013). Limited realism or critical realism has its roots in realist ontology combined with a constructivist epistemology which means "the world has a reality outside of human constructions of it, but that our understanding of it is always limited by our position within it" (King and Books, 2016, p. 18). This is based on Bhaskar's belief that "things exist and act independently of our descriptions, but we can only know them under particular descriptions" (1978; p.250). The world is seen to be stratified and to consist of events, objects and object structures (Sayer, 1992). The realist view of the world is that knowledge can be incomplete and partial and there isn't one single truth and as such, there can be more than one way of understanding reality (Maxwell and Mittapalli, 2007). Realists look to build a number of views of reality and tend to use research methods that are inductive rather than purely deductive with the view to build theory (Riege, 2003).

Critical realism subscribes to subjectivist position in the development of knowledge (Madill et al., 2000). Critical realism is tolerant to different research methods that fall into two broad categories. Extensive research uses large scale surveys and statistical analysis to look for patterns. The second one, intensive, focuses on studying agents in contexts using qualitative analysis such as interviews to explain and look for causality. Bhaskar describes that "causality is to be analyzed in terms of tendencies of things rather than the conjunction of events or phenomena (1975, p.28). The focus here is

not on a deductive causality but identifying a cause as a result of particular mechanism or processes that relate to specific situations and events (Maxwell, 2004). This is in line with Miles and Huberman's explanation of local causality (1994). This approach to causality allows for identificaltion of local causality even with individual cases and as such seen as a major contribution to scientific research (Maxwell and Mittapallli, 2007)

Case studies might include both inductive and deductive use of data and analysis where deduction helps to pinpoint the areas of interest providing connections to prior literature and research. Induction focuses on understanding in detail of the social event by recording and analyzing activities. Interpretation of events is subjective and the researcher accepts that explanations take on an interpretive character. (Easton, 2010; Danemark et al. 2002; Sayer, 1992). The research process uses abduction, which is a systematic combination of inductive and deductive approaches. It allows the researcher to go back and forth between theory and empirical observations to build a greater understanding (Dubois and Gadde, 2002). The approach is closely related to process theory, which looks at events and the connectivity of processes. Process theory "lends itself to the in-depth study of one or few cases or a relatively small sample of individuals and to textual forms of data that retain the chronological and contextual connection between events" (Maxwell, 2004). The realism paradigm was selected for the research as it fits well with the goal of doing an in-dept process oriented study of the end to end new product development process and build causality.

3.2.4 Critical Theory

The ontology behind critical theory is that "reality is based on power and identifies struggles" (Creswell, 2013, p.36). Critical theory focuses on measuring the world through the study of social structures. The aim of the research is to find the truth pertaining to social power struggles (Denzin and Lincoln, 2011). These studies are often "long-term, ethnographic, and historical studies of organisational processes and structures" (Perry et al., p.17).

3.2.5 Constructivism

The ontology behind constructivism is that there is more than one reality, which is constructed through interactions and experiences with others (Creswell, 2013): "users of this paradigm are oriented to the production of reconstructed understandings of the social world" (Denzin and Lincoln, 2011, p.92). The paradigm represents an "epistemological perspective, concerned with how we know, and by implication how we develop meaning" (Young and Collin, 2003, p.375). The researcher is an active participant in the research and studies the work from the perspective of an insider by commenting systematically on their own role (reflexivity) (Easterby-Smith et al., 2008). The researchers position themselves in the research and ask open ended questions to generate a theory, pattern or a meaning. Emergent ideas are obtained through the use of interviewing, text analysis and observation (Creswell, 2013).

3.3 Research Methodology

3.3.1 Qualitative Research

Qualitative research is a situated activity that locates the observer in the world. Qualitative research consists of a set of interpretive, material practices that make the world visible and can transform it. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. Information is gathered and studied using observations, interviews, documents and artefacts. (Miles and Hubermann, 1994). At this level, qualitative research involves an interpretive researcher studying things in their natural settings, attempting to make sense of or interpret phenomena, in terms of the meaning people bring to them (Denzin and Lincoln, 2011, p.3)

With qualitative research it is believed the investigator can get a better understanding of the individual perspective, using both observation and interviews (Densin and Lincoln, 2011). The data is most often collected in the field or natural settings, as opposed to a laboratory. It uses a combination of inductive and deductive logic. The investigator uses an inductive approach and builds logic through organising data from multiple sources, identifying emerging themes from the data. It furthermore, uses a deduction to check themes against literature or data (Miles & Hubermann, 1994; Creswell, 2013).

Qualitative research is most commonly used when themes or issues need further exploration or complex/detailed understanding. This type of research is also used for theory building and can be used to testing hypothesis or to validate or bolster quantitative research from the same set of data (Miles and Hubermann, 1994; Creswsell, 2013).

3.3.2 Strategy as a Practice

Strategic as a practice is focused on conducting strategy and looks to create connections between micro-phenomenon that is studied in detail in a natural setting. It looks at detailed processes around who and how things get done and how that influences the strategy (Jarzabkowski, 2004). Strategy as a practice draws mainly on sociological theories of practice. This further enriches the field of strategic research which tends to relay on economic theories (Vaara and Whittington, 2012). The strength of this approach is that it helps uncover details of the activities of a process (Brown & Duguid, 2001; Vaara and Whittington, 2012). The research approach looks at three key elements of 1) Practice, which is the examination of strategy as a flow of organisational activity; 2) Practitioners, looking at interactions between people across the organisation and externally to the organisation; and 3) Practices, such as tools and artefacts that are being used (Jarzabkowski, 2005). As the research focuses on practice and practitioner it aims to create practical relevance (Vaara and Whittington, 2012).

3.3.3 Case Study Method

Case studies are used to explore one or a small number of individuals, events or organisations in depth, over time (Easterby-Smith, 2008). The purpose of a case study is to gain a deep understanding of the complexity of the object of study and it allows for a thorough and holistic understanding of the research problem in situation (Baxter & Jack, 2008; Stake, 1995). Yin (2013), highlights that case studies are a good method for answering "how" and "why" questions. Yin defines case study research as "an Empirical inquiry that:

- Investigates a contemporary phenomena within its real life context, especially when the boundaries between phenomenon and context are not clearly evident (1994, p.13).

The case or cases that are to be researched need to be bound by certain criteria, e.g. a specific time or a place. Case studies can either be intrinsic, with the intent to demonstrate a unique case, or instrumental, where cases are selected to better understand a specific problem. A limitation of the case study method is that the researcher needs to clearly define the scope of the case. It is vital that the scope is neither too broad nor too narrow, and it is also important to define whether it is appropriate to use single or multiple cases (Creswell, 2013). To ensure trustworthiness and rigor of case study triangulation, clear articulation of the research question, solid data collection strategies and good data analysis are needed (Baxter & Jack, 2008). Table 3.2 on the following page provides an overview of case study research as defined by Creswell (2013).

Table 3.2: Overview of Case Study Research

Characteristics	Case Study Research
Focus	Developing an in-depth description and analysis of a case or multiple cases
Type of problem best suited for design	Providing an in-depth understanding of a case or cases
Discipline background	Drawing from psychology, law, political science and medicine
Unit of analysis	Studying an event, a problem, an activity, or more than one individual
Data collection forms	Using multiple sources such as interviews, observations, documents and artefacts
Data analysis Strategies	Analysing data through description of the case and themes of the case, as well as cross-case themes
Written report	Developing a detailed analysis of one or more cases
General structure of study	Entry vignette Introduction (problem, questions, case study, data collection, analysis, outcomes) Description of the case/ cases and its/ their context Development of issues Detail of selected issues Assertions Closing vignette

Source: Creswell, 2013, p.102 - 106

Case studies are used to achieve different objectives. The inductive theory building case study looks to build a new theory from empirical data. It is a positivist approach and looks to create testable hypothesis and theory. The natural experiment looks to develop causal explanations through a positivist approach and objective search of causes. The interpretive sense making approach is a constructionist approach that focuses on

understanding of social constructs and are descriptive in nature. The contextualised explanation falls under critical realism and looks to subjectively establish case and effect explanations (Welch et al. 2011).

Table 3.3: Comparing four methods of theorising from case studies

Dimension	Inductive theory building	Natural experiment	Interpretive sense making	Contextualised explanation
Philosophical orientation	Positivist (empiricist)	Positivist (falsificationist)	Interpretive/ constructionist	Critical realist
Nature of the research process	Objective search for generalities	Objective search for causes	Subjective search for meaning	Subjective search for causes
Case study outcome	Explanation in the form of testable propositions	Explanations in the form of cause-effect linkages	Understanding of actos' subjective experiences	Explanation in the form of causal meaning
Strength of case study	Induction	Internal validity	Thick description	Causes-of-effects explanations
Attitude to generalisation	Generalisation to population	Generalisation to theory (analytic generalisation)	"Particularisation" not generalisation	Contingent and limited generalisations
Nature of causality	Regularity model: proposing associations between events (weak form of causality	Specifying cause-effect relationships (strong form of causality)	Too simplistic and deterministic a concept	Specifying causal mechanisms and the contextual conditions under which they work (strong form of causality)
Role of context			Contextual description necessary for understanding	Context integrated into explanation
Main advocate	Eisenhardt	Yin	Stake	Ragin/ Bhaskar

Source: Welch et al.2011, p.745

Qualitative case studies continue to receive criticism from more positivist researchers suggesting they don't have the same amount of rigour, it is harder to generalize from the cases and due to large amount of data the interpretation can be subjective (Easterby-Smith et al., 2008). Multiple cases are seen to increase confidence in the robustness of the research. Case studies are also criticized for lack of validity and rigour. Yin, recommends the use of multiple sources of evidence, establishing a chain of evidence and using informants to verify findings (2013).

3.3.4 Interview Technique

3.3.4.1 Semi-Structured Interviews

The typical interview is conducted one-to-one, with the main aim of understanding the respondent's opinion and why they hold that viewpoint (Easterby-Smith et al., 2008). It is also important to ensure that interview bias is avoided. To avoid this bias, researchers usually keep their questions open and ask probing questions. In order to gain correct insights, it is vital to gain the trust of the interviewee. Additionally, using a language that the organisation is familiar with is another factor that will ensure that key themes are captured correctly. Other elements influencing the success of an interview is the location where the interview is conducted. A location that is neutral and quiet is considered better in terms of building the right environment. Finally, recording the interview can also result in anxiety, so it is important to ensure interviewees that their information will be anonymous so that they feel at ease while recording the interviews (Easterby-Smith et al., 2008).

3.3.4.2 Critical Incident Technique

Critical incident technique is often used alongside interviews to gain further information: "proposed by Flanagan (1954), the technique offers an opportunity to go straight to the heart of an issue and collect information about what is really being sought, rather than collecting large quantities of data that may or may not be directly relevant to what is wanted to be understood" (Easterby-Smith et al., 2008, p.150). Qualitative researchers often use this technique in combination with in-depth interviews. The interviewees are frequently asked to remember a specific incident to explain motives or actions (Easterby-Smith et al., 2008). It is believed that critical incident technique will further help gain deep insight into the critical success factors.

3.2.1 Thematic Analysis

Thematic analysis is a foundational method for qualitative analysis and is a tool to be used across different methods. It is a flexible method to identify patterns within data and can be used across different theoretical frameworks from positivism to constructionism and anything in-between such as critical realism (Braun and Clarke, 2006). Thematic analysis goes beyond the frequency analysis in content analysis looking at the meaning Themes are developed by coding and the interpretation can range from looking at theme frequencies to showing graphically relationships between different themes. There are a number of approaches to thematic analysis including content analysis, template analysis, grounded theory and interpretative phenomenal analysis (King & Brooks, 2016).

3.3.4.3 Content Analysis

Content analysis is a research technique for making replicable and valid inferences from texts and provides the researcher with greater understanding of the subject being examined. It also helps provide new insights and informs actions (Krippendorff, 2004). Nowadays, content analysis is generally considered to be an eight step process developed and evolved by Inch et al. (1997), Krippendorff (1980) and Weber (1990). Summative content analysis is where keywords are derived from the literature or from an interest of the researcher and are identified before and during the data analysis with the goal of exploring usage. Secondly, a latent content analysis is applyed focusing on finding the underlying meanings of the content or the words (Hsieh and Shannon, 2005).

Content analysis was used during the pilot study to further identify themes for the primary study, get a better understanding of the topic in the field and language used and build a first version of the template to be used in the primary study.

3.2.1.1 Template Analysis

Template Analysis is used to identify emerging themes in the topic of concern. It is often referred to as ‘codebook analysis’ or ‘thematic analysis’. The researcher develops basic templates (codes) based on the themes being explored prior to conducting the research. However, there is full flexibility to modify and add templates as the researcher gains further insights. (Symon and Cassell, 2008). Template analysis has evolved as a separate research approach from within thematic analysis and is considered a good approach for research in real-life settings. Template analysis is classified as a generic style of thematic analysis as it does not tie to a specific methodology or underlying philosophy.

This includes in relation to induction or deduction and is neither strongly inductive nor strongly deductive. It often uses a priori themes that might be grounded in the literature review and then follows a process of the researcher understanding the data, doing preliminary coding, clustering themes, producing an initial template, applying and developing the template and final interpretation. It is highly iterative in nature so these steps are repeated frequently during the process (King & Brooks, 2017).

Template analysis was used during the primary study to allow flexibility of identification of emergent themes and deep exploration of key themes to enable the construct of causality between themes.

3.4 The Pilot Study

3.4.1 Introduction

The goal of a pilot study is to prepare for the main study and can be used to test data collection, interview technique, trying out research instruments and building a better understanding of the topic to be researched (Sampson 2004; Van Teijlingen and Hundley 2001).

The goal of the pilot study was to:

a) Test data collection, interview technique and research instruments

b) Identify key emerging themes in regard to the new product development process

c) Get a better understanding of the these themes to start to develop the template for the primary study

d) Understand better the language used around new product development and innovation.

To further explore the topic, semi-structured interviews were conducted within the company on a recent product innovation to better understand the topic of new product development process including leadership, cross-functional teams and how performance was measured. Word count analysis was used in the first instance to identify key emerging themes and this was coupled with latent content analysis with the aim to build a deeper understanding of the themes and develop conceptual maps of each theme.

3.4.2 Research Approach

The pilot study was conducted within the global financial services company at the beginning of 2012. A series of conversations were undertaken with the leaders of one division of the company between October and December 2011 to get approval to conduct the research inside the company. Access was granted by the organisation's Public Relations department in December to use a mobile payments pilot in Japan for the pilot study. The mobile payments pilot was a project run by a cross-functional team in the Japan, Asia, Pacific and Australia (JAPA) region. This was considered a good project as it was focused on launching a new payments innovation product. Team members were based in Sydney, Singapore, Seoul and Tokyo and the core team consisted of nine participants. All the participants were contacted via email to obtain their consent to participate in the interviews and seven of them responded positively; one person had already left the company and one was on extended leave. Table 3.4 lists a summary of the participants in the interviews. The interviews were conducted in January 2012.

Table 3.4: Interview Participants - Pilot Study

Function	Leadership Hierarchy	Age	Gender	Years in Company	Location	Interview #
Relationship Lead	Junior Management	28	Male	2	Japan	1
Business Development	Middle Management	35	Female	1	Japan	2
Technology	Middle Management	35	Male	10	Sydney	3
Regional Project Lead	Senior Management	45	Female	15	Singapore	4
Local Business Lead/ Sponsor	Senior Management	46	Male	7	Japan	5
Local Project Management	Junior Management	32	Male	3	Japan	6
Technology	Junior Management	36	Male	9	Korea	7
Average		36.7	29% Female / 71% Male	6.7		

As can be seen in the table, the team represented a good cross section of senior, middle and junior management from business and technology functions. They had a range of 1 - 15 years experience with the company and were based around the Japan, Asia Pacific region.

A semi-structured interview guide was developed which matched the core themes of the research topic based on the literature review. A semi-structured interview is an incomplete script and allows for open ended questions (Myers and Newman, 2007). The aim was to cover all main topics but allow the interview to be free flowing and non-leading, so the guide focused on high level questions. Semi-stuctured interviews are believed to give more detailed and personal data (Easterby-Smith et al., 2008).

3.4.3 Conducting the Interviews

The interviews took place over the phone and were recorded to enable detailed transcribing. To put the interviewees at ease they were explained in detail the purpose of the study, the confidentiality of the research and that they could pull out any time should they choose to do so, the estimated length of the conversation. Given that the researcher

had worked in the division previously and in the region, it helped create familiarity and trust. The interview guide was useful and also important to allow the interview to flow on the basis of interviewee responses. A number of themes emerged during the semi-structured interviews that further helped shaped the primary study.

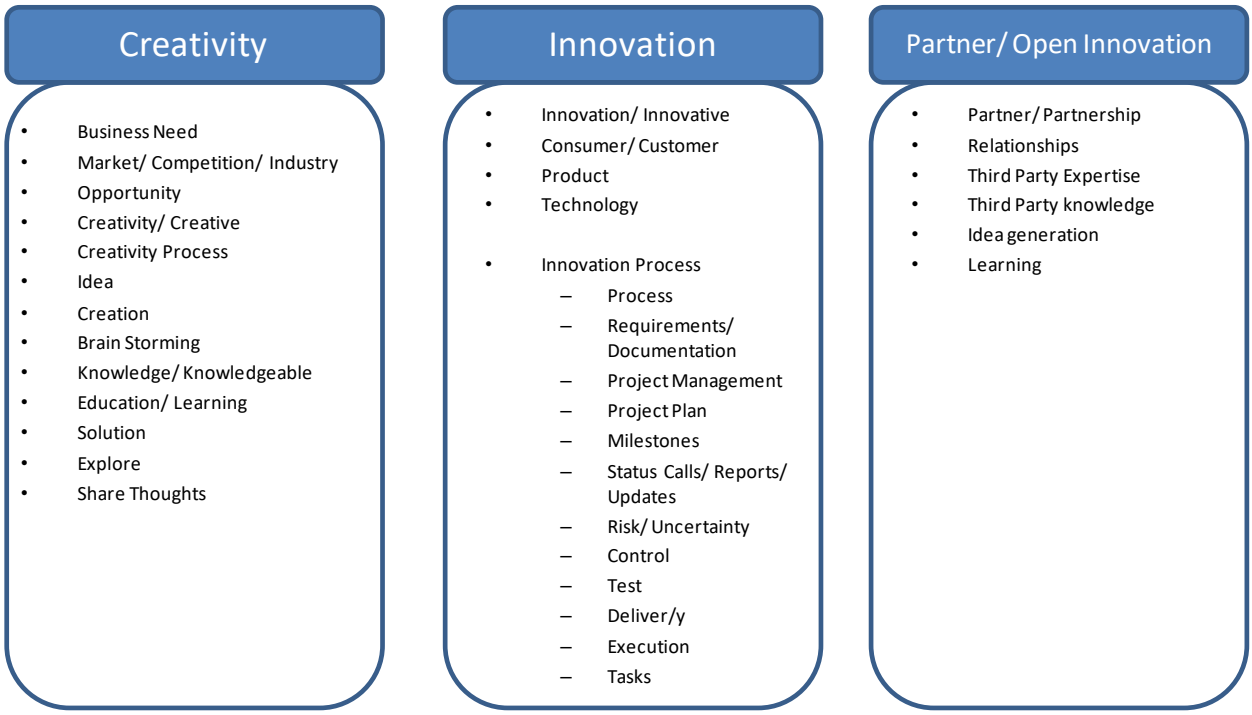
3.4.4 Transcribing

The interviews were transcribed to improve consistency. They were transcribed using verbatim transcription or a "word-for-word" reproduction of verbal data, where the written words are the exact replication of the audio recorded words (Harcomb and Davidson, 2006, p. 19). However, it was difficult to understand certain respondents when listening to the recorded interview. Blank spaces were left where there were gaps in understanding. It did take considerable amount of time to transcribe each interview, which was a consideration for the primary study.

3.4.5 Template Development

A template for content analysis was developed on the basis of themes emerging from the literature review. The analysis was categorised based on these key themes, developed in Research framework 1.l: Leadership, Cross-Functional Team, Third Party Involvement, Customer Input, Creativity and Innovation, and Performance. The goal was to firstly understand frequency around key themes in the template, followed by a qualitative content analysis to understand deeper meaning behind key themes. The template is outlined and explained below:

Figure 3.1a: Template– Creativity/ Innovation/ Partner Involvement



The template presented above highlights the keywords that were explored across creativity, innovation and partner involvement. As defined in the literature review, creativity looks in detail at the idea generation phase (Puccio et al., 2011). The key themes on creativity evolve around the generation of the idea and the creation of a competitive advantage. The key models and words selected for the template for creativity evolved around the idea generation and the competitive environment.

Innovation is defined as the successful implementation of the idea (Amabile et al., 1996). The key themes on innovation evolved around the implementation process. Hence the words selected in the template developed around the new product development or the innovation process of getting the product or idea to market.

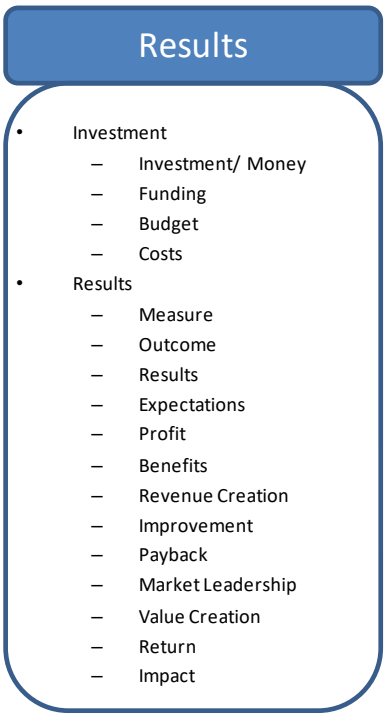
Opening the innovation to third parties is the process of bringing external partners into the new product development process in order to leverage their knowledge and resources and thereby accelerating innovation (Chesbrough and Appleyard, 2007). The key themes selected for the template were therefore around partner involvement and the expertise and value they contribute to the innovation process.

Figure 3.1b: Template– Leadership and Cross-Functional Teams

Studies show a positive correlation between transformational leadership and creativity and innovation (Jung 2003; Shin and Zhou, 2003). Some of the key characteristics of transformational leadership, according to the MLQ model, is the ability to provide vision, empowerment, inspiration and influence, along with the ability to motivate, be optimistic and enthusiastic and seek different views. As a result, a number of these themes were selected for the template. According to the literature review, some of the critical success factors for cross-functional teams were clarity of goals, empowerment, team selection and creating the right working environment. Characteristics such as trust, flexibility, communication and decision making were

identified as important and critical (Holland et al., 2000; McDonough III, 2000). The following template reflects these factors:

Figure 3.1c: Template – Performance & Financial Return



There are several ways to measure innovation, both focused on creativity and financial returns (Knight, et al., 2005). Some of the key themes explored in the literature review centred on value creation, growing market share in existing and new markets, building sustainable competitive advantage and driving business performance. These were selected for the template.

3.4.6 Coding and Analysing

Word count was determined for unit analysis and hence critical key words were identified in each category. Firstly, interviews were read and reviewed for key word selection to ensure that all the key themes are captured, based on the literature review and the research framework.. Words were carefully selected for each category, based on the themes from the literature review, as well as reading and working through the interviews. A manual word count was conducted to review the words in the context of the document. Secondly, Microsoft Word's word count was used to recheck the word count. To ensure accuracy, these words were manually counted twice. Some of the limitations with this approach are that there were certain overlapping themes between the categories. For example, expertise is critical to the selection of diverse cross-functional teams and it is also important in an open innovation process. In this case, the two were divided into expertise and third party expertise and were manually counted.

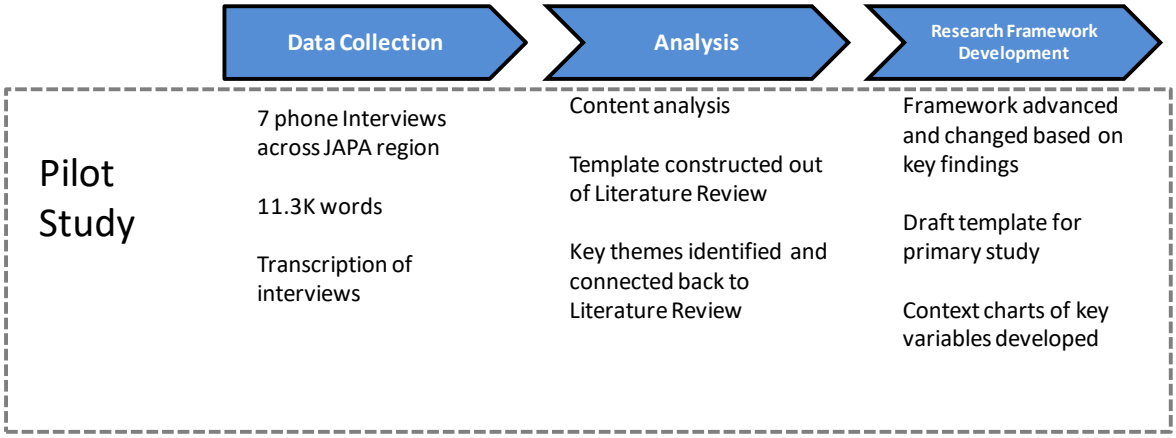
Once key themes were identified a further analysis was done on the interviews comparing and reviewing answers from all 7 respondents to identify similarities and underlying themes. This has been further summarized in tables and context charts. Context chart is a network or a graphical representation of inter-relationships between variables (Miles and Hubermann, 1994). The purpose of these was to further help understand language and develop template for the primary study.

3.4.7 Summary of Data Collections, Analysis and Model Development

To summarise, the pilot study was used to explore the key themes derived from the literature review and further advance the theoretical framework. The pilot study comprised of

seven interviews, with a total length of 11.3K words, which were analyzed using rigorous content analysis. The overview of the data collection, analysis and model development can be seen in Figure 3.2 below.

Figure 3.2: Pilot Study: Overview



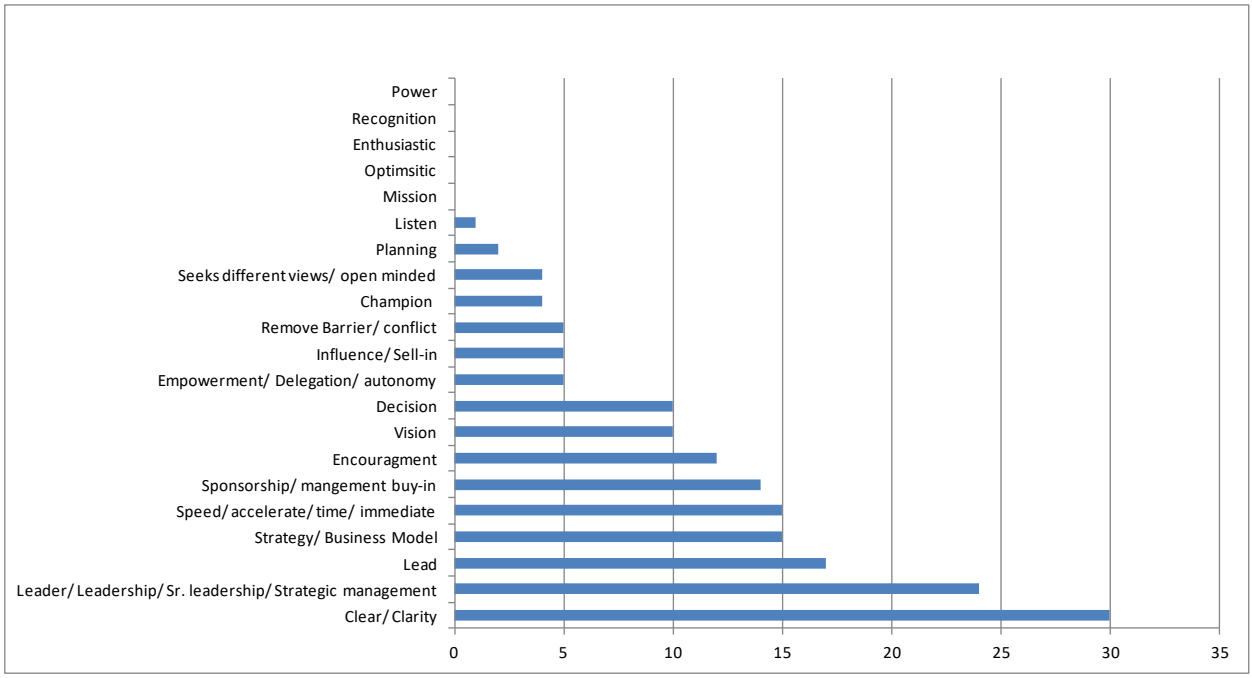
3.4.8 Results of the Analysis

3.4.8.1 Methodology

As outlined above, the purpose of the content analysis was to look at the key emerging themes in each of the areas to gain better and deeper understanding of the subject ahead of the primary research. Firstly, the goal was to understand the language used in the organisation to discuss new product development and innovation processes. This would help further fine-tune the semi-structured interview guide for the primary study. Secondly, the goal was to start to build a heuristic framework for the research. Thirdly, was a starting to understand better the inter-relationships between key variables.

3.4.8.2 Results - Leadership

Figure 3.3: Pilot Study - Leadership



Unit of analysis: Frequency of words/ terms being mentioned

The area of leadership in the project is about both the overall leadership of the project and leadership within the team. In the literature review, some of the key characteristics of a transformational leader are identified: being charismatic, enthusiastic, providing clarity and vision, having an element of power, challenging conventional thinking, providing appropriate recognition to the team and being able to motivate people to exceed expectations (Avolio et al., 1999; Bass, 1990; Yukl, 2010). Additionally, some of the other traits of a successful leader in cross-functional teams are senior leadership sponsorship, being a project and team champion, ability to remove barriers and speed up decision making (Holland et al., 2000; McDonough III et al., 2000). Reviewing the output of the word count analysis, *clarity* and *providing clarity* followed by *overall leadership* were the most frequently used words. *Business strategy*, *time* and *speed*

were also mentioned frequently. Additionally, *sponsorship* and *management buy-in* were mentioned recurrently along with *encouragement*.

Based on these themes the interviews were further analysed to understand deeper meaning and context. The key themes emerged around decision making, setting a clear vision, senior management sponsorship and the ability to build buy-in for the project. Below is a table that summarizes comments from participants around these topics:

1) Decision making: What seemed important around decision making was the ability to take fast decisions. Secondly, empowering and delegating decision making to the local team was linked directly to faster implementation of the project.

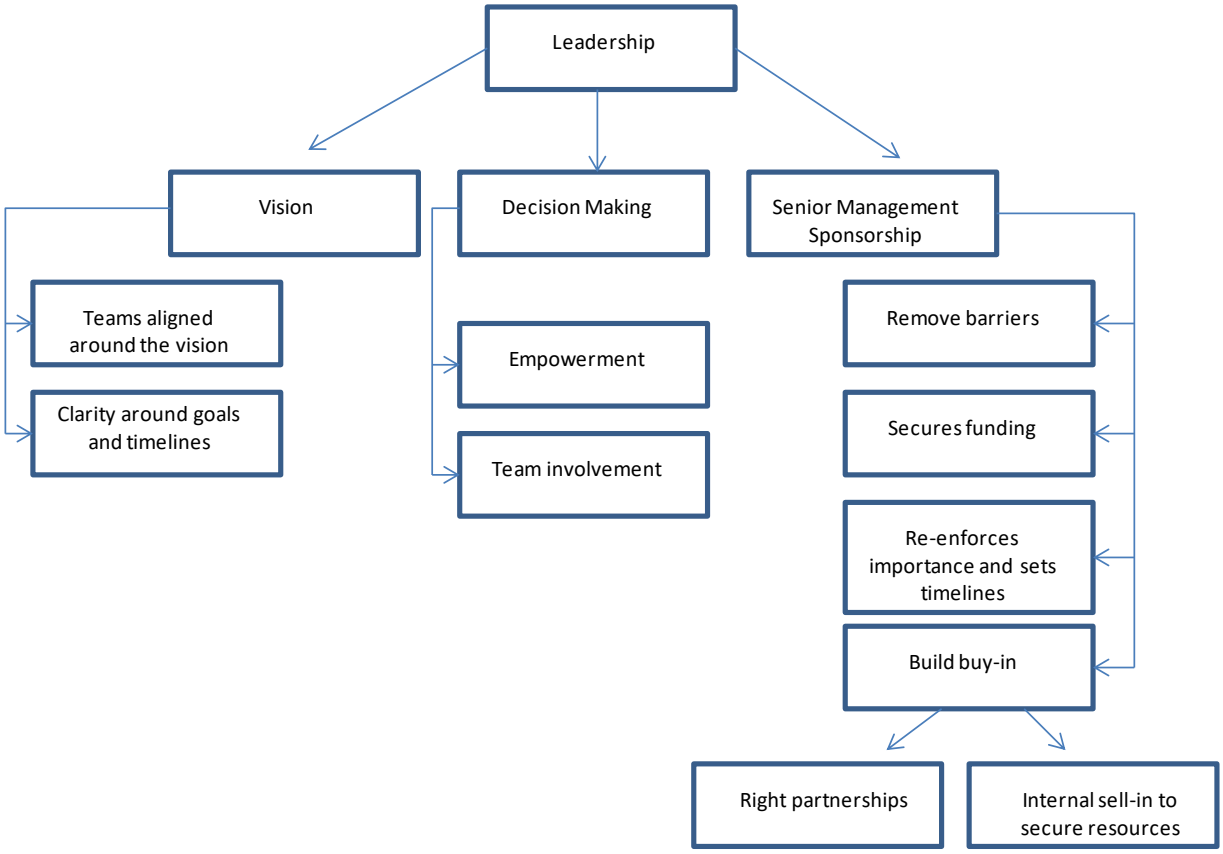
2) Vision/ Objectives: Most participants highlighted the importance of having a clear vision as a team and something that was done very well for this project.

3) Senior management sponsorship: This was highlighted as a critical element to the project. The level of sponsorship was seen as an important element to release funding and create focus and buy-in for the project.

Table 3.5: Qualitative content analysis - Leadership

	Interviewer 1	Interviewer 2	Interviewer 3	Interviewer 4	Interviewer 5	Interviewer 6	Interviewer 7
Leadership							
Decision Making	The business leader clearly took decisions in partnership with the project team		It was critical we had delegation and empowerment from senior management to lead the project in Japan. Leaders needed to be flexible like that and be close when there were issues but then delegate	Decision making had to be quick and fluid given the levels of uncertainties in the beginning	Being able to implement in such a short timeframe was due to the fact that the Japanese team was empowered to run the project and execute. In fact the partner requesed this as well. They didn't want too many people involved from a regional and global perspective and as a result full autonomy was given to the team in Japan.		
Vision/ Objectives	The leadership team did a great job in ensuring everyone had the same vision and everyone could see the future for this innovative product	It was critical to align behind single vision and make sure that was well understood by the team as well as the partners	Everyone was clear about what needed to be achieved.	I was very clear from the beginning to create a short term vision that was separate from the long term vision. This included setting clarity around timelines to get the team focused on daily and weekly deliverables	The senior management team did a good job of building a vision to what I would call creating the hope and then defining the reality		The senior management team was very clear from the beginning for the rational behind the pilot and objectives and benefits. It was a very good strategy`
Senior management Sponsorship	Having a leadership that cared about the pilot and communicated it to the project team and the organisation was great to build momentum	From a leadership perspective it was critical to provide the right support to the team, being able to discuss challenges and remove barriers. Successful partnership between the region and the country that allowed us to bring together the right external parnerships across the region. This enabled us to have the right alignment of objectives	You need senior management sponsorship and someone that believes this should happen. With this sponsorship you will get funding.	Senior management endorsment was really critical including empowering the team.	Having senior management buy-in from the top of the house who belived we had to be in this space. There was a clear and critical sponsorship. Senior support in removing internal roadblocks and sell in the project internally in an effective way.		

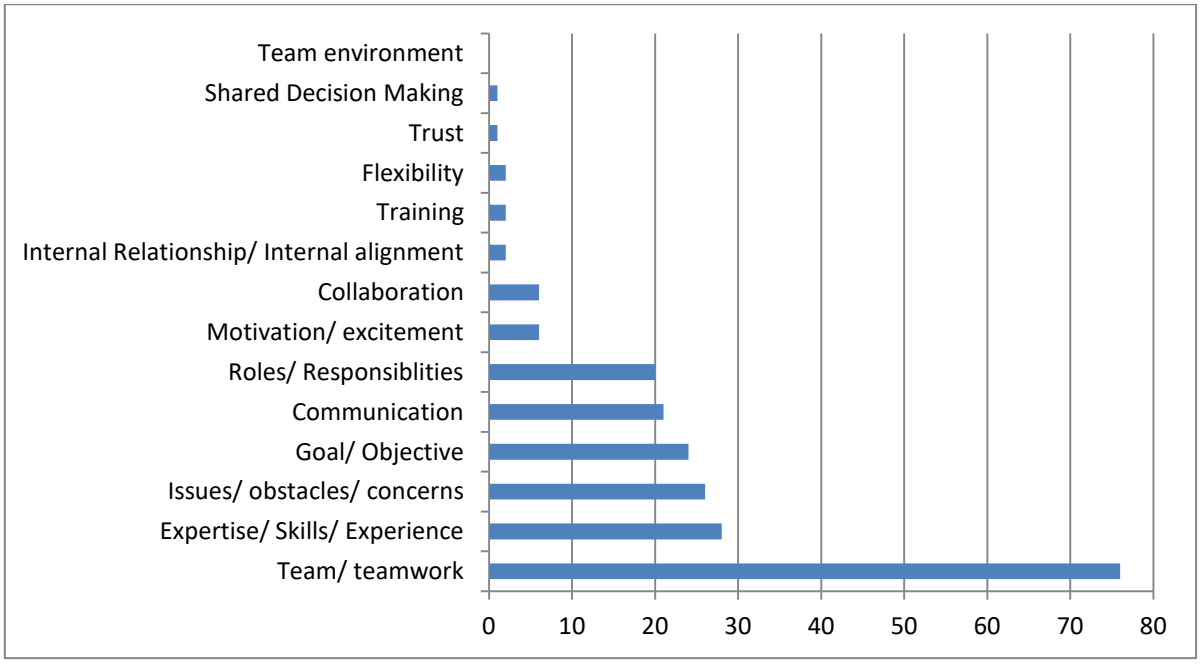
Figure 3.4: Leadership



In figure 3.4, the themes have been summarised in context charts. These have been grouped together based on responses from the interviews but don't at this stage necessarily represent causality. The primary study put focus understanding in more detail the linkages between variables and what enables as well as hinders good leadership.

3.4.8.3 Results - Team Work

Figure 3.5: Pilot Study - Team Work



Unit analysis: Frequency of words/ terms being mentioned

A range of literature suggests that key elements of success in cross-functional teams include goal clarity, team empowerment, selection of the right team members, functional diversity and creating the right team environment. This is enabled by team leadership, senior management support and collaboration within the team (McDonough III, 2000). Elements like *senior leader sponsorship* was measured in the leadership section and was rated relatively highly in terms of word frequency and came further through the thematic analysis.

Figure 3.5 shows that the factors *team* and *teamwork* were most frequently mentioned. Second to that is the selection of the right people through the words *expertise*, *skills* and *experience*. Additionally, *issues*, *obstacles* and *concerns* are

frequently mentioned and need to be understood. Other topics that are also important and relate to the literature review are *goal setting*, *communication* and *roles and responsibilities*. When asked about collaboration, the team most often talked about *communication* and the importance of regular *updates* and *face-to-face meetings*. Analysing the interviews further helped understand better the underlying themes:

a) **Expertise**. As can be seen in table 3.6 below, the expertise of the cross functional team was highlighted as an important variable. At the same time it appears that the leadership didn't have the benefit of being able to assemble the best technical experts across the business or market, but had to rely on a few available experts within the team as well as rely on the partners for expertise.

b) **Collaboration.** The team collaborated well together and through that trust was built among team members. This collaboration also extended to the external partners and being open and willing to share information helped support a collaborative environment. Communication and strong senior management support were highlighted as an important factors to foster collaboration.

c) **Roles and Responsibilities** seemed to be well communicated and clear to the team and was highlighted as an important factor for success.

d) **Communication** both between senior leadership and the project team as well as across the team was highlighted as important. This included communication of the project vision and expectations as well as frequent communication of milestones, status updates and proactively working through issues, concerns and removing barriers.

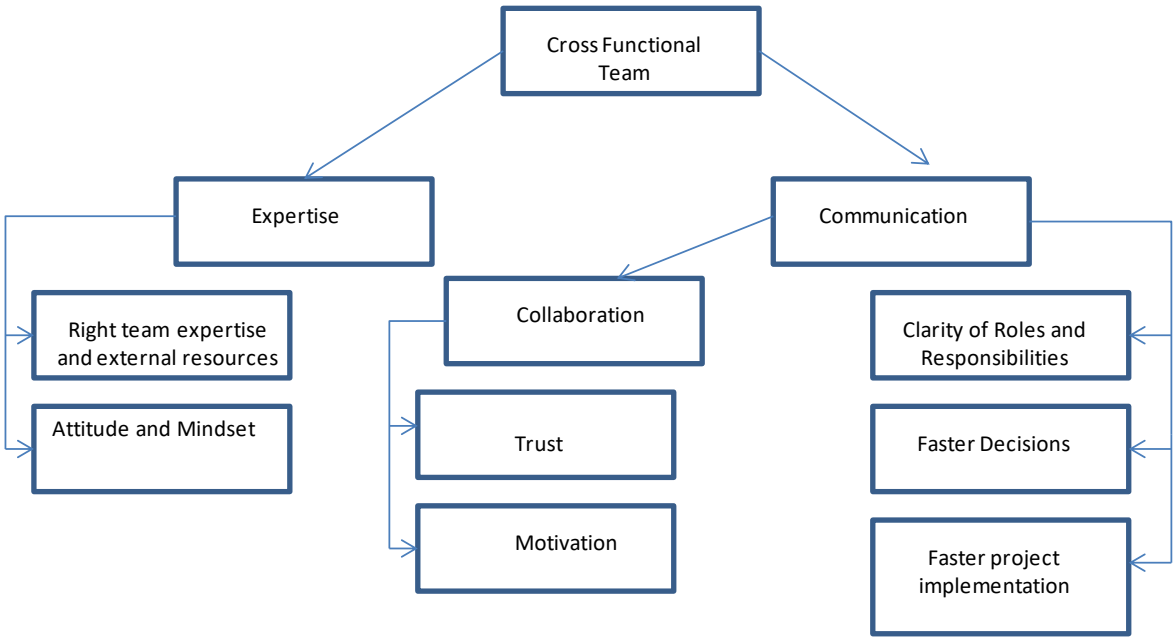
Table 3.6: Qualitative Content Analysis - Cross Functional Teams

	Interviewer 1	Interviewer 2	Interviewer 3	Interviewer 4	Interviewer 5	Interviewer 6	Interviewer 7
Cross Functional Teams							
Expertise	We had people in each specific area of expertise. For example Interviewer 3 had significant background in technologies and interviewer 2 had lots of telco knowledge	We didn't have the luxury of time to pick and choose right team members for the project and it needed a number of Japanese speakers in the local market. Having the right attitude and mindset to learning was an important skill set. We pulled together people with the right technology background and project management skills and brought the right vendors who had the technology and know-how.	We needed expert project team that knows how our products work. The project had a very small project team and that was a very clear success factor. Additionally, it was important to have the right SMEs that have know how and knowledge. When you walk into a partner meeting you need to be clear about what you want and have the technical expertise to carry the conversation.	The knowledge levels of mobile payments from me, the team and the entire organisation was limited. There were many uncertainties and we didn't know how much would be within our control. The key for me was therefore to be open-minded and listen and learn from anyone who has more expertise.	Our technical lead was critical, he brought internal connections to teams around the world so he could bring learnings and capabilities from around the organisation to the pilot and got commitment from teams to provide expertise and support.	Basically, it was new to many of usbut the partners had lot of the expertise	My role was very technical in nature. I have no knowledge of how the team was selected, but I particiated in regular team meetings and project updates.
Collaboration	We overcame a lot of challenges by taking proactive project leadership. Also, through everyone working together and delivering their area, trust was built within the team. The atmosphere was very motivating.	We were very good at teamwork across our team, within the business and with the partners. We also had strong support from senior management that collaborated well to make this pilot happen.	We had a clear understanding among the projec team that this was our project, status updates were shared, issues were shared and we were very open in our communication. It was important that people felt comfortable to raise their concerns easily.	Because this was new to a lot of the team and there were uncertainties people had to embrace ambiguity and be comfortable with asking questions and listening.	We were such a small team that we had to work well together and the parners were an extension of our team. They participated in regular calls and meetings and the whole relationship management and engagement was critical.	Communication style and communicating effectively across internal and external stakeholders drove collaboration.	I have been regularily over to Japan for key meetings. Meetings were arranged on a regular basis and we went through issues and milestones
Roles and responsibilities	Because we were a small team we had full clarity of each others roles.		I mentioned about keeping internal alignment, and clarity around roles and responsibilities was really critical		The team had clarity around roles and responsibilities and how we worked together was a key success factor.		Roles and responsibilities were clear. We had a weekly project plan that everyone had access to that was updated frequently.

Table 3.6 continued: Qualitative Content Analysis - Cross Functional Teams

	Interviewer 1	Interviewer 2	Interviewer 3	Interviewer 4	Interviewer 5	Interviewer 6	Interviewer 7
Cross Functional Teams							
Communication		Being able to communicate across the project team and with senior leadership became very critical as there were so many up-front uncertainties. You needed to get quick decisions as you unfolded something new. Having support to remove barriers and secure funding was key.	The other thing that made the project successful was communication. Firstly, right from the top by clearly articulating the goals for everyone. Secondly, communicating clearly milestones and next steps through our weekly updates. Thirdly, good communication with the partners making sure all of them felt part of the project. Lastly, communicating back progress to senior leaders to keep momentum and support. We used face to face, conference calls, emails, meeting notes and status updates. We had formal discussions and informal discussions to remove issues before they became issues.	From time to time I talked to different team members to ask how the project was going, trying to get a feel from each team member. Sometimes this was formal during project updates and sometimes more informally. This allowed me to uncover very early any issues, concerns and questions the team had.	Marking sure everyone was working towards a common goal. We put a stake in the ground with a clear timeline that was well communicated to everyone.	Communication is an essential thing, communication style internal communication and external communication including PR and media communication.	Meetings were on regular basis. We discussed project and progress, issues and checked off items we were doing so we were clear on how to resolve issues and concerns. We used conference calls and face to face meetings.

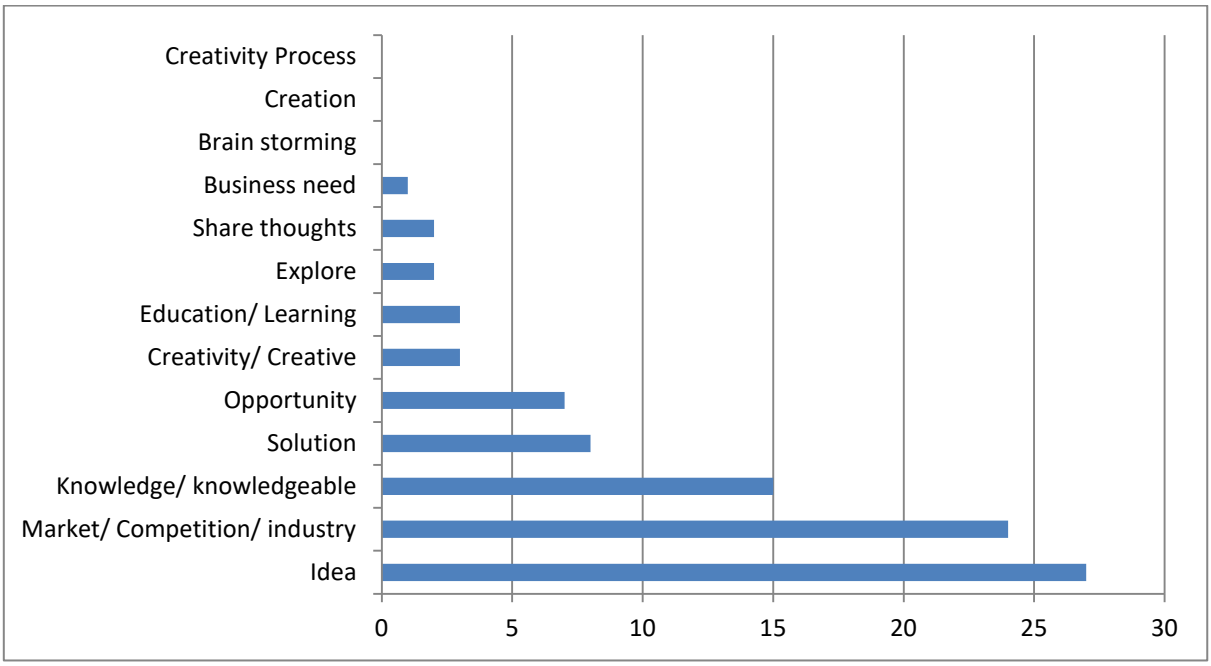
Figure 3.6: Cross Functional Team



The context chart is summarised in figure 3.6. Team dynamics and how to effectively build the right team environment are critical factors and need to be further explored in the main research. This includes understanding communication models and what works well and what doesn't and linkages between key factors.

3.4.8.4 Results - Creativity

Figure 3.7: Pilot Study - Creativity



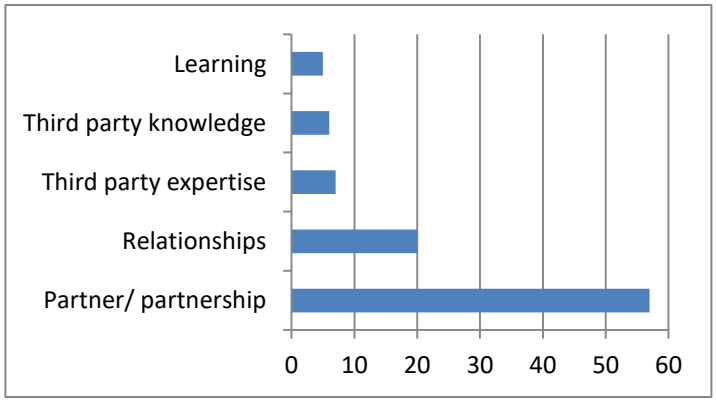
Unit of analysis: Frequency of words/ terms being mentioned

Creativity is the development of novel, appropriate and useful ideas by individuals or groups (DiLello and Hougton, 2004). Higher levels of creativity lead to significantly higher level of innovation, but creativity processes needs to be formalised (Bharadwaj and Menon, 2004). What was apparent through the interviews was that there was no formal creativity process used during the project, which may explain why the word creativity was not frequently used during the interviews. Further analysing the interviews through qualitative analysis the idea generation came from understanding the competitive environment and the details of the development of the solution came from the partnerships with external parties.

- **Competitive Analysis** was done by detailed analysis of the market and competition that lead the team to decide this was an area the company needed to build expertise in.

3.4.8.5 Results - Partner Involvement

Figure 3.8: Pilot Study - Partner Involvement



Unit of analysis: Frequency of words/ terms being mentioned

Opening up the innovation process to third parties can accelerate innovation by leveraging the valuable assets of the parties, resources and market knowledge and help increased pressures to reduce innovation costs and time to market (Chesbrough and Appleyard, 2007). Examining the output of the content analysis, the most frequently mentioned words were partner and partnership. This could also refer to internal partnerships within the company. Additionally *relationships* were mentioned very frequently, followed by *third party expertise* and *knowledge.*

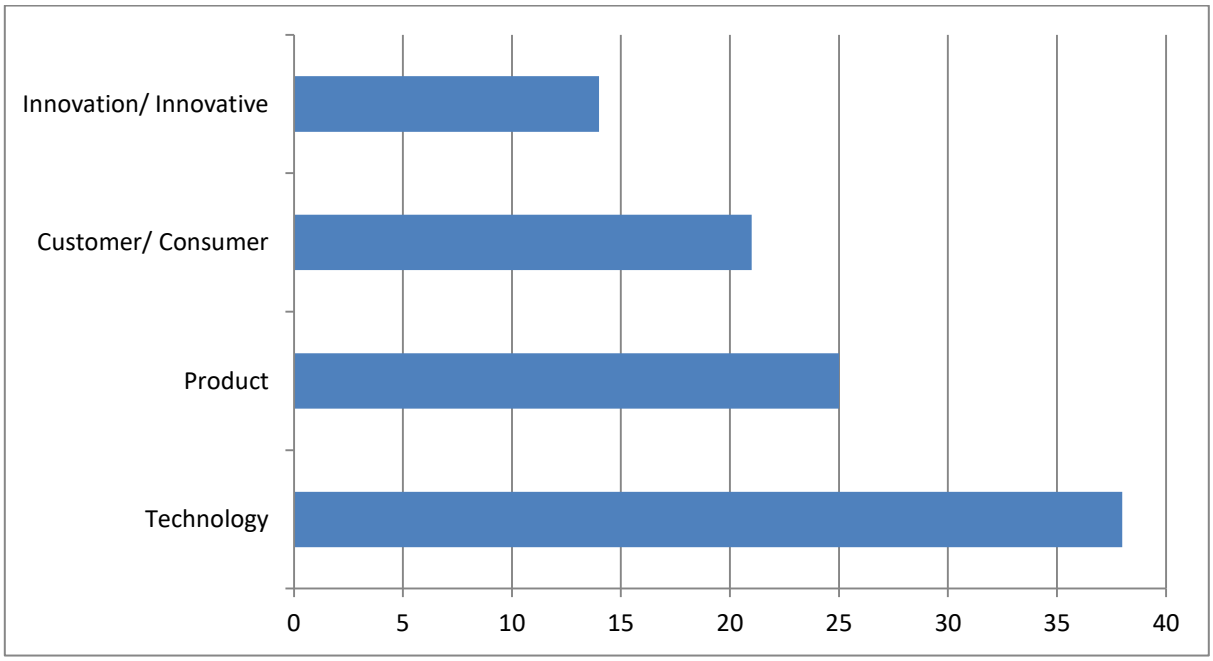
- **Open innovation** through working with third parties was a fundamental part of the development of the idea and solution that was launched to the market. The team relied heavily on the partners for knowledge and co-

creation happened when the teams were brought together. In this instance, selecting the right partners that brought significant technical expertise was seen as a key factor of success.

A key learning from the pilot study is the need to look at the whole creativity and open innovation approach separately from the innovation process. Additionally, care was taken in selecting the right language used in the primary research, to ensure it resonated with the participants and matched with the language used in the organisation studied.

3.4.8.6 Results - Innovation Strategy

Figure 3.9: Pilot Study- Innovation Strategy



Unit of analysis: Frequency of words/ terms being mentioned

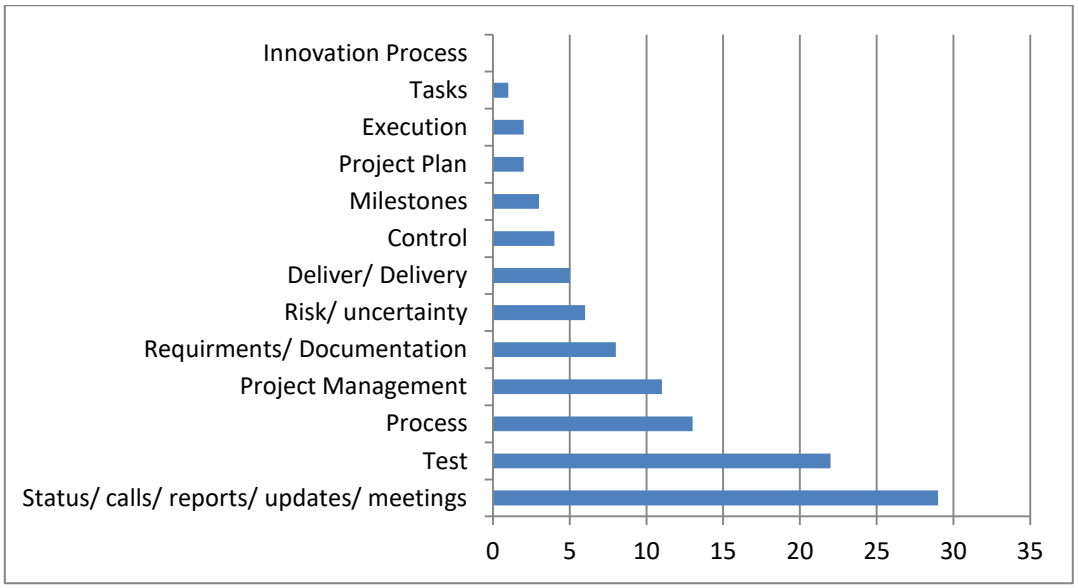
As previously stated, innovation is the execution of ideas in the market place (Amabile et al., 1996). Examining the innovation strategy, it is interesting that the word innovation is not frequently used for the strategy and overall innovation. The content analysis suggests that the project studied was very much a *technology* led project, followed by *product* and then *customer*.

Further analysis of the interview data relating to innovation revealed the importance of launching a pilot, developing new business models and understanding new technology:

- *"But what we've been doing in Asia, we are working on a business model, where we are working on new revenue and this revenue stream is going to be generated through the use of mobile technology, for which as we know, there are many participants in this region, who are interested in taking on this new technology. So, basically creating a new business by exploiting the interest in the new technology sphere. I think we're working on this at this point."*
- *"Our objective was to test the technology and ensure it works."*
- *"So developing a suite of innovative ideas around what new products can happen in this context and then having a trial to test out how this technology will work in order for these ideas to materialise."*
- *"What kind of customer behaviour would come about with this type of payment?"*

3.4.8.7 Innovation Process

Figure 3.10: Pilot Study - Innovation Process



Unit of analysis: Frequency of words/ terms being mentioned

The key themes identified in terms of innovation process were the traditional project management vocabulary, as well as elements such as *status, calls, reports, updates and meetings, tests, processes, project management* and *requirements and documentation*. Looking at the qualitative analysis in detail, emerging themes identified were:

- **Project Management** through regular project meetings, status calls and updates were highlighted as critical.
- **Launch of a minimum viable product** was highlighted as an important element where leadership was clear on tight timeframes for the launch that in return made the project team be very selective about what features could be included in the initial launch. The ability to prioritize these was highlighted as an important element to the project.

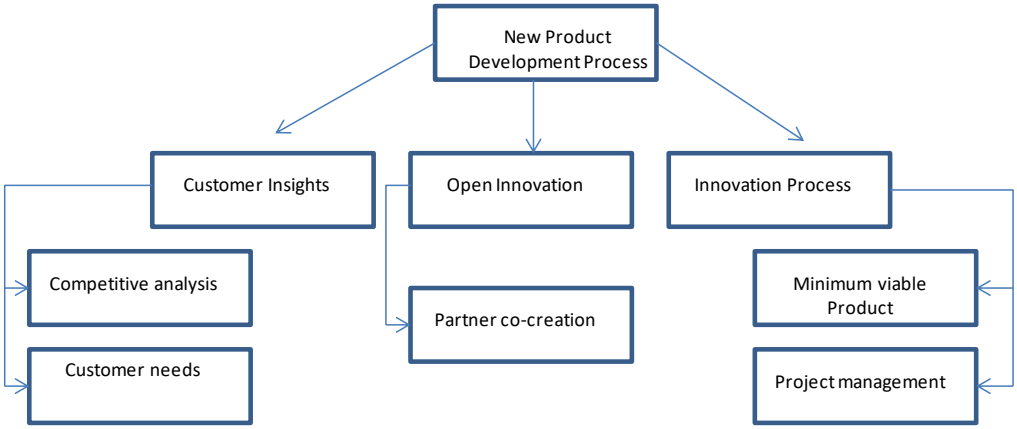
Table 3.7: Qualitative content analysis - New Product Development Process

	Interviewer 1	Interviewer 2	Interviewer 3	Interviewer 4	Interviewer 5	Interviewer 6	Interviewer 7
New Product Development Process							
Customer insights and inputs	We had a good understanding of the Japanese market. We saw a number of advanced mobile payments techonlogies in the market. The market insight was that consumers wanted more conveneinces with payments and this pilot was about testing value proposition with consumers	We were clear on the broad strategy and that we needed partners to support us. We started with scanning the market for both what valuepropositions existed as well as build a good understanding of who the key players are.					
Open Innovation		We brought technical providers, telcos and banks to support the value proposition	Selecting the right vendors and setting the right expectations was key.	Real innovation happened after we engaged the parnters. We had lots of ideas jointly	The partners knew what worked and what didn't work so we relied a lot on them in terms of their knowledge. The partners found the timelines aggressive but once they saw our commitment they were fully bought in. The feedback we got from them was that we are very open, professional, honest and committed partner.	We identified some relationship issues with us and one of the partners because of our project management style. We subsequently created a relationship management role for the partners.	Without the partners we would not have been able to get the pilot off the ground

Table 3.7 Continued: Qualitative content analysis - New Product Development Process

	Interviewer 1	Interviewer 2	Interviewer 3	Interviewer 4	Interviewer 5	Interviewer 6	Interviewer 7
New Product Development Process							
Innovation process		We had a number of different value propositions but selected one quickly that would allow us to get the product out on time. We had no clear process or documentation up-front because we had never done this before. We made sure we documented along the way. We then used clear project managment techinques such as status updates, project plans and issues log to run the project	One of the partners walked away after 2 months into the prject because they didn't see the clear value for them. We had to go back and look at the joint value creation and show them different use cases and making firmer commitments to bring them back on-board. What drove the success of this project is that we set clear timelines and objectives upfront and then we had regular update meetings reporting on where we were in new developments and any road-blocks	We had to prioritise ideas but prioritised quickly the scope of the pilot so we could meet timelines. We were trying to test something quickly to get learnings. We relied heavily on the mobile phone operator to help us get from ideation to an execution plan. We then used project plans, status updates to drive results.	The partners provided us with the refined idea, what the customer experience could look like including the screens and custoemr journey mapping. The partners participated in regular project meetings and status calls.	Beause it was totally new to us and the partners brought lots of experience there were lots of uncertainty and questions in the beginning.	Everything was quite new, we were doing things we had never done before. Collaboration from each partner was critical and so were prooject calls and status updates.

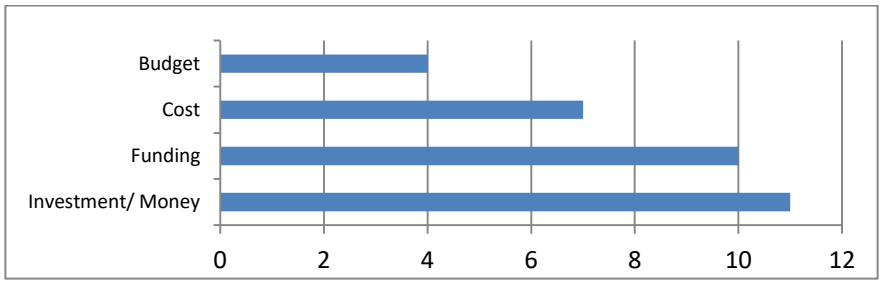
Figure 3.11:New Product Development Process



The context chart has been summarized in figure 3.11. There are three critical elements identified to the new product development process. Firstly, the process of generating customer insights; secondly the open innovation process which was involving 3rd parties and partners in the overall new product development process an finally the innovation process of launching the product that involved project management and building the minimum viable product.

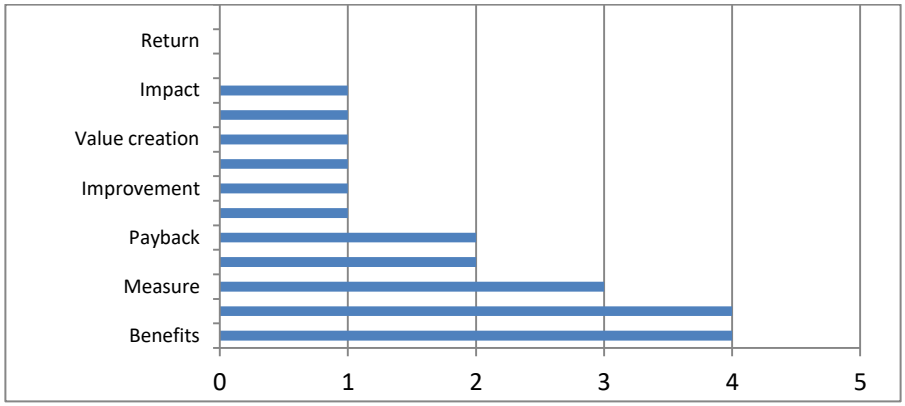
3.4.8.8 Results - Performance

Figure 3.12 Pilot Study - Investment



Unit of analysis: Frequency of words/ terms being mentioned

Figure 3.13 Pilot Study - Returns



Unit of analysis: Frequency of words/ terms being mentioned

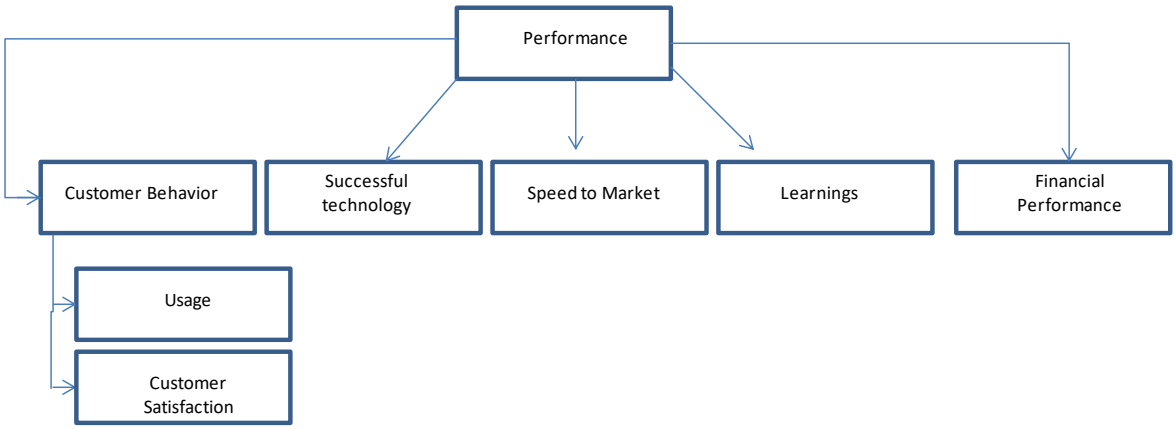
Looking at performance measures the initial word count did not capture the themes of how success was being measured very well. Investment came up frequently but the way returns was categorized it did not highlight key themes. By conducting a thematic analysis on the topic a few emerging themes came through.

- **Customer behaviour** both in terms of driving usage of the product as well as looking at customer satisfaction.
- **Successful technology** or the ability to launch a new technology to the market that worked both from a consumer and merchant perspective.
- **Speed to market.**
- Any **learnings** derived from the pilot.
- **Financial performance** in terms of increased spend and usage of the product.

Table 3.8: Qualitative content analysis - Measures of success

	Interviewer 1	Interviewer 2	Interviewer 3	Interviewer 4	Interviewer 5	Interviewer 6	Interviewer 7
Performance							
Measures of success	Ensure that the technology worked, what kind of customer behaviour would we see with this type of payment mechanism. These were some of the learnings that we wanted to get out of the pilot	We wanted to see if there would be an increasae in the nu;mber of times a customer would use mobile payments, would the average spend increase? Measuring things like average ticket size per transaction. We were also hoping to see what learnings we would get from the pilot to help justify how we could move aggressively into this space	We said from day one we would launch in 8 months and we set a date in November. User exeperinace and what type of behaviors such as customer satisfaction of using mobile payments that we measured through a customer survey. Business volume such as how many transactions overall per day. We were firstly focused on provind that the technology works and secondly seeing if it drives changes in customer behavior	Developning the technology and making sure it works both from the consumer and the merchant perspective. Customer experinece included time to do the transaction	We were testing the technology, ensuring transactions worked. We were also lookig at the customer experience, i.e. is the transaction higher, do customers spend more and what types of items are they buying. Dp customers like the interface of the wallet	It is a functional pilot ensuring that the technology works and htat download time is appropriate and time of payment acceptable	Making sure that the technology worked from moving files between partners to personalizing data on the handset to over the air network. Ensuring that the data could be downloaded to the handset. So basically making sure transactions were a success.

Figure 3.14: Performance



Measuring the final outcome is critical to assess the success of the project. It is complex to quantify, evaluate and benchmark innovation activity (Frenkel et al., 2000). In the case studied in this pilot the success factors were focused around testing that the technology worked and had a positive impact on the customer experience. The content analysis identified that launching the product successfully on time along with generating customer behaviour and learnings were most important for this launch. Financial performance was secondary in the beginning. These categories will be put into the initial template for the primary study.

3.4.9 Summary

The pilot study helped further develop the semi-structured interview guide and gave a greater understanding around the language used in the company around the topic. Secondly, it helped further develop the research instruments and coding techniques. It informed the decision to move away from content analysis to a thematic template analysis that would allow for more flexibility in developing deep understanding of the patterns and causality within the data. It gave the researcher valuable experience in conducting

interviews and informed the decision to do interviews face-to-face. Additionally, the below template was developed that was further evolved during the primary study.

Table 3.9: First draft of Template for Primary Study

Leadership	Cross Functional team	Customer Insights	Innovation Process	Performance
Vision	Expertise	Competition	Minimum Viable Product	Speed to market
Decision Making	Communication	Customer needs	Project Management	Successful technology
Senior Management Sponsorship		Open innovation		Customer behaviour
				Learnings
				Financial Performance

3.4.10 Reliability and Validity of Content Analysis

Reliability in content analysis refers primarily to stability, i.e. the ability of the coder to get the same results over and over again when coding the same data. Secondly, it refers to reproducibility, i.e. whether it will deliver the same results if coded by different people (Stemler, 2001). In the content analysis for this study the coding was a simple word count followed by a qualitative analysis of most frequent themes. To ensure reliability, the words were manually counted twice and additionally the find word function in Microsoft Word was used for validation. As there were only seven interviews this was a feasible option to deliver reliable results. For larger studies, it is recommended that a coding book is used and at least two coders conduct the content analysis.

Validity is about ensuring that the method measures what it is meant to measure. External validity, or generalisability, refers to the extent to which you can relate the results to other contexts (Neuendorf, 2002). Face validity refers to whether the findings make sense or are believable, and empirical validity relates to the degree of evidence and theory, the research process and its results (Krippendorff, 2004). In terms of external validity, the sample size was too small to allow any generalisability. Regarding face validity, the themes identified made sense. Evaluating empirical validity, the output of the research supports many of the theories and findings in the literature review and further strengthens the approach to move forward with the research.

3.4.11 Limitations

There are a number of limitations with the pilot study. Firstly, given that it was a pilot study, the sample size of only seven people was considered to provide indications and further help define themes for the primary research. Secondly, the quality of interview recordings was mixed and some key words and themes might not have been captured as a result. Thirdly, the coding was a simple word count. While this technique was very useful in capturing key important themes and building a better understanding of the use of language, it did not allow for a deeper scrutiny of the subject.

3.4.12 Implications of the Research

The case study method is an excellent method for an in-depth view of each of the cases in the primary research. It is well suited, where the researcher explores a real life case or cases over time, leveraging many sources of information (Creswell, 2013). The pilot study confirmed that this is a good method for the subsequent research. To overcome some of the limitations faced, the primary research involved conducting more face-to-face interviews to improve the interview quality and the quality of recording. Secondly, the primary research aimed to increase the sample size in order to gain further rich data. Thirdly, analysing data using template analysis allowed deeper probing of the underlying themes. Content analysis is not as flexible as template analysis as the templates are predefined. Conversely, template analysis is a flexible and widely used approach in qualitative research, where the researcher produces a list of templates which represent the key themes of the information and data. While some templates are developed prior to conducting the research, the researcher has the flexibility to modify them or add new templates throughout the research (Symon and Cassell, 1998). This technique was particularly well suited for the primary research as it allows discovery of emergent themes.

3.5 Conclusions

The pilot study helped confirm and align key themes identified in the literature review and supported the planned future research. The pilot study confirmed the case study as a good approach for the primary study, and led to considerations regarding increasing the sample size, including more than one case study for comparative purposes and conducting more face-to-face interviews to improve recording quality. Secondly, to gain

deeper insights into the underlying themes a critical incident analysis was used during the interviews and a template analysis to analyse the output and create causality. Additionally a computerised programme, nVivo, was used during the analysis to help structure the analysis and gain better insights into emerging themes.

The research framework was adjusted based on findings in the pilot study. Some critical elements that changed in the framework were: a) In the leadership section, the primary study included the analysis of communication models and evaluated leadership within the division and within cross-functional teams. b) In the section on cross-functional teams, team selection and team motivation was included; c) The section of creativity and innovation was split into firstly, how customer insights, competition and the open innovation process informed the product strategy and secondly, the innovation process of launching the products to the market. Lastly, d) The section on performance included customer and innovation metrics when performance was evaluated.

4. Primary Study

4.1 Introduction

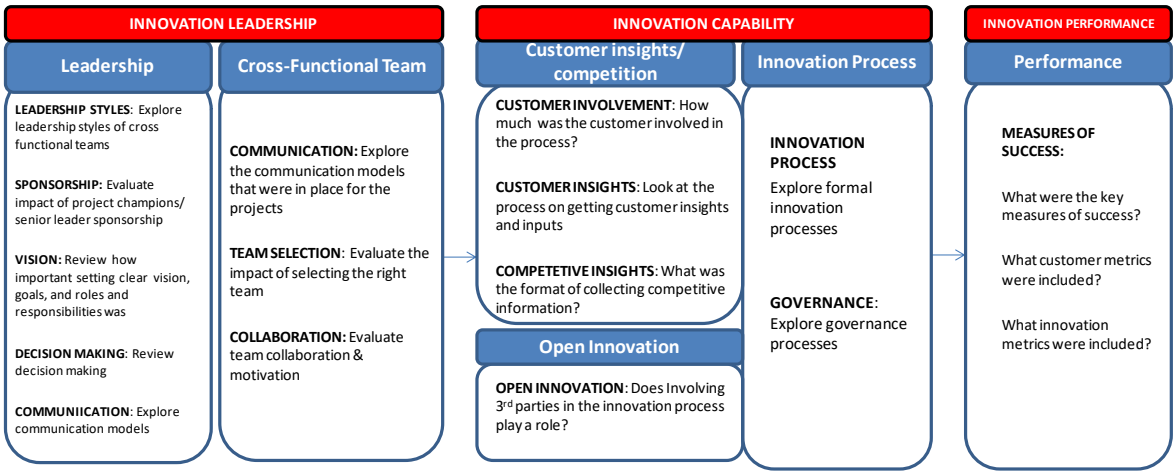
This section will first review the research proposal and the approach taken in the primary study. This includes detailed discussion of the reliability and validity of the research and the ethical considerations. Secondly, it will analyse each case in detail, develop a causal network and discuss the findings of each case. Thirdly, it will show a cross-case analysis. Finally, it will develop a cross-case causal network and best practice summary of findings.

4.2 Methodology

4.2.1 Proposed Research Framework and Research Proposal

A new research framework was developed based on the output of the pilot study. This framework, Research Framework 1.2, can be seen in Figure 4.1 below:

Figure 4.1: Conceptual Research Framework 1.2

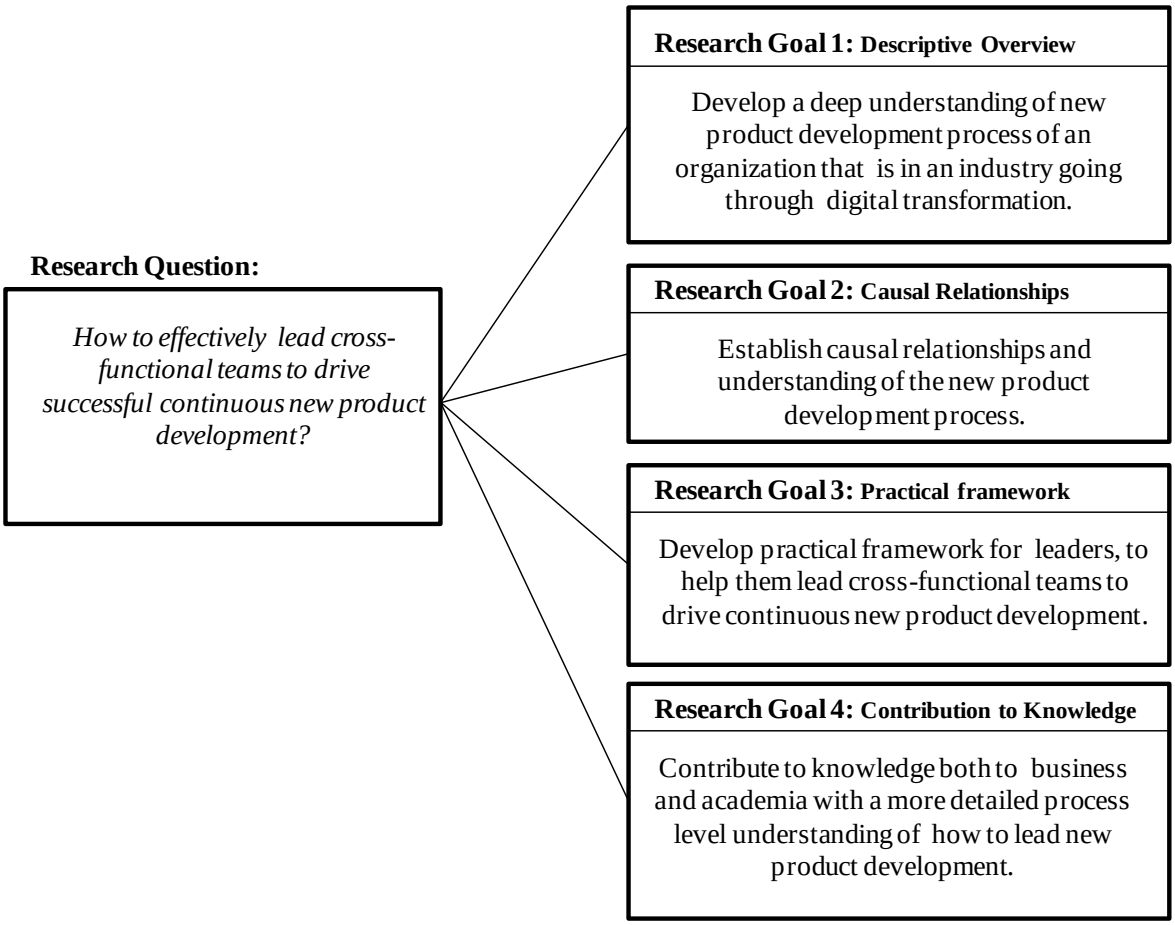


The research question was: *How to effectively lead cross-functional teams and drive successful continuous new product development?*

New product development is defined as the process of creativity and the product strategy process of generating ideas for new products to be evolved or developed and the innovation process of bringing them successfully to the market. The overall research goal was to

a. Conduct an empirical study in order to gain a deep understanding of the new product development process of an organisation, which is in an industry faced with digital transformation.
b. Develop causal relationships and understanding of the new product development process
c. Develop practical framework for the leaders, to help them lead cross-functional teams in order to drive continuous new product development.
d. Contribute new knowledge to academia, leading to further research, and to industry.

Figure 4.2: Research Question



4.2.2 Summary of Approach

In the following Table (4.1), an overall summary of the research approach is presented. The ontology is critical realism and the epistemology is subjectivist. The research process follows abduction which is a systematic combination of inductive and deductive approaches through an iterative non-linear approach (Dubois and Gadde, 2002). The case study method, using semi-structured interviews and critical incident technique, was selected with a view to provide detailed process-oriented view of each of the cases and build causality. Miles and Humberman outlined a method of data analysis using three stages, data display, data reduction and data interpretation (1994). This method of analysis

was followed and data was analyzed multiple times to increase accuracy and quotes were used from participants.The data were analysed using template analysis followed by a descriptive overview of each of the cases. This was followed by network analysis of each of the cases with a view to establish causality. Finally, a cross-case analysis was conducted.

Table 4.1: Summary of Research Approach

Paradigm	Realism
Ontology	Critical Realism
Epistemology	Subjectivist
Methodology	Qualitative
Method	Case Study
Method	Semi- structured Interviews and Critical Incident Technique
Analysis (Primary)	Thematic Template Analysis Causal Network Analysis

4.2.3 Selection of the Cases

Qualitative case sampling should be conceptually driven by either the research question or the research framework, the samples tend to be small and studied in detail to generate significant amount of information and selecting more than one case should

increase the ability to make analytical generalisation (Curtis et al., 2000). Cases and samples are not focused on probability nor convenience sampling but on what is called "purposeful selection" (Miles and Huberman, 1994; Maxwell, 2013). In essence the cases were selected because they represent the evolution of a new product development process over time in the organisation and also contain highly successful and less successful product launches. Hence, maximum variation sampling was used to understand the difference between a very successful product launch and a product launch that failed. This approach is frequently used as it ensures that the findings will represent differences and different perspectives (Creswell, 2013). Selecting multiple cases also adds confidence to the findings of the research allowing for a strategy of replication (Miles and Huberman, 1994; Yin, 2013).

It was decided to use 4 different product launches within the Emerging Payments division of the company. The selection of the cases was based on the continuum of perceived success of each of the product launches and their representation of how the overall new product development process evolved from a product centric process to a more customer centric process. The researcher discussed with key leaders in the company their perception of success or failure of each case on the outset to select the 4 different cases. These cases would provide in depth understanding of the new product development process and enable the creation of a causal network of variables. Additionally, as the launches and subsequent field work happened over a period of 5 years they give an excellent overview of how things unfold over time.

Table 4.2: Summary of Cases

	Digital Wallet	Pre-paid	Bank 2.0	Bank-like Pre-paid
Launch time	March 2011	June 2011	October 2012	October 2013
Details of cases	Launch of a new digital platform and digital wallet to the US market	Launch of a re-loadable pre-paid product to the US market. Innovative fee messages.	Launch of a new category of payment product, Bank 2.0, to the US market.	Re-launch of digital wallet as a bank like pre-paid product.
Level of success*	Not successful	Moderately Successful	Very Successful	Very Successful

*Assessment of success based on senior leader conversations

4.2.4 Structure of the Interviews

4.2.4.1 Selection of Interviewees

When selecting the interviewees Pettigrew's (1990) view to focus on describing and analyzing competing versions of reality of different actors and therefore participants were selected to enable different perspectives to be represented. Firstly, the focus was on ensuring people from senior leadership to junior leadership were selected. Secondly, different subject matter experts across the value chain of the new product development process were selected. The selection of the interviewees was cross-functional across the product, technology, operations, business development, HR, customer insights and marketing departments to give detailed cross-functional perspectives. Participants had relevant backgrounds and had been involved in the product launch studied. A number of participants contributed to more than one case discussion. A total summary of the interviewees and their contribution to each of the cases can be found in Appendix F).

The average years of industry experience was 16 years with average number of 9 years in the company and years and 4 years with the division. The split across levels of seniority was 27% in junior management, 44% in middle management and 27% in senior management. Looking at gender split it was overall 55% Female and 45% male with a 50/50 split across junior member population; 38% male/ 62% female across the middle management population and 55% male/ 45% female in senior management. Overall, the participants represented well the range of cross functional teams involved in a new product launch within the division.

Basic principles were followed in preparation of the interview of choosing a setting with little distraction, explaining the purpose and format of the interview, indicate the length of the interview, explain confidentiality and record the interviews (Jacob, 2012). Follow up emails and informal meetings were used to gather additional facts after the interview.

Interviews were conducted in person at the company headquarters in a neutral meeting room. Additionally, a couple of the interviews were conducted over the phone due to the people being located in other cities. Each interview lasted from 30 minutes to an hour. The researcher worked at the company at the time of the research and knew most of the respondents well and this created trust. Participants were clearly informed of the purpose of the interview and that everything they would say would be confidential. Participants gave their consent to their interview being recorded and were informed that they could withdraw from the research at any time. The researcher was an active participant in the process, having been involved in some of the product launches and being close to the overall mission and vision of the division.

4.2.4.2 Interview Guide

The interview guide was constructed on the basis of Research framework 1.2, which was derived from the outcome and key findings of the pilot study and was linked back to the literature review. The interviews were semi-structured and the guide was used to support a free-flowing conversation where the study seeks answers for key questions related to leadership, cross-functional teams, customer insights and performance measurement. Questions were open ended and the respondents were asked to focus on specific events for non-directive questioning. (Easterby-Smith, 2009; Huber, 1985). Critical incident technique was used during the interview, asking participants to think of specific times when things worked well or did not work well and to give examples. The interview guide can be found in Appendix A).

4.2.5 Summary of Data Collection and Research Approach

4.2.5.1 Use of other data sources

Additional data sources were collected throughout the process including internet articles on the product launches and the launch of the new division, senior executive interviews, external conference material, intranet articles and press releases, annual reports, internal documents as well as observations from the researcher. This gave a fuller account of sequence of events and helped triangulate the data. The data was used extensively to help resolve divergent views and build and independent chronology of events. Table 4.3 provides a summary of the data sources.

Table 4.3: Summary of Data Sources

Materials	Detail	Sources
Interviews	18 In-depth semi structured interviews conducted from September 2014 – May 2015.	In depth semi-structured interviews that were tape recorded and transcribed word-by-word.
Internet articles	39 articles on the launch of the different products, the launch of the business unit, leader interviews and leader presentations at industry events.	American Banker, Fast Company, Venture Beat, Business Wire, Business Insider, CNBC, Washington Post, ATM Market Place, Accenture, Bloomberg, New York Daily News, HBR Blog.
Intranet articles	34 Intranet articles on the launches of the different products.	Company Intranet.
Press releases	9 Press releases on announcement of launches and organisational changes.	Company's archive of Press Releases on the Intranet.
Annual reports	Company's Annual Reports.	Annual reports from 2011 – 2015.
Internal documents	Gate Review Documents Documents on value propositions Document on each of the product launches	Company Sources.
Researcher Observations	Researcher was in middle management from 2011 – 2015 and observed and participated in many of the product launches.	Researcher reflections and notes.

4.2.5.2 Research Approach

Eisenhardt's approach to case study analysis was used as a basis for the research approach as outlined in table 4.4. The process was highly iterative and non-linear throughout the study (1989).

Table 4.4: Process of Building Theory from Case Study Research

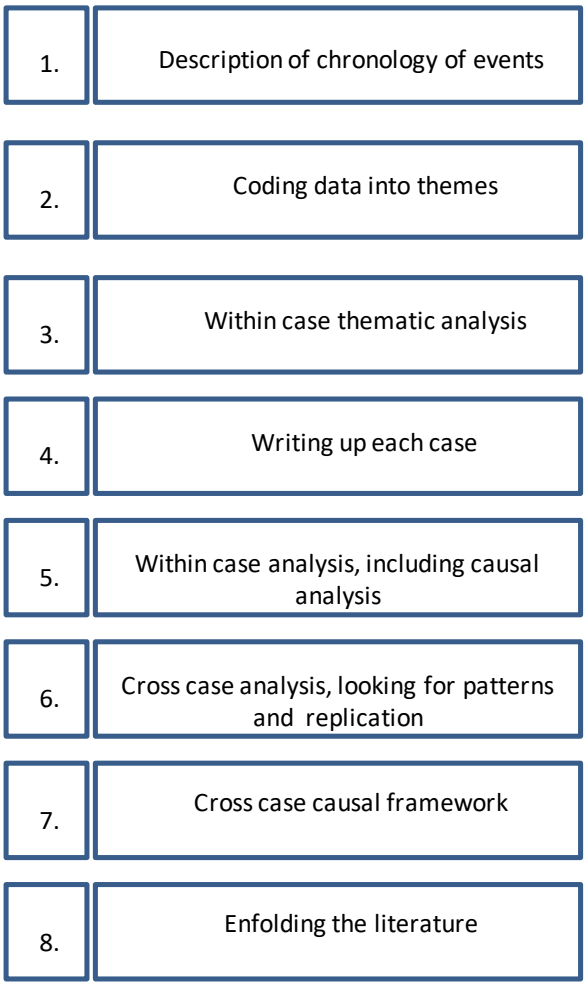
Step	Activity
Getting Started	Definition of research question. Possibly a priory construct.
Selecting Cases	Neither theory not hypothesis. Specified population.
Crafting Instruments and Protocols	Multiple data collection methods.
Entering the field	Overlap data collection and analysis, including field notes. Flexible and opportunistic data collection methods.
Analyzing the data	Within case analysis. Cross case pattern search using divergent techniques.
Shaping	Iterative tabulation of evidence of each construct. Replication logic across cases. Search evidence for "why" behind relationships.
Enfolding Literature	Comparison of conflicting literature. Comparison of similar literature.
Reaching Closure	Theoretical saturation when possible.

Adapted from Eisenhardt, 1989, p.533

In line with Eisenhardt's approach (1989) a detailed overview of the approach taken is outlined in figure 4.3 below. While this is shown as a linear process, in line with the

abductive approach it was non-linear in practice with frequent back and forth between the empirical study and theory.

Figure 4.3: Primary Study - Approach to the Case Study Analysis

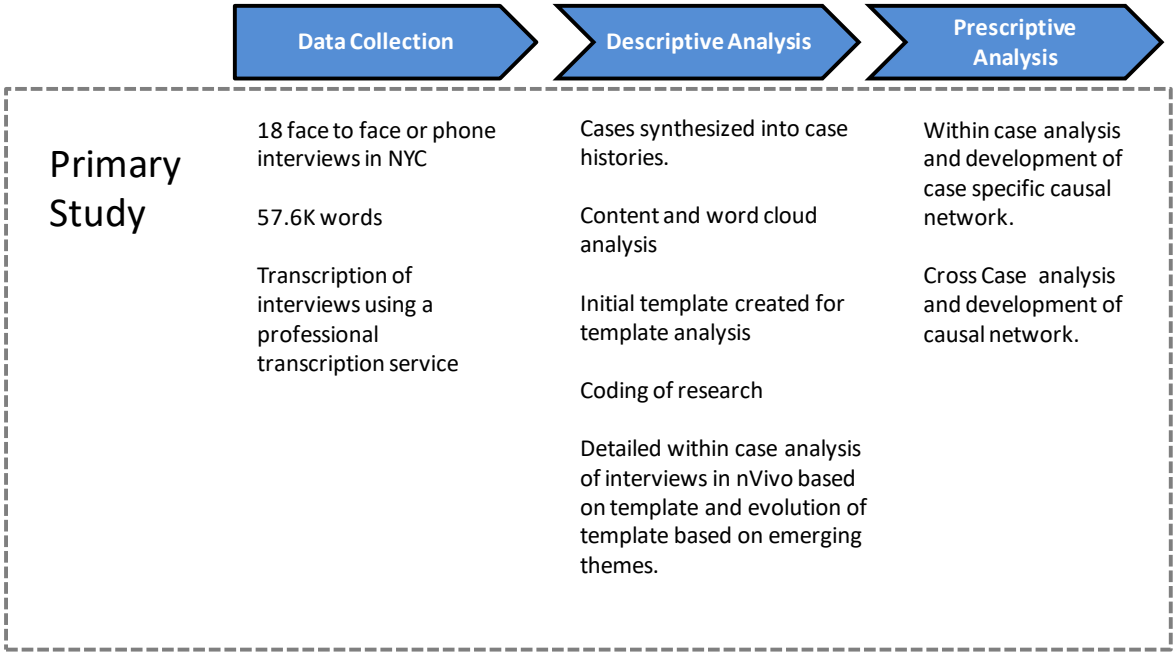


*Author of the Thesis

The main study leveraged Research framework 1.2 as the basis for the interview guide and conducted eighteen different interviews with a total length of 57.6K words. Two of the interviews were transcribed personally by the researcher in order to understand the

detail of the content and the remainder of the interviews were sent to a professional transcription service. A summary of the data collection and research approach can be seen in Figure 4.4 below. The data analysis for the primary research will be discussed in more detail in section 4.3.

Figure 4.4: Primary Study - Data collection and Research Approach



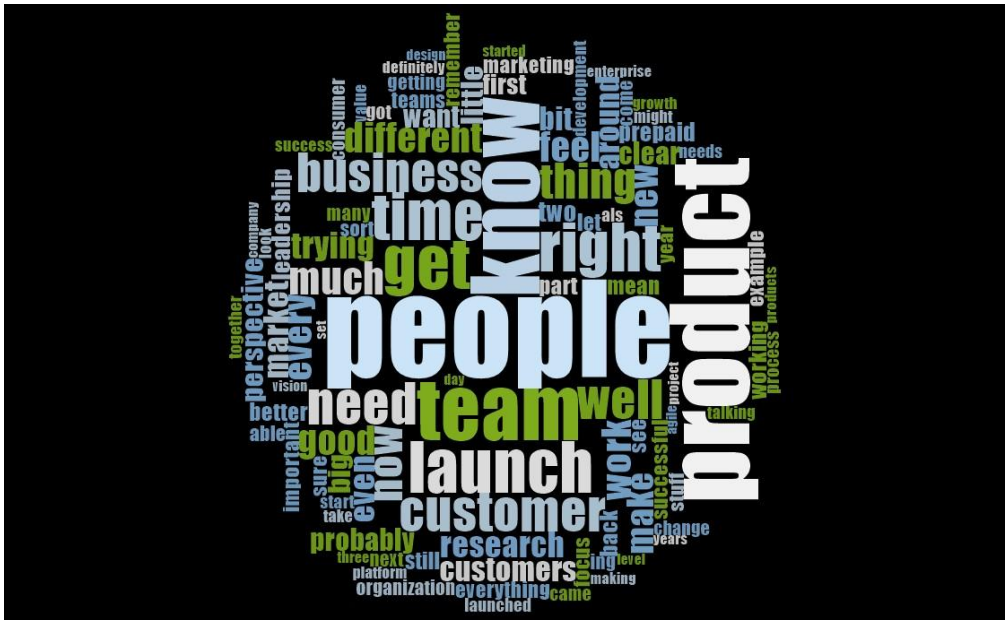
4.3 Research Findings and Analysis

4.3.1 Data Analysis

Template analysis was used to analyse the cases. With this technique, it is usual to begin with some predefined codes to help the analysis (Symon and Cassell, 2012); "the researcher produces a list of codes ("template") representing themes identified in their contextual data. Some of these will usually be defined a priori, but they will be modified and adapted as the researcher reads and interprets the text" (King et al., 2004, p.256). The

current research utilised five key themes as the predefined codes: leadership, cross-functional teams, product stategy, innovation process and performance. In order to build the templates, the interviews were read thoroughly so the researcher could build a good understanding of the context and key themes. An overall word count analysis was also done and the word themes visualised, leveraging nVivo. The following illustration presents a word cloud from all the interviews. The size of the word represents the frequency of its use. It was helpful to visualise the overall content to identify the emerging themes.

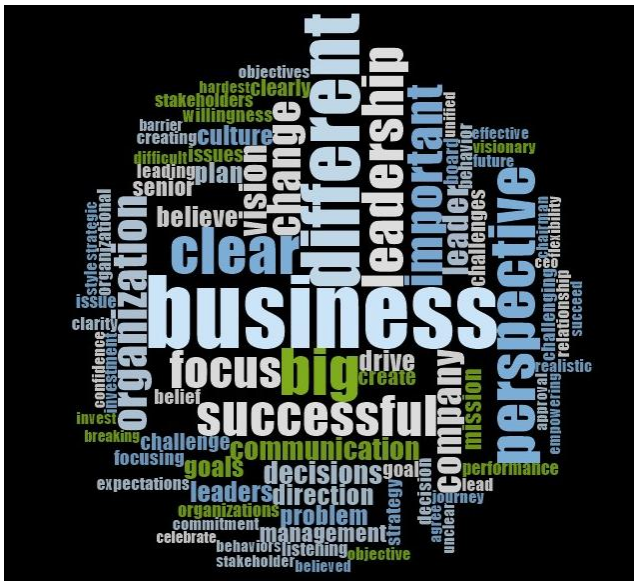
Figure 4.5 Word Cloud of Research themes - Overall



The five main research themes of leadership, cross-functional teams, product strategy, innovation process and performance were used to build the template for detailed data analysis. A word frequency analysis was also conducted across all the interviews, based on the five themes, and this was visualised in a word cloud. A detailed analysis was also conducted in nVivo, in the context of the themes and words, in order to ensure that

they fit well with the theme. Following are the five themes shown in word clouds, where the size of the words represents the frequency used.

Figure 4.6: Word Cloud - Leadership



Some emerging themes are business strategy, leadership, vision, focus, culture, clarity, communication, decision and mission.

Figure 4.7: Word Cloud -Cross-Functional Teams

Some emerging themes are people, teams, roles, collaboration, communication, environment, recognition and motivation.

Figure 4.8: Word Cloud - Product Strategy

Some emerging themes are product, customer, partner, innovation, research, market, need, idea, competition, opportunity and open.

Figure 4.9: Word Cloud - Innovation Process

Some emerging themes are launch, development, process, agile, design, technology, build, experience, capabilities, structure, meetings, prioritise and weekly.

Figure 4.10: Word Cloud - Results

Some emerging themes are new, success, months, measure, metrics, target, launch, engagement, results, users, feedback and learnings.

The result of the word frequency analysis by key theme can be found in Appendix E). Based on the analysis of the emerging key themes and by contextually reading through the cases in detail three times, the initial template for the template analysis was built.

An initial template was built in nVivo, based on the word count and themes identified through interpretation of the text. This template was iterated and modified throughout the analysis, based on detailed scrutiny of the text and the themes emerging from the research. It has been suggested that a researcher should read through the text three or four times before a researcher will be comfortable with the template (King et al., 2004).

In order to build a further understanding and scrutiny of key themes visualisation techniques were used extensively, leveraging nVivo. An example of exploration of key themes and language used can be seen in the word tree in figure 4.11 below.

Figure 4.11: Word Tree - Communication

Table 4.5 presents the final top level template used for the detailed case study analysis. Each interview was coded on the basis of the following categories and by each product. nVivo was used to help analyse each case according to the template below. Taking a structured approach, the templates were used to code each case for the analysis.

Table 4.5: Template Analysis

Leadership	Cross-functional team	Product strategy	Innovation process	Performance
Vision	Communication	Market opportunity	Prioritisation/ governance	Business metrics
Strategy/ direction	Collaboration	Customer needs	Minimum viable product	Volume
Customer focus	Motivation	Customer involvement	Platform/ technology	Customer engagement
Leadership styles	Talent	Qual. and quant. research	Agile delivery	Profitability
Behaviours	Environment	Open Innovation		Innovation metrics
Decision making				Time to market
Communication				New market / innovation
				Feedback/ pivot/ learning

4.3.2 Reliability and Validity

4.3.2.1 Reliability

Reliability refers to the ability to ensure that the same results can be reproduced again by another researcher. In this case, given the interviews are semi-structured, there will be a natural influence of the interviewer on how the interview flows. As this research falls within the critical realism domain, triangulation is best suited to establish reliability (Golafshani, 2003). Hence, to increase reliability, interviews were open ended and recorded, data were triangulated through verification of repetitive themes in the interviews by different participants and through the documentation review. Reliability was also obtained by the fact that the interviewer was an employee of the division and therefore an active participant in the transformation process. In line with Creswell's views, reliability was also increased by detailed field notes and tape recording of interviews that were

subsequently transcribed by a 3rd party (2013).The computer programme nVivo was used to help with the accuracy of coding, data visualisation and analysis.

4.3.2.2 Validity

Validity in positivist research is examined from the perspective of construct validity, internal validity and external validity. However, there is much debate regarding whether such stringent measures can be applied to qualitative research, such as case study research that aims to provide rich and detailed insights of multiple cases and where there is not one single truth (Lincoln and Guba, 2000; Mason, 2002). Lincoln and Guba (1985) further argue that the goal should be to establish trustworthiness and confidence in the findings.

In accordance with Maxwell's definition, the most appropriate way to establish validity in a critical realist case study is to establish "the correctness or credibility of description, conclusion, explanation, interpretation or other sort of account" (Maxwell, 2013, p. 122). Substantial rigour was applied throughout the study to further demonstrate confidence in the findings. Firstly, the research was grounded in the literature review. The initial research framework and research questions were derived from the literature review and were explored through a rigorous pilot study. The research questionnaire and language were tested through pilot study and amended for the primary study based on the findings.

Secondly, very clear selection criteria were used for case study selection of four cases within one division, over a period of four years, where a clear progression was seen of movement from a closed and product centric to a more open and customer centric processes. These four cases also represented a mix of successful and unsuccessful product

launches. A true cross-functional team were selected as interviewees. They represented people from a wide range of functions and levels within the organisation that had participated in the product launch and had extensive experience in the field.

Thirdly, triangulation was established through data collection from interviews and archival materials. Additionally, researcher notes and observations were used. Also, Given the extensive time the researcher spent in the field, continuous validation of key components was conducted over time (Creswell 2013, Maxwell, 2013). Ongoing member checking was conducted through informal conversations and email to further clarify responses and events.

Finally, rich description of chronology of events was established along with ongoing validation of divergent views (Miles and Huberman, 1994; Creswell, 2013; Maxwell, 2013). This also enables the consideration of transferring the findings to other events (Creswell, 2013). The four cases and the transition that the company was going through gave a real example of an approach that multiple companies are taking today to digitally transform their organisation. The case studies therefore could have applicability to other organisations.

4.3.3 Ethical Considerations

Approval was received from the PR and Human Resource department of the company to conduct the primary study. It was agreed that the company should remain anonymous in the write up and publishing of the thesis. Each participant was contacted via an email to gain consent to participate in the study. Consent from participants was received prior to each interview and the participants were informed that the interviews would last

from 45 minutes to an hour and that they would be recorded only with approval. They were also notified that they could withdraw at any time during the study, should they choose to do so. They were advised that the conversation was confidential and would take place in a closed room for complete privacy. A copy of the email invitation can be found in Appendix B).

4.3.4 Case Study Findings and Analysis

The detailed findings of each of the four cases will be provided in this section. The cases were analysed using template analysis focused on key themes emerging from the interviews. The structure of the analysis was as follows: case background followed by detailed analysis around the key themes of a) leadership, b) cross-functional teams, c) the new product development process, which is divided into the product strategy and the innovation process, and d) performance. Each case will then be summarised and key findings discussed.

4.3.4.1 Case 1 - Launch of a Software Platform and a Digital Wallet

4.3.4.1.1 Case Background

The company completed the acquisition of a next generation payments platform in 2010. The vision for the purchase was to enable the company to aggressively enter into the non-traditional payments area. The platform was seen to provide the company with the opportunity to compete in the peer-to-peer payments space and also allow it to develop an alternative payment product for new segments of the market. A new division was created within the company that had a bold mandate to transform digital commerce. It was set up in a separate location and a number of people were hired from Silicon Valley and from the

mobile industry, with the intent to accelerate the pace of innovation. Considerable investment was dedicated to this new group for testing new partnerships, product and digital marketing approaches.

4.3.4.1.2 Leadership

The vision for the product launch was very broad and closely linked to the overall vision of the division. It was to redefine commerce and launch a Digital Wallet swiftly to the market place, leveraging the new software platform. The goal was very broad and the team had not clearly defined the customer segments it would serve and their core need for a product like this.

"I would say that with the launch we made that exact mistake, the goal was too big and we didn't solve very specific customer problems."

(Middle Management, Strategy)

"I think the launch of the Digital Wallet was a disaster because we were trying to solve this meta-question. We were going to re-make payments but how we didn't know."

(Senior Management, Strategy)

"We didn't know what we wanted to be and we were very vague about the vision. I think we struggled for the first year or so because of this where people spent a lot of time spinning their wheels because they didn't really know what the product was, they didn't know who the consumer was and they didn't necessarily know what the consumer value proposition was."

(Middle Management, Strategy)

"With the launch of the Digital Wallet; there was a lot of unclear direction from the business side in terms of where we wanted to go, lack of decision and direction, which made it very challenging."

(Junior Management, Marketing)

The leadership team came together through company acquisition, hiring externally from the mobile industry and Silicon Valley, as well from within the company. There was incredible enthusiasm for the mission and the division, and at the same time, the strategy was still very much in formation. During the product launch the leadership team was in development and decision making was still very hierarchical, which hindered the transparency of communication. The whole division and approach to this product launch was a big cultural change for the company. Traditionally the company had a culture of winning, and hence, testing and failing was not a big part of the company's culture. The tone at the top of the new division was set clearly to innovate and redefine the payments space. As part of that process, the leadership put significant emphasis on testing and learning, and increased tolerance for failure.

> *"Contrast that to a more hierarchical conversation which is, well I am not going to volunteer anything until my leader tells me"*

(Middle Management, New Product Delivery)

"That whole tone at the top was around change is ok, ambiguity is ok, it's ok to try and fail."

(Senior Management, HR)

"It really was the tone at the top not just from the GM of the new division but from the CEO of the company as well as from the board. This included creating a technology and innovation committee. The message from the top was this is important and we are going to do this."

(Senior Management, HR)

The focus was on hiring leaders that would be comfortable in an unstructured start-up environment, where change was constant. Leaders needed to have the willingness to challenge the status quo by continually putting the customer at the centre.

"One of the key leadership traits that made people successful was the ability to be ok with ambiguity, change and risk taking. You have people who did extraordinarily well in a start-up within a large multinational company like this, where people who were ok with not having all the I's dotted and T's crossed. I think that change capability, I'd say is probably one of the biggest leadership traits that was required."

(Senior Management, HR)

Ambiguity at the beginning of the project regarding the overall strategy created substantial confusion and made it difficult for the working team to focus on the execution of a clear strategy.

> *"There was a lack of clarity in terms of the direction we wanted to go. The communication was very muddled in terms of what we were trying to do."*
>
> (Junior Management, Marketing)

> *"I do think it is really important to set a vision that everyone can understand. I think the Digital Wallet really floundered when we were just throwing things out there to see what would stick."*
>
> (Middle Management, Product)

Some of the leadership traits that emerged in the business unit as critical to drive success were the ability to influence at the most senior level; ability to secure funding and tell a compelling story; ability to be comfortable with ambiguity, change and risk taking; ability to project positivity and instil confidence in the vision and ability to prioritise, handle conflict and make decisions swiftly.

> *"They need to be able to tell a compelling story to make sure they get the resources in the right places."*
>
> (Middle Management, HR)

"That whole tone at the top of change is ok, ambiguity is ok, it's ok to try and fail and make sure you talk to your actual customers."

(Senior Management, HR)

"I think being able to project change is achievable and really important. It's just a real optimism, a realism about the challenges but also always communicating a belief we can get there."

(Middle Management, Product)

"It's a combination of, it's not optimism because that's not giving it enough credit. It's to have faith and belief that you can get through a set of very hard challenges."

(Senior Management, Strategy)

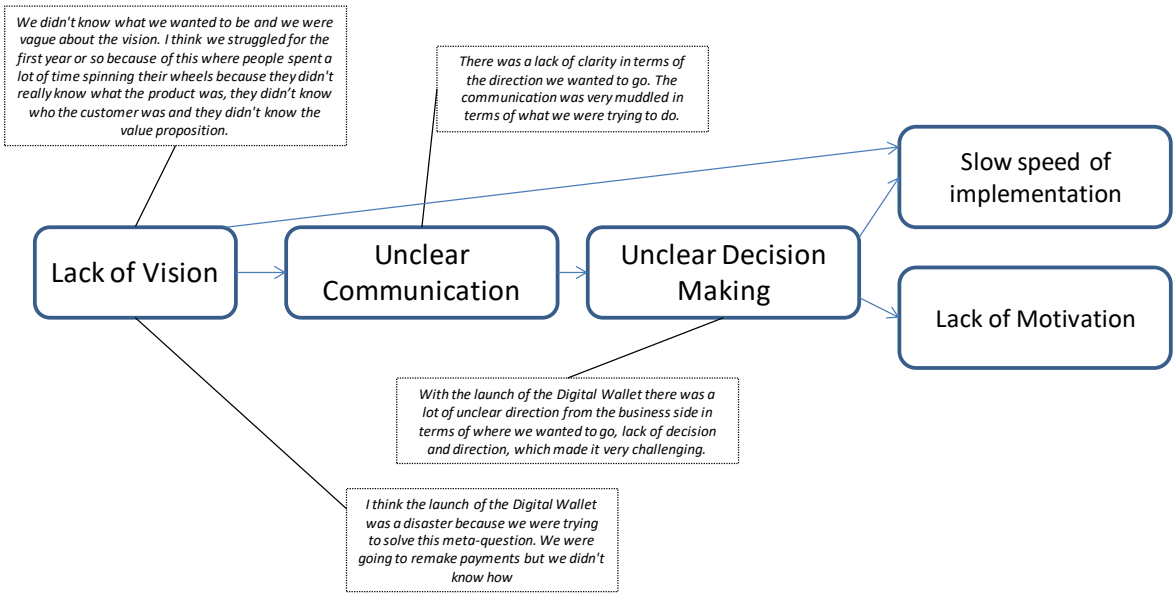
By reviewing the themes across different levels of leadership it is clear that the senior management team was more positive around some of the building blocks of culture that were being put in place. At the same time, there is consensus across all groups that there was lack of vision for the project.

Table 4.6: Thematic Analysis by Seniority: Leadership

	Junior Management	Middle Management	Senior Management
Leadership			
Vision/ Objectives	With the launch of the Digital Wallet there was a lot of unclear direction from the business side in terms of where we wanted to go, lack of decision and direction, which made it very challenging.	We didn't know what we wanted to be and we were vague about the vision. I think we struggled for the first year or so because of this where people spent a lot of time spinning their wheels because they didn't really know what the product was, they didn't know who the customer was and they didn't know the value proposition I do think it is really important to set a vision that everyone can understand. I think the Digital Wallet really floundered when we were just throwing things out there to see what would stick.	I think the launch of the Digital Wallet was a disaster because we were trying to solve this meta-question. We were going to remake payments but we didn't know how We set up the busienss in the right way by making the GM of the division one onf the named officers of the company ad putting a number of different busiensses inside the unit
Decision Making	While decision making was at time slow one thing that I think worked well was realizing that the work that marketing and business teams were putting forth were needed much further down the line so shifting people to focus on developing the product .		The whole thinking that we could do it alone without the rest of the company slowed us down in the beginning and probably didn't create the best product
Senior Management Sponsorship		Being able to project change is achievable and really important. It's just a real optimism, a realism about the challenges but also always communicating a belief we can get there.	It really was the tone at the top not just from the GM of the new division but from the CEO of the company as well as from the board. This included creatating a technololgy and innovation committee. The message from the top was this is important and we are going to do this. It's a combination of, its not optimism because that's not given it enough credit. It's to have faith and belief that you can get through a set of very hard challenges. The whole tone at the top was around change is ok, ambiguity is ok, it is ok to try and fail.
Communication	There was a lack of clarity in terms of the direction we wanted to go. The communication was very muddled in terms of what we were trying to do.	They need to be able to tell a compelling story to make sure they get the resources in the right places.	I don't know that we did a good job in bringing people along the journey. My recollection of it was we created a lot of hype around we are going to change commerce

A causal fragment or a part of a causal network was developed to start to establish how one variable or a theme leads to the next. According to Miles and Hubermann (1994), "A causal network is a display of the most important variables (represented in boxes) in a field study and the relationship among them (represented by arrows)" (p. 236).

Figure 4.12: Causal Fragment - Leadership



While senior management sponsorship was strong, the lack of vision led to very unclear communication which in return caused unclear and lack of decision making. This resulted in slower speed of product implementation and lack of team motivation.

4.3.4.1.3 Cross-Functional Teams

The company hired talent into the division from within the company, Silicon Valley and from the mobile industry. It created a new start-up office that was in a different building and the set up of cross-functional teams were co-located together. People were hired based on the vision of building the future of the company; people that could cope with change, and build teams that had considerable digital product expertise. As this was during the start-up phase of setting up the business, there was significant focus on bringing in the appropriate team members quickly.

"We started attracting all the people who were really interested in the digital arms race, and people who were really interested in changing the way we do business at the company and going after new customers."

(Senior Management, HR)

"We had approval for hiring 550 people, about 50% internal and 50% external. We were tracked against that and even had pressure to hire when we weren't sure which departments were going to need more growth than others."

(Middle Management, HR)

"We tried to make sure people were joining the company and division and not just taking a particular job. When changes happened, people expected it and they felt like they belonged to the division and company and not just to the specific role."

(Middle Management, HR)

We had to open up new channels of recruiting for skill sets and think about it differently. UI/UX is one of the prominent examples."

(Middle Management, HR)

"One was we actually brought in people who were designers by training, so design thinkers. Those kind of folks, if you are going to follow a design

thinking product development approach, it requires teamwork and collaboration."

(Senior Management, HR)

"The other thing we did and I am convinced it's one of the reasons we've been successful, is when we opened up a space in another part of town. We actually sat people by project rather than by division. It really worked, I would see the product people turn to the lawyer and ask a question and get an answer then, whereas you know our culture, it would otherwise take 2 weeks to go and see a lawyer."

(Senior Management, HR)

Given that the strategy was still in formulation, the direction and roles and responsibilities were not clear to the cross-functional teams. This often slowed execution and decision making, and had a negative impact on morale.

"The direction didn't exist in terms of where we wanted to go, what the product was going to be, and I feel there's something we could have done better to set up in terms of really kicking off exploratory efforts around the brand and the research to help us define ourselves earlier in the process"

(Junior Management, Marketing)

"The most basic was that people were not clear about what their roles were, what their jobs were, so that meant that there was sometimes overlap in terms of what people were doing"

(Middle Management, Product)

"I actually think the cross-functional teams failed in the beginning."

(Middle Management, HR)

Whilst many of the fundamentals for successful cross-functional teams were put in place, the ambiguity around the strategy and which customer the division was focusing on created misalignment, unclear models of communication and lack of project prioritisation.

"It was very informal in the early days and I think that was trickier because people didn't necessarily have the right information. They got information through informal channels."

(Middle Management, Product)

There were a small number of successful teams, such as the design team.

"It benefited from clarity of message, co-location and dedicated professionals. They all knew why they were on the team."

(Middle Management, HR)

Goals and reward structures were not aligned well during the launch of the Digital Wallet. Due to the lack of strategic clarity, the leadership struggled to

communicate the vision to the team, which created confusion and had a negative impact on motivation.

> *"I don't think we did a good job in the beginning bringing people along the journey."*
>
> (Senior Management, Strategy)

> *"You can really only have one performance leader that is going to give you your ratings at the end of the year and often these goals are not aligned to team involvement. We're working in a corporate structure, where individual rewards are the majority of someone's pay at the end of the year, not team rewards."*
>
> (Middle Management, HR)

By reviewing the themes across different levels of leadership there is clear commonality around break down of communication, collaboration and lack of clarity around roles and responsibilities and by junior and middle management. Senior management responses are focused on the disruptive talent strategy that was put in place for the business.

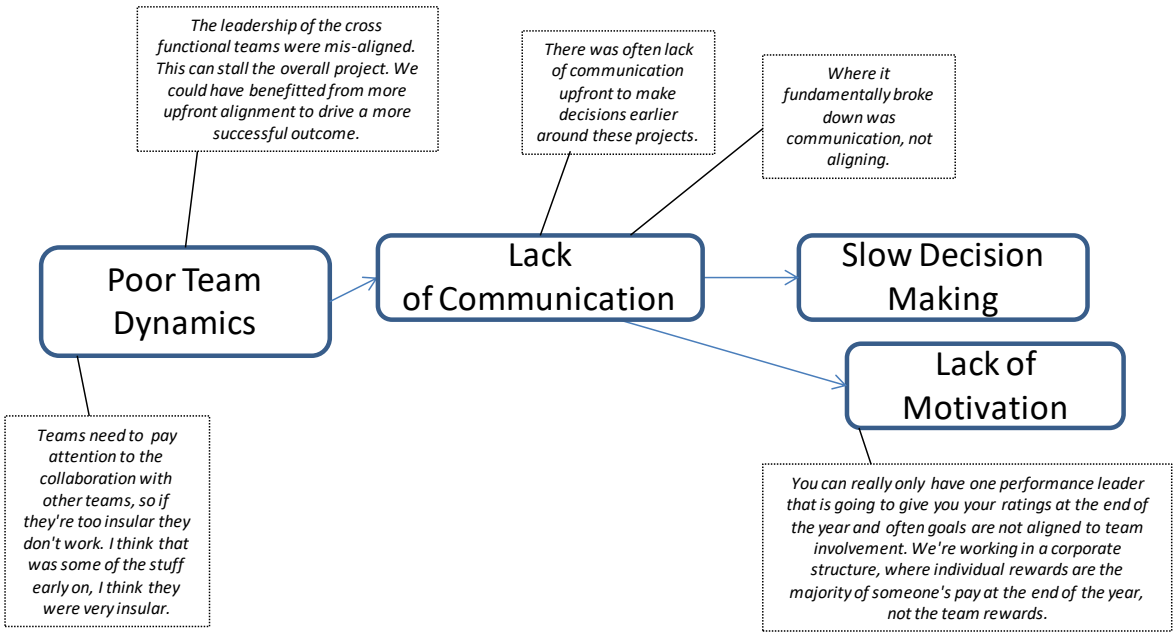
Table 4.7: Thematic Analysis by Seniority: Cross Functional Teams

	Junior Management	Middle Management	Senior Management
Cross Functional Teams			
Team	The leadership of the cross functional teams were mis-aligned. This can stall the overall project. We could have benefitted from more upfront algnment to drive a more successful outcome.	We had approval for hiring 550 peple, about 50% internal and 50% external. We were tracked against that and even had pressure to hire when we weren't sure which departmens were going to need more growth than others. We tried to make sure people were joining the company and division and not just taking a particular job. When changes happened, people expected it and they felt like they belonged to the division and company and not just a specfic role One was we actually brought in people who were designers by training so design thinkers. Those kind of folks, if you are goiong to follow desing thinking product development approach, it requires teamwork and collaboration. The most basic was that people were not clear about what their roles were, what their jobs were so that meant that there was sometimes overlap in terms of what people were doing. I actually think the cross functional teams failed in the beginning.	people successful, and frankly that got in the way of some people who weren't able to succeed, was the ability to be okay with ambiguity, and change, and risk taking. You have people who did extraordinarily well in a startup within a large The division became a portal for fabulous talent. We started attracting all the people who were really interested in the digital arms race, and people who were really interested in changing the way we do business at the company and going after new customers. We looked for the team with the right mindset acorss all functions. It became important to build the ability to find people who would get you to a yes in a safe and compliant way is what we were looking for.
Communication	Where it fundamentally broke down was communication not aligning.	I think in some of the distribution parnerships we launched people didn't have a good understanding of the scalability need. Once these projects started to soak up development time and investment dollars the questions got more critical. There was often lack of communication upfront to make decisions earlier around these projects. People often felt isolated and not in the know so they were net comfortable questioning because they felt they were constantly on the back foot.	

Table 4.7: Thematic Analysis by Seniority: Cross Functional Teams continued

	Junior Management	Middle Management	Senior Management
Cross Functional Teams			
Motivation	We did have a lot of happy hours to celebrate accomplishments. It was informal just to say a job well done.	You can really only have one performance leader that is going to give you your ratings at the end of the year and often goals are not aligned to team involvement. We're working in a corporate structure, where individual rewards are the majority of someone's pay at the end of the year, not the team rewards.	We opened up separate start-up office in NYC along with China and Paolo Alto which created the right environment to attract and motivate talent.
Collaboration		The design team were really collaborative, and they actually had a fairly set process about how they think about design strategy and design development. So that you actually know exactly, kind of what the next rhythm is of the project. Teams need to pay attention to the collaboration with other teams, so if they're too insular they don't work. I think that was some of the stuff early on, I think they were very insular.	We were probably the only business unit in the company where the risk and legal teams sat with the business.
Environment	I feel we had a nice culture that feels like a start-up, when there was something big happening with the product or platform it was all hands on deck.	It was very informal in the early days and I think that was trickier because people didn't necessarily have the right information. They got information through informal channels.	We sat people by project rather than by division. It really worked, I would see the product people turn to the lawyer and ask a question and get an answer then, whereas you know our culture, it would otherwise take 2 weeks to see a lawyer.

Figure 4.13: Causal Fragment - Cross Functional Teams



While the innovative set up of the work environment should have a positive impact on team dynamics and motivation, the overall team dynamics showed lots of misalignment and very insular behaviour that resulted in lack of collaboration and communication. In return the lack of communication had again negative impact on decision making and team motivation.

4.3.1.4.4 New Product Development Process

4.3.1.4.4.1 Product Strategy

The overall goal was to launch a new software platform, a Digital Wallet, and test new and innovative e-commerce partnerships. With this in mind, the team developed a multi-faceted strategy to market, aiming to get a Digital Wallet launched quickly and to build a number of new distribution partnerships for scale.

> *"It was scary because there were no constraints. We didn't know where the box was - to play inside or outside the box. Everything was green field. Changing the face of commerce is very unfocused and unstructured and it's very hard."*
>
> (Middle Management, Strategy)

The teams pursued a number of different partnerships that were signed in the first year to be launched on the platform. The selection of these partnerships was based on potential business scale, but not necessarily on solving a customer problem. The overall approach was product centric in nature, with the goal of putting an innovative product out in the market. However, there was minimal involvement of the customer and understanding what segments or needs it was meeting.

> *"Some of the early partnerships were not successful. I think that either people didn't get it, didn't believe the use cases or understand the scalability of those. After they started to soak up platform development time and investment dollars the questions became more critical as the ground work wasn't there. The other learning was that you can only do so much. There*

were too many demands competing for people's attention when we had, I think fourteen partner sets."

(Middle Management, HR)

The team conducted some customer research in the Digital Wallet space and conducted a competitive analysis. However, it was performed after a decision had been made to launch the platform and a Digital Wallet.

"I think we were trying to solve it backwards. How can we create a Digital Wallet for these consumers? What needs can we identify and meet rather than truly start with the consumer and saying what needs are we solving for? I don't think that was anybody's fault though because we were handed the platform."

(Senior Management, Strategy)

"Developing the brand took a long time because it was done in a piece meal fashion rather than really digging in and trying to understand the core of who we wanted the product to be for and what we wanted the brand to stand for. There was no focus to understand who the customer was."

(Junior Management. Marketing)

"There was no effort to understand who that customer was and to me that was some time lost, the product could have been much further along."

(Middle Management, Product)

Table 4.8: Thematic Analysis by Seniority: Product Strategy

	Junior Management	Middle Management	Senior Management
Market Opportunity/ Customer Insights			
Market Opportunity	We did some desk research but it was very unfocused. We looked at disruptive payments players but they eneded up not being the core competitors at launch.	It was scary because there were no constraints. We didn't know where the box was - to play inside or outside the box. Everything was greenfield. Changing the face of commerce is very unfocused and unstructured and it's very hard.	It wasn't grounded in market insights, we bought this platform and product and someone gave our GM of the business the task to turn this platform and product into a Digital Wallet.
Qual. And Quant research	There was some data gathering about dfferent partners that we were looking to potentially work with but true customer research, it didn't happen.	There was no effort to understand who that customer was and to me that was some time lost, the product could have been much further along.	I think we were trying to solve it backwards. How can we create a Digital Wallet for these consumers. What needs can we identify and meet rather than truly start with the consumer and saying what needs are we solvling for. I don't think that was anybody's fault though because we were handed the platform. The approach was too big, we didn't solve a customer problem.
Product Strategy	There was a lot of unclear direction from the business side in terms of the direction that we wanted to go.		I think the launch of the Digital Wallet was a disaster because we were trying to solve this meta-question. We were going to remake payments but we didn't know how.

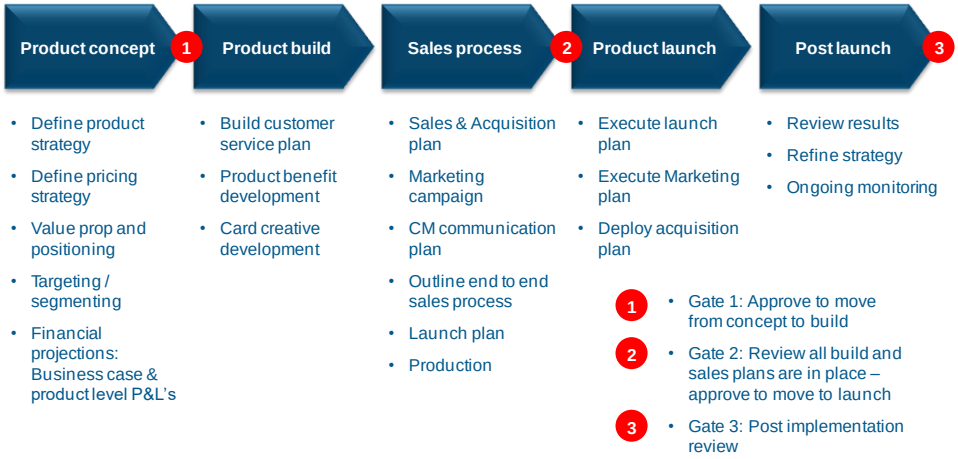
Different leadership population all conclude that the product strategy was not well grounded in market insights and customer research and this had an impact on the product not being successful in the market.

4.3.4.1.4.2 Innovation Process

The innovation process was a major platform integration into the company's platform. The process it followed was a waterfall technology process, but the stage-gate process was badly structured, in terms of finalising the product requirements early. Figure 4.14 summarises the company's formal stage-gate process. The approach has three separate gates: Gate 1 is a concept gate, which requires the full product strategy and requirements to be locked down before the team moves to actually build the product. Gate 2 is a launch

gate, where building is complete and tested and launch plans are ready and signed off. Gate 3 is a post implementation review gate, which looks at the early sales progress and learnings.

Figure 4.14 The Company's Stage-Gate Process



There was considerable focus on getting the Digital Wallet out quickly, so current platform capabilities were a key driver of what was launched in the first instance.

There was a tremendous amount of effort that was required in integrating the platform and developing core capabilities for launch. Some teams were moved to product development efforts in order to meet the launch timelines:

> *"The product really wasn't ready. We took all the marketing people and made them product people just to get the product out of the door. Based on where we were, we had to do it."*
>
> (Junior Management, Marketing)

A number of the teams were new and learning how to work effectively together, as they were from different organisational cultures. They had to build a common understanding of a new platform that does not need a detailed user manual and they had to work out a model of delivery, while the product scope was still being defined.

> "*The launch was not a breakthrough launch, it was just repackaging of the platform and get it out the door. I think that was not successful. There was not an understanding of the end to end technology and what it takes to deliver. We had very much a business and technology split. You have to understand what you're going to do to the platform, the operation and everything so you are mapping things as you go."*
>
> (Middle Management, New Product Delivery)

> *"The launch of the Digital Wallet wasn't exactly launching new technology. There were enhancements made to an existing platform but the platform at the time was so far behind and it had a lot of bugs."*
>
> (Junior Management, Marketing)

While the organisation had started on a journey to create a design thinking approach to product delivery, by putting the customer at the centre, the team was still in formation and therefore had limited impact on the launch of the Digital Wallet.

Following the initial launch, the team focused on initiating a number of new partnerships that consumed all the resources, hence, further development of the core product functionalities was limited.

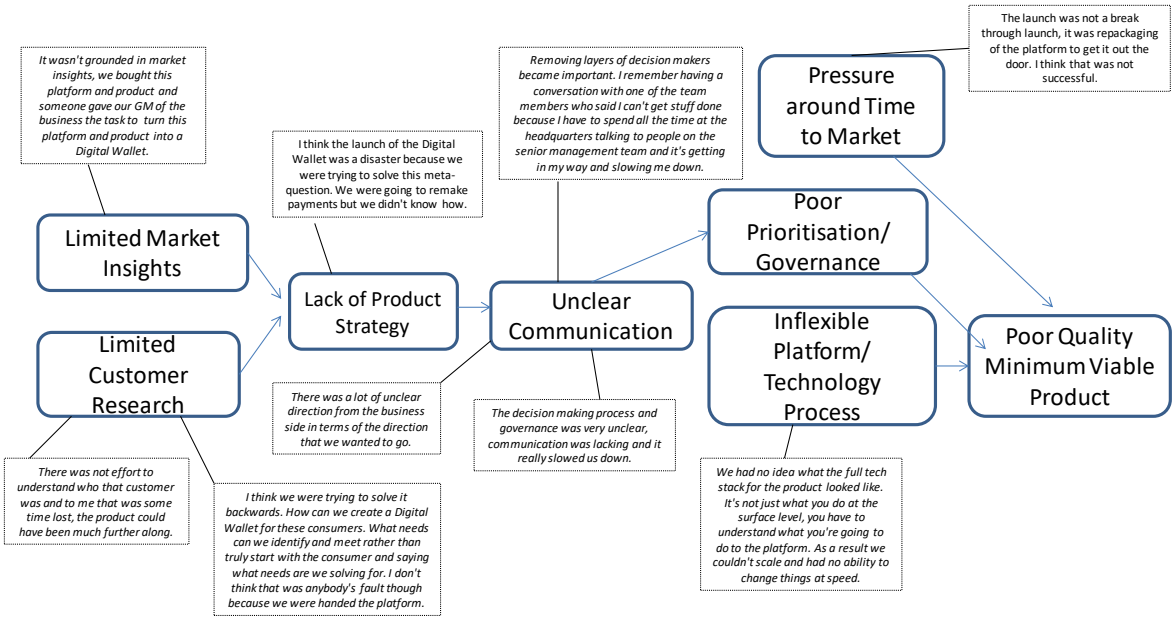
"Not only did we not ship, but we knew the product was bad, but we couldn't do anything about it."

(Middle Management, New Product Delivery)

Table 4.9: Thematic Analysis by Seniority: Innovation Process

	Junior Management	Middle Management	Senior Management
Innovation Process			
Prioritisation & Governance	The decision making process and governance was very unclear, communication was not lacking and it really slowed us down.	People think innovation is the opposite of dicipline but it is the same thing.	Removing layers of decision makers became important. I remember having a conversation with one of the team members who said I can't get stuff done because I have to spend all the time at the headquarters talking to people on the senior management team and it's getting in my way and slowing me down.
Minimum Viable Product	The platform was the first launch, that's all it was and in reality it wasn't even such a new technology. It also had a lot of bugs. The product really wasn't ready. We took all the marketing people and made them product people just to get the product out the door. Based on where we were, we had to do it.	The launch was not a break through launch, it was repackaging of the platform to get it out the door. I think that was not successful.	It was scary because there were no constraints and therefore we didn't know where to draw the line on what to develop and for whom.
Platform/ Technololgy	There were some enhancements made to an existing platfrom and we were still very siloed in our approach.	There was not an understanding of the end to end technology and what it takes to deliver. We had very much a business and technology split. You have to understand what you're going to do to the platform, the operation and everything so you are mapping things as you go. We had no idea what the full tech stack for the product looked like. It's not just what you do at the surface leve, you have to understand what you're going to do to the platform. As a result we couldn't scale and had no ability to change things at speed.	The platform technology was very limited and it didn't come with a clear manual so coding one area would sometimes cause bugs or problems in another area.
Project Delivery		Not only did we not ship, but we kew the product was bad, but we couldn't do anything about it.	

Figure 4.15: Causal Fragment - New Product Development Process



Limited market insights and customer research resulted in an unclear product strategy, that in return led to unclear communications. Additionally, lack of communication lead to the fact that decisions were made slower and there was lack of clarity around the governance process. The governance process, platform capabilities and technology process had an impact on the speed at which the product was launched. At the same time pressures from senior management around launch date pushed focus on getting a product launched within a certain date and this sacrificed the quality of the product being launched.

4.3.4.1.5 Performance

The success measures were not clearly established nor communicated to key stakeholders. On reflection, initial measures of success focused on how well the team was able to integrate the platform into the company, and the team's ability to launch the Digital Wallet to the US market in a set timeframe. Also, ensuring that the product's functionalities worked as intended and new partnerships were launched to create scale and learn, as well as driving new account acquisition, which came later. Focus on customer engagement and customer satisfaction were not initially part of the success measures.

> *"In the beginning the key measure of success was that the product actually worked. There were definitely a lot of issues that we were still trying to work through that didn't feel great from a customer perspective."*
>
> (Junior Management, Marketing)

> *"I remember the party we had, to celebrate the launch of the Digital Wallet. We were so excited to have it out there and the company was really pushing us to launch it probably even before it was ready. Then it took like two weeks when the rest of the finance organisation started demanding the daily report of how many accounts. So by nature of trying to measure us that way I think it was stifling innovation. One of the best ways you can inspire innovative work environment or product development process is to put the right measures of success against it. In the beginning, it's probably not just accounts and right now, it's probably not just Pre-Tax-Income (PTI)."*
>
> (Senior Management, Strategy)

"In a lot of cases we launched with partners that were primarily for acquisition because seemingly they had a good fit for the product".

(Junior Management, Marketing)

"In the beginning when we didn't see adoption take off, we floundered around. We did a lot of deals in the first 18 months. None of them probably made a ton of sense, but they all got us to learn a little bit more about what we had. It also bought us some time to actually enable us to pivot."

(Middle Management, Strategy)

"Those things may not have been successful in the market place from a customer perspective, but on the other hand if your measure is to get funded for another twelve months, then they were successful. What makes you successful is being clear about what your measure of success is and then working towards it."

(Middle Management, Product)

"The first eighteen months it was very hard to assess talent and ultimately assign ratings, because the results were not on-board yet."

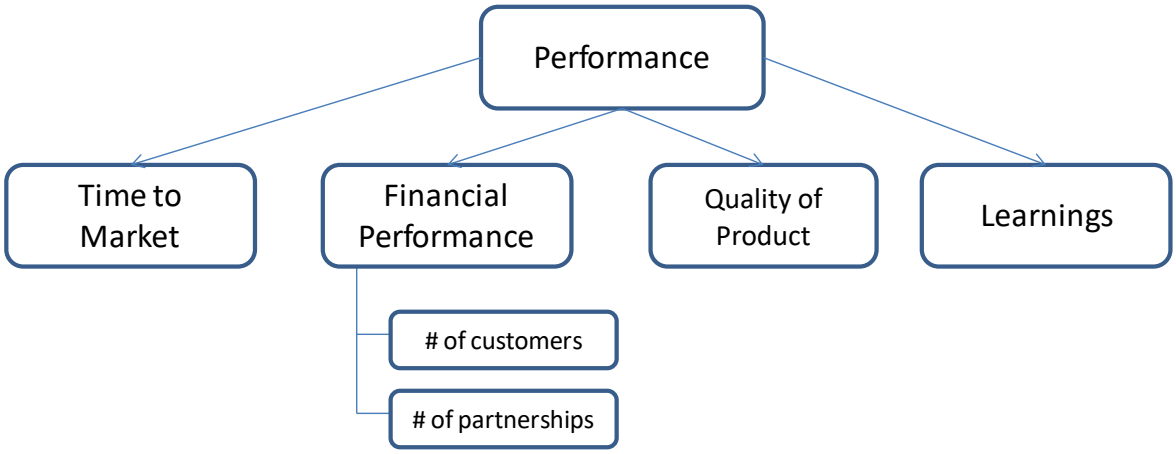
(Middle Management, HR)

The company met the launch timelines with the introduction of the Digital Wallet. However, it was apparent that the key measures of success were inappropriate, whether that was regarding time to market, new innovation in the market, attracting new partners, attracting new customer segments and ultimately customer engagement, satisfaction or financial targets. The communication on progress to the senior leaders of the company and demonstrating meeting key milestones led to continued investment in the platform and division.

Table 4.10: Thematic Analysis by Seniority: Performance

	Junior Management	Middle Management	Senior Management
Performance			
Time to Market	There were really tight deadlines and in the end we were really pulling together to hit the deadlines.		I remember the party we had to celebrate the launch of the Digital Wallet. We were so excited to have it out there and the company was really pushing us to launch it probably even before it was ready.
Financial Performance	It was very important to build the base and partnerships were a really big piece of the overall plan for growth for the product. Hence, launching partnerships The goals were really acquisiation numbers with the idea that we would focus more on engagment down the line	I think at our company, it's always been such a a parnter led company and our success has been so driven by major partnerships It depends on what you are trying to achieve, you need to flexible but also really clear. We had a lot of partnerships launched and closed in the the first year. They were never successful partnerships but they helped convince people that it was worth continuing to place bets on the business.	It took like two weeks when the rest of the finance organisation started demanding the daily report on the number of accounts. So by nature of trying to measure us that way I think it was stifling innovation. One of the best ways you can inspire innovative work environment or product development process is to put the right measures of success against it. In the beginning, it's probably not just accounts and right now, it's probably not jsut Pre-Tax Income.
Quality of Product	In the beginning the key measure of success was that the product actually worked. There were definitely a lot of issues that we were still trying to work through that didn't feel great from a customer perspective.		
Learnings		In the beginning when we didn't see adoption take off, we floundered around. We did a lot of deals in the first 18 months, None of them probably made a ton of sense, but they all got us to learn a bit more about what we had. It also bought us some time to actually enable us to pivot.	

Figure 4.16: Performance: Measures of Success



In summary, the key measures of success were launching the product and account volume.

4.3.4.1.6 Summary

The acquisition of the platform and subsequent launch of the Digital Wallet was completed rapidly. The overall purpose and mission were still in formation, which resulted in a lack of clear vision and direction and absence of customer focus. The goal was set and the team tried to identify a problem that the Digital Wallet could solve. The business sought growth, but the number of employees grew too quickly and goals, direction and success criteria were limited. A new culture was in formation; a culture of greater openness and transparency, where decisions would be made quickly and communication would be clearer. Leadership was still hierarchical and decisions were made in silos, in the same way as elsewhere in the organisation. A new leader was brought into the organisation, but his strategy and vision were not still clear and the superior transformational leadership performance, described by Bass (1990) of being able to inspire people to buy into the

mission and purpose and then go beyond self-interest for the good of the group was not visible.

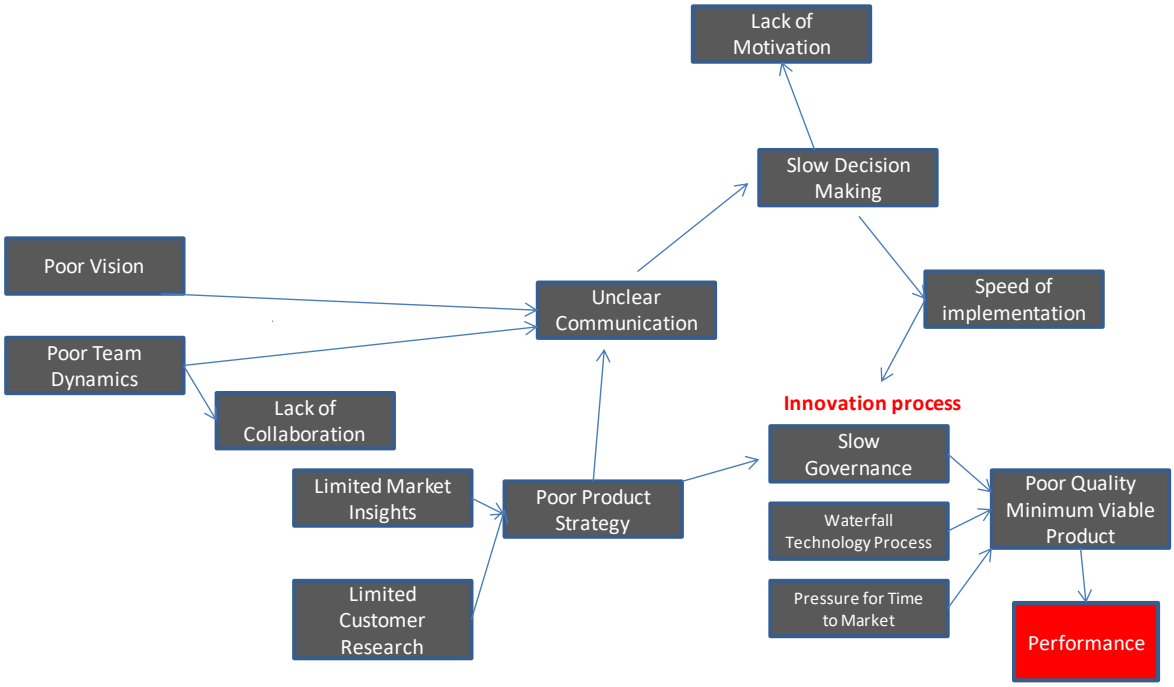
The team needed to create a better governance framework to allow greater autonomy and faster decision making. The overall mission was to launch the Digital Wallet to the market quickly. Limited work was carried out to understand the overall business and market opportunity, as well as focus on really understanding the customer pain points, the product would solve. Because of the clear focus on speed to market, the team made many trade-offs that ultimately sacrificed the ability to launch a market-leading proposition and user experience. While it was a significant achievement for the team to launch the product and integrate the platform at this pace, no one was proud of the released product.

The focus was still very product centric, in terms of launching a new product versus delivering a superior service that truly met customer needs. According to Jassawalla and Sahittal's (2002) research on innovation culture, there are many foundations that were being put in place correctly by the team. Locating the team together away from their functional teams and creating an environment with a high level of communication are considered critical for driving innovation (Jassawalla and Sahittal, 2002). Selecting a truly cross-functional and diverse team is another important element for success. Some of the elements for team climate were still lacking, such as having a clear vision, shared commitment and clear objectives (West, 1990). Additionally, a range of literature identified that cross-functional teams are often not successful due to the misalignment of goals and cultures, which is believed to be the case with the launch of the Digital Wallet (McDonough III, 2000).

The innovation process was not open and it did not focus on solving customer pain points; it did not involve the customers early on and limited research was used. The key goal was to launch a Digital Wallet to the market at maximum speed. The programme used a waterfall development programme, where features were looked at and locked down in isolation without involving the customer for feedback. The success measures were undefined, which caused major confusion across the company regarding how the team was performing against the broader mission. Overall, the launch achieved business headlines and sufficient momentum within the division to enable further investment into the platform and division.

To summarise, a number of the important elements that are required to drive a successful new product development were not in place. Figure 4.17 shows the overall causal network for the launch of Digital Wallet.

Figure 4.17: Model 1.1 - NPD Causal Network - Digital Wallet*



*NPD Causal Network leads to product performance

What the causal network shows is a relation between variables. Essentially, poor vision and team dynamics led to a very unclear communication strategy. This greatly impacted decision-making and as a consequence speed of implementation. Additionally, the limited market insight and customer research resulted in a poor product strategy. that led to a confusing governance process. This coupled with a waterfall technology process and a pressure to get product out to market quickly impacted the quality of the minimum viable product.

4.3.4.2 Case 2 - Launch of a Pre-paid Product

4.3.4.2.1 Case Background

The vision from senior leadership was to capture a new segment of the market with the aim of gaining market share from competitor organisations. There were a number of new players entering the pre-paid market that was new and growing part of the payments arena. The company had previously launched a pre-paid product to the youth segment with limited success, but through deep analysis of the data, the team noticed that there were users that were signing up, but who didn't fit into the target segment and were using it for very specific use cases.

> *"When we started we just wanted a piece of the market, stealing market share from our competitors. Today our mission is much broader and clearer."*
>
> (Junior Management, Marketing)

> *"I think that the launch of pre-paid came more out of the mould of typical corporate thinking, where there was less of an appetite to fail."*
>
> (Junior Management, Marketing)

"We noticed with the youth product that a lot of people using the product were not teenagers or parents of teenagers. What we saw were people using the product for a lot of different use cases such as I'm using it to pay my nanny or I'm using it to pay my sibling."

(Middle Management, Implementation)

The insight from the youth product led the team to analyse further the market opportunity and competitive landscape. Based on these findings, the team decided to leverage the existing capabilities and get a new product out quickly, re-positioning a youth product that the company had launched earlier in the pre-paid space.

"The entire executive team was behind it to make that change happen and wanted it in less than three months."

(Middle Management, Product)

"From an implementation standpoint, it was essentially a repaint of the past product. It was just re-skinned, and we changed the colours and changed the name of it, same functionality."

(Junior Management, Marketing)

4.3.4.2.2 Leadership

The focus on the pre-paid segment was a strategic shift for the organisation. It took time for the strategy to be fully formulated into a vision and mission, and be communicated to the broader organisation. This resulted in a lack of clarity at the

beginning of the project. The vision was to capture a new segment of the market. Given the platform limitations and how long it would take to make the changes, it was decided that the focus would be on leveraging existing product and platform capabilities and innovate on price and communication. The team set a very tight target around launching the product in three months' time.

> *"It was very unclear what the focus was or what the priorities were."*
>
> (Middle Management, Product)

> *"There was a sudden shift away from the core business, which included travellers check and gift cards. I think there was a lot of confusion. Nobody outside of New York had any clue what the vision was."*
>
> (Middle Management, Implementation)

Given the lack of clarity from the top to the broader team, the project team had to convince stakeholders that the project was important. It also required a lot of communication from the broader team to define the mission and road ahead.

Communicating the vision and being clear to the team about the purpose of the project was critical to the success of a new product launch. Rallying everyone behind a single minded mission was not fully achieved in the beginning.

> *"Clarity of goal and how it fits in; I have heard from peers that it was not clear what they were doing and how it fits."*
>
> *(*Middle Management, Product)

In order to meet the tight project timelines, the team was required to work in a more collaborative way than they had previously. This team was located at the company headquarters and the leadership team spent time thinking about how they could create a more collaborative structure to drive speed. It put in place a structured decision making framework, through weekly meetings and regular steering committee meetings. The goal was to launch the new product within three months, and it was recognised that in order to do so, decisions would have to be made quickly and barriers removed for the project team to execute well. Communication between the project team became very open and collaboration was fostered within the cross-functional team.

> *"There was single, clear focus. We can do this in less than 3 months. If anything gets in the way of that I will help remove the barrier."*
>
> (Middle Management, Product)

> *"During the launch I saw leadership style like collaboration, open communication and good relationships between cross-functional partners emerged."*
>
> (Middle Management, Implementation)

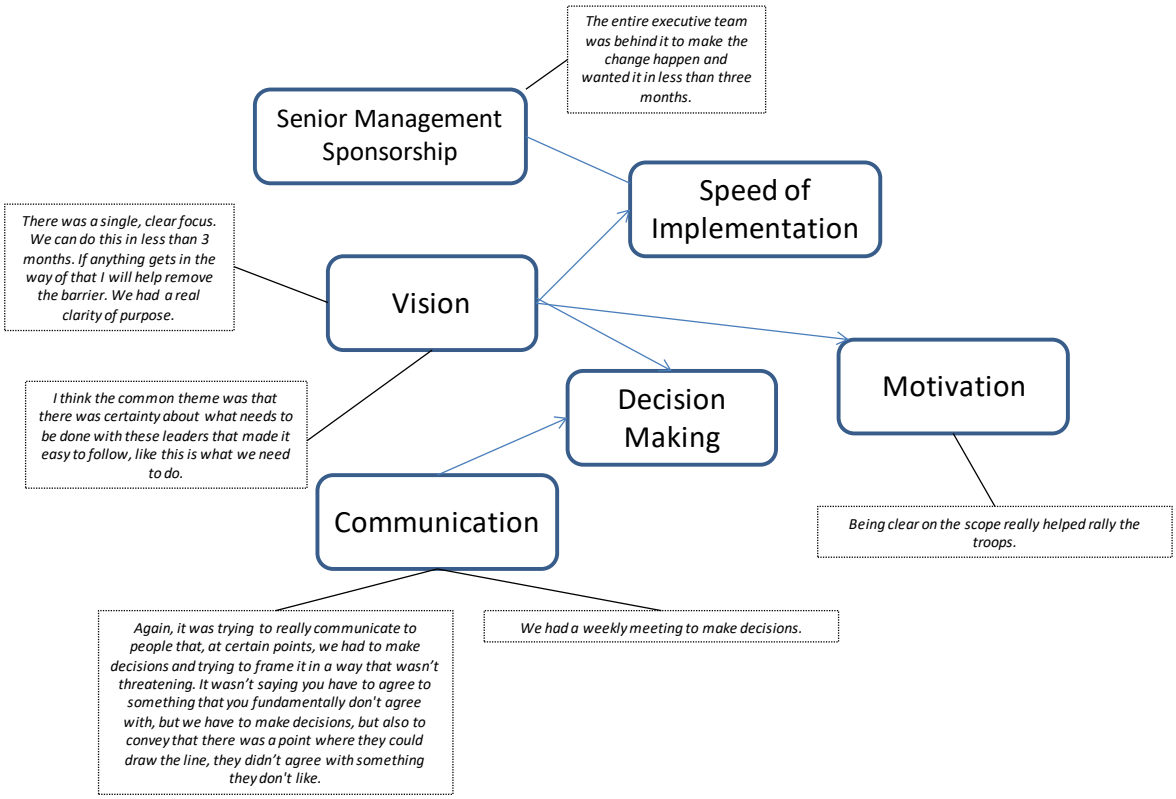
While the mission from the leadership might not have been broadly communicated throughout the organisation initially, the narrow scope of the project was clear regarding what needed to be achieved. The aim was arguably simple: capture a new segment of the market by repositioning an existing product and get the product out in three months.

Table 4.11: Thematic Analysis by Seniority: Leadership

	Junior Management	Middle Management	Senior Management
Leadership			
Vision/ Objectives	When we started we just wanted a piece of market share, stealing market share from competitors. Today our mission is much broader and clearer. I think the common theme was that there was certainity about what needs to be done with these leaders that made it easy to follow, like this is what we need to do. It was very unclear what the focus was in the beginning.	There was a sudden shift away from the core business, which included travellers check and gift cards. I think there was lot of confusion. Nobody outside of New York had any clue what the vision was. Clarity of goal and how it fits in; I have heard from peers that it was not clear what they were doing and how it fits. There was a single, clear focus. We can do this in less than 3 months. If anything gets in the way of that I will help remove the barrier. We had a real clarity of purpose.	Being clear on the scope really helped rally the troops. We wanted to get a product quickly out the door to take market share and learn about the pre-paid market.
Decision Making	Overall I would say there was definitely a willingness to take risks, which was a good and inportant thing.	We had a weekly meeting to make decisions.	Again, it was trying to really communicate to people that, at certain points, we had to make decisions and trying to frame it in a way that wasn't threatening. It wasn't saying you have to agree to something that you fundamentally don't agree with, but we have to make decisions, but also to convey that there was a point where they could draw the line, they didn't agree with something they don't like.
Senior Management Sponsorship	I think the lauch of pre-paid came more out of the mould of a typical corporate thinking, where there was less of an appetite to fail.	The entire executive team was behind it to make the change happen and wanted it in less than three months.	

Looking at opinions of different levels of leadership, what transpires is that senior leadership seemed less aware that the vision and goal was not well communicated to everyone, while this comes through from junior and middle management.

Figure 4.18: Causal Fragment - Leadership



In looking at causality, senior management sponsorship and clarity around vision led to faster implementation. Additionally, having clarity around the vision also led to team motivation and drove faster decisions. Finally, having clear and frequent communication models helped drive decisions.

4.3.4.2.3 Cross-Functional Teams

There was a true cross-functional team assigned to the project including product, technologies, acquisition, marketing, legal, compliance, and finance. Roles and responsibilities were visibly communicated and team members clearly understood each other's project roles.

The team had to work on what being on a true cross-functional team meant. Some members were uncomfortable with leaving their predefined roles. As operational structure was formulated, the team started working much more efficiently as together.

> *"What I found successful was bringing people in early and together. People find it incredibly helpful to set context and understand what is this opportunity? What is the concept? And that they have an opportunity to provide an opinion or a voice before the train is running."*
>
> (Middle Management, Implementation)

> *"It is critical to have the cross-functional team involved at the beginning. At the beginning there is more you can figure out. "*
>
> (Junior Management, Research)

> "*There was definitely a lot of team huddling close together, daily or whatever it took to get things done. I think the teams work really well in their areas of discipline and where some of the challenges may have happened is in crossing over, where marketing people need some technology stuff or vice versa. I think that kind of cross-functional collaboration was a bit of a trial and error".*
>
> (Junior Management, Marketing)

> *"The biggest thing is really being one team and understanding when things matter and actually caring about it. Things like seeing technology as part of*

the team versus just complaining about tech was important."

(Middle Management, Product)

"The cross-functional team was clear on what their role was, what the expectations of them were and what commitments were needed. I think that worked really well."

(Middle Management, Product)

The team motivation improved throughout the project, driven by the clarity of expectations and senior management emphasising the importance of the project. As the message and story became clearer the leadership team became more vocal about the mission and positioning.

"Then after the launch we had a big launch party and the leadership team would address the mission and positioning."

(Junior Management, Marketing)

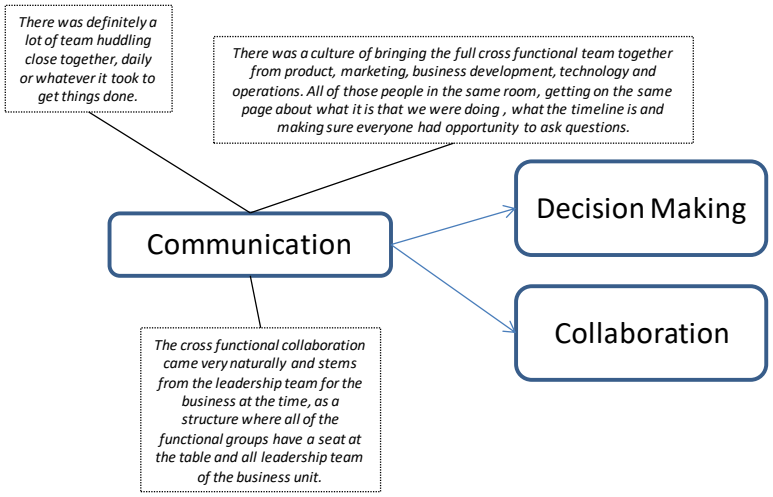
Table 4.12: Thematic Analysis by Seniority: Cross-Functional Team

	Junior Management	Middle Management	Senior Management
Cross Functional Teams			
Team	It is critical to have the cross functional team involved at the beginning. At the beginning there is more you can figure out. We were all over the place and needed to really tighten the focus.	The cross functional team was clear on what their role was, what the expectations of them were and what commitments were needed. I think that worked really well. There was a culture of bringing the full cross functional team together from product, marketing, business development, technology and operations. All of those people in the same room, getting on the same page about what it is that we were doing , what the timeline is and making sure everyone had opportunitiy to ask questions. We built great relationships across the cross functional partners.	The cross functional collaboration came very naturally and stems from the leadership team for the business at the time, as a structure where all of the functional groups have a seat at the table and all leadership team of the business unit.
Communication	There was definitely a lot of team huddling close together, daily or whatever it took to get things done. Because the operations and people you relied on for the project didn't all report into one leader, you were having to tell your business colleagues in Salt Lake or Phoenix here is what we're doing and can you make sure you talk to your leader about it. This was difficult from a prioritization perspective.	What I found successful was bringing people in early and together. People find it incredibly helpful to set context and understand what is this opportunity? What is the concept? And that they have an opportunity to privide an opinion or a voice before the train is running. What worked well was communication, transparency and governance.	
Motivation	Then after the launch we had a big launch party and the leadership team would address the mission and positioning.	It was important to the team to know that what they were working on was important.	
Collaboration	I think the teams work really well in their areas of discipline and where some of the challenges may have happened is in crossing over, where marketing people need some technology stuff or vice versa. I think that kind of cross-functional collaboration was a bit of trial and error.	The biggest thing was really being one team and understanding where things matter and actually caring about it. Things like seeing technology as part of the team versus just complaining about tech was important.	

Looking at different seniority of leadereship it appears that all teams agreed that the teams got together frequently to discuss the project and make decisions.

There is more data from junior and middle management on cross functinal teams than from senior managment.

Figure 4.19: Causal Fragment - Cross Functional Team



Based on the analysis, communication drove decision making and better collaboration.

4.3.4.2.4 New Product Development Process

4.3.4.2.4.1 Product Strategy

The idea originated from analysing the usage of the youth product and realising that the product had much broader appeal and many more use-cases than originally intended. The overall process was not customer centric and did not involve customer research regarding the product features or inclusion of third parties in the idea generation process. However, it was based on in depth customer insights regarding how customers were using

the current teen product. Research was used later for the product positioning and fee discussions. Following the initial competitor review and analysis on the usage of the teen card, the senior leadership team fully supported launching another version of the existing product for a broader audience.

> *"What we started seeing, looking at the data, was that a lot of the people were using the youth product; they were not teenagers or parents but other demographic that were using the product for a lot of different use-cases, such as paying the nanny or paying a contractor."*
>
> (Middle Management, Implementation)

Additional research was conducted to further reinforce these findings; the team conducted a robust competitive analysis of the existing products in the market place, and explored the positioning and communication approach with prospective customers. While the scope to make substantial changes to the product was limited, the team was innovative around product positioning, fees and messaging to consumers.

> "*I think with Pre-paid, we were somewhat customer driven. I want to say it was more of gut coupled with behaviours, we were actually seeing in the market."*
>
> (Middle Management, Product)

"There was definitively some data points from focus groups and surveys, but it seemed last minute and we didn't get them in time before locking down product. They were used for positioning decisions."

(Junior Management, Marketing)

"With Pre-paid that was the first time we tested the free message and that was really important. We recognized that it rang true with consumers and regulators."

(Senior Management, Strategy)

"The pricing and positioning that we launched with the pre-paid product was leveraged for future launches."

(Senior Management, Strategy)

Table 4.13: Thematic Analysis by Seniority: Product Strategy

	Junior Management	Middle Management	Senior Management
Market Opportunity/ Customer Insights			
Market Opportunity	We leared a lot from our teen card and we then looked at the key pre-paid players in the market.	I think with Pre-Paid we were somewhat customer driven. I want to say it was more gut coupled with behaviours we were actually seeing in the market.	We knew very little about the pre-paid space.
Qual. And Quant research	There was definitely some data points from focus groups and surveys, but it seemed last minute and we didn't get them in before locking down product. They were used for positioning decisions. It was so open eneded because our target was pretty ill-defined, to be quite honest. We didn't have a solid handle on our design target, so we were making a lot of stuff up.		With the pre-paid that was the first time we teseted the free message an that was really important. The fee message rang true with regulators but also with consumers, we got a lot of good feedback.
Customer Involvement		We noticed with the youth product that a lot of people using the product were not teenagers or parents of teenagers. What we saw were people using the product for a lot of different use cases such as I'm using it to pay my nanny or I'm using it to pay my sibling.	
Product Strategy			Pricing and fee approach were very innovative

As can be seen , the senior management is more focused around the strategic elements of the launch, where as the middle and junior management give a more detailed count of how things got done.

4.3.4.2.4.2 Innovation Process

The innovation was leveraging an existing product to a new target segment and positioning it competitively against the existing products in the market. The process was a technology waterfall process and because of the time required for major changes on the

platform, it stifled the product innovation. Additionally, given that a number of product features were de-scoped for launch, the challenge was how to get them onto the roadmap following the launch and stop the team from moving onto the next big thing.

"Pricing and fee approach were very innovative."

(Senior Management, Strategy)

"The trade-offs with getting anything launched on the platform were significant. You don't know everything so far in advance. I, for example, had to discuss pixels and getting tracking in place and because I didn't have all the details months in advance. The team said we will have to do without tracking."

(Junior Management, Marketing)

"Having the staying power to continue to invest and iterate can be very challenging. There is the shiny objects syndrome in front of the team, moving onto the next big thing."

(Middle Management, Product)

"What worked well was communication, transparency ad governance."

(Middle Management, Implementation)

As there were no major product changes the innovation process was relatively simple in terms of delivery. There was strict prioritisation as to what could be changed and opportunity to make changes were minimal given the tight timelines.

> *"It was a bit more straightforward because we had the past product in market. It was more of a rebranding of the product and less around the functionality of the product."*

(Middle Management, Portfolio)

The team used the stage-gate process, which provided a lot of rigour, coupled with the waterfall technical process for building any new functionality. The product was built on a legacy platform leveraging the waterfall technical process. New product development through this process is time consuming and it hindered the ability to introduce many new product functions, requiring the team to make final decisions regarding product features substantially in advance of launch.

> "*If you are held to what you handed in six months ago and you can't make any changes and the next change you can make is six months later, then it's not that helpful."*

(Junior Management, Marketing)

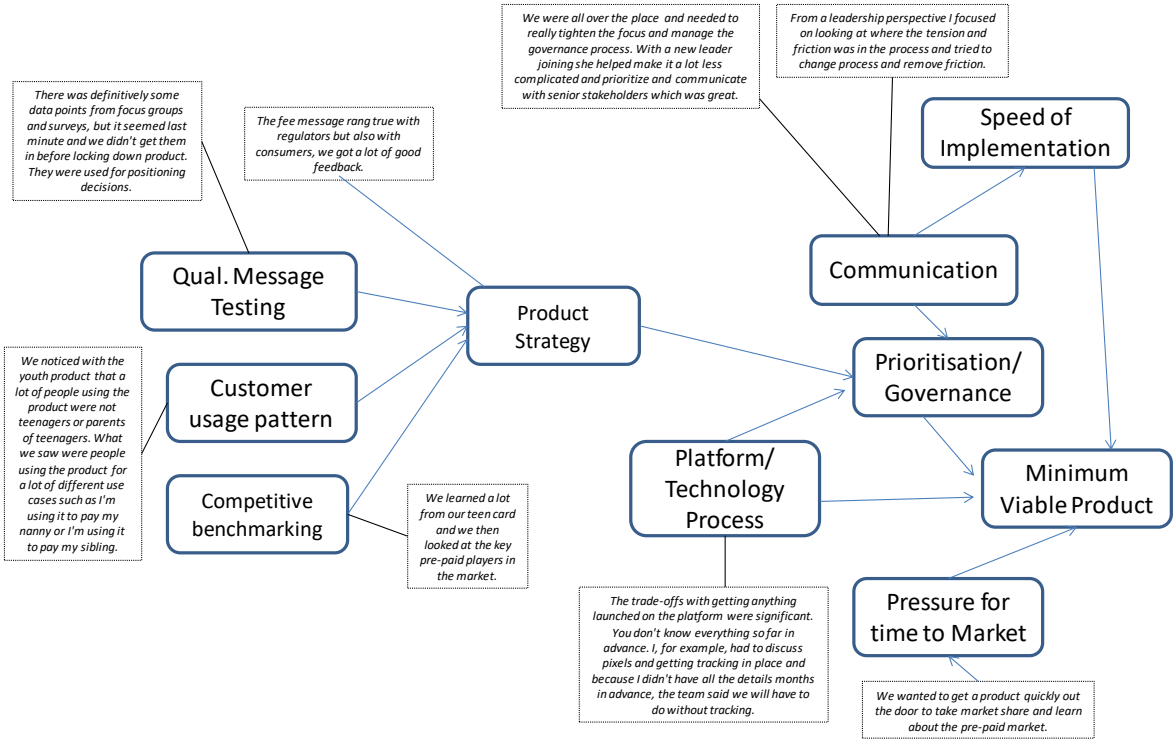
As the business quickly moved to other products that were built on next generation software platforms, the product has remained unchanged since its launch with only limited additional features added.

Table 4.14 Thematic Analysis by Seniority: Innovation Process

	Junior Management	Middle Management	Senior Management
Innovation Process			
Prioritisation & Governance	We were all over the place and needed to really tighten the focus and manage the governance process. With a new leader joining she helped make it a lot less complicated and prioritize and communicate with senior stakeholders which was great. Because the operations and people you relied on for the project didn't all report into one leader, you were having to tell your business colleagues in Salt Lake or Phoenix here is what we're doing and can you make sure you talk to your leader about it. This was difficult from a prioritisation perspective.	What worked well was communication, transparancy and governance. From a leadership perspective I focueded on looking at where the tension and friction was in the process and tried to change process and remove friction.	
Minimum Viable Product	If you are held to what you had in six months ago and you can't make any changes and the change you can make is six months later, then it's not that helpful.	Having the staying power to continue to invest and iterate can be very challenging. There is the shiny objects syndrome in front of the team, moving onto the next big thing. It was a bit more straightforward because we had the past product in market. It was more of a re-branding of the product and less around the functionality of the product	We wanted to get a product quickly out the door to take market share and learn about the pre-paid market.
Platform/ Technololgy	The trade-offs with getting anything launched on the platform were significant. You don't know everything so far in advance. I, for example, had to discuss pixels and getting tracking in place and because I didn't have all the details months in advance, the team said we will have to do without tracking.	Because you rely so heavily on operations. From customer service to supply chain to production and operation it was difficult to manage such tight timelines with people spread across the country.	

. What can be seen is that senior management was focused on getting a product out quickly to learn. However, the team found it challenging to manage with the constraints around timelines and an inflexible technology platform.

Figure 4.20: Causal Fragment - New Product Development Process



Looking at the new product development process, reviewing the customer usage pattern on other products, coupled with qualitative message testing and competitive benchmarking led to the product strategy. The platform capability heavily impacted the prioritisation process and ultimately the minimum viable product. Pressure for a 3 month time to market made it hard for the team to make any fundamental changes to the platform and impacted the minimum viable product. Communication helped drive governance and speed of implementation of the minimum viable product.

4.3.4.2.5 Performance

The key focus for the project team was to launch a pre-paid product to the market

place that would allow the company to gain new market segments. This was achieved through innovative positioning around fees and new marketing claims that no competitor had done previously. The goal around the launch timelines was critical and meeting that target instilled a lot of confidence in the team that things could be done differently. The leadership team also started tracking new customer segments brought into the business. From a financial perspective, the goals focused on account acquisition and product engagement.

> *"The head of the business gave us the challenge of acquiring million customers in the first year."*
>
> (Junior Management, Marketing)

> *"The initial success was around the fact that we actually launched successfully. We got it done in a very, very accelerated timeline."*
>
> (Middle Management, Product)

> *"Bringing in new customer segments was important."*
>
> (Middle Management, Product)

> *"The first metric was scale and account volume. Once that hurdle was passed the focus was on the product engagement, funds being loaded into the account and usage of product and its features."*
>
> (Junior Management, Marketing)

The company was recognised as an innovator in the field through this product

launch and the product won the company's innovation award. The product reached its account targets in the first two of years. Today, this product is not actively sold in the market as there have been newer, more powerful re-loadable products launched by the company on a better software platform.

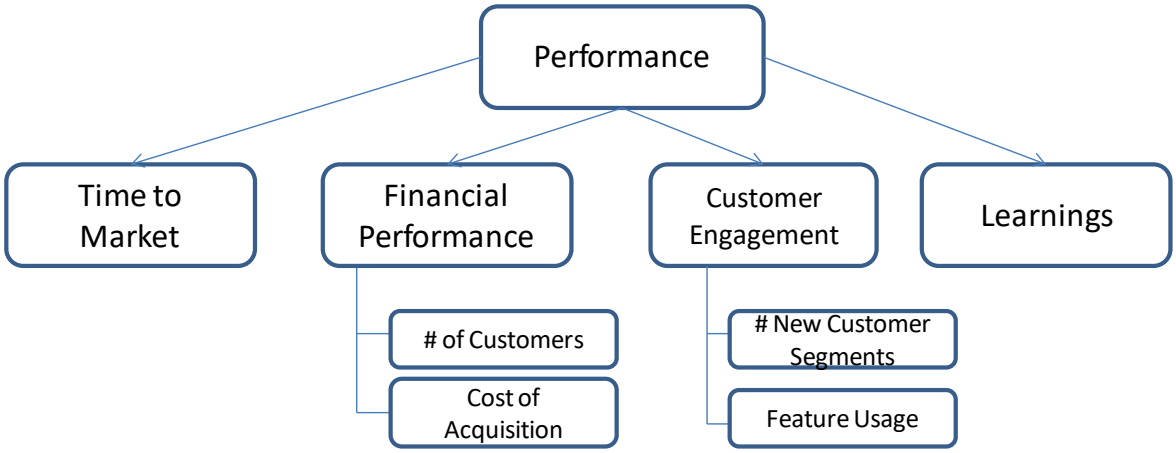
> *"We've won some external awards in terms of innovative product solutions."*
>
> (Middle Management, Portfolio)

> *"We didn't know anything about this market when we launched pre-paid. What we could do a bit better is take these learnings into the next programme. We could do post-mortem on what stuff didn't work and what did work."*
>
> (Middle Management, Portfolio)

Table 4.15 Thematic Analysis by Seniority: Performance

	Junior Management	Middle Management	Senior Management
Performance			
Time to Market		There was a single, clear focus. We can do this in less than 3 months. If anything gets in the way of that I will help remove the barrier. We had a real clarity of purpose.	
Financial Performance	The head of the business gave us the challenge of acquiring million customers in the first year. The first metric was scale and account volume. Once that hurdle was passed the focus was on the product engagment, funds being loaded into the account and usage of the product and its features.	The intial success was around the fact that we actually launched successfully. We got it done in a very, very accelerated timeline.	We needed to get to scale of customers to gain learnings. In the beginning we focused on number of customers and cost per acquisition. Later on we started to measure customer engagement and feature usage.
New product segments		Bringing in new customer segments was important	
Learnings		We won some external awards in terms of innovative product solutions We didn't know anything about this market when we launched pre-paid. What we could do a bit better is take these learnings into the next programme. We could do a post-mortem on what stuff didn't work and what did work.	The pricing and positioning that we launched with pre-paid product was leveraged for future research. Our approach has been rather choppy. We did the pre-paid card, but we didn't do it all the way. Then all the attention shifts to the next project.

Figure 4.21: Performance: Measures of Success



In summary, The key measures of success were launching the product on time and driving customer volume, followed by customer engagement.

4.3.4.2.6 Summary

The overall leadership team and vision for the new division was still in formation during the launch of the pre-paid product. Entering the pre-paid market was still not a formal part of the organisation's strategy. As a result there was initially a lack of clarity around the project's vision and goals. At the same time, the team was able to work quickly to meet a tight deadline for the launch of a product that was grounded in customer insights and based on the usage of an existing teenage pre-paid product. The leadership team was then able to create a suitable environment and framework to drive the product launch forward quickly. Communication and openness increased within the team as the vision and strategy became clearer. Decision making was swift and the leaders focused on removing

barriers for the team and empowering them to launch the product in three months. The team that worked on the project was experienced launching the products within the company, but had to learn how to work truly cross-functionally to achieve results more quickly. As the cross-functional team started to operate more efficiently some of the benefits of the approach became apparent, such as increased speed, a more entrepreneurial culture and enhanced employee motivation (Holland et al., 2000). The leadership team moved to a more agile leadership style, as they communicated the vision and the mission more clearly and their stakeholder agility increased with clearer decision making and effective stakeholder management (Joiner and Joseph, 2007).

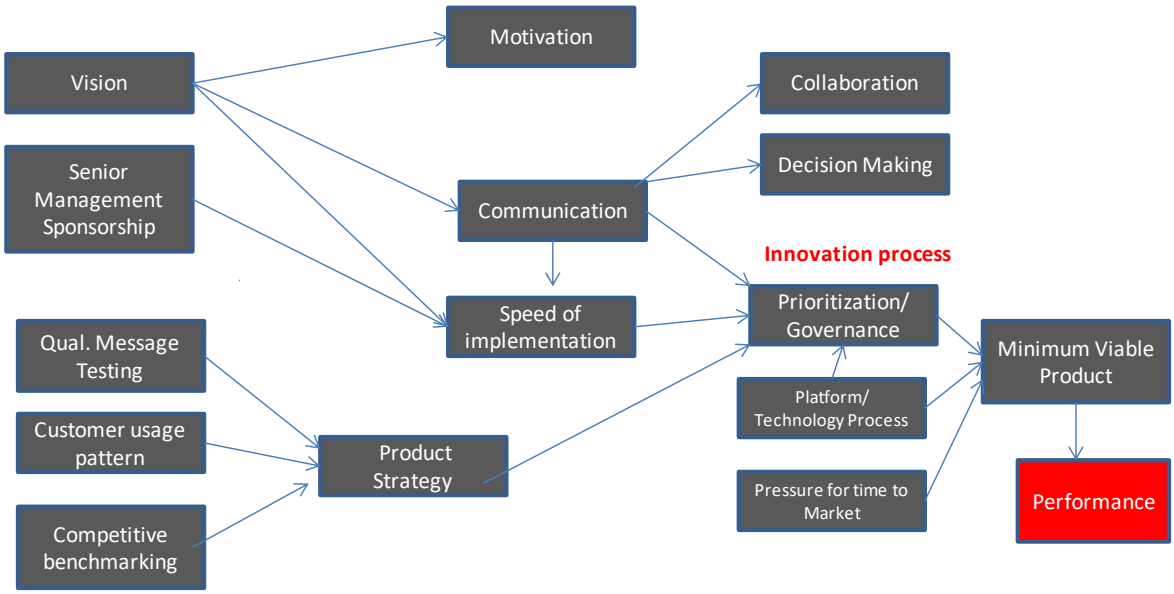
The reasons for launching the product were grounded in data insights about the customer usage and understanding the growing market segment. However, the team did not use thechniques to gain iterative insights from customers or partners to further evolve the product proposition. The platform was inflexible and the team put speed ahead of fully redesigning the product. Positioning research and working through a very clear and simple value proposition around transparent fees were very helpful to encourage customer take-up. The innovation process required considerable prioritisation due to the platform limitations and the implementation was done through a waterfall process. This limited the ability to take a more iterative and exploratory approach and made the whole innovation process inflexible (Nerur and Balijepally, 2007)

The measures of success were relatively clear to the team. It was firstly to launch the product in the timeline set by the team. Secondly, it revolved around capturing a new segment of the market and therefore growing the company's reach. Thirdly, clear account acquisition targets were set and with time, they included customer engagement and

profitability measurements. This product launch also offered some learning elements around the ways of working and the consumer response to transparent and easy to understand fees.

Figure 4.22 shows the overall causal network for the launch of Prepaid.

Figure 4.22: Model 1.2: NPD Causal Network - Pre-paid*



*NPD Causal Network leads to product performance

What the causal network shows is that clarity of vision and senior management sponsorship coupled with clear communication drives faster implementation. Previous customer usage patterns along with qualitative message testing and competitive benchmarking impacted the product strategy. There were competing forces driving the innovation process, the platform

limitations and pressure around timelines made it hard to prioritize any major technical changes and led to a very simple minimum viable product.

4.3.4.3 Case 3 - Launch of Bank 2.0

4.3.4.3.1 Case Background

The company had partnered with a major US retailer with an aim to launch a banking 2.0 product in the US market. The goal was to target the unhappily banked population in the US, which is a segment that felt they were paying too much in fees for their standard banking services with limited benefits. Combining the powerful distribution network of the retailer with the unparalleled capabilities of the brand of the company would allow the two companies to create a unique customer champion value proposition to the market and disrupt the banking sector in the US. A cross-functional team across the retailer and the company was put together and clear goals were set around the expected product launch and timelines.

4.3.4.3.2 Leadership

The vision from both companies centred on how to disrupt and simplify banking and bring the best assets from both the companies to transform the industry. The joint teams generated a very clear idea for the project. Due the transformational nature of the project, it had sponsorship from the most senior level of both the organisations.

> *"The partner saw tremendous potential with the company's new software platform that had been used to launch the Digital Wallet."*
>
> (Middle Management, Product)

"We had been working on a concept for Bank 2.0 and it came together with what the partner came to us for."

(Senior Management, Strategy)

"The sponsorship was just through the roof. Everyone was committing to make this happen. It was very clear as to why we're going to do this and why we're excited about it."

(Middle Management, Product)

"The vision for the 2.0 Bank product was very well founded in the core consumer needs and that is why it was so successful."

(Senior Management, Strategy)

Having a signed contract with a major retailer made it easy to rally the teams behind a single vision and mission.

"We had a big deal with the retailer and a lot of people around the company were behind it."

(Senior Management, GM)

While the project scope was significant, the transformational nature of the opportunity and the way senior leadership talked about it within the organisation created a notable excitement and belief in the team's ability to make this happen. There was a lot of focus by the senior leadership on this project launch and the team included subject matter experts to form a cross-functional team.

"Our leaders that led this project were completely committed and were very thoughtful about where they spent time, both with outside and internal partners. The ability to prioritise and handle conflict, as well as motivating the troops was critical."

(Middle Management, HR)

A strong focus was placed on creating the right innovation infrastructure for the project, including communication, governance, removing barriers and the ability to make quick decisions. Considerable stakeholder management was also required to bring the whole team along the journey.

"*I think one of the critical success factors was encouraging open, transparent communication among all the stakeholders and forcing decisions."*

(Senior Management, GM)

"The leadership team had a very strong vision, they were empowering and creating a sense that you are doing something special."

(Junior Management, Marketing)

"I would say commitment from partners both internally and externally."

(Middle Management, Customer Engagement)

"From an organisational perspective, things change fast and there are roadblocks, so it was important to be able to problem solve at both strategic and tactical level quickly."

(Middle Management, Customer Engagement)

"A lot of the things we were trying to do had never been done and dealt with. Issues of risk, compliance, regulation and customer experience. The process was around trying to lock down various views at the same time as dealing with a high profile partner."

(Senior Management, GM)

"We had all the cross-functional teams with a seat at the table, running regular meetings, having side conversations to bring along all the different groups and solve problems quickly."

(Senior Management. GM)

"We started out weekly, but eventually the meetings became daily, where we had representative of every function that was involved and we were constantly putting things to the group and making decisions."

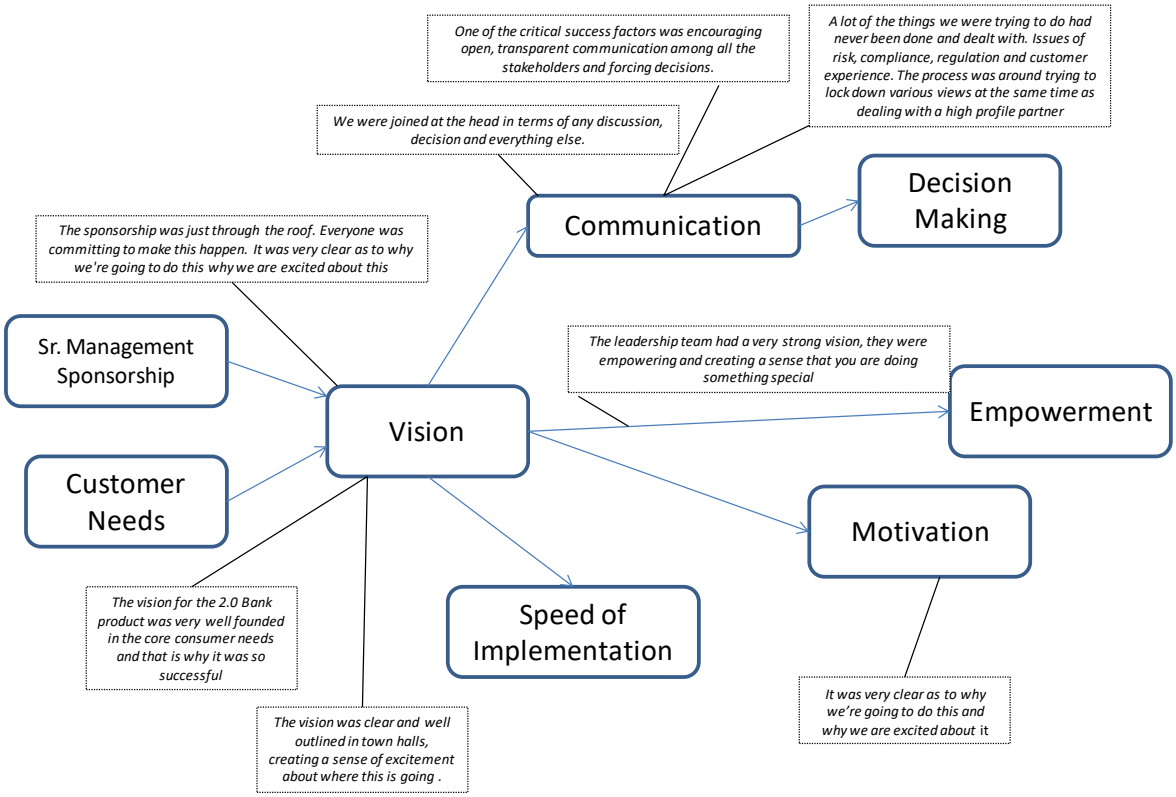
(Senior Management, GM)

Table 4.16 Thematic Analysis by Seniority: Leadership

	Junior Management	Middle Management	Senior Management
Leadership			
Vision/ Objectives	The leadership team had a very strong vision, they were empowering and creating a sense that you are doing something special	I think the leadership enabled the whole system that was very different and new for the company. We were joined at the head in terms of any discussion, decision and everything else. It was very clear as to why we're going to do this and why we are excited about it	The vision for the 2.0 Bank product was very well founded in the core consumer needs and that is why it was so successful
Decision Making	Where there were barriers, they helped break them down so we could get our jobs done.	From an organisational perspective, things change fast and there are roadblocks, so it was important to be able to problem solve at both strategic and tactical level quickly	A lot of the things we were trying to do had never been done and dealt with. Issues of risk, compliance, regulation and customer experience. The process was around trying to lock down various views at the same time as dealing with a high profile partner
Senior Management Sponsorship	The vision was clear and well outlined in town halls, creating a sense of excitement about where this is going .	The sponsorship was just through the roof. Everyone was committing to make this happen. It was very clear as to why we're going to do this why we are excited about this Management said, we're going to do this, but we'll need to bring to bear resources and make it happen.	
Communication	Everyone lined up after there was a strong leader that communicated the plan or the vision.		One of the critical success factors was encouraging open, transparent communication among all the stakeholders and forcing decisions. We started out weekly, but eventually the meetings became daily, where we had representative of every function that was involved and were constantly putting things to the group making decisions.

From a leadership perspective the team is aligned across all levels that there was strong sponsorship, vision and clarity around decision making and communication for Bank 2.0.

Figure 4.23: Causal Fragment - Leadership



Customer needs and senior management sponsorship influenced the vision being set for the project. Having a clear vision drove clarity in communication that in return led to faster implementation and higher motivation and empowerment.

4.3.4.3.3 Cross-Functional Teams

Members of the cross-functional team were diverse and from different parts of the company. The team bought into the overall vision and the motivation to be a part of the initiative. The team was brought in early and the full cross-functional team was part of the

project from the beginning. Critically, the team functioned in a truly cross-functional manner and solved problems together, focusing on the issues that needed resolutions ahead of launch.

> *"There was a close knit group that was sitting separate from the rest of the organisation that could innovate quickly."*
>
> (Junior Management, Marketing)

> *"The leadership enabled a whole system that was very different and new for the company. I don't remember anyone going to see the partner as a single function. People went together as a cross-functional team."*
>
> (Junior Management, Product)

Decisions were made quickly within team meetings and members were continually challenged to innovate through keeping a customer focus. One example of this was working out the customer load and spending limits on the product:

> *"We had our lead compliance officer in the meeting and explained to her what we needed to accomplish. She came back the next day with a solution that was obvious and elegant, which was instead of having a monthly limit, have an annual limit."*
>
> (Senior Management, GM)

The team was heavily involved in every decision and this provided substantial motivation and a sense of truly being part of the team that brought the Bank 2.0 product to market. One of the key factors enabling the success was the team's ability to work through the difficult issues together as a team:

"We problem solved together as one team."

(Middle Management, Product)

"There was a clear leader, there were regular meetings and success was celebrated."

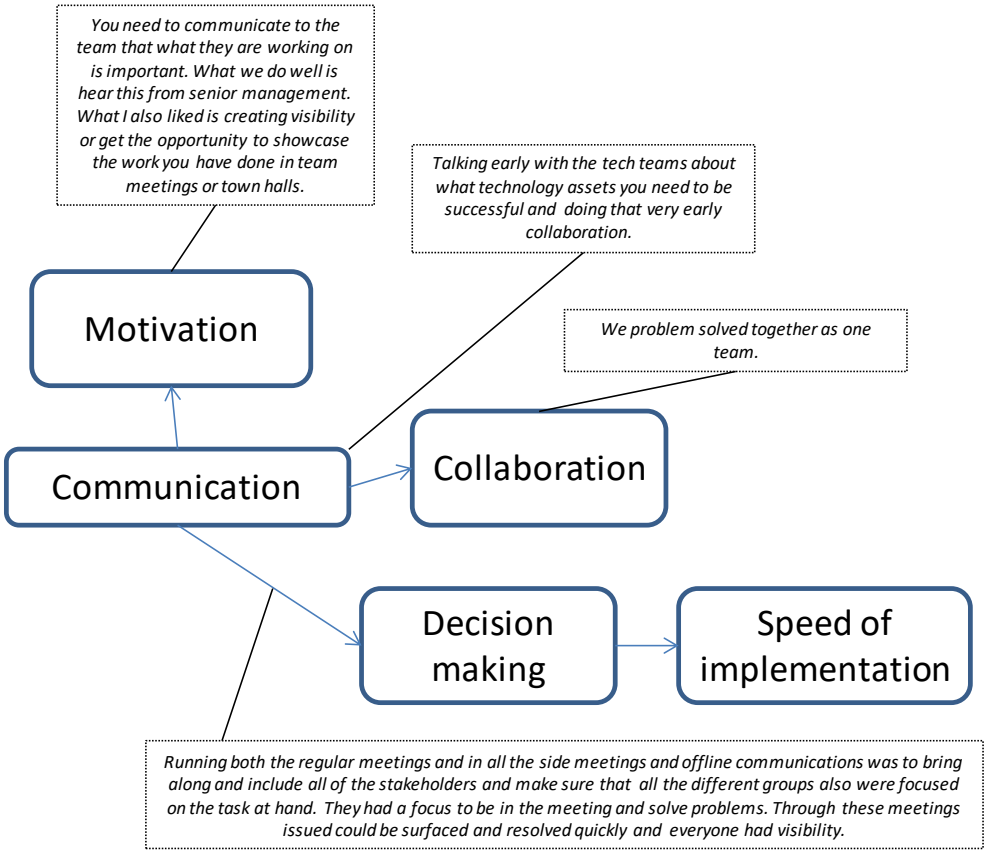
(Middle Management, HR)

Table 4.17 Thematic Analysis by Seniority: Cross-Functional Team

	Junior Management	Middle Management	Senior Management
Cross Functional Teams			
Team	There was an air of specialness to being part of the launch team.	One basic element is having dedicated resources whether they report to you or not. You need to be able to pull expertise from different teams to execute against one goal and one vision. I think where it can break down is communication Being one team, understanding when things matter and caring about it. Understanding and communicating dependencies such as the marketing team needs to explain to the tech team the packaging as it relates to how we build the product. Understanding the intralink between teams.	You have to have the people who really had experience in solving hard problems and have the resilience and optimism to push through.
Communication	One thing that is different is that a senior leader joins the regular project update calls.	Communication I would say, it's really just the team fundamentals. There was a clear leader, there were gatherings	Running both the regular meetings and in all the side meetings and offline communications was to bring along and include all of the stakeholders and make sure that all the different groups also were focused on the task at hand. They had a focus to be in the meeting and solve problems. Through these meetings issued could be surfaced and resolved quickly and everyone had visibility.
Motivation	It feels like we are trying to do something special here. Just from an employee moral standpoint and productivity standpoint, that's something really positive that you can feel good about and that you want to be part of. It's continually optimistic and a sense of breaking new ground every day.	You need to communicate to the team that what they are working on is important. What we do well is hear this from senior management. What I also liked is creating visibility or get the opportunity to showcase the work you have done in team meetings or town halls. I remember when we launched a certain functionality on the product it wasn't just a victory for the leader of the team but for the whole team. Comes back to communication of shared success.	
Collaboration	Talking early with the tech teams about what technology assets you need to be successful and doing that very early collaboration. There was defiantly a lot of teams huddling close together, daily or every other day or whatever it took	We problem solved together as one team. If you don't believe that it takes multiple people to come together and make something happen, it's not going to work.	We had our lead compliance officer in the meeting and explained to her what we needed to accomplish. She came back the next day with a solution that was obvious and elegant. What I have seen is if people feel they are not part of the initiative they are like what's going on over there? I don't know and I don't like what they are up to and I'm not going to be part of it and then they start killing it or undermining it.

There themes across different seniority levels were similar around communication, collaboration and decision making.

Figure 4.24: Causal Fragment - Cross-Functional Teams



Communication is a key driver of motivation, collaboration, decision making and speed of implementation.

4.3.4.3.4 New Product Development Process

4.3.4.3.4.1 Product Strategy

The launch of Bank 2.0 was a customer driven process where customer insights were used to arrive at the right value proposition. Learnings from the retailer and from the company were also instrumental in the process.

> *"I think in general it was customer driven in terms of what the insights were."*
>
> (Middle Management, Product)

> *"It was really well founded on a set of core consumer needs and that's why it was so successful."*
>
> (Senior Management, Strategy)

The goal was for the product to be able to replace a bank account, hence considerable competitor research was conducted to understand what the product needed in order to achieve this. There was also much constructive discussion between the partners, discussing what the customer needs were, , research, and involving the customers through an online panel was instrumental in prioritising the key product benefits.

> *"We did two or three rounds of research, we also did a pilot. We did have some insights to inform which features are the most relevant to this customer base. We also obviously had a lot of existing knowledge from the competitive space. The partner had a very strong point of view just based*

on what they saw with their customers. We had very quick feedback through online panel to help us through the development process".

(Middle Management, Implementation)

"We did a lot of competitive comparison. What their positioning was against ours. This helped us determine the broader positioning as well as messaging."

(Junior Management, Marketing)

The partner was critical in pushing a lot of the thinking and helped push a lot of innovation around the customer experience and capability development.

The retailer pushed the platform development a lot further, and I don't think we would be where we are from a platform capability, product feature set and benefits perspective it wasn't for the retailer".

(Junior Management, Marketing)

Table 4.18 Thematic Analysis by Seniority: Product Strategy

	Junior Management	Middle Management	Senior Management
Market Opportunity/ Customer Insights			
Market Opportunity	We did a lot of competitive comparison. What their positioning was against ours. This helped us determine broader positioning as well as messaging.	We also obviously had a lot of existing knowledge from the competitive space.	There was lots of competitor analysis done.
Qual. And Quant research	They came up with the product and said we are partnering with this major retailer. We were brought in pretty late to the game and the research happened after to work on name, packaging, communication and launch. We did have a customer panel but I don't think the design target was informed by research. There was definitely some data points from focus groups or suveys but it always seemed like they were last minute and we didn't necessarily get them in time.	We did two or three rounds of research, we also did a pilot. We did have some insights to inform which features are the most relevant to the customer base. I sometimes find that research trumps the actual activity we see eg. The way that people are actually using the product. Our partners also have a pretty good idea about their customers. I sometimes feel we relied too much on research as there is more practical data out there that can help us win market share. The initial set or value proposition for the product was very much 10 people sitting in a room saying we want this, we don't want this. Then there was vetting done through research both in terms of positioning, the naming, the features we wanted to highlight and messaging.	We did bunch of research to inform the product strategy.
Open Innovation	The initial target design was purly looking at an incremental target to what the partner was getting today. The partner wanted to grow their share of their business and not cannibalize existing business. The partner pushed the platform development a lot further, and I don't think we would be where we are if it wasn't for them, from a platform capabilities, product features and benefits perspective.	Because it was a partnership with a very influential partner it was a balance of what do we think the customer wants. The partner had a very strong point of views just based on what they saw with their customers	The product only exists because the partner came to us. They couldn't get a banking license and we had a licence. We had been thinking about a similar concept here and had done a whole body of work called Bank 2.0. The process was really around trying to lock down those views and dealing with a partner who was very demanding. It also played a role of pushing us beyond our comfort zone.
Product Strategy		You are never going to get everything right for the first time. Hence, having the staying power to continue to invest and iterate on I think is very challenging. There is what I call the shiny object syndrome, always looking for the next big thing. I think in general it was customer driven in terms of insights	The launch was well founded on a set of customer needs.

There are some diverging views around how much research was used to inform the value proposition. Senior management indicates that there was significant amount of research done, while there is difference in opinion across more junior members of staff to what extent the value proposition was pre-determined by the partner and how the research was used. Looking at the middle management views it gives a balanced account that the

partner had a strong influence, there were other sources of data they had that was also powerful and this was then validated through continuous customer testing and research.

4.3.4.3.4.2 Innovation Process

The team followed a stage-gate process along with a waterfall technology process for new product implementation. This required the team to finalise plans for the end product well in advance of the launch, in order to meet the deadlines. The team had also agreed a six month lead time to launch with its partner, which put a lot of pressure on the various teams. The platform needed a significant upgrade for handling the scale anticipated and this added further pressure on the teams to ensure full alignment, both internally and with the partner.

> *"The issue at the time was that the platform hadn't really handled any scale. It didn't have the risk capabilities required. So a lot of focus was on building the capabilities in the platform. There was a lot of scepticism within the company, whether the platform could handle this and concerns that the product would have a lot of defects."*
>
> (Senior Management, GM)

Clear communication and decision making became an important part of the new product development process and it was important to allow the debate over issues in order to make difficult decisions. However, once a decision was made it was very important for people to support it.

"It was really communicating to people that at certain points, we had to make decisions and trying to frame it in a way that wasn't threatening. I remember a moment in, I think it was June, before we launched in October and the tech team was looking to de-scope things to make it easier to hit the dates, so we pulled all of the group together that has some input to these user requirements and we said ok here is the list. Tomorrow, we are going to sit down and have a discussion where only things that absolutely have to be available at launch are going to be there. You are all going to have to think hard and you are all going to have to do things that feel really uncomfortable."

(Middle Management, Product)

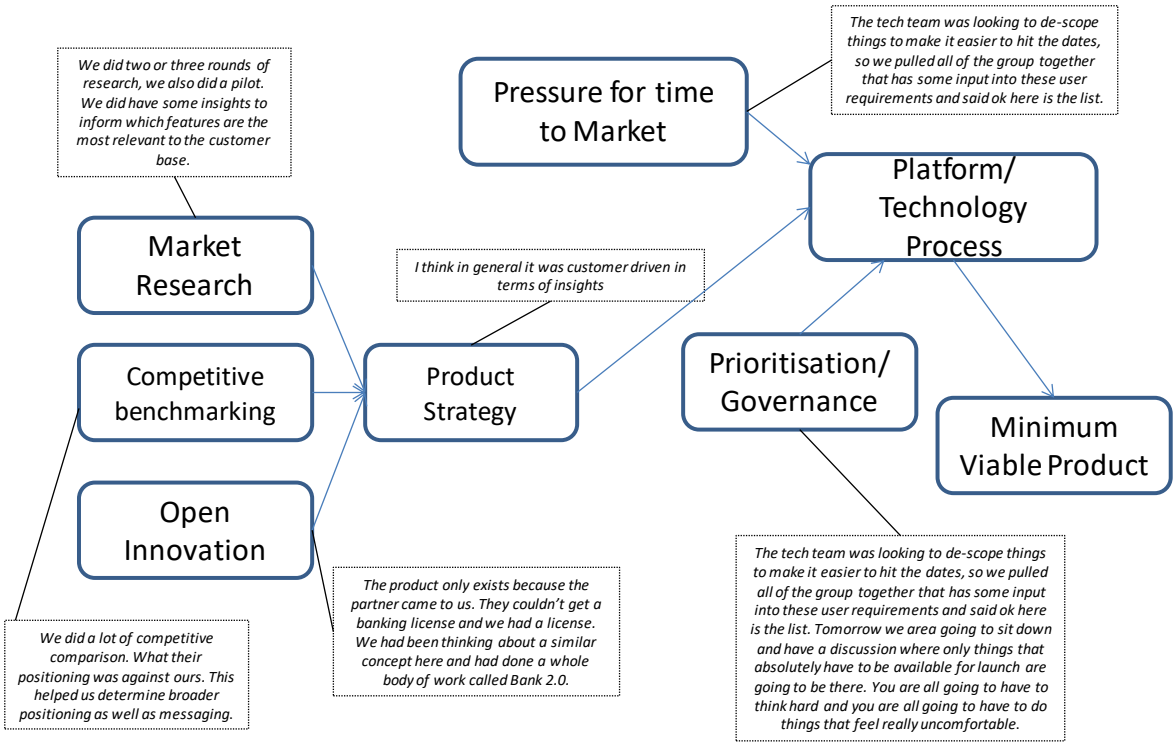
Delivering a completely new and innovative product in the payments space with a superior customer experience was at the core of the team's focus. Given the tight timeframe, the leadership team needed a fast decision making model that allowed for constructive debate to prioritise the right capabilities. Putting the customer at the centre of the conversation helped the team to get to the right customer experience.

Table 4.19 Thematic Analysis by Seniority: Innovation Process

	Junior Management	Middle Management	Senior Management
Innovation Process			
Prioritisation & governance	I do think the way we did governance and prioritisation is a very elusive process. It is not clear how it gets done and it is not clear what necessarity goes into it .	We were rigorous in our governance and there is specifc launch gate prior to the product going live and controls in place.	The tech team was looking to de-scope things to make it easier to hit the dates, so we pulled all of the group together that has some input into these user requirements and said ok here is the list. Tomorrow we area going to sit down and have a discussion where only things that absolutely have to be available for launch are going to be there. You are all going to have to think hard and you are all going to have to do things that feel really uncomfortable.
Minimum Viable Product	The product has been in an ongoing state of launch since 2012 because there's so many new features.	We had a lot of testing clearly leading up to the launch. We would do a daily triage for defects. What's needed, what's not needed to launch and so on and so forth. People in the meeting were the leaders or senior leaders from all of the functions, whether it's legal, risk, compliance, operational risk, risk, internal audit, product, technology would all get together. There will be a meeting at 9:00 every night and all those people were there personally. It wasn't a, oh, I'm letting someone else in the team more junior do it or I don't need to be in this meeting. I'll send a delegate. Everyone was there together, all the senior team, trying to figure it together.	The tech team was looking to de-scope things to make it easier to hit the dates, so we pulled all of the group together that has some input into these user requirements and said ok here is the list.
Platform/ Technololgy		You need to have technical capabilities to evelove the product post launch. I remember spending a lot of time arguing and excelating change requests	The issue at the time was that the platform hadn't really handled any scale. It didn't have the risk capabilities required. So a lot of focus was on building the capabilities in the platform. There was lot of skepticism within the company whether the platform could handle this and concerns that the product would have lots of defect.

The themes across different levels were for the most part aligned around prioritisation and platform capability. However, it wasn't as clear to a junior member of staff how the process worked as it seemed to be to other groups.

Figure 4.25: Causal Fragment - New Product Development Process



Looking at causality, the influence of the partner along with competitive bench marking and market research led to the product strategy. The product strategy coupled with a pressure for a specific launch date and prioritisation and governance process impacted the technology delivery process that in return led to the minimum viable product.

4.3.4.3.5 Performance

The key measures of success were the ability to launch on time, the focus on bringing new customer segments to the organisation, and volume of customers. Over time, other metrics were introduced including key customer engagement metrics such as

customer satisfaction, recommend a friend, profitability and operational quality. In an interview with Harvard Business Review in early 2014, a senior company leader talked about the results of the programme: "we have over 1 million accounts, and over $1 billion has been loaded onto this. More than 85% of the product customers are new to our company, and half are under age 35. So it is expanding our franchise" (HBR Blog, 2014).

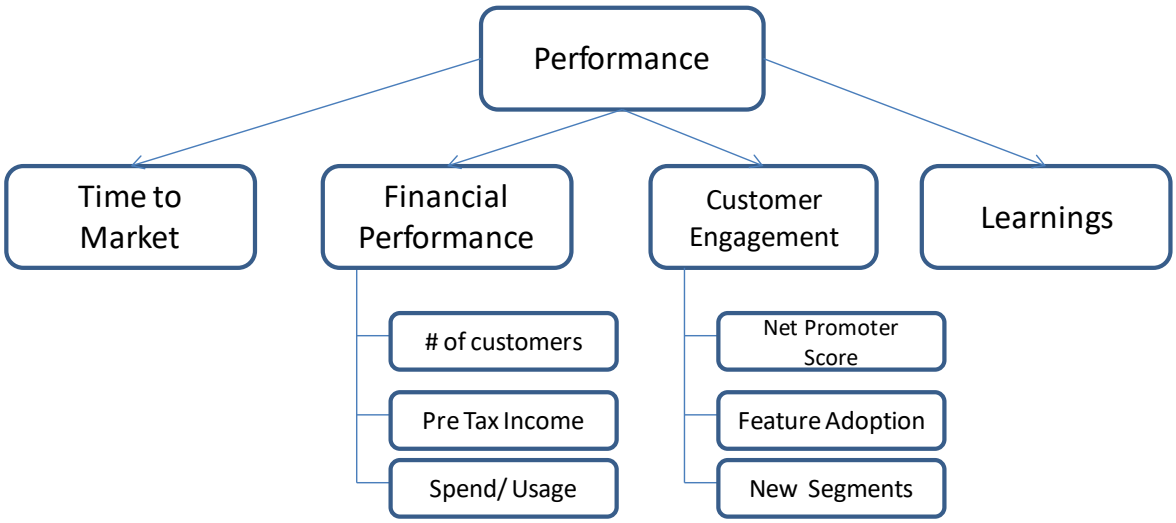
"In the beginning the big number was acquisition. We are now moving from acquisition to Pre-Tax Income (PTI), along with measuring refer a friend."

(Middle Management, Strategy)

Table 4.20 Thematic Analysis by Seniority: Performance

	Junior Management	Middle Management	Senior Management
Performance			
Time to Market	The focus was on launching the product on time and that drove decisions around product value proposition.		The build probably started in March and we launched in October.
Financial Performance	Acquisition was a big measure of ours	In the beginning the big number was acquisistion. We are now moving from acquisistion to Pre-Tax Income (PTI), along with measuring refer a friend It was all about the customers acquired in the beginning. The number of customeres aquired in the first 4 months, nine months or whatever it was.	The first thing is scale and account volume. When you can get past that hurdle with some level of respectablity, then people start looking closely at your engagment levels such as funding levels on the accounts. Ulitmately it is about spend and usage.
Customer Behavior	We have only more recently started looking at customer engagement such as NPS as we have a big customer base. We look at feature and capability adoption	It was also about new segments such as younger age groups and female. Bringing in new segments was critical. We didn't focus too much on customer engagment metrics in the beginning and recommend a friend scores.	I remember looking at the numbers in December of 2012 because the launch was in October of 2012. Looking at the numbers and everyone was just blown away. Because the behavior on the products ended up really matching and even surpassing what we had anticipated it to look like in terms of acting like a bank account.
Learnings	Apart from the number of cards and money going through the account there is feedback we get from our partners Incorporating learnings so we don't make the same mistakes twice.		You push the envelope a little bit more and then you can take it to the next product launch and you push the envelope a little bit more. So I think the pricing and the fee approach was one of the biggest things that we took from launch to launch.

Figure 4.26: Performance: Measures of Success



Key performance measures were time it took to launch, scale of acquisition along with customer loyalty metrics such customer usage, feature adoption and refer a friend.

4.3.4.3.6 Summary

The partnership with the retailer represented a major opportunity for the company to capture an untapped segment of the market with a ground-breaking product. The product itself was a disruptive product for the banking sector, and it offered low fee banking services in a market where holding a bank account could cost an average of $259 annually (Bretton Woods, 2012). According to the "Ways to Grow" matrix, developed by Brown, this product launch falls into the Create quadrant, as a revolutionary approach whereby the company is bringing out new offerings to the new users (Brown, 2008, p.161). This relates

to Christensen's (2013) disruptive innovation theory, where disruption happens when companies introduce new technology to the new markets.

The leadership developed a very clear direction for the team and created considerable excitement within the company and with the partner for the new product launch. They managed the extreme uncertainty and stakeholder management across the company and partner well, and at the same time focused on the team delivering at speed. Communication was frequent and clear and the team developed a culture of openness. The leaders demonstrated many aspects of both agile and transformational leadership; being able to provide a clear vision, connect emotionally with the team, empower and recognise achievement are all examples of transformational leadership (Avolio et al., 1999; Bass, 1990). Additionally, being able to be both visionary and tactical, decisive and engaging with key stakeholders and being comfortable with the high levels of uncertainty are examples of agile leadership (Joiner and Joseph, 2007).

The team was truly cross-functional and was co-located together, which enabled frequent and open interactions. The governance structure was clear with frequent meetings and status updates and the team solved problems together to ensure it could deliver great customer outcomes. McDounough III's (2000) model for successful cross-functional teams highlights the importance of clear goal setting and empowerment, creating a climate that is enabled by both team and senior management leadership. Stakeholder management and partnering effectively were also a key success factors in this project.

The new product development process is customer centric. It used multiple insights from both primary and secondary research. The partner included new customer perspectives and the teams engaged in constructive discussions to reach the right outcome.

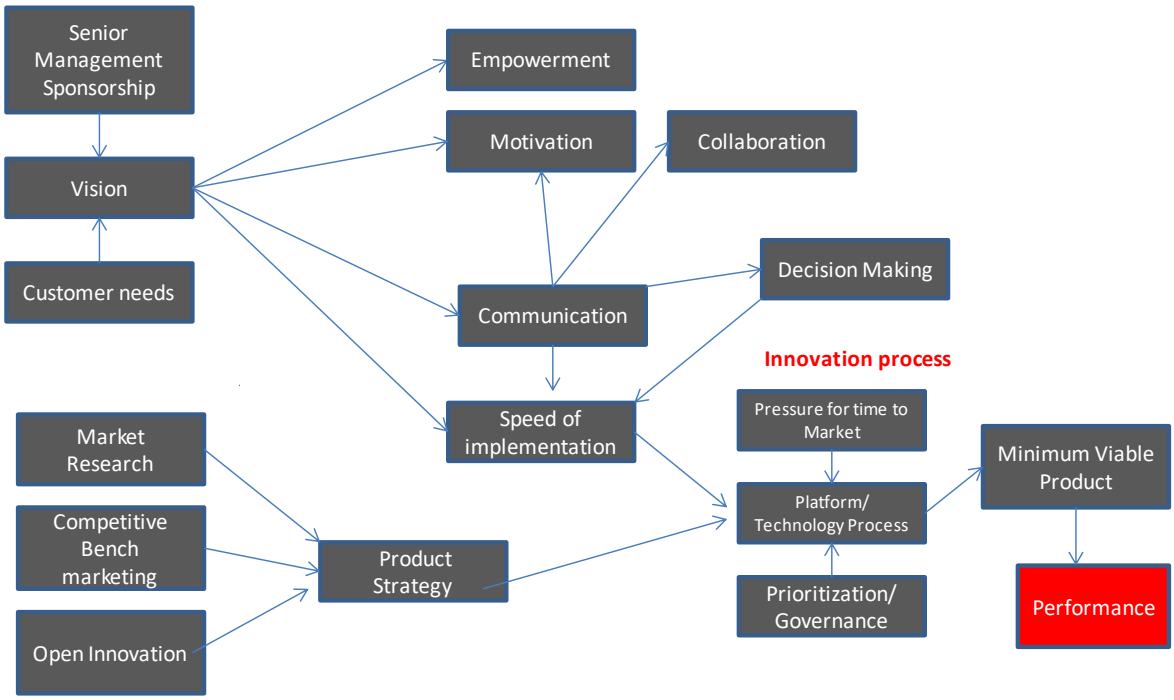
The project team involved the customers in the development cycle by leveraging online panels for quick feedback. The teams used elements of design thinking, lean start-up and open innovation.

Bringing third parties into the process is an example of open innovation (Chesbrough, 2011). Elements of design thinking and lean start-up were used by learning quickly from the end customers and truly understanding the consumer behaviour to get a better understanding of customer needs (Brown, 2008). Additionally, elements of lean start-up were used through an iterative process and quick feedback loop from real customers (Ries, 2011).

The fact that the team used a rigid waterfall process for the innovation process stifled some of the innovation process, because the requirements had to be determined months in advance. The full benefit of a rapid feedback loop from customers could not be fully acted upon, for example, as the focus was on launching a minimum viable product quickly, and the ability to quickly iterate after the launch was not in place.

Some key innovation metrics were used, such as speed of delivery and percentage of new customers the product brought in. The business also used classic business metrics, such as overall volume of customers, and then started to move to more customer centric measures, such as customer engagement and net promoter score.

Figure 4.27: Model 1.3: NPD Causal Network - Bank 2.0*



*NPD Causal Network leads to product performance

Customer needs and senior management sponsorship influence the vision. Having clarity of vision drives empowerment and motivation. Secondly it leads to clarity in communication that in return leads to better collaboration and faster decision making and implementation. Open innovation, coupled with market research and competitive benchmarking leads to a product strategy that in return drives the implementation roadmap. Pressures around time to market and governance, prioritisation process also impact technologal implementation that in return drives the minimum viable product.

4.3.4.4 Case 4 - Launch of a Bank-like Pre-paid Account

4.3.4.4.1 Case Background

The company set a target to re-launch the Digital Wallet and aggressively go after the under banked and underserved in the US, which was a new market segment for the company studied. The new product would be innovative, with ground-breaking new benefits that uniquely meets the needs of this market segment. At the same time, the team would launch the biggest nationwide retail distribution network with major media support and in a short timeframe.

4.3.4.4.2 Leadership

The re-launch of the Digital Wallet to a bank-like pre-paid account was a fundamental change in direction, both in terms of product positioning and target audience. The vision for the product launch was clear and set from the highest levels of the organisation. It was bold and targeted a large new segment of the US market (70 million people) with a ground-breaking new product, at a very rapid pace. The vision was well communicated across the leadership team and to the broader organisation, and there was a lot of optimism and enthusiasm. The leadership team were effective at sharing the vision and setting clear timelines and milestones.

> *"He was a complete visionary, he would say we are going to go after this big thing, and it's going to be difficult, it's going to be really hard to get approval to do this. But, we're going to do it anyway."*
>
> (Middle Management, Strategy)

"*You need a real visionary who sees things that others can't. It's not optimism because that's not giving it enough credit, it's to have faith in it a belief that you can get through a set of very hard set of challenges."*

(Senior Management, Strategy)

"It was being able to project that change is achievable, is really important. Real optimism, a realism about the challenges, but also always, communicating a belief that we can get there, so I think that's been really important."

(Middle Management, Product)

"Having the shared sense of vision and shared understanding of where we wanted to go."

(Middle Management, Marketing)

"What worked well was everyone bought into the vision. No one was questioning do we really need go forward."

(Middle Management, Technology)

The vision was very well communicated by the leadership, both to the most senior leaders of the organisation for secure funding and project sponsorship, and to the project teams for creating clarity and excitement.

"The senior leaders were able to very successfully sell the vision and mission both up and down the organisation to secure funding and create

momentum and build influencers at every level."

(Middle Management, Technology)

"Flexibility is key. We were changing strategic direction and there were a lot of questions to be answered across the team, why are we doing this, we thought we were about this type of customer. I think the leadership team did a really great job of addressing this."

(Middle Management, Portfolio)

"The leadership team was able to rally everyone around this new mission."

(Middle Management, Portfolio)

The clear and well communicated vision also related to people's roles and provided the team a clear sense of purpose.

"I think that everyone was marching towards a unified goal, which was re-launching the product and you saw that from a unified leadership team really all saying 'hey, we're marching to the beat of the same drum', 'we're trying to get to this together', so it built that sort of collaboration and camaraderie."

(Junior Management, Marketing)

People were motivated while working on a project that was strategically important innovative. It provided them with the opportunity to share learnings and get recognition from their senior leaders and the product launch as a whole. Celebration of milestones achieved and praise in meetings and emails also maintained motivation and focus on the end goal. The openness in communication, team empowerment, and sharing of successes and opportunities to fail and learn fast really affected vital elements of the culture.

> *"The willingness to fail and an appetite for testing as long as we learned something and feed that back in, whereas in other organisations and other companies that I have been in, failure was not an option."*
>
> (Junior Management, Marketing)

> *"We had very different management ethos in place. People felt more protected, freer to experiment and I can make local decisions."*
>
> (Middle Management, Product)

> *"When I tell people what I work on, I really do believe these are better products than others out there and that makes me feel good."*
>
> (Junior Management, Research)

> *"Making sure people get the visibility or opportunity to showcase their work."*
>
> (Middle Management, Implementation)

"I think belief ties back to the motivational point, finding some kind of broader purpose or mission, we need to be a growth engine for the company and we know this sector is exploding."

(Middle Management, Customer Engagement)

Decision making was quick and people were encouraged to share opposing views, but once a decision was made the team supported it. Regular leadership steering committees were very helpful to obtain key decisions. There was also substantial empowerment and autonomy in decision making.

"What was driving success was the leader having a very clear path and direction, and being very, very decisive."

(Junior Management, Marketing)

"The other thing that struck me was the willingness to make decisions. The ability to move forward and make decisions, when there are different product options on the table."

(Junior Management, Acquisition)

"Having a leadership steering committee, so really having the most senior leaders know, or be involved, to the extent that they understood what the programme was, where it was on track, where it was challenged, the decisions that day to day core team are making, and then, really being able

to come in and make decisions in a timely way, that has been a game changer."

(Middle Management, Product)

"People closer to the front lines are making mostly right decisions. Contrast that to a more hierarchical conversation, which is, well I'm not going to volunteer anything until my leader tells me."

(Middle Management, Product)

Prioritisation was key and the leadership team were effective in their transparency about the product roadmap and reprioritising when required.

"The one I recall is the ability to prioritise and to handle the conflicts they come with, a platform schedule that bumps things off the list, and I think they were skilled for the most part, handling out at the right levels."

(Middle Management, HR)

"Being able to understand enough of how technology works to understand how it informs decisions. We set priorities and we have set up a very controlled way to communicate the tech stack, to enable velocity and speed."

(Middle Management, Implementation)

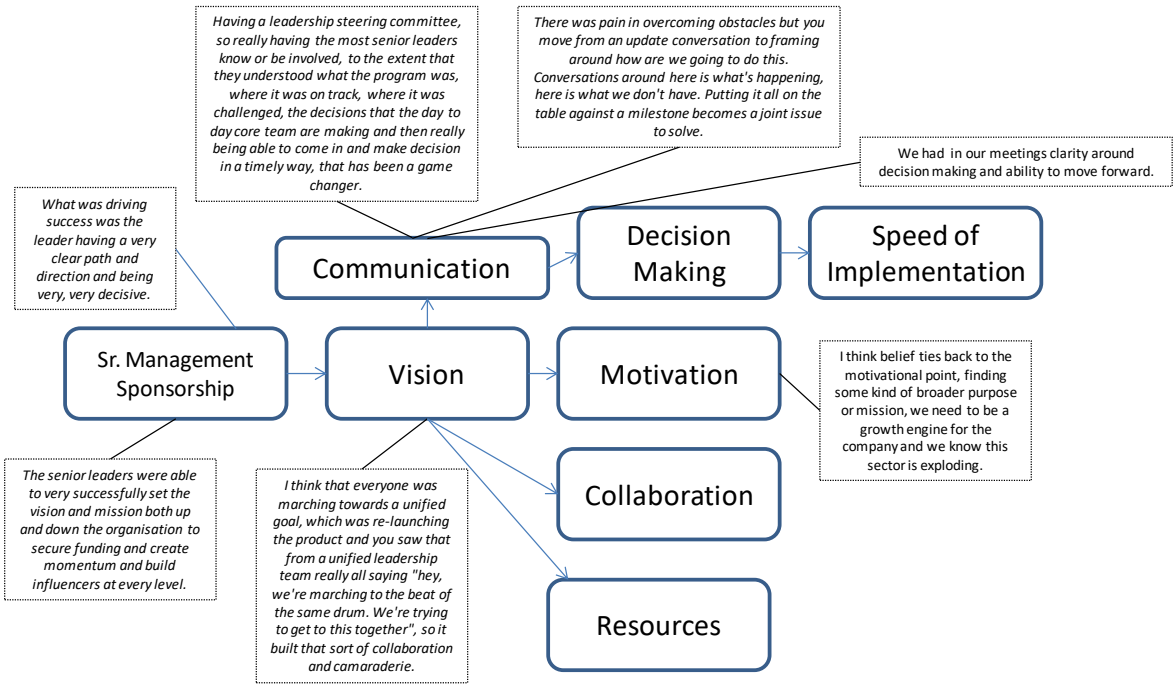
Another element of leadership was willingness to take risks. The product value proposition and target market was new for the company and being willing to move so boldly with the products into the new segments was a risk they were willing to take.

Table 4.21 Thematic Analysis by Seniority: Leadership

	Junior Management	Middle Management	Senior Management
Leadership			
Vision/ Objectives	I think that everyone was marching towads a unified goal, which was relaunching the product and you saw that from a unified leadership team really all saying "hey, we're marching to the beat of the same drum. We're trying to get to this together", so it built that sort of collaboration and camaraderie.	He was a complete visionary, he would say we are going after this big thing, and it's going to be difficult, it's going to be really hard to get approval to do this. But we're going to do it anyway. The leadership did an exceptional job of rallying everyone around a new mission Having the shared sense of vision and shared understanding of where we wanted to go.	You need a real visionary who sees things that other's can't. It's not optimism because that's not giving it enough credit, it's to have faith in it a belief that you can get throug ha set of very hard challenges. We were able to get all the key stakeholders across the company on board in the mission.
Decision Making	The other thing that struck me was the willingness to make decisions. The ability to move forward and make decisions, when there are different product options on the table.	What worked well was everyone bought into the vision. No one was really questioning do we really need to go forward. We had in our meetings clarity around decision making and ability to move forward. Flexiblity is key. We were changing strategic direction and there were a lot of questions to be answered across the team, why are we doing this, we thought we were about this type of customer. I think the leadership team did a great job of adderessing this.	We had very clear meetings where we looked at what milestones needed to be hit each week and had discussions around the table on key issues that we solved together. There was pain in overcoming obstacles but you move from an update conversation to framing around how are we going to do this. Conversations around here is what's happening, here is what we don't have. Putting it all on the table against a milestone becomes a joint issue to solve.
Senior Management Sponsorship	What was drivning success was the leader having a very clear path and direction and being very, very decisive. The willingness to fail and an appetite for tesing as long as we learned something and feed that back in, whereas in the other organisations and other companies that I have been in, failure was not an option.	Having a leadership steering committee, so really having the most senior leaders know or be involved, to the extent that they understood what the programme was, where it was on track, where it was challenged, the decisions that the day to day core team are making and then really being able to come in and make decision in a timely way, that has been a game changer. People closer to the front lines are making mostly right decisions. Contrast that to a more hierarchical conversation, which is, well I' not going to volunteer anything until my leader tells me. The senior leaders were able to very successfully set the vision and mission both up and down the organisation to secure funding and create momentum and build influencers at every level.	We were really clear to the team about the importance of this project and the overall strategic direction. Having that shared sense of vision and shared understanding on where we wanted to go.
Communication	I think that everyone was marching towards a unified goal, which was re-launching the product and you saw that from a unified leadership team really all saying "hey, we're marching to the beat of the same drum. We're trying to get to this together", so it built that sort of collaboration and camaraderie.	It was being able to project that change is achievable, is really important. Real optimism, a realism about the challenges, but also always, communicating a belief we can get there, so I think that's been really important. The leadership was able to rally everyone around this new mission.	We were really purposeful to get people on board, communicating and showing the ways forward to what we were looking to achieve. We made sure all stakeholders were involved in our communications strategy, including communicating our vision and mission and having really open communications channels.

Looking at responses across seniority within the organisation, the themes are consistent across different leadership levels and highlight clarity of vision, strong senior management sponsorship, clear communication and decision making framework.

Figure 4.28: Causal Fragment - Leadership



Strong senior management sponsorship helped provide clarity around the vision. Having clarity of vision drove better communication, collaboration, ability to secure the right resources and higher motivation. Communication, in return, enabled faster decision making and quicker implementation.

4.3.4.4.3 Cross-Functional Teams

Hiring suitable team members was essential to ensuring that there was cohesiveness and collaboration, being comfortable challenging each other and solving problems together, which became more of an ongoing part of the culture.

> *"One of the things I was particularly proud of as the head of HR for the business was that the group became a portal for fabulous talent, both inside and outside the company. We started to attract people who were really interested in the digital arms race. The change capability, people comfortable with change, was one of the biggest leadership traits required."*
>
> (Senior Management, HR)

> *"The ability of different stakeholder groups to work together. The legal team really sits down with us to help us figure out solutions, we view them as a partner to help us figure stuff out and make stuff work. This does not exist in other parts of the business and it would be a lot harder to innovate and create change without this."*
>
> (Junior Management, Acquisition)

> *"There was pain with overcoming obstacles but you move from an update conversation to framing around how are we going to do this. Conversations around here is what's happening, here is what we don't have. Putting it all on the table against a milestone becomes a joint issue to solve."*
>
> (Middle Management, Customer Engagement)

"It needs to be a team first and cross-functional second. We understand each other, we talk to each other."

(Middle Management, New Product Delivery)

"I think it's taking the strengths from every team and I think our team does a good job of sort of getting the best out of all of our cross-functional team partners."

(Junior Management, Acquisition)

"The openness around sharing, what's the goal and what's the objective. There is also a lot of adapting communication style, I think the team does a good job of working that out."

(Junior Management, Marketing)

Formal team structure was very well defined during the project and roles and responsibilities were clearly set. The team's composition was truly cross-functional, with strong subject matter experts in all the main areas.

"*Cross-functional in my mind is product, marketing, portfolio management, client management, business development, operations, and operations means servicing and settlement, supply chain, technology. It's all of those people being in the same room, getting everyone on the same page about what it is that we were doing, what the timeline is, what everyone says,*

making sure they've had an opportunity to ask questions, that's when I say it's successful. Then having a weekly meeting."

(Middle Management, Implementation)

"Everyone was really clear on what their role was, what the expectations of them were, what the commitment was expected of them, I think that's worked really well."

(Middle Management, Product)

Titles and hierarchy were less important and what was most critical was that people knew their role within the cross-functional team. People were also empowered to make decisions within the team. Having clear communication models and open communication contributed significantly to the success of the project.

"*There really isn't this org chart, where someone says what group they're in. People aren't terribly precious about whose job is what, people are empowered pretty much at all levels."*

(Middle Management, Customer Service)

"I think that open communication is key and it started out with a shared understanding and a shared buy in, of what we were doing. It's having those checkpoints and those appropriate conversational channels open, so that people can ask questions."

(Middle Management, Portfolio)

Having a clear and shared understanding of the broader vision, key project deliverables and milestones was important. Bringing everyone in early and making sure that people felt part of the process was crucial. This was followed by regular working sessions, reviewing progress and milestones, which helped accelerate progress. There was a mindset of solutions orientation, and the team collaborated to find solutions to obstacles quickly.

Table 4.22 Thematic Analysis by Seniority: Cross Functional Team

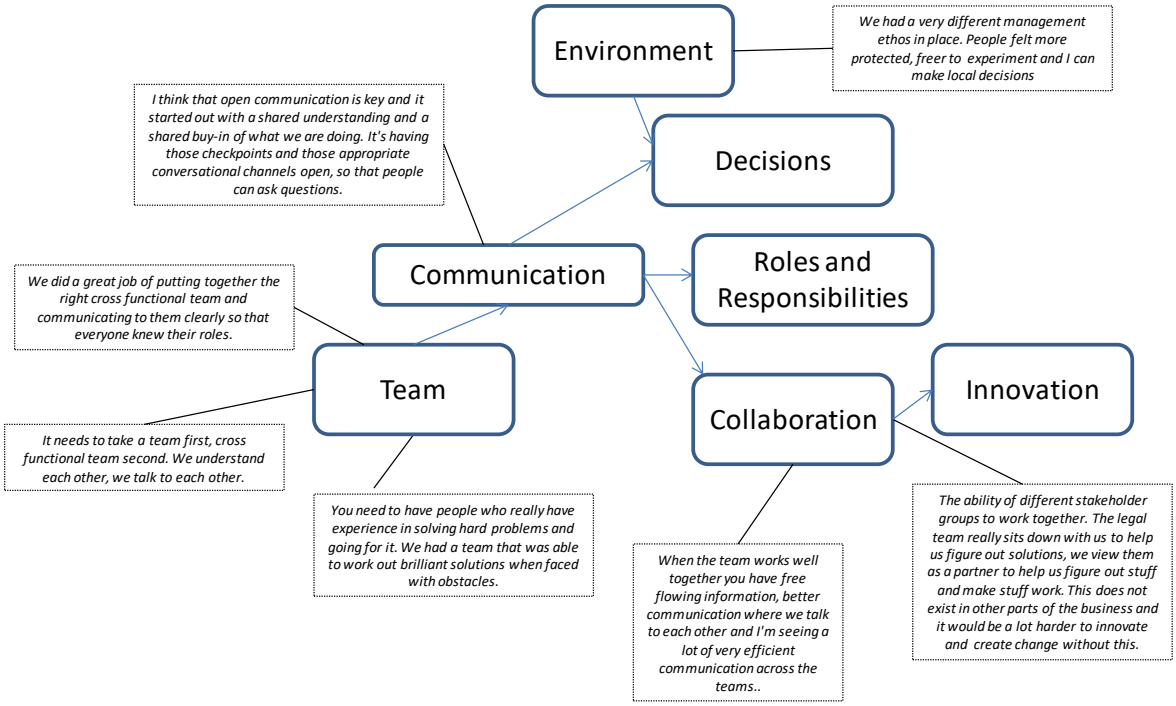
	Junior Management	Middle Management	Senior Management
Cross Functional Teams			
Team	I think it's taking the strenghts from every team and I think our team does a good job of sort of getting the best out of all of our cross functional team partners. One thing that has really stood out for me with this launch is the willingness for different stakeholders and groups to work together.	It needs to take a team first, cross functional team second. We understand eachother, we talk to eachother. We did a great job of putting together the right cross funcitonal team and communicating to them clearly so that everyone knew their roles. Roles and responsiblities were clear, particularity with the tech and product teams that kind of own the emotions around things. Everyone was really clear on what their role was, what the expectations of them were, what the commitment was expected of them, I think that's worked really well.	You need teams that are motivated and also resilient. You need to have people who really have experience in solving hard problems and going for it. We had a team that was able to work out brilliant solutions when faced with obstacles. One of the things I was particularily proud of as the head of HR for the business was that the group became a portal for fabulous talent, both inside and outside the company. We started to attract people who were really interested in the the digital arms race, The change capability, people comfortable with change was one of the biggest leadership traits required.
Communication	The openness around sharing, what the goal and what's the objective. There is also a lot of adapting communication style. I think the team does a good job of working that out.	I think that open communication is key and it started out with a shared understanding and a shared buy-in of what we are doing. It's having those checkpoints and those appropriate conversational channels open, so that people can ask questions. When the team works well together you have free flowing information, better communication where we talk to eachother and I'm seeing a lot of very efficient communication across the teams.	I often think of a being a visionary leader, you need to know where you want to go, having a long term vision. But then you really need to break it down into milestones, very short term, tacatical next 30, 60 or 90 days. Being able to articlate it which in return builds that enthusisam with the team. It was important to identify a set of communications that everyone needed to know and communicate this frequently. I was trying to address the feedback we heard from different groups of not being in the know. You need to also think about that you work for the people. If someone is not doing what you expected you need to ask yourself, what have I not explained well? Have I not been clear? What do I need to do to get it working right? We need to continually ask ourselves, are we leading the team correctly?
Motivation	When I tell people what I work on, I really do belive these are better products than others out there and that makes me feel good.	We made sure people got the visibility and opportunity to showcase their work. I think belief ties back to the motivational point, finding some kind of broader purpose or mission, we need to be a growth engine for the company and we know this sector is exploding.	You need to continually show people that you are listening to them. There was a group of people that wanted to hear a lot and another group that just wanted to know the next steps. I think I was always looking to re-adjust to the audience.
Collaboration	The ability of different stakeholder groups to work together. The legal team really sits down with us to help us figure out solusions, we view them as a partner to help us figure out stuff and make stuff work. This does not exist in other parts of the business and it would be a lot harder to innovate and create change without this.	It's behavior. I mean it 's all behavior and I find myself send a lot of time checking behavior at a very small leve. A team is disagreeing, what are you going to do about it, how are you going to solve it?	There really isn't this org. charg, where someone says what group they're in. People aren't terribly precious about whose job is what, people are empowered pretty much at every level.

Table 4.22: Thematic Analysis by Seniority: Cross Functional Team, Continued

	Junior Management	Middle Management	Senior Management
Cross Functional Teams			
Environment	The willingness to fail and an appetite for tesing as long as we learned something and feed that back in, whereas in the other organisations and other companies that I have been in, failure was not an option.	We had a very different management ethos in place. People felt more protected, freer to experiement and I can make local decisions With the shift in the way we are working to a more software-driven, product innovation and devlopment mindset your alllegiance is with the team. Your hirerachical org charg leader is oftern more your coach.	

There were no marked differences in terms of responses based on seniority of position within the organisation. The key themes around the right cross functional team set-up, strong communication network, collaborative work environment and motivation were highlighted and discussed.

Figure 4.29: Causal Fragment - Cross Functional Team



The cross functional team drove open and transparent communication, that led to clarity of roles and responsibilities, strong collaboration and decision making. The open work environment further enabled local decision making. A collaborative, cross functional approach was seen to enable more innovation.

4.3.4.4.4 New Product Development Process

4.3.4.4.4.1 Product Strategy

The product strategy process was customer focused and used multiple touch-points to gather insights into the customer needs and the best way to meet them (better than any other competitor).

"I think the launch of bank-like pre-paid is a good example of something that was insights driven."

(Middle Management, Product)

The team worked well together in defining who the target customer was going to be and understanding their core needs.

"I think that in priming up a new value proposition for bank-like pre-paid it all starts with the customer. What is the customer frustrated about? What are the solutions that are out there today in the pre-paid space? How do we excel? How are we better?"

(Middle Management, Portfolio)

"We had a very clear idea of the target segment and their set of needs based on insights. This helped us focus the value proposition. For example, the people in the target segment can't always go to the bank, having cash re-load facilities will really help them out. They also need to cash cheques but it's really expensive for them. All the research that was done upfront really helped shape the proposition and messaging."

(Junior Management, Marketing)

The launch of bank-like pre-paid was customer focused and the team leveraged research, customer insights, competitive analysis and third party involvement. Learnings from previous launches also played a role in further developing the value proposition.

> *'There is a ton of research done around here. A ton of investing in what are customers interacting with, how do they feel, a good job of looking at the competition and not limiting that to just the pre-paid category."*
>
> (Junior Management, Marketing)

> *"The launch of bank-like pre-paid in my mind may be one of the most successful examples of anything that we've done. Because there was a facts base behind it. We knew about the consumers that were going to look for this product. We knew who this was going to appeal to. I thought it was really well done, based on another model of innovation that had been successful."*
>
> (Middle Management, Implementation)

Competitive benchmarking was used to further define the target audience and ensure that the business would launch a market leading product.

> "*We defined and redefined our competitive set, but we also looked across the industry to see what non-direct competitors are doing from a marketing perspective."*
>
> (Junior Management, Acquisition)

"We really crystallised around the competitive set. It is a very different customer and competitive set."

(Middle Management, Portfolio)

Table 4.23: Thematic analysis by seniority: Product Strategy

	Junior Management	Middle Management	Senior Management
Market Opportunity/ Customer Insights			
Market Opportunity	We do a good job of looking at the competition and do not limit that to just the pre-paid category. We had fairly robust competitor analysis for the companies so I think we do a really good job of comparing key compatitors. We defined and re-defined our competetive sets, but we also looked across industry to see what non-direct competitors are doing from a marketing perspective	I think in priming up a new value proposition for bank-like pre-paid it all starts with the customer. What is the customer frustrated about? What are the solutions that are out there today in the pre-paid space? How do we excel? How are we better? We really crystalise around the competitive set. It is a very different customer and copetitive set.	
Qual. And Quant research	We had a very clear idea of the target segment and their set of needs based on insights. This helped us focus the value proposition. For example the people in the target segment can't always go to the bank, having cash re-load facilities will really help them out. They also need to cash cheques but it's really expensive for theim. All the research that was done upfront really helped shape the We were really clear about the 5 or 6 key questions that we wanted the research to answer. We do a lot of research, looking at what customer interacting with and how do they feel.	The launch of bank-like pre-paid in my mind may be one of the most successful examples of anything that we've done. Because there was a facts base behind it. We knew about the customers that were going to look for this product. We know who this would appeal to. I though it was really well done. The launch of bank-like pre-paid is a good example of something that was insight driven. We started with the customer. What is the customer frustrated about, how do we excel and how are we great? We did lots of specific user testing and experience, understading pain-points.	We did use a lot of research. But I think you have to marry it with experience and gut along with mega-trends in the market.
Customer Involvment	Involving and speaking to customers and filming them was very useful to hear how people would like to use the product.	We did lots customer panel validation throughout.	
Product Strategy		We landed on a really value based value proposition, where we introduced monthly fees having to prove to our customers the value.	We had a very clear value proposition.

Overall the different leadership populations share the views around that the value proposition was grounded in research and customer insights. Middle management and

junior leadership give a much more detailed account of how different types of insights were gathered.

4.3.4.4.4.2 Innovation Process

The innovation process involved leveraging elements of the company's stage-gate process, coupled with rapid technology implementation through agile development. By moving to agile development the technology teams had product releases every two weeks. The agile move has made the product development process quicker and generated further motivation for the rapid development. The change to agile was a major one in the operating model, and whilst the team saw the value and immediate benefits, it also created challenges in the model as the team shifted pace.

> *"I think it's actually quite significant that right around the same time that we launched bank-like Pre-paid, we moved into agile development process, so our tech team, was making a major change at the same time, and so I think, everybody was really crystallised around the fact that we're doing something new here, we're making a number of changes that are going to improve our business."*
>
> (Middle Management, Portfolio)

> *"That journey was hard. I look at it as trying to change the engine, while the car was running. We couldn't take a break from servicing our customers. We worked out some key principles as we moved through the process. First, customers cannot be impacted. Second, we had to design for*

any new features on the old platform that were easily migratable to the new method. Thirdly, really focusing on our deployment model."

(Senior Management, Technology)

"We also thought about the deployment model, there was a lot of thought and training that went into this. This was the first time we got all the stakeholders discussing the model upfront."

(Senior Management, Technology)

"We are releasing products every two weeks. Not only are we releasing faster, but we are releasing higher quality products. Defects have come down. Agile did actually build race cars. If you want to make changes you can. We have a much better model now to meet market needs at a faster pace."

(Senior Management, Technology)

The focus also changed to getting a minimum viable product out quickly and then continuing to innovate the product. The key to success here was to ensure that there was continuous innovation post launch.

"*The proof will be in our ability to do incremental changes on things rather than being bored with stuff that we've done, and then, move on to the next thing. There needs to be discipline."*

(Middle Management, Product)

Shipping a product sounds so final and then the product team is onto the next thing. However, that's where it starts - the change management, how these new benefits will impact the customers, making sure we have the right customer listening points."

(Middle Management, Customer Engagement)

While moving to agile created notable improvements to speed, the organisation's ability to continually iterate based on customer needs was a cause for confusion at times, as the team adapted to the new way of working. Communication models needed modification to adapt to the new speed and managing this change required considerable ongoing coordination.

"We were making decisions up to the very last minute and this created extra work and confusion for everybody and some rework. But the result was a good product went out, a real consumer champion, which is great."

(Junior Management, Marketing)

"It's great that you can get it done in two weeks but I can't tell everyone that it's done in a day. People forget that we have to train 600 people on this change."

(Middle Management, Customer Engagement)

"I think moving to agile is great, but I also think that the governance needs to be figured out before everyone sees the value."

(Middle Management, Product)

Table 4.24: Thematic Analysis by Seniority: Innovation Process

	Junior Management	Middle Management	Senior Management
Innovation Process			
Prioritisation & governance	We were making decisions up to the very last minute and this created extra work and confusion for everybody and some rework. But the result was a good product went out, a real consumer champion, which is great. What we do incredibly well is priortisation. We constantly come together, look at the entire scope and prioritise and continually resasess what is good.	The one thing I recall is the ability to prioritize and to handle the conflicts they come with. A platform schedule will bump projects off the list, and the leadership was skilled for the most part in handling this intense prioritisation. I think moving to agile is great, but I also think that the governance needs to be figured out before everyone sees the value.	
Minimum Viable Product	What I liked about the approach we took was this done is better than perfect approach to get the first release out the door We were making decisions up to the very last minure and this created extra work and confusion for everybody and some rework. But the result was a good product went out, a real consumer champion, which is great.		It's great that you can get it done in 2 weeks but I can't tell everyone that it is done in a day. People forget that we have to train 600 people on this change. Where we do sometimes fall down is addressing the backlog after the first release. Prioritising and fixing bugs and adding new features.

Table 4.24: Thematic Analysis by Seniority: Innovation Process - Continued

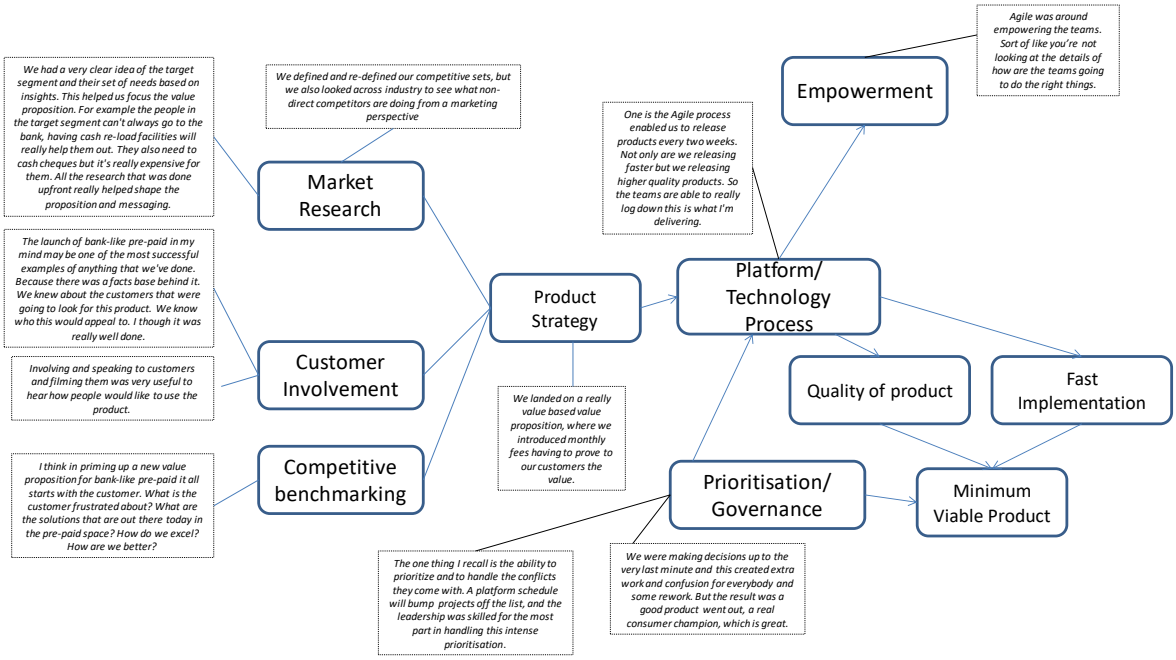
	Junior Management	Middle Management	Senior Management
Innovation Process			
		Being able to understand enough of how technology works to understand how it informs decisions. We set priorities and we have to set up a very controlled way to communicate the tech stack to enable velocity and speed.	The journey was hard. I look at it as trying to change the engine, while the car was running. We couldn't take a break from servicing our customers. We worked out some key principles as we moved through the process. First, customers cannot be impacted. Second, we had to desing for any new features on the old platform that were easily migratable to to the new method. Thirdly, really focusing our deployment model.
		I think it's actually quite significant that right around the same time that we launched bank-like pre-paid, we moved into an agile development process, so our tech team, was making major change at the same time, and so I think everybody was really crystallized around the fact that we're doing something new here, we're making a number of changes that are going to improve the business.	We also thought about the deployement model, there was a lot of thought and training that went into this. This was the first time we got all the stakeholders discussing the model upfront.
		The proof will be in our ability to do incremental changes on this rather than being bored with the suff that we've done, and then, move onto the next thing. There needs to be dicipline.	We are releasing products every two weeks. Not only are we releasing faster, but we are releasing higher quality products. Defects have come down. Agile did actually build race cars. If you want to make changes you can. We have a much better model now to meet market needs at faster pace.
			Shipping a product sound so final and then the product team is onto the next thing. However, that's when it starats - the change management, how these new benefits will impact the customers, making sure we have the right customer listening points.
			I think the project was super well exeucted. It was a real success story. What worked well is that everyone bought into the vision forus.
	Also more importantly the shift that has gone in product and technologies with Agile, I just don't think we are at a place yet when really applying learnings	The launch was built on a better stack. I think that it wasn't until we switched to Agile that we fully started to improve and develop the product.	One is the Agile process enabled us to release products every two weeks. Not only are we releasing faster but we releasing higher quality products. So the teams are able to really log down this is what I'm delivering.
			Agile was around empowering the teams. Sort of like you're not looking at the details of how are the teams going to do the right things.
Platform/ Technololgy Delivery		I think the biggest thing is that constant change request kind of goes away, which was big. Aside from that, theoretically Agile allows us to improve the core product easier right without having big projects	The cost of error in theory is lower because in some cases, it takes 2 or 4 weeks or 6 weeks to correct something. It's not like, oh, there is a 9 month project.

There are no major differences in opinion across different leadership populations.

There is more input from middle and senior management and the themes highlighted are

around the importance of moving to an agile development process and with that change the governance and communication models.

Figure 4.30: Causal Fragment - New Product Development Process



Market research, customer involvement and benchmarking against other industry products all influenced the product strategy. The agile technology process led to more empowerment by the team, it also led to faster implementation and higher quality product releases. The prioritisation process impacted the technological implementation process , creating some rework. At the same this resulted in higher quality of product being launched.

4.3.4.4.5 Performance

The measures of success were a combination of innovation, customer and financial metrics. The success metrics were well defined and the team knew what success looked like.

"I think it truly depends on what you're trying to achieve, and I think you need to be flexible with that and just be really clear. We've demonstrated that I think in the division, when we set a goal, then we can achieve it."

(Middle Management, Product)

"I think now we're moving from acquisition to PTI, which means that that's probably the healthy way to look at your business. Also, all of them refer a friend metrics. That's been an initiative that's happened over the past year that I actually think is really valuable."

(Middle Management, Strategy)

"The goal needs to be tied to the growth objective of the business. We are starting to focus much more on customer metrics, such as reducing disruption and customer loyalty."

(Middle Management, Customer Engagement)

"It sounds like net promoter score and refer a friend is something that everyone is focused on and jointly share. It's also about focus on the audience we are serving, which is becoming a competitive advantage."

(Junior Management, Marketing)

"It's been an evolution. I was surprised that when I started, we were only focusing on some of the upfront metrics and not the downstream ones. I think it comes down to the organisation and the goals we put in place. We

have moved from just driving scale to now focussing on whether the people are using the product."

(Junior Management, Acquisition)

"Bringing in new segments was critical."

(Middle Management, Product)

From the perspective of a product launch, the engineering and technology teams looked at factors such as quality and time to market.

"*From the technology perspective, we have been looking at quality, speed and velocity. How much are we delivering? How quickly are we delivering? What's the quantity of work we are delivering every sprint? And what's the quality of our production?"*

(Middle Management, Technology)

The focus was also on external industry recognition, the product has been ranked as the best in the category a number of consecutive years. While the ranking in itself does not drive end business results, having a best in class product does. Additionally, it builds employee satisfaction and pride.

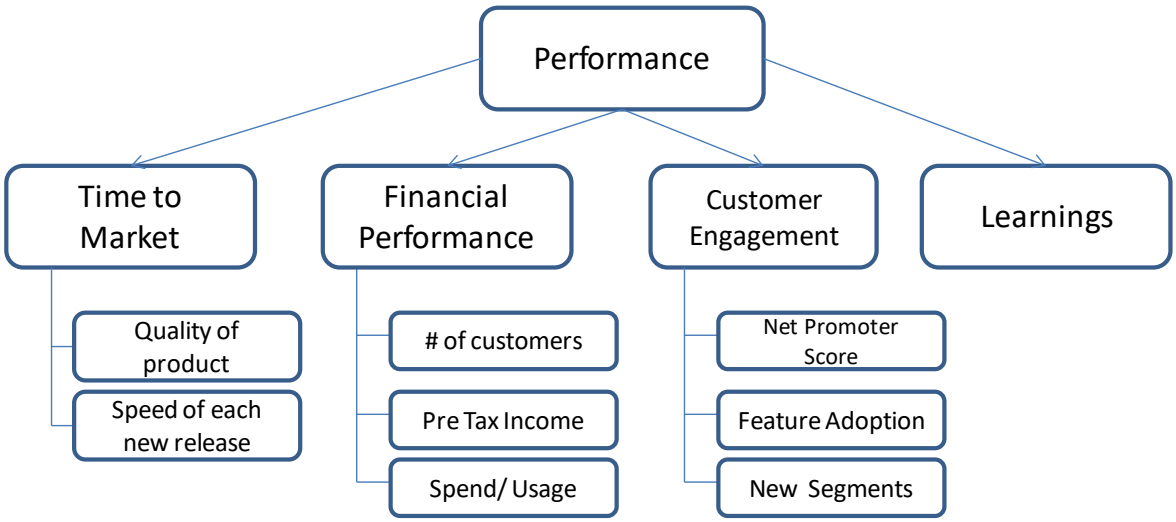
"I think the product is better than other products. Even as an employee, when I saw that I was feeling good about it. I really do believe that and that makes me feel good. In some ways that's probably a measure of success, so we can believe in what we're working on."

(Junior Management, Research)

Table 4.25: Thematic Analysis by Seniority: Performance

	Junior Management	Middle Management	Senior Management
Performance			
Time to Market	Launch with quality in the set timeframes.		From a technology perspective we have been looking at quality, speed and velocity. How much are we delivering? How quickly are we delivering? What's the quality of work we are delivering every sprint? And what's the quality of our production? We set a clear date and worked backwards from that.
Financial Performance	It sounds like net promoter score and refer a friends is something that everyone is focused on and jointly shared. It's been an evolution. I was surprised that when I started we were only focusing on some of the upfront metrics and not the downstream ones. I think it comes down to organisation and the goals we put in place. We have moved from just driving scale to focusing on whether the people are using the product.	I think now we're moving from acquisition to PTI, which means that it's propbably a healthy way to look at your business. Also all of them refer a friend metrics. That's been an intiative that's happened over the past year that I actually think is valuable.	The goal needs to be tied to the growth objective of the business. We are starting to focus more on customer metrics such as reducing customer disruption and loyalty.
Customer Behavior	It's also about the audience we are serving, which is becoming a competitive advantage.	Bringing in new segments has been critical.	
Learnings	I feel like we're so much about learning here and that comes from senior leadership down. Getting the learnings and feeding that back in and what did we learn and how does that positively or negatively change what we're doing.	I think we're still learning. We are constantly iterating around this. The package doesn't work so let's do a new package. This messaging doesn't work so let's try this messaging.	We did leverage a lot of learnings from previous launches.

Figure 4.31: Performance: Measure of Success



Key performance measures being tracked were time to launch, customer volume, pre-tax income and spend and usage on the product .Additionally, customer engagement was tracked through feature adoption and net promoter score. More attention was being paid to ongoing technology delivery such as quality and speed of each release.

4.3.4.4.6 Summary

Given the changes to the Digital Wallet's value proposition and positioning**,** the launch of bank-like pre-paid is defined as a new product launch that targets new segments of the market. While the product leverages platform capabilities of previous launches, it fully repositions and fundamentally changes the product to meet the needs of a new set of customers**.** With this launch, the organisation was turning into an effective agile, lean, and learning organisation that could move at a much faster pace. The teams have learned effectively from the previous product launches and incorporated key learnings into the launch of a bank-like pre-paid. There was a transformational and agile leader at the top

who, with his leadership team, was able to define the road ahead with a bold mission and vision statement for the group. This was effectively communicated to the key stakeholders across the organisation to create clear direction and motivation. The leadership demonstrated strong transformational leadership by instilling respect, trust and motivation in the team to achieve (Yukl, 2010). The team focused on constructive confrontation for better customer outcomes, team empowerment and recognition, which are all traits of a transformational leader (Avolio et al., 1999; Bass, 2009). The leadership showed agility and flexibility in changing the business model based on deeper customer and market insights, which is consistent with agile leadership and the need to be able to redefine the business model (Doz and Kosenen, 2010). The team showed both leadership unity, such as willingness to re-evaluate the previous hypothesis, and resource fluidity, shifting resources around based on need. These are the characteristics of an agile leader (Joiner and Joseph, 2007).

The team was a true cross-functional team, empowered to make decisions quickly. The team structure was flat and the team environment highly collaborative and motivated. The team was not afraid to raise opposing views, with the customer at the heart of the conversation. This is consistent with some of the climate factors outlined by West (1990) which are deemed critical for innovation, such as having shared goals and being able to participate in decision making without fear. The team felt empowered to take risks and was very close to the customer details, which is consistent with the factors that have a positive correlation with innovative teams (Sethi et al., 2001).

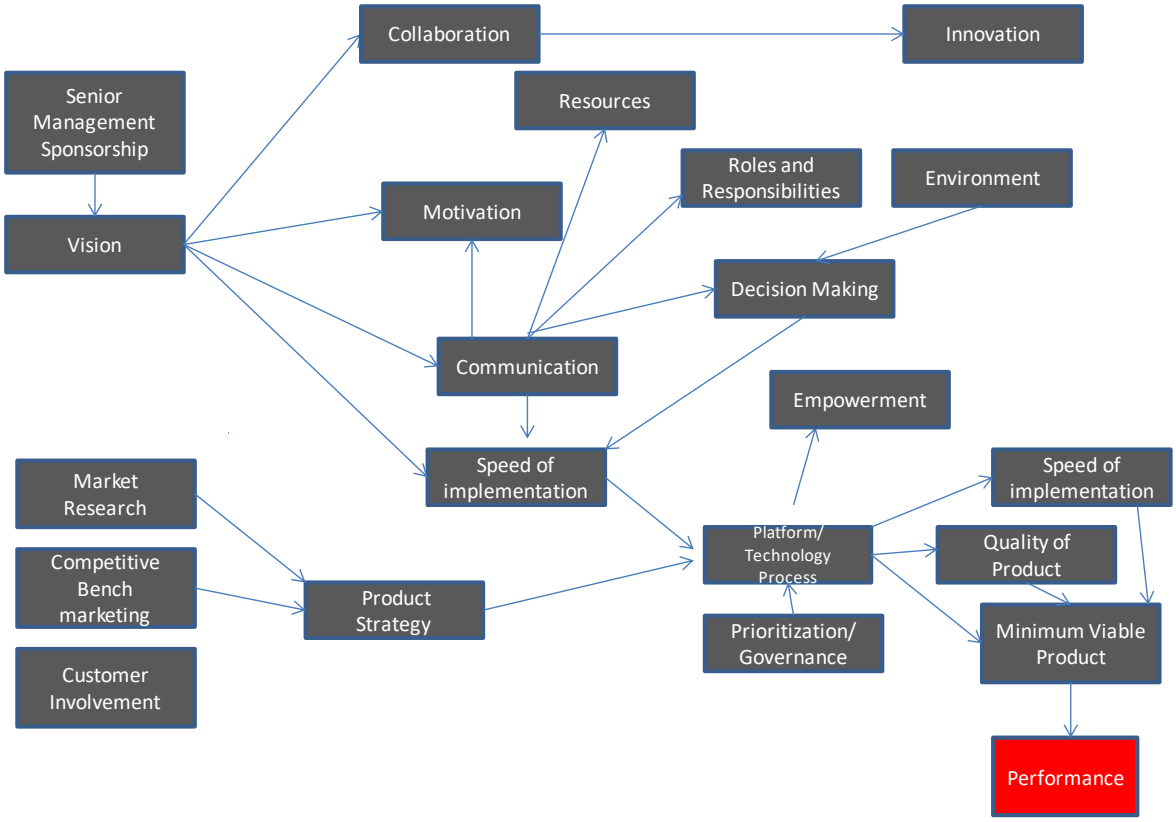
The creativity process was very customer centric. It involved multiple data collection opportunities with customers, provided detailed analysis of the competition and

a clear goal in relation to the market opportunity. The team used a number of qualitative and quantitative research techniques, involving the customer in the process to understand the key customer pain points. The company used storytelling to bring the customer to life, which is in line with both design lead innovation and agile technology processes.

The innovation process was an agile software development process, enabling the team to be much more flexible and responsive to customer needs. The process had some key components of agile development, such as being iterative, responsive, constantly reframing the problem and the solution, and embracing conflict for better customer outcomes (Nerur and Balijepally, 2007). Given that this was the division's first experience using an agile approach, a number of obstacles were identified throughout the process for future development, regarding the need for a new governance model and a new communication model.

Results were measured in multitude of ways. Firstly, the team was focused on improving the continuous delivery model through agile. This focused on significantly increasing the ability to deliver at speed, and at the same time improving quality. While focus on time to market was important, metrics for ongoing velocity and quality became more prevalent. Building a new business for a new target segment was a key success metric in line with Christensen's (2013) disruptive innovation theory of leveraging new technology and new products to pursue new markets. The team also moved to more customer driven metrics around customer engagement, net promoter scores, customer loyalty and reducing customer disruption. It also began to focus on product profitability, in terms of PTI.

Figure 4.32: Model 1.4: NPD Causal Network - Bank-like Pre-Paid*



*NPD Causal Network leads to product performance

Senior management sponsorship had an impact on the vision being set and communicated. A clear vision drove more collaboration that in return drove more innovation. Having a clear vision helped enable a good communication that led to clarity around roles and responsibilities, faster decision making and faster implementation. The product strategy influenced the platform and technological process. Having an agile technology process in place drove higher quality and faster product releases. Additionally,

the governance and prioritisation process impacted the technology process creating some re-work but led to a higher quality of the product being launched.

4.3.5 Case summary and New Model

4.3.5.1 Introduction

The research has looked at four cases in the emerging payments division of the company with key emerging themes explored in detail. Critical incident analysis was used during interviews to highlight key events. Each case has been examined and analysed in detail using template analysis followed by causal network analysis. Data analysis showed that the division studied was moving from a product centric closed innovation process to more customer centric and open innovation process.

The following sections present the summary of findings of the cross-case analysis and shows key causal relationships across cases. It also highlights how divergent views were handled and summary of the model and how it compares to existing models.

4.3.5.2 Case Summary

Table 4.26 highlights some of the key enablers and inhibitors indentified during each of the product launches. What is evident is that the enablers turn into inhibitors when they are not present. The case of the launch of Digital Wallet, is the best example of this. It shows that key inhibitors were lack of vision that leads to lack of communication and decision making, Team dynamics and motivation were poor and the product strategy was unclear. leading to a challenging innovation process that lacked structure and flexibility.

When these variables were positive they become enablers as was the case in Bank-like Pre-paid. In this instance, clear vision led to good communication and fast decision making. The team was motivated and team dynamics were good and the product strategy was grounded in customer insights. The prioritisation process was rigorous and technology process flexible.

Table 4.26: Case Summary

	Digital Wallet	Pre-paid	Bank 2.0	Bank-like pre-paid
ENABLERS	**LEADERSHIP** Strong sponsorship Right team environment **CROSS FUNCTIONAL TEAM** New talent and right mix of talent Right team environment **INNOVATION PROCESS** Pressure around time to market	**LEADERSHIP** Senior Management Sponsorship Vision clear to a number of core team Communication and decision making frequent **CROSS FUNCTIONAL TEAM** Good cross functional talent Motivated and collaborative team **PRODUCT STRATEGY** Based on in market customer behavior and super-users **INNOVATION PROCESS** Pressure around time to market	**LEADERSHIP** Senior Management Sponsorship Clear vision Frequent communication up and down organization Clear decision making framework **CROSS FUNCTIONAL TEAM** Good cross functional talent Motivated and empowered team **PRODUCT STRATEGY** Open innovation coupled with market research and competitive bench-marking **INNOVATION PROCESS** Clear prioritization process and fast decision making Pressure around time to market **PERFORMANCE** Clear and aligned base set of performance metrics	**LEADERSHIP** Senior Management Sponsorship Clear vision Frequent communication up and down organization Clear decision making framework **CROSS FUNCTIONAL TEAM** Good cross functional talent Motivated , empowered and collaborative team Right tea m environment Roles and responsibilities clear **PRODUCT STRATEGY** Number of tools to understand customer and market dynamics **INNOVATION PROCESS** Clear prioritization process and fast decision making Agile technololgy process Pressure around time to market **PERFORMANCE** Clear and aligned base set of performance metrics
INHIBITORS	**LEADERSHIP** Lack of vision Lack of communication Unclear decision making **CROSS FUNCTIONAL TEAM** Poor team dynamics Low motivation **PRODUCT STRATEGY** Limited customer and market insights **INNOVATION PROCESS** Lack of a governance process Inflexible technology platform: waterfall development Pressure around time to market **PERFORMANCE** Lack of consistent metrics	**LEADERSHIP** Vision not broadly communicated from the beginning **CROSS FUNCTIONAL TEAM** Siloed ways of working Unclear communication in the beginning **PRODUCT STRATEGY** Limited customer research to inform product **INNOVATION PROCESS** Inflexible technology platform: waterfall development Pressure around time to market **PERFORMANCE** Lack of consistent metrics	**INNOVATION PROCESS** Inflexible technology platform: waterfall development Pressure around time to market	**INNOVATION PROCESS** Governance and prioritization process not aligned with agile methodology Pressure around time to market

4.3.5.3 Sentiment Analysis and Divergent Views

A sentiment analysis was carried out based on leadership hierarchy to further evaluate if there was a difference in opinion based on seniority. What that shows in table 4.27 below that the junior and senior leaders have similar outcomes of 65-68% positive sentiment and 32-35% negative sentiment across all cases. However, the middle management tier shows a slightly higher negative sentiment at 42%.

Table 4.27: Sentiment Analysis - Leadership Hierarchy

Sentiment analysis by leadership hirarchy	A: negative	B: positive
1 : Respondents:Leadership hirarchy = Junior Management	35%	65%
2 : Respondents:Leadership hirarchy = Middle Management	42%	58%
3 : Respondents:Leadership hirarchy = Senior Management	32%	68%

Divergent views were further explored using archival materials that served as an excellent source to verify chronology of events. Additionally, further informal conversations with respondents were carried out to clarify statements and facts. Finally, being an active participant throughout the study I was able to rely on my own account of details and notes.

Looking at the examples below, in the first example on team dynamics, what was evident was that there were some building blocks being put in place for a more open and collaborative team environment. However, as per the views of middle management due to the lack of vision and lack of clarity in communication it wasn't impactful, as shown in detail through the case analysis.

The second example on setting the vision for Pre-Paid, what is evident is that it wasn't clearly communicated from the start. By summarizing better chronology of events,

what comes through is that to begin with the vision wasn't well communicated but was clarified through better communication later on in the product launch. People closer to the strategy of the division, such as senior leaders and heads of product had a much clearer view from the beginning than other team member.

In the last example, there are divergent views on how much research was used to inform the product strategy for Bank 2.0. By further clarifying comments with a number of the respondents and through using archive materials from the product launch, it was established that the partner had significant influence on the product strategy and this was based on their own experience and research they and done in the past. Secondly, further testing of that proposition was done throughout the time leading up to product launch that helped verify some of the features as well as inform the positioning of the product.

In summary, the divergent views helped gather more detailed understanding of the nuances with some of the events and triggered further analysis of archival data and verification with respondents. As such, they served as a rich source to further the analytics in accordance with Miles and Huberman (1994).

Table 4.28: Divergent Views

	Junior Management	Middle Management	Senior Management
TEAM DYNAMICS	I feel we had a nice culture that feels like a start-up, when there was something big happening with the product and platform it was all hands on deck.	It was very informal in the early days and I think that was trickier because people didn't necessarily have the right information. They got information through informal channels.	We sat people by project rather than by division. It really worked, I would see the product people turn to the lawyer and ask a question and get an answer then, whereas you know our culture, it would otherwise take 2 weeks to see a lawyer.
VISION	I think the common theme was that there was certainty about that needs to be done and with these leaders that made it easy to follow, like this is what we need to do. It was very unclear what the focus was in the beginning.	There was sudden shift away from the core business which included travelers check and gift cards. I think there was lot of confusion. Nobody outside of New York had any clue what the vision was. Clarity of goals and how it fits in, I have heard from peers that it was not clear what they were doing and how it fits. There was a single, clear focus. We can do this in less than 3 months. If anything gets in the way of that I will help remove barrier. We had a real clarity of purpose.	Being clear on the scope really helped rally the troops. We wanted to get a product quickly out the door to take market share and learn about the pre-paid market.
PRODUCT STRATEGY	They came up with the product and said we are partnering with this major retailer. We were brought in pretty late to the game and the research happened after to work on the name, packaging, communication and launch. We did have customer panel but I don't think the design target was informed by research. There was definitely some data points from focus groups or surveys but it always seemed like they were last minute and we didn't necessarily get them in time.	We did two or three rounds of research, we also did a pilot. We did have some insights to inform which features are the most relevant to the customer base. I sometimes find that research trumps the actual activity we see eg. the way that people acre actually using the product. Our partners also have a pretty good idea about their customers. I sometimes fee we relied too much on research as there is more practical data out there that can help us win market share. The initial set of value proposition for the product was very much 10 people sitting in a room saying we want this, we don't want this. Then there was vetting done through research both in terms of positioning, naming, the features we wanted to highlight and messages.	We did bunch of research to inform the product strategy.

4.3.5.4 New Model

A cross-case analysis was carried out to indentify repeated causality across cases, following a replication strategy (Yin, 2013). This helped build a final recommended causal network for the research. Details of the analysis is shown on the following pages, where replication of causal relationships are identified. This is followed by building a cross-case causal network. Model 1.5 on page 288, that shows the causal network summary.

Table 4.29: Causal Analysis - Leadership

	CUSTOMER NEEDS	SPONSORSHIP	VISION	COMMUNICATION	DECISION MAKING
Leadership					
Digital Wallet			Lack of vision leads to unclear communication Lack of vision leads to slow implementation	Lack of communication leads to slow implementation Lack of communication leads to low motivation	
Pre-paid		Senior management sponsorship leads to speed of implementation	Clear vision leads to speed of implementation Clear vision leads to higher motivation	Clear communication leads to faster decisions	
Bank 2.0	Customer needs drive better clarity of vision	Senior management sponsorship leads to clear vision	Clear vision leads to speed of implementation Clear vision leads to higher motivation Clear vision leads to more empowered teams Clear vision leads to better communication	Good communication leads to faster decision making	
Bank -like Pre-Paid		Senior management sponsorship leads to clear vision	Clear vision leads to better communication Clear vision leads to higher motivation Clear vision leads to better collaboration Clear vision un-locks resources	Good communication leads to faster decision making	Faster decision making leads to speed of implementation

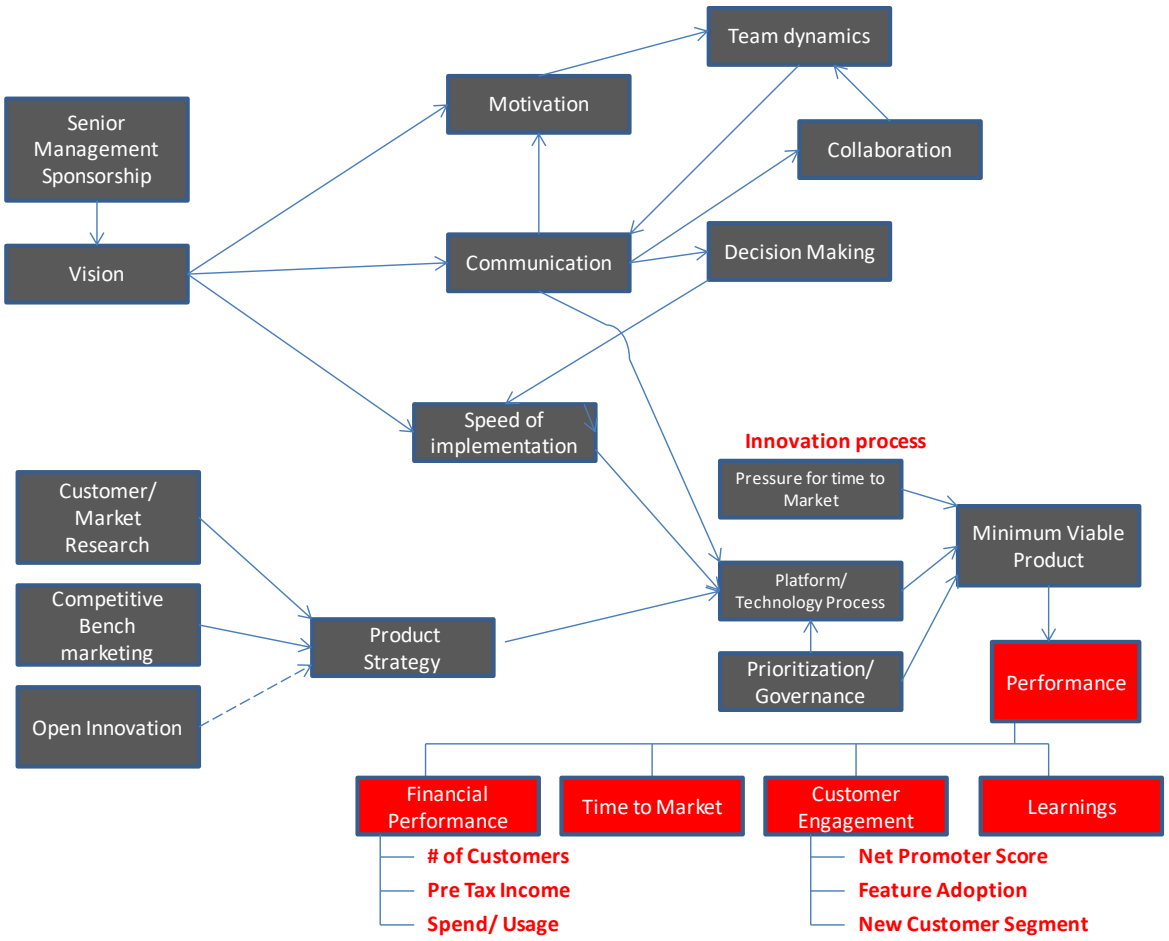
Table 4.30: Causal Analysis - Cross Functional Teams

	TEAM DYNAMICS	COMMUNICATION	DECISION MAKING	COLLABORATION
Cross-Functional Teams				
Digital Wallet	Poor team dynamics/ non-cohesive team leads to lack of communication	Lack of communication leads to slow decision making Lack of communicaiton leads to low motivation		
Pre-paid		Communication leads to faster decision-making Communication leads to collaboration		
Bank 2.0		Communication leads to motivation Communication leads to collaboration Communication leads to faster decision making	Faster decision making leads to faster implementation	
Bank -like Pre-Paid	Good team dynamics/ cohesive team leads to better communications	Communication leads to faster decisions Communication leads to better understanding of roles and responsibilities Communication leads to collaboration		Collaboration leads to innovation

Table 4.31: Causal Analysis - New Product Development Process

	MARKET INSIGHTS	CUSTOMER RESEARCH	OPEN INNOVATION	PRODUCT STRATEGY	COMMUNICATION	PLATFORM/ TECH PROCESS	PRIORITISATION/ GOVERNANCE	TIME TO MARKET
New Product Developent Proces								
Digital Wallet	Limited market insights leads to lack of clear product strategy	Limited customer research leads to lack of product strategy		Poor product strategy leads to lack of communication	Lack of communication leads to poor governance and prioritization	Inflexible tech processes led to poor minimum viable product	Slow governance influences minimum viable product	Pressure around time to market leads to poor minimum viable product
Pre-paid	Competitive benchmarketing influences product strategy	Customer insights and research influences product strategy		Product strategy influences prioritisation and governance	Clear communication drives better governance and prioritisation Clear communication leads to faster implementation	Inflexible tech processes influence minium viable product	The priortisation and governance process influences minimum viable product	Pressure around time to market influences minimum viable product
Bank 2.0	Market insights help develop product strategy	Customer research leads to clearer product strategy	Open innovation leads to clearer product strategy	Product strategy influences the platform and tech processes			Goverance and prioritisation influneces the tech processes	Pressure around time to market influences minimum viable product
Bank -like Pre-Paid	Market inslights help develop product strategy	Customer involvement and research help develop product strategy		Product stategy influences tech strategy		Flexible/ agile tech processes influences leads to better minimum viable product Flexible/ agile tech processes lead to faster implementation Agile tech strategy leads to empowered teams	Constant change in prioritisaton leads to confusion and extra work impacting speed to market	

Figure 4.33: Model 1.5: New Product Development Causal Network Summary*



*NPD Causal Network leads to product performance

The causal network looks to explain key relationships between variables. It shows the following causalities:

- Senior management sponsorship leads to better clarity of vision
- Clear vision is positively correlated with better communication.
- Better communication helps facilitate faster decision making
- Good communication leads to higher motivation and better collaboration.

- Strong motivation and collaboration leads to better team dynamics.
- Customer and competitive research, along with open innovation positively correlate to the product strategy.
- Product strategy impacts the innovation process
- Vision and communication impact the speed of the innovation process
- Prioritisation and governance impacts the minimum viable product
- Platform and technology process impact the minimum viable product
- Pressure around time to market impact the minimum viable product

Providing a detailed view of causalities helps provide a strategic view of the importance of each of the variables and inter-relations between them.

4.3.5.5 Comparison with Other Research

The model compliments other research done on best practice models of new product development. Cooper and Kleinschmidt's research is focused on quantitative analysis and impact of variables across a few hundred firms across the globe and therefore, does not show a causal network of how the variables relate to each other. Additionally, it does not provide in-depth analysis of how strategy is made in practice through detailed, process oriented case-study method that shows how events unfold over time. (Cooper & Kleinschmidt, 2007). Kahn et al. provide a bench marking framework based on previous bench marking studies and highlights best practice and poor practice based on expert interviews followed by a quantitative study. It didn't show details of specific cases nor how new product development unfolds over time and as such does not show a causal network

(Kahn et al. 2006; 2012). Equally, Cormican and Sullivan conducted in-depth interviews across organisations to identify key variables to successful new product development and then developed a questionnaire to enable bench-marketing. Again, it does not provide a detailed causal network nor the in-depth description of processes (Cormican and Sullivan, 2004). Brown and Eisenhardt's base their findings on detailed analysis of past literature in the field and build a causal network through systematic review of the literature. It does not show a process oriented approach through case study research. Equally, Ernst's analysis is also a best practice summary based on comparison of 30 years of empirical research with a view to summarize key findings across this body of research. It does not show detailed causal relationship between variables (Ernst, 2002).The research that was used to conduct the best practice analysis was largely quantitative research and as such did not show causal networks and how the process unfolds over time. This is in line with the call for more qualitative, process oriented research on new product development using integrated frameworks (Fagerberg, 2003; Anderson et al. 2014; Zhou and Hover 2014). As a result, model 1.5 that shows causal relationships between variables, provides a unique contribution to knowledge.

4.3.5.6 Summary

Based on the detailed findings of the research, a new model, model 1.5, has been developed that will help organisations that are going through a digital disruption to create a framework for effectively leading cross-functional teams to achieve successful continuous new product development. The model, that can be seen in Figure 4.33 on page 288, focuses

on the inter-relationship and causality across key factors in the new product development process. These elements are:

a) *Leadership* - The key factors identified as critical for successful leadership include the need for leaders to provide senior leader sponsorship and set a clear vision. The leaders need to have a sense of belief in the vision and ability to demonstrate to the team the path from the vision to the market. Senior leaders sponsorship influences the clarity and vision for the project. Setting a clear vision leads to better communication that in return speeds up decision making. Secondly, it drives higher team motivation and faster project implementation.

b) *Cross-Functional team* - Team dynamics such as the cross-functional team being truly cross-functional by attracting the skill sets and expertise required for the project, having a flat and open organisational structure, and being highly motivated and collaborative influencees the openness and frequency of communication that in return leads to faster decision making and influences the new product development process.

The way that the leadership and cross-functional team operate and interact with each other will create the culture of the unit, division or company.

The new product development process is split into two factors – product strategy and the innovation process.

c) *Product Strategy* – The product strategy is the process of developing the product idea. The critical success factors focus on making sure that the product strategy is grounded in good insights about the market, the competitive landscape and the customer pain points. Open innovation, that was seen in the Bank 2.0 launch, can further influence and enhance the product strategy.

d) *Innovation Process* – This is the process of actually bringing the product to the market. Factors that are seen to influence the innovation process is having a clear vision, open frequent and transparent communication, fast decision making that all lead to a faster implementation. Secondly, the product strategy and prioritisation and governance influence the technology process. Moving to a model of continuous delivery through agile methodology is also seen to improve speed and quality of implementation. Setting a clear expectation around speed to market will influence how quickly the minimum viable product is launched. It can also have a negative effect on the quality of product being launched if the timelines are too aggressive.

e) *Performance* - Measuring the right metrics at the right time is critical. The leadership team needs to have a clear understanding of what success looks like, depending upon the purpose of the new product development. Measurements should focus on both customer and innovation metrics as they look at business performance. It is important to have an open feedback loop for the organisation to learn quickly.

5. Conclusion

5.1 Introduction

This section summarises the findings of the cases with the aim of answering the research question and sub-questions and folds in the literature. The main contributions to industry and academia will be discussed. The limitations of the research, implications for further research and personal evolution of the researcher through the research process are also discussed.

5.2 Consolidated Case Summary

This section summarises the findings of the research in order to answer the research question *"How to effectively lead cross-functional teams to drive successful continuous new product development?"* Model 1.5 will be utilised to summarise the key findings and answer the key research questions linked to each of the five main elements of the model.

5.2.1 Innovation Culture

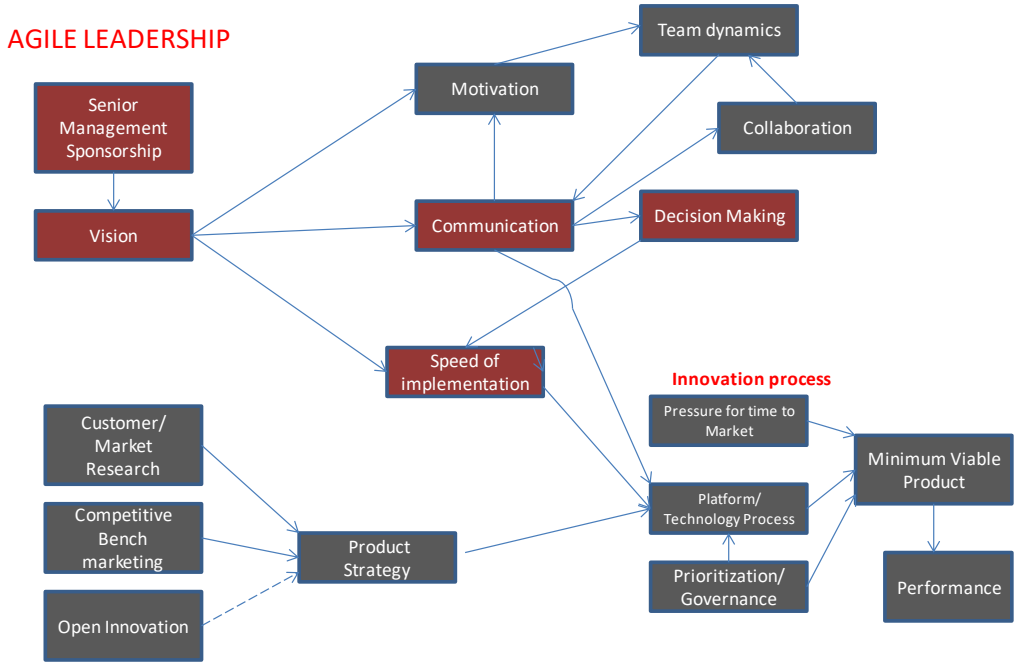
The organisation studied was experiencing a cultural transition from being a hierarchical and siloed organisation to adopting a culture of innovation that is more open, collaborative and transparent. While culture is not an explicit factor in the model, elements of culture are part of the causal framework and it comes through repeatedly as an important factor for innovation in the innovation literature. Amabile (1983) argues the importance of an environment that supports creativity in the componential theory of creativity and Scott (1995) argues for a flat organisational structure. It is further argued that sponsorship from senior leaders, team empowerment, and clear vision for the team all contribute to an

innovative organisational culture (Bass, 1990; McDonough III, 2000; Sethi et al., 2001). Additionally, the 5 factor model by Martins and Terblance (2003) highlight the core components of culture that impact creativity and innovation as 1) Having a clear strategy and vision; 2) Organisational flexibility and employee autonomy; 3) The right support mechanism such as availability of resources; 4) Behaviour that encourages innovation such as risk taking and 5) Conflict handling and open and honest communication. The causal model highlights variables that align with this such as having a clear vision that leads to better communication; team dynamics that include flatter organisational structure; empowerment and collaboration; and fast decision making through constructive conflict handling. In the following sections dedicated to leadership and cross-functional teams, some of the key components will be further identified.

5.2.2 Agile Leadership

The goal was to understand *"What types of leadership styles and behaviours are suited to drive successful new product development?"*. This section presents an analysis of this question on the basis of Model 1.5, and will be related to the key case findings and the literature review.

Figure 5.1: Model 1.5: Causal Network Leadership



The key causal relationships identified were the following:

i) Senior leader sponsorship leads to better vision for the project

ii) Clear vision leads to better communication, higher motivation and faster implementation.

iii) Frequent and clear communication leads to faster decision making, higher motivation and collaboration.

5.2.2.1 Senior Management Sponsorship and Clear Vision

Having strong senior management sponsorship helps set clarity of vision based on the new model. It is important to provide a clear vision and purpose that the team can believe in and feel proud of. Additionally, leaders should demonstrate confidence and a

belief in the vision, helping the team see the path forward and how the mission can be achieved. This is supported by the literature review both through the transformational leadership theory and the agile leadership theory (Avolio et al., 1990; Bass, 1990; Joseph and Joiner, 2007). Looking at the four cases, this was in place for two of the cases - the launch of Bank 2.0 and Bank-like Pre-paid. In these cases, the team felt they could rally easily behind a well understood mission and a vision that was customer focused. They were proud to be a part of the team that went over and above to do a great job. On the other hand, during the launch of the Digital Wallet, the team had very limited clarity of direction. Moreover, the approach that was taken was not customer focused. As highlighted before, having a clear vision leads to better communication, faster decision making and helps with speed of implementation as highlighted in model 1.5 above.

5.2.2.2 Leadership Styles that Enable Quick Decision Making

As was seen in both the launch of Bank 2.0 and Bank-like Pre-paid, the teams had moved to a model of leadership where they were empowered to make decisions and were encouraged to obtain constructive and varied views for better customer outcomes. The leadership was not afraid to take risks in order to enter the new markets and customer segments. What was apparent was the need to have frequent and open communication to enable prioritisation and this led to quick decision making.. This is in line with transformational leadership that encourages strong communication to promote different points of view (Avalio et al, 1999; Bass 1990). It also aligns with agile leadership theory on leaders being able to openly look at new assumptions and make fast decisions (Doz and Kosen, 2010; Joiner and Joseph, 2007).

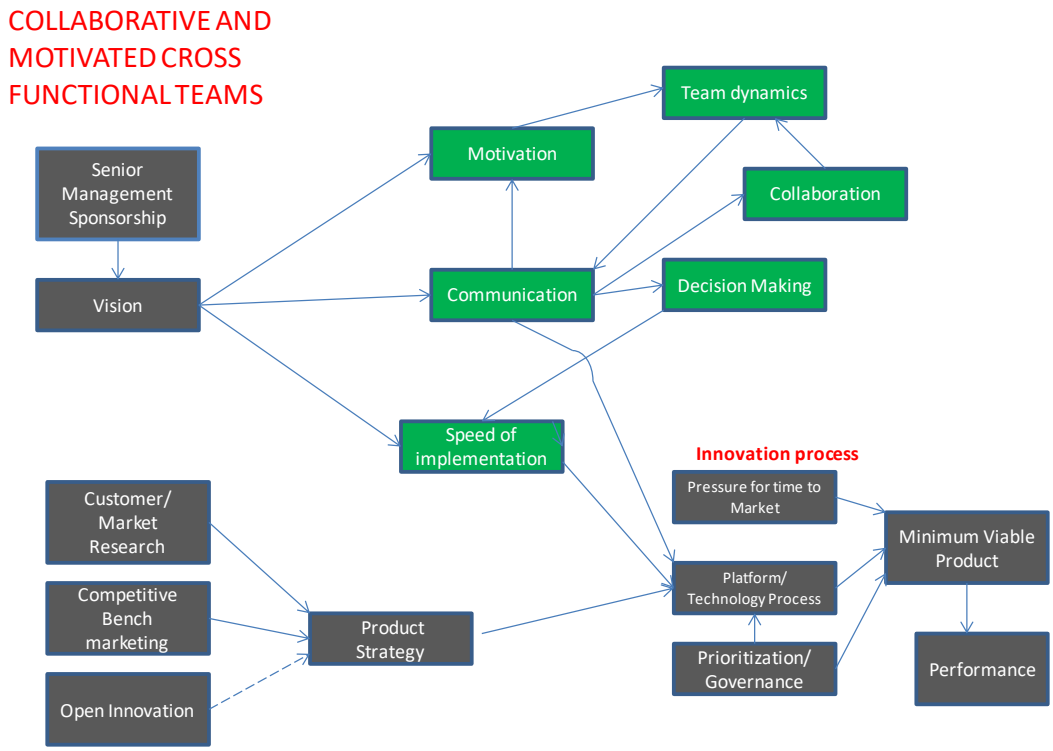
5.2.2.3 Culture and Leadership Summary

The leadership styles best suited to drive continuous new product development are a combination of agile and transformational leadership. The conclusion is that the leader should provide senior management sponsorship and a clear vision that shows the team the road ahead. Secondly, the leader needs to be promote different points of views and allow for an open dialogue and promote constructive debate that enables quick decisions. Agile leaders are able to work effectively in an environment of major change, they are exceptional at stakeholder management, comfortable with high levels of uncertainty and able to draw useful insights from conflicting views, through a collaborative approach (Joiner and Joseph, 2009). Transformational and agile leaders are able to create a clear vision, motivate the team, communicate well, encourage different points of view, empower people and recognise achievement (Avolio et al., 1999; Bass, 1990; Joiner and Joseph, 2009). This is in line with the model presented where a clear project vision leads to better communication and faster decision making.

5.2.3 High Performing Cross-Functional Teams

The goal was to understand in depth "*What are the key success factors in the composition and set up of cross-functional teams to drive new product development?".*

Figure 5.2: Model 1.5: Causal Network Cross Functional Team



As can be seen in model 1.5 the key causal relationships identified were:

i) Communication leads to higher motivation and collaboration

ii) Motivation and collaboration impact team dynamics

iii) Better team dynamics lead to better communication

iv) Good communication leads to faster decision making

v) Fast decision making influences speed of implementation

5.2.3.1 Effective Communication Model

Communication is fundamental for the success of setting up cross-functional teams. It is important to have an effective communication model both between the cross-functional teams and the leadership. People found it critical to be brought into the process early and felt that solving problems together helped better and faster decision making. Clarity of vision, goals, roles and responsibilities were vital for the team. Lack of clarity and formal communication models created confusion, for example during the launch of the Digital Wallet. The importance of communication is highlighted in the agile development process (Nerur and Balijepally, 2007), agile leadership theory (Joiner and Josepth, 2007) and in the critical success factors of cross-functional teams (Holland et al., 2000; McDonough III, 2000).

5.2.3.2 Team Dynamics

Attracting appropriate talent impacts team dynamics. Being able to develop true cross-functional teams that have deep subject matter expertise is very important, including expertise in legal, compliance and technology. Additionally, is it important to build new team capabilities and attract people that had digital expertise from start-ups in Silicon Valley and in areas like design thinking and user experience (UX/ UI).

This is supported by Amabile's (2013) Componential Theory of Creativity, which emphasises the importance of domain expertise. Holland et al. (2000) further support this through their cross-functional team model, which highlights primary success factors of cross-functional teams such as the composition of the team. However, it is not enough to attract the right talent; for the team to perform well, the right team environment and a clear

vision are essential. This was evidenced clearly by the launch of the Digital Wallet, where the team, though of high calibre, was not working together as a high performing and cohesive team. A sign of success in terms of talent was that the group quickly became a portal of talent for the rest of the organisation.

Moving to a flatter and open organisational structure and environment contributed to the team dynamics. The ability to co-locate the cross-functional team together allowed a more open dialogue. Whilst roles and responsibilities were important, titles and hierarchy were seen as a hindrance for speed. In fact, a flatter structure enabled a much more collaborative environment where people feel more empowered to make decisions.

Strong cross-functional collaboration contributed to the team dynamic. Clear communication led to better collaboration. The ability to solve problems together as a unified team and be comfortable challenging each other for better customer outcomes, enabled speed. This was seen clearly in the case of both the launch of Bank 2.0 and the launch of Bank-like Pre-paid, where those with legal, compliance, and technologies expertise worked collaboratively to develop new solutions. The importance of collaboration is frequently mentioned in the literature review. It factors in the successful model for cross-functional teams (McDonough III, 2000), it is highlighted in the agile leadership theory (Joseph and Joiner, 2007) and it features in the lean and open innovation theories (Brown, 2008; Chesbrough, 2007; Ries, 2011).

High levels of motivation contribute to the team dynamics. People felt more motivated when the overall business direction was clear, the mission was communicated well from the top and the team could clearly see how the project or programme fits into the overall business strategy, in addition to when successes were publicly celebrated.

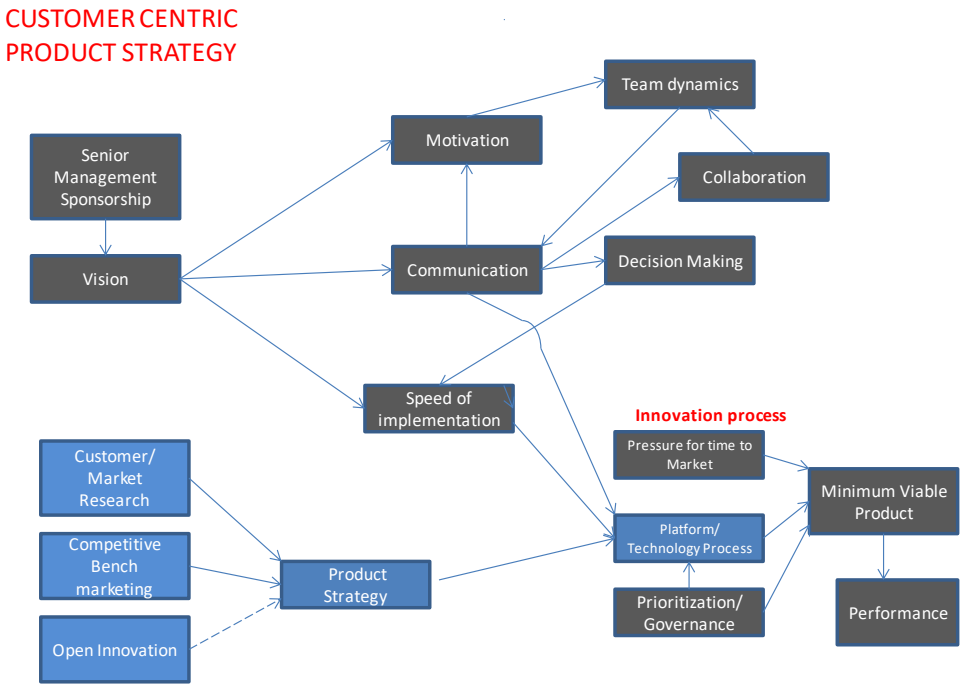
5.2.3.3 Cross functional teams - Summary

The findings demonstrate that to create high performing cross-functional teams the organisation needs to be able to attract the right talent and build the right environment for innovation, including a flatter organisational structure and a customer centric environment. Additionally, teams were motivated through effective communication of vision, goals and progress across the team and good collaboration. These findings corroborate those of McDonough III (2000) and Holland et al. (2000), who argue that factors such as clear goal setting, selection of the right team members, team empowerment and creating the right team climate contribute to successful cross-functional teams. This is also highlighted in agile leadership theory (Joseph and Joiner, 2007) and in agile technology process (Nerur and Balijepally, 2007).

5.2.4 Customer Centric Product Strategy

The goal was to understand in depth the following question: "*What are the key factors in the innovation process that drive successful new product development?".*

Figure 5.3: Model 1.5: Causal Network Product Strategy



*Open innovation only observed in one of the four cases, Bank 2.0

Based on model the following causal relationships were identified

i) Customer involvement and market research leads to stronger product strategy

ii) Competitive research leads to stronger product strategy

iii) Open innovation leads to stronger product strategy.

5.2.4.1 Market Opportunity

Clear definition of the target market, the business opportunity and competitive environment is an important aspect of the product strategy. This is also highlighted by Christiansen (2013), who emphasises the importance of disruptive business models to enter

into new markets with new products. Brown (2008) discusses a similar need to understand the market opportunity through the Ways to Grow Matrix.

For the launch of the Digital Wallet, the assessment of the market opportunity was vague; there was limited definition of the competitive landscape and the team faced a difficult time narrowing the target audience for the product. Conversely, with the bank-like pre-paid, the target segment, competitive set and the market opportunity were very clearly defined. There was considerable amount of competitive benchmarking, defining and redefining the competitive set and the proposed value proposition was compared against the competition. The approach helped the team define the vision of launching a new product, targeting a completely new segment of the market: the under banked in the US.

5.2.4.2 Deep Understanding of Customer Needs

Having a model and the ability to get close to customers, understand their challenges and identify how to best solve them is a key success factor for the product strategy. Opening the innovation process to include partners introduces speed and agility into the model as was seen through Bank 2.0.

There are three essential components for understanding customer needs: a) involving the customer into the innovation process for rapid feedback, b) involving a third party or a partner in the process, and c) conducting qualitative and quantitative research. Chesbrough (2003), Brown (2009), Dyba and Dingsoyr, (2008), and Ries (2011) all argue for more open, collaborative and agile innovation processes to enable speed and more customer centric innovation. It was seen that in the case of the launch of the Digital Wallet, the lack of customer insights and poor definition of customer needs, made it challenging

for the team to launch a successful value proposition. More customer driven insights were evidenced with the other launches.

a) Customer Involvement

Bringing the customer into the development of the product strategy proved to be very productive for quickly evolving the product and proposition. For the launch of Bank 2.0, the customer panels were seen as very effective. Having direct customer feedback allowed the teams to challenge each other.

b) Partner/ Third Party Involvement

Involving a third party or a partner in the open innovation approach encouraged the team to think differently about the customer and enabled faster innovation on the platform. This was the case with the launch of Bank 2.0, where the partner introduced a different perspective on the customer and pushed the joint teams to go further in achieving innovation.

c) Qualitative and Quantitative Research

Qualitative research (e.g. focus groups) and quantitative research are effective tools for gathering customer insights. This was seen in the case of the launch of Pre-paid. The initial insight was identified by looking at the super-users of an existing product. This was followed by qualitative and quantitative research to verify the hypothesis and get further validation on product positioning and importance of the

key benefits. The team also used such research at various stages in the process for Bank 2.0 and the launch of bank-like pre-paid.

5.2.4.3 Product Strategy -Summary

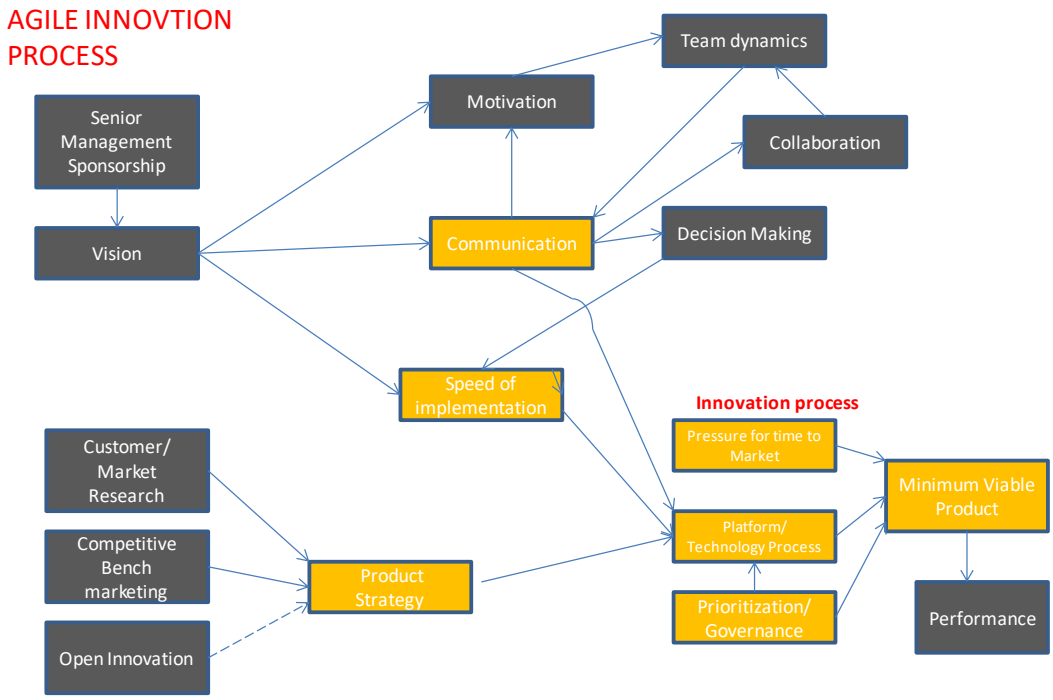
The key success factors for the product strategy are, firstly, to have a clear understanding of the market opportunity. Christiansen's (2013) disruptive innovation theory discusses the importance for companies to define the markets they are targeting. Disruption occurs when companies target new markets, introducing new products or technology. He argues that companies have a tendency to focus on existing customers and drive incremental improvements. Additionally, Brown (2008) defined in the Ways to Grow matrix, different approaches to innovation pending on the company's growth strategies.

Secondly, it is seen that opening the innovation approach to partners and customers leads to agility and improves the customer outcomes. This is consistent with the Chesbrough's (2007) argument that a strategy of openness will increase the value creation for companies, including bringing external partners into the innovation process (Chesbrough and Appleyard, 2007). While the elements of customer and partner involvement are seen in the four cases, the company studied can develop further regarding design-led thinking and a lean innovation process, where prototypes are built quickly for rapid customer feedback.

5.2.5 Agile and Iterative Innovation process

The goal was to understand in depth: "*What are the key factors in the innovation process that drive successful new product development?".*

Figure 5.4: Model 1.5: Causal Network Innovation process



In this analysis the following causal relationships are identified

i) Clear communication leads to faster decision making and faster implementation

ii) Product strategy impacts the technology process

iii) Prioritisation impacts the technology process

iv) Pressure around time to market impacts minimum viable product

v) Technology process impacts minimum viable product

(1) Agile delivery increases speed and quality of product

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5.2.5.1 Prioritisation and Governance

Bringing a product to market quickly is critical. Inevitably, there are many trade-offs that are made during this process. What was seen as critical to making fast decisions was to ensure that the decisions was clear communication on the trade-offs. For Bank 2.0 and Bank-like prepaid it was evident that the product strategy helped ground decisions in customer centric solutions. An example of this was the Bank 2.0 project, when the technology team wanted to de-scope an important feature to meet the timelines. The project team challenged this and jointly worked out an agreeable solution with the right customer outcome.

There is a constant conflict of de-scoping elements for speed and in the case of Digital Wallet, the key element was just launching the product at speed. However, there was not a true customer custodian in the room that defended the need to deliver a ground breaking customer value proposition that needed to be the best in market.

Regular meetings and steering committees where decisions were made contributed to the success of the launch of Bank 2.0 and bank-like Pre-paid. As the teams moved to an agile delivery, there was a need to further adapt the governance and communication framework due to the speed of releases. The increased speed revealed the need to further increase the frequency of communication to the broader teams to avoid repeating work.

5.2.5.2 Platform/ Technology

The platform and technology process impacted the minimum viable product. It was evident that because of lack of flexibility through the waterfall tech process, trade-offs to hit deadlines meant critical elements of product proposition were de-scoped. This lead to a

less than ideal customer proposition. It was considered important to the project's success that the team understood the platform and technology, its capabilities and its limitations. The technology team focused on building a platform that could handle scale and focus on a deployment model that worked. It was observed in the four launches that the move was from a very inflexible, waterfall technology methodology to a much more agile and flexible technology methodology.

5.2.5.3 Agile Delivery

Moving to an agile delivery was a transformation in terms of speed of delivery, and the process therefore further reinforced a more customer centric and collaborative way of working. The team had the capability of releasing new products or benefits, every two weeks, at a higher quality than before. This is in line with Nerur and Balijepally's research on agile processes, that are seen to be faster and more flexilbe (2007). The new approach required a different communication and governance process.

5.2.5.4 Minimum Viable Product

The concept of Minimum Viable Product is fundamental to Reis's Lean Start Up theory and focuses on launching a product that is valuable to users but then leverages a continuous feedback loop for ongoing iterations (Reis, 2011). Through the different cases it was evident that it was important to make the right trade-offs to ensure that not only the product being launched was best in the class in the market, but also that the strategy to continue to iterate and create new benefits based on the customer feedback and learnings was in place. The challenge for the team was to identify the extent of their ability to

continue to evolve and iterate the existing products against other priorities on the backlog. Questions raised included whether the organisation would persevere, or whether it would quickly move onto the next big project. The earlier launches, such as the Digital Wallet and the launch of pre-paid, exemplified inflexibility in the process with no focus on continuous iteration. With bank-like pre-paid, the process had moved to a more flexible approach that allowed ongoing releases but there was still a need to adjust the governance process and ways of working to fully capitalize on this.

5.2.5.5 Innovation Process - Summary

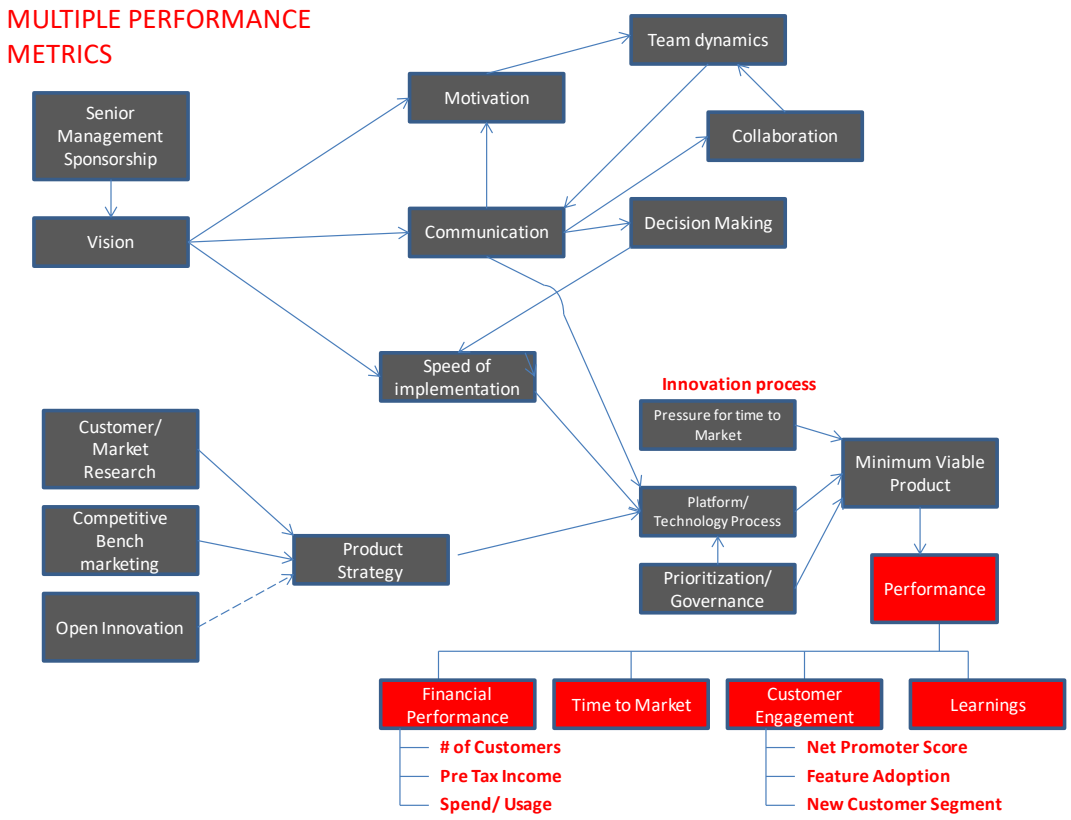
The organisation is on a path to move towards a more lean innovation process, which empowers a cross-functional team to build and deploy minimum viable products quickly and iterate or pivot based on an accelerated feedback loop (Ries, 2011). Whilst there is further development needed for the launch of an MVP at speed, the learnings clearly demonstrate that moving to an agile process and focusing on MVP and ongoing product iteration leads to greater success. Agile is an iterative process and it focuses on learning through experimentation (Dyba and Dingsoyr, 2008). The model outlines the importance of prioritisation and speed of decision making. This is also emphasised in agile leadership theory, agile development processes and lean leadership (Joseph and Joiner, 2007; Nerur and Balijepally, 2007; Reis, 2011).

5.2.6 Customer & Innovation Performance Metrics

The goal was to understand in-depth: "*What are the key measures of success that drove successful new product development?"*. The findings indicate that customer and

innovation metrics need to be part of the business metrics used to measure performance. Additionally, it is vital that there is clarity from the beginning regarding these metrics and when they will be applied. Using stringent financial metrics at the beginning of a project is detrimental and can “kill” the product before the team has the opportunity to optimise it and learn from the market. However, teams can become emotionally attached to projects and having clear measures and gating is critical to allow a project to be stopped if it is not working well.

Figure 5.5: Model 1.5: Performance metrics



The financial performance metrics used to measure success were: a) new customer acquisitions and volume, b) customer usage metrics such has spend , and c) pre tax income and profitability. The customer engagement metrics were a) net promoter score, feature adoption and the ability to attract new customer segments. Additionally, speed to market and feedback loop and ongoing learnings were also tracked.

The success measures were poorly defined at the beginning of the Digital Wallet launch. On one hand, it was at the very basic level of ensuring that the product worked. However, the finance team began tracking account volumes from the first day, putting stress on the team to achieve volume when the focus should have been on how to make the

product more relevant for the key customer segments. In the case of Pre-paid, which was a relaunch of an existing product to a new segment, the focus was on speed to market and driving the market share. With Bank 2.0 and bank-like pre-paid, there was a much more balanced focus on the innovation and business metrics. Focus was on bringing new customer segments to the organisation and ensuring speed of delivery, along with business metrics like volume, customer engagement and profitability. Capturing learnings, optimising the process and getting feedback on what was effective and not effective were introduced in the organisation. As the company moved to a model where it was more comfortable with failure, key learnings were shared on a regular basis to support future projects.

5.2.6.1 Summary

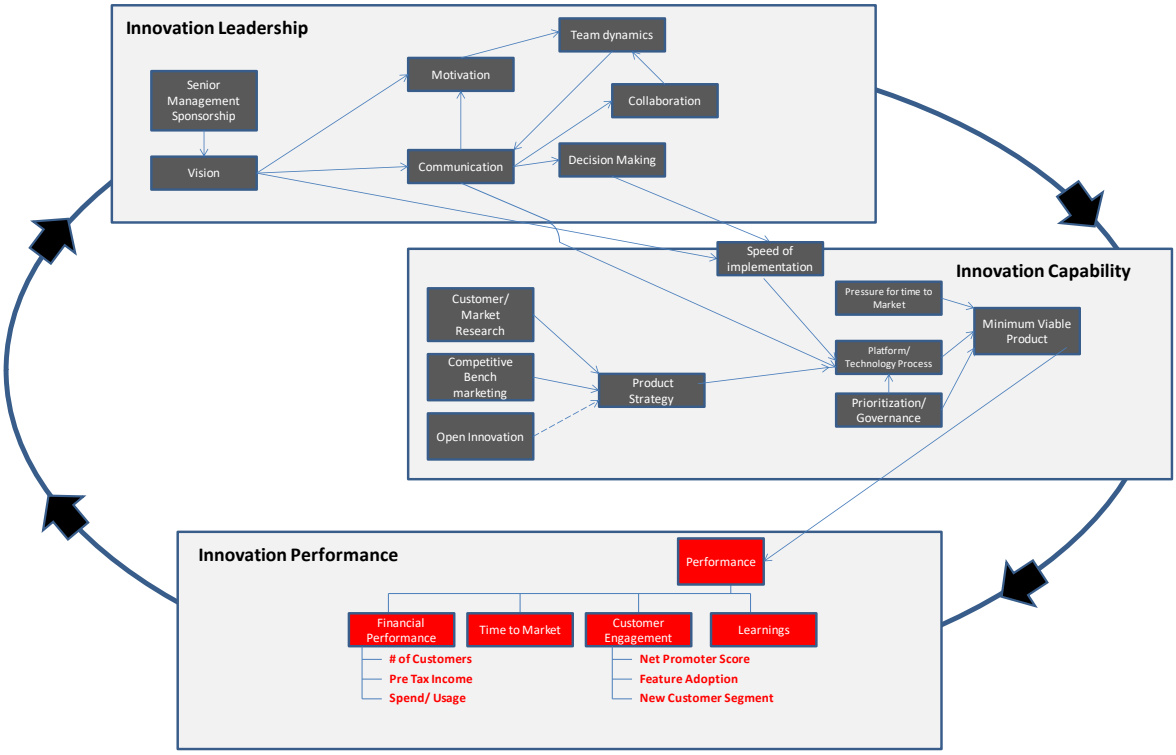
There are a number of ways to measure innovation within an organisation. Muller et al. (2005) created a framework, visualising it from a resource view, capability view or a leadership view. The approach taken within this organisation was consistent with the resource view, examining the percentage of revenue generated from the products and services introduced, and the number of products and services launched. Ries (2011) further encouraged companies to dedicate resources to understanding the details behind the metrics at the beginning of a project, such as conducting cohort analysis and understanding the impact of regular changes through a/b analysis. Additionally, being comfortable with failure and measuring learning should be part of the innovation measures. Measuring both customer and innovation metrics as part of broader business metrics is recommended when measuring innovation. Furthermore, it is important to understand at which stages of the

project different metrics should be applied (e.g. product launch, iteration and ongoing delivery).

5.3 Practical Framework for Leaders

To summarize, based on findings, it can be assumed that innovation leadership has impact on innovation capability that in return impacts innovation performance. Additionally, with a proper measurement and capture of learnings a feedback loop is created that feeds back into leadership and future strategy. In reality, this is a messy process that is non-linear.

Figure 5.6 Practical Framework



5.3.1 Innovation Leadership

To summarise, in order to create the right innovation leadership it is important to have strong senior leader sponsorship and be able to set a clear vision for the projects. The leaders need to be able to show the path forward through communicating the vision and then tactically show the steps that need to taken to get there. Having a compelling vision influences the clarity of communication. It is critical for leadership to establish a communication framework that speeds decision making leading to faster implementation along with creating a more motivated team.

Secondly, a true cross functional team, that operates in a dynamic, flat organisational structure, tends to be more motivated when communication is clear. This in

return, further fuels better communication among team members and again, influences speed and decision making. While not explicit in the causal model, it is believed that by creating the right leadership framework and team dynamics a more innovative culture will emerge.

5.3.2 Innovation Capability

Successful innovation leadership influences the innovation capability. A product strategy that is grounded in customer insights, competitive bench marketing and uses open innovation processes is believed to be more successful then strategies that are not grounded in customer behaviour and insights. The innovation process is influenced by the product strategy. It is recommended that focus is put on creating the right prioritisaiton and governance framework that enables speed. Additionally, while it is important to set timelines, quality of product and competitiveness should not be sacrificed to hit a particular launch date. Agile and open innovation process enables ongoing changes and faster implementation. Using agile methodology can have positive impact on the quality of the product and the speed at which it is delivered. The output of the innovation process is the launch of a minimum viable product that is continually enhanced and iterated through continuous delivery.

5.3.3 Innovation Performance

Multiple metrics to measure innovation should be put in place to track speed to market, financial performance metrics along with customer engagement and satisfaction metrics such as net promoter score. Learnings, should be captured ongoing to inform the

product development process in terms of enhancements to existing products and new product opportunities.

5.4 Summary

5.4.1 Managerial Contributions

In the current rapidly changing and uncertain competitive environment, companies need to innovate at a much greater speed. The findings of the research recommend a dynamic model for leading cross-functional teams to achieve continuous new product development. It shows the unique linkages across key components of the innovation process and highlights some of the critical success factors that need to be in place to drive continuous innovation.

This model firstly contributes to the organisation studied and can be used across different divisions of the multi-national organisation. Secondly, transferability can be applied, due to the rich description of the research, to environments that are going through digital transformation and where there is focus on speed, agility and learning. The proposed model is dynamic and future research should be conducted to develop it further. The goal is for leaders and teams to use the model, evaluating their capabilities against individual elements of the model, and then put in place strategies for success.

The model proposes a multi-layered strategy concerning: a) **Innovation leadership** focused on ***agile leadership*** that provides strong sponsorship for the project and a clear vision. ***High performing cross-functional teams***, which are open, collaborative and highly motivated.; b) **Innovation capability** that centres on ***customer focused product strategy,*** that is grounded in customer insights, competitive research and open innovation;

d) ***Innovation process,*** which is agile, with strong prioritisation, process and focuses on minimum viable product, and lastly c) **Innovation performance** that tracks ***Performance measures*** focused on both customer and innovation metrics that allow quick learning and optimisation to drive the right financial outcomes and organisational learnings.

To summarise, it is believed that the model is a good framework to help organisations create the innovation culture required to effectively lead cross-functional teams and drive successful continuous new product development. The contribution to business is a practical tool that enables businesses to create organisational structures that allow a greater level of innovation at a faster pace.

5.4.2 Academic Contributions

This research contributes to the new product development literature. As highlighted, research on the end to end new product development process was seen as fragmented, and there was a clear gap and a need for cross disciplinary studies using integrated frameworks (Fagerberg, 2003; Anderson at al. 2014; Zhou and Hover, 2014). It was also highlighted that there is a need to build more knowledge around innovation theory and practice through process studies, looking at innovation in the context of the organisation and show how the process unfolds over time (Nakata & Di Benedetto, 2012; Hustad, 2012; Debenham and Kaberon, 2014; Brenton and Leving, 2012; Anderson et al. 2014).

The development of the causal network and the visualisation of how variables impact each other further enhances the understanding of the innovation process. The causal model

adds to the existing body of research on new product development by showing causal relationships between variables.

- The model highlights how having senior management sponsorship leads to clearer development of vision.
- A clear vision drives better communication, higher team motivation and faster implementation.
- Good communication positively impacts team motivation and collaboration and speeds up the implementation process.
- Product strategy is influenced positively by the quality of market research, competitive bench marking and open innovation.
- Product strategy, communication and fast decision making have an impact on the innovation process.
- Additionally, prioritisation and governance, platform strategy and pressure for speed to market impact the minimum viable product.

The model uniquely brings together the variables across the end to end process. The findings align with previous literature that researches separate components of the model or highlights variables but they don't bring together causal relationships between variables.

For instance, the literature on agile leadership highlights importance of factors such has leadership unity which ties to senior leader sponsorship (Doz and Kosen, 2010) and Joiner and Joseph's agile leadership theory highlights the importance of context setting agility to provide a clear vision and tactical direction for the team.

Research on cross functional teams points out some climate factors for success such as having a clear vision and organisational context. Additionally the importance of communication and the selection of the right teams is highlighted (Holland et al., 2000; McDonough III, 2000).

Research on creativity looks at the interaction between the individual, group and the organisation and individual factors that impact person's creativity including the importance of creative environment (Amabile, 1983; Bledow et al. 2009; Unsworth & Clegg 2010). Customer centric innovation models highlight the importance of grounding the product strategy in strong customer insight and user centred innovation frameworks such as agile, design thinking and lean start up are recommended (Brown, 2009; Nerur and Balijepally, 2007; Ries, 2011).

As can be seen, the findings of the research further support some existing theories and principles. However, these theories are fragmented and do not provide a process oriented understanding that show how the process unfolds over time. The study, starts to address this need by bringing together all elements of the process into one causal model.

The methodology further contributes to process studies on innovation. The critical realism stance allows for the search of local causality through qualitative research. The use of quotes to build causality adds depth to understanding of processes.

The thick description of cases demonstrates how strategy unfolds over time contributes to the field of process oriented new product development studies and in line with strategy as a practice, highlights some important tools used to enhance the new product development process such as agile technology process, lean product development and design thinking.

5.4.3 Limitations and Future Research

The current research has a number of limitations. Firstly, only select theories across leadership, cross functional teams and creativity and innovation were explored in detail. In the area of creativity and innovation, the research excluded extensive analysis of the fuzzy front end of innovation (how ideas get selected into the innovation process) and only focused on selected creativity and innovation theories that were believed to be most suited to the research. In the area of leadership and cross-functional teams, the entire area of management research was excluded from the literature review. Selected theories on leadership and cross-functional teams that were most aligned with innovation were evaluated in detail. The research does not provide detailed understanding of culture and impact of organisation climate. Studies focused on innovation culture and organisational structure could be a topic for future research. Other topics that warrant future research is further evolution of the innovation leadership theory and combination of transformational leadership and agile leadership into a theory of innovation leadership. There is also an opportunity to study how to develop innovation leaders across an organisation. Additionally, the topic of measurement of innovation represents an opportunity for future research. Finally, more research can be done of the holistic innovation ecosystem in financial services and its evolution in hyper competitive world and compare that to other industries that have gone through disruptive transformation earlier, such as the telecommunications industry.

There are some limitations with the methodology. Firstly, given the small sample size and single company being studied it is limited in its generalisability. There are a number of contributing factors to this such as the fact that only four cases were studied;

The research was conducted within one financial services organisation and it focused purely on the US market. However, given the rich description of the environment transferability could be applied to organisations going through similar changes. Hence, it is recommended that learnings should be tested with other financial services firms and beyond. Future research could cover more than one firm and blend quantitative methods with qualitative methods for richer insights. For instance, there is an opportunity to measure the impact of each of the variables on performance.

Because of the time laps between interviews and the product launches there could be a reporting bias with how respondents remember events. Additionally, the number of interviews and length of interview time also contributes to a potential reporting bias. Further to this, there was also unevenness in terms of volume of responses around different topics based on seniority. The impact of these were minimized through triangulation with other data. There is an opportunity to conduct more action based, real time research on the processes.

Moreover, researcher bias may have occurred, as the researcher was personally involved in all the case studies. The research process and research results take a subjectivist stance and is a mix of deductive and inductive approach. Grounding the research in prior literature influenced the shape of the research questions and the personal views of the interviewer could have had an impact. As the researcher was also the interviewer and worked at the company studied, the data could have been influenced in the way questions were asked or the responses were interpreted. Additionally, given that the researcher also completed the coding and analysis there is the possibility of an error of interpretation. While, objectivity was maintained in the selection of cases and candidates,

convenience also played a role in selecting teams that were based in the NYC area. Furthermore, the research was conducted over a period of time, and therefore other changes may have occurred in the organisation that impacted the findings.

There is tremendous power in bringing together academia and industry to expedite innovation research and the creation of frameworks, leveraging a number of the lean and agile approaches described in this thesis. Co-creation of theory development, validation of models through rapid prototyping with the industry and customers and a quick feedback loop, leveraging industry experts and academia are all tools that could be applied in the future development of the current research.

5.4.4 My Evolution Through the Process

I started this research in 2010 while working in the financial services industry in London. At that time, I realised that innovation is paramount for the industry to remain relevant to customers. I was lucky to expand my role to NYC and be at the forefront of the digital transformation of the organisation studied, experiencing the transformational journey described in the case studies. During the research, market competition intensified and new non-traditional organisations emerged. This resulted in new literature being published that influenced my thinking and approach throughout the research. The journey of writing the thesis has been an iterative one, as my thought process evolved and ideas became crisper by bringing together theory and practice.

Today, I lead a customer and innovation function for one of the biggest global banks and am implementing a number of elements of the model into practice on a daily basis. Digital transformation and innovation in large organisations is a complex, non-linear

and multi-disciplinary process; using the case study method to bring to life these findings will further advance the thinking that the industry can apply in practice.

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7. Appendices

7.1 Appendix A): Email Permission for Pilot Study

Dear [potential participant name].

My name is Sigga Sigurdardottir and I am a [job title] in [division].

I'm contacting you as part of my Doctoral Research at Manchester Business School. My thesis is on leadership and innovation. [Senior leader] has agreed to use [division] as part of my pilot study I would like to interview the team responsible for the [project launch]. The format will be an interview focused on the project and on the critical success factors. I will be particularly interested in the leadership of the team, how it worked together and the key innovation driven in the market. I would like to tape the interview with your permission. The interviews will be anonymous and no information can be personally identifiable. Additionally, you have the right to pull out of the process at any time during the research.

The interview should take no more than 45 minutes. I would like to set up an interview with you in the next couple of weeks, depending upon your availability. Would you be available at [time], [time], any day next week for us to talk?

Looking forward to speaking with you.

Kind regards,

7.2 Appendix B): Email Permission for Primary Study

Dear [potential participant name].

My name is Sigga Sigurdardottir and I am a [job title] in [division].

I am contacting you as part of my Doctoral Research at Manchester Business School. My thesis is on how to effectively lead cross-functional teams to drive successful new product development and I am looking to conduct it within [divison]. [Senior leader], public affairs and HR have agreed to the study. I am looking to review the launch of four products within [division] as a part of my study - Launch of Case 1, Case 2, Case 3 and Case 4. Given your involvement in [case] and [case], I would really like to interview you as a part of the process. The format will be a one on one interview, focused on the project, along with critical success factors and learnings. I will be particularly interested in the leadership of the team, cross-functional team, new product development process and how the performance is measured. I would like to tape the interview with your permission. The interviews will be anonymous and no information can be personally identifiable. Additionally, you have the right to pull out of the process at any time during the research.

The interview should take no more than an hour. If you are ok with participating in this project, my assistant will get in touch in the next few days to ascertain a specific time of your convenience.

Looking forward to hearing from you.

Kind regards

7.3 Appendix C): Interview Guide for Pilot Study

OUTLINE – DISCUSSION GUIDE	
Overall project	Tell me what you think were some of the critical success factors of the project?
Leadership/ management	Can you tell me about some of the critical leadership success factors? Describe how the vision for the team was set? Tell me about how decisions were made? How did you manage conflict? Did you encounter any roadblocks and how did you manage? How were key processes managed? Can you talk about the leadership of the project and how it relates to the output of an innovative business result?
Organisational/ team structure	How was the team put together? Was there certain expertise in the team you looked for to make it successful? What worked well with the team? How did you build trust? How did you ensure you collaborated? How did you communicate? How did you ensure you drove results?
Innovation	How did the innovation strategy derive? What was the innovation process? How did you manage the idea creation? How did you ensure the innovation would be competitive in the market place? Did you involve the external customer for input ideas? How was it managed?
Project management	What do you think were some of the key success factors around the project management?

	How did you move from idea generation to driving successful product implementation out in the market?
Criteria for success	How did you set goals? What were the key objectives and criteria for success? Can you talk about what the key success measures of the project, not in any specific details but how you measure success or failure? – is it BB, being first in market, etc.

7.4 Appendix D): Interview Guide for Primary Study

- Leadership

Question 1: What type of leadership style/s and behaviours are suited to drive successful new product development?

Probes:

Leader	**Team**
What overall vision did you set the team?	What overall vision were set the team?
What were the key goals? Did you have learning goals as part of process?	What were the key goals? Did you have learning goals as part of process?
How was the opportunity identified for this new product launch?	How was the opportunity identified for this new product launch?
How were roles and responsibilities set for the team?	How were responsibilities set for the team?
How important was Sr. leader sponsorship?	How important was Sr. leader sponsorship
How much day to day involvement did you have in leading the project?	How much day to day involvement did the project sponsor have in leading the project?
From a leadership perspective what worked really well and what would you have liked to seen done differently?	From a leadership perspective what worked really well and what would you have liked to seen done differently?
How were small wins celebrated and recognised throughout the project - how important was this?	How were small wins celebrated and recognised throughout the project - how important was this?
How were barriers removed and how important was this	How were barriers removed and how important was this

- Cross-Functional Teams

Question 2: What are the key success factors in the composition and set up of cross-functional teams to drive successful new product development?

Probes:

Leader	**Team**
How did you put the team together? What factors were most important?	How was the team put together? What factors were most important?
How were goals and performance metrics set for the team? How were they managed throughout the project?	How were goals and performances metrics set for the team? How were they managed throughout the project?
What did you do to ensure the team worked together? What was the most critical piece around making sure there was good team work?	How well did the team work together? What was the most critical piece around the team working together?
How did the team communicate and how effective was this?	How did the team communicate and how effective was this?
Can you think of one thing that worked really well and one thing that could have been done better in terms of teamwork?	Can you think of one thing that worked really well and one thing that could have been done better in terms of teamwork?

- Product Strategy/ Innovation Process

Question 3: What are the key factors that drive successful new product development process?

Probes:

Leader	**Team**
How did the new product idea come about?	How did the new product idea come about?
What were the critical success factors in developing a competitive value proposition?	What were the critical success factors in developing a competitive value proposition?
How important was customer research? Can you give example of how it was used	How important was customer research? Can you give example of how it was used?
How important was competitive analysis in developing a competitive value proposition?	How important was competitive analysis in developing a competitive value proposition?
Did you involve potential customers in the new product development process? If so, how?	Did you involve potential customers in the new product development process? If so, how?
How important was involvement of third parties? Can you give example of how they were involved throughout the new product development process?	How important was involvement of third parties? Can you give example of how they were involved throughout the new product development process?
What role did new technology play in the NPD process?	What role did new technology play in the NPD process?
How much of a role did previous product launches play in the development of this new product?	C How much of a role did previous product launches play in the development of this new product?
Can you think of one thing that worked really well in the new product development process and one thing that could have been done better?	Can you think of one thing that worked really well in the new product development process and one thing that could have been done better?

- Performance

Question 4: What are the key measures of success that drove successful new product development?

Probes:

Leader	**Team**
What were the key measures of success?	What were the key measures of success?
What role did marketing/marketing investment play in the success of the product? How much $$ was invested in the launch?	What role did marketing/marketing investment play in the success of the product? How much $$ was invested in the launch?

How important were these below metrics:
• Financial Performance
• Market leading product:
  ○ External/ market recognition
  ○ The company recognition
• Net promoter score
	How important were these below metrics:
	• Financial Performance
	• Market leading product
	  ○ External/ market recognition
	  ○ the company recognition
	• Net promoter score

How were they measured?	How were they measured?

7.5 Appendix E): Word Frequency Analysis by Key Theme

Leadership		**Cross-Functional Team**		**Product Strategy**		**Innovation Process**		**Performance**	
Business	108	people	264	product	223	launch	141	new	81
different	85	team	170	need	117	process	42	success	39
big	65	teams	48	customer	114	development	40	months	32
clear	64	cross	22	research	74	launched	40	measure	27
perspective	64	functional	22	market	72	design	33	metrics	27
leadership	55	resources	21	customers	69	level	33	target	23
important	49	view	19	better	53	agile	32	launching	22
successful	49	role	17	consumer	44	experience	26	understanding	19
focus	48	environment	14	needs	40	build	25	engagement	17
organisation	44	talent	13	products	35	technology	24	try	17
change	42	support	12	innovation	31	tech	17	results	15
company	34	collaboration	10	Partner name	30	week	14	learn	14
vision	33	communications	8	competitive	25	building	13	users	13
communication	22	discussion	8	features	25	structure	13	feedback	12
decisions	22	excited	8	partner	25	meetings	11	financial	12
direction	19	staff	7	partners	25	quality	11	pivot	12
goals	18	motivated	6	driven	24	launches	10	weeks	12
leaders	18	sharing	6	digital	23	capabilities	10	projects	10
plan	18	conversation	6	opportunity	22	capability	10	fast	9
believe	18	dedicated	6	idea	21	functionality	10	faster	9
drive	18	happy	6	proposition	21	compliance	9	impact	9

culture	17	informal	6	data	20	created	8	learnings	9
problem	17	informed	6	open	18	delivering	7	achieve	8
Leader	17	legal	6	consumers	17	developing	7	learned	8
mission	16	momentum	6	ideas	14	monthly	6	measures	8
management	14	roles	6	competitors	12	weekly	6	numbers	8
senior	14	execute	5	insights	13	committee	6	testing	8
challenge	12	responsibilities	5	partnerships	12	develop	6	accounts	7
create	12	reward	5	partnership	11	scrum	6	learning	7
challenges	11	understood	5	changing	11	solutions	6	rewards	7
clearly	11	updates	5	external	10	sprint	5	profitability	6
leader	11	conversations	5	problems	9	dates	5	result	6
goal	10	alignment	5	solving	9	governance	5	revenue	6
issues	10	collaborative	4	answer	8	opportunities	5	speed	6
focusing	9	influence	4	competition	8	operational	5	volume	6
belief	9	recognition	4	competitor	8	path	5	fail	6
board	9	relationships	4	insight	7	programmes	5	fix	6
strategy	9	skill	4	solution	7	stage	5	fixed	6
challenging	8	speaking	4	solve	7	steps	5	growth	5
decision	8	training	4	innovative	6	technical	5	cost	5
leading	8	manager	4	audience	6	operation	4	deliver	5
willingness	8	ambiguity	3	demand	6	plans	4	driving	5
behaviour	7	communicated	3	interest	6	constraints	4	measurement	5
issue	7	confusion	3	innovate	5	framework	4	progress	5
listening	7			verizon	5	operations	4	tracking	5
organisational	7			compare	5	prioritisation	4	costs	4
organisations	7			panel	5	prioritise	4	evolution	4
performance	7			resonate	5	processes	4	metric	4
stakeholders	7			defined	5	production	4	mistakes	4
investment	6			definition	5	steering	4	quick	4
relationship	6			benefits	4	daily	4	reporting	4
clarity	6			feature	4	defects	4	improve	4
creating	6			fees	4	pushed	4	knowledge	4
expectations	6			industry	4	pushing	4	accomplish	4
lead	6			retailers	4	techdebt	4		
commitment	5			developed	4	checkpoints	3		
confidence	5			externally	4				
future	5			identify	4				
objective	5			markets	4				
objectives	5			start-up	4				

realistic	5			targeting	4				
style	5			planning	4				
visionary	5			models	4				
difficult	5								
journey	5								
ceo	4								
chairman	4								
effective	4								
empowering	4								
flexibility	4								
invest	4								
stakeholder	4								
strategic	4								
succeed	4								
unclear	4								
unified	4								
agree	4								
approval	4								
behaviours	4								
believed	4								
hardest	4								
barrier	3								
breaking	3								
celebrate	3								

7.6 Appendix F) Summary of Interviewees Primary Study:

a) Digital Wallet:

Function	Leadership hirarchy	Age	Geneder	Tenure in Industry	Years in Company	Years in division
Marketing	Junior Management	43	Female	17	16	5
Product	Middle Management	46	Male	16	5	5
Product	Middle Management	51	Female	28	14	4
HR	Middle Management	36	Male	19	7	4
Strategy	Middle Management	34	Female	11	4	4
Product	Middle Management	41	Male	15	15	5
HR	Senior Management	38	Male	10	4	4
Strategy	Senior Management	39	Female	20	15	5
Averages		41	50% Male/ 50% Female	17.0	10.0	4.5

b) Pre-paid:

Function	Leadership hirarchy	Age	Geneder	Tenure in Industry	Years in Company	Years in division
Marketing	Junior Management	41	Male	15	6	5
Research	Junior Management	37	Female	17	8	4
Product	Middle Management	32	Female	13	10	5
Product	Middle Management	46	Male	16	5	5
Product	Middle Management	51	Female	28	14	4
Product	Middle Management	33	Female	13	9	5
HR	Middle Management	36	Male	19	7	4
Product	Middle Management	41	Male	15	15	5
HR	Senior Management	38	Male	10	4	4
Division Head	Senior Management	44	Male	22	14	5
Averages		39.9	60% Male/ 40% Female	16.8	9.2	4.6

c) Bank 2.0:

Function	Leadership hirarchy	Age	Geneder	Tenure in Industry	Years in Company	Years in division
Marketing	Junior Management	41	Male	15	6	5
Research	Junior Management	37	Female	17	8	4
Product	Middle Management	46	Male	16	5	5
Product	Middle Management	51	Female	28	14	4
Product	Middle Management	33	Female	13	9	5
HR	Middle Management	36	Male	19	7	4
Strategy	Middle Management	34	Female	11	4	4
Product	Middle Management	41	Male	15	15	5
HR	Senior Management	38	Male	10	4	4
Division Head	Senior Management	44	Male	22	14	5
Strategy	Senior Management	39	Female	20	15	5
Customer Experience	Senior Management	35	Male	17	13	3
Averages		39.6	Male 58%/ Female 42%	16.9	9.5	4.4

d) Bank-like Pre-Paid:

Function	Leadership hirarchy	Age	Geneder	Tenure in Industry	Years in Company	Years in division
Marketing	Junior Management	33	Female	9	9	3
Marketing	Junior Management	35	Male	13	12	3
Marketing	Junior Management	43	Female	17	16	5
Product	Middle Management	32	Female	13	10	5
Customer Service	Middle Management	40	Female	13	4	2
Product	Middle Management	46	Male	16	5	5
Product	Middle Management	51	Female	28	14	4
Product	Middle Management	33	Female	13	9	5
Product	Middle Management	41	Male	15	15	5
Technology	Senior Management	47	Female	21	2	2
Strategy	Senior Management	39	Female	20	15	5
Customer Experience	Senior Management	35	Male	17	13	3
Averages		39.6	33% Male/ 67% Female	16.3	10.3	3.9