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**Influencing the Front-End of Innovation: A Study of Resource
Challenges in the Banking Sector**

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Abstract

Title: Influencing the Front-End of Innovation: A Study of Resource Challenges in The Banking Sector

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Keywords: Resources, Resource challenges, Resource scarcity, Front-end of innovation, New Service Development

Research Question: How do resource challenges influence the front-end of innovation in the banking industry?

Methodology: An inductive approach, with deductive elements as well, was used within this case study. Semi-structured interviews were the main method of data collection, and the qualitative data analysis was done in line with Gioia *et al.* (2012).

Theoretical Perspectives: In terms of epistemology, an interpretivist approach was utilised to allow for the potentially subjective nature of the data to be considered. The ontological considerations of this paper are centred around constructionism.

Conclusions: The resource challenges - in terms of type, level and flexibility - within the case company influence several different constraints; Poor Cross-Functional Collaboration; Lack of Engagement; Limited Dynamic Development; Lack of an Efficient Structure; and Unsupportive Front-End Strategy. This study goes into a new level of depth, previously unexplored in related literature. The constraints identified can have negative effects on the output of the front-end and have various relationships with each other. These constraints can also lead to a change in working practices to mitigate their effects. The Resource Challenges Model provides a visualisation of the study's findings.

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Chapter 1: Introduction

1.1- Background

In the past, and present, organisations have to constantly adjust, adapt and redefine themselves (Kuratko *et al.* 2011). With the global economy facing its most demanding time in 60 years, it is important for all companies to introduce new offerings and grow (Trotter and Vaughan, 2012), as they cannot rely on past successes. This can be achieved through innovation and the new combination of resources. Innovation is the ability to create and build a vision from practically nothing (Kuratko *et al.* 2011). This research interprets the innovation process to involve identifying opportunities, transforming them into defined concepts and commercialising them (Tidd and Bessant, 2014). However, the process of innovation itself is not easy and is open to many interpretations. The rate of failure- failing to reach commercialisation objectives established by the business unit that launched the product/service (Castellion and Markham, 2012), has been estimated at around 90%, therefore a need for organisations to manage this process effectively is significant, giving their innovations the best chance of succeeding (Trotter and Vaughan, 2012).

New concept development (typically in the form of a new product, service or process) is the vehicle typically used to manage innovation- also known as a stage-gate model (Koen *et al.* 2001). This stage-gate model is highly formal within organisations, although it can vary drastically- in a study of 49 organisations all of them had differently structured processes (Leithold *et al.* 2015). One of the most widely recognised models for new product/process development is the stage-gate model developed by Cooper and Kleinschmidt (1986). This model works through 13 gates, with a “go” or “no-go” decision at each gate, where the idea can proceed through the gate as it is, with alterations, be terminated, or be made to further develop its case. The gates work up from an initial screening where it is decided certain amounts of effort and resources will be devoted to exploring the potential of an idea, ending at the product launch. The after-launch optimisation/management of a new concept may be managed in similar ways, however, is considered to be a distinct phase with separate structures (Gremyr *et al.* 2014). Yet despite this highly developed and understood model, new innovations continue to fail at a rate of 90%. If this model works then why do products that eventually fail still make it so far through the stage-gate process?

The success rate of new innovations will never be 100% - partly due to the internal and external environment constantly changing (Tidd and Bessant, 2014), meaning work completed at the beginning of a project may be made redundant by the time of launch. One less developed area to examine is the front-end development of innovation. The front-end is the area ideas are created and developed into more explicit product concepts and definitions in order for the more formal development process can begin with the initial “go” or “no-go” decision (Florén and Frishammar, 2012). The front-end development process is made up of several different informal activities e.g. assessment of strategic fit and producing an evidence generation plan (Trotter, 2011). These activities on their own can be mistaken for the process itself, nonetheless, it is the synthesis between all of these activities that produces the intended outcome of innovation (Koen *et al.* 2001). The management of this front-end of innovation (FEI) is argued to have an important impact on the overall performance of new product/process development. The effectiveness at managing this process can be significant enough to constitute a core competency to sustain a competitive advantage (Kim and Wilemon, 2002). It is common for organisations to align all the basic elements comprising an organisation, such as their offerings, strategies, structures and processes to achieve a level of innovation agreeable and to then supplement these with management styles that recognise these relationships (Otero-Neira *et al.* 2009). By implementing a front-end development process, management system taking into account these factors, performance in terms of innovation, should by extension increase. It is at these early stages consequences of decisions will be highest whilst the amount of knowledge and certainty will be at their lowest (Williams and Samset, 2010).

One of the main indicators of how well a company will be able to work with front-end development is the characteristics of the resources involved at this stage. The commitment of resources as well as the flexibility of these resources are key (McKinney, 2016). This flexibility of resources concerns the speed and efficiency these resources can be accessed, as well as the discretion to have a level of autonomy on how these resources will be used (Trotter, 2011). Previous studies have been contradictory in the challenges that the amount of resources may pose to innovation. For example, resource scarcity can lead to higher levels of creativity (in SMEs) and therefore innovation. However, it can also constrain the exploration of opportunities (Woschke *et al.* 2017). Therefore, a more holistic view of resources within the front-end should be considered in order to gain a deeper understanding; including their type, level and flexibility of resources.

1.2- Problem Discussion

Organisations have implemented stage-gate processes hoping it will help them aid new successful products to the market, however many projects tend to fail and evidence can be traced back to the FEI (Florén and Frishammar, 2012). It is highlighted by Florén and Frishammar (2012) this early stage is related to success of new products too. However, it has been documented the FEI entails much uncertainty, lack of vision and lack of proper organisation (Khurana and Rosenthal, 1998). Koen et al. (2014) also states top management commitment is essential for front-end success, to support, create a clear vision and allocate resources. Without this backing, the FEI can face severe challenges to produce quality output. Furthermore, this process needs to be managed and controlled in a way that ensures optimal performance, with Khurana and Rosenthal (1998) finding one significant challenge is the late arrival of new concepts to market due to the concept constantly being modified. However, this control should not be too stifling as to dissuade creativity and innovation (Poskela and Martinsuo, 2009). A balance must be struck between stringent screening and evaluation of ideas as they develop and ensuring momentum of the development is maintained, both for motivation of the development team and to ensure efficient and effective delivery (Kim and Wilemon, 2002). The inherent uncertainty throughout the FEI, especially at the beginning, means the process has to be very iterative with decisions and assumptions constantly being reassessed as new information is acquired. This uncertainty can be in the form of the development team not having a clear vision of the development path to follow, or in the form of a well-defined concept being uncertain as to whether it will be profitable/in-line with an organisation's strategy (Zhang and Doll, 2001). This can require clear communication throughout the whole organisation and a level of openness that values many different sources of information as well as differing perspectives (Herstatt *et al.* 2004). These general challenges relate to why the FEI is the weakest stage in entire innovation process, nonetheless, the actions and decisions made at this stage highly influences success of the whole innovation process (Koen *et al.* 2001)

Koen *et al.* (2014) stated a key organisational attribute for success at the FEI is the importance of having sufficient amount of resources at this stage. Saulina and Ukko (2014) define resources as tangible (finances, materials and employees) and intangible (Skills and capabilities). Bell *et al.* (2013) adds to this by stating "Resources can be financial; physical (e.g. plant, equipment, raw materials); legal (e.g. trademarks, licenses and patents); human (e.g. the skills and knowledge of a firm's employees); organisational (e.g. competences- being the

collective knowledge of the company as a whole, controls, policies, culture); informational (e.g. knowledge from customer and competitive intelligence); and relational (e.g. social capital stemming from relationships with suppliers and customers)", from a resource advantage approach view. Koen *et al.* (2014) only defines resources as funding in the front-end. Furthermore, McKinney (2016) includes people, time and equipment in resources, relating to the necessary ingredients for innovation to thrive. Therefore, the definition of resources related to this study are derived from a combination of Bell *et al.* (2013) and McKinney (2016); financial, human, organisational and time.

Koen *et al.* (2014) stated successful companies at the FEI allocate sufficient resources to support exploration of new ideas, development and definition. However, there is some debate whether the idea must fit to the resource capabilities already available, rather than the other way around (Rosenthal and Khurana, 1997). Kim and Wilemon (2002) realised most companies are reluctant to commit resources to the FEI, due to uncertainty and fuzziness involved, so how can new ideas be supported? Florén and Frishammar (2012) identified top management have an influence in allocating resources and experienced sponsors can access resources more easily, however if they are not involved at the front-end, what resources can only be accessed? Trotter (2011) Found the factor posed as the most disruptive barrier for transformational innovation was a lack of resources. There are many studies related to a lack of resources; also termed as resource scarcity (Woschke *et al.* 2017; Laforet and Tann, 2006; Burg *et al.* 2012; Newbert, 2008; Madrid-Guijarro *et al.* 2016), however none relate to the FEI.

Therefore, resources have been highlighted as a key attribute to success at the front-end (Koen *et al.* 2014) and a lack of resources are seen as a constraint (Trotter, 2011). Despite these distinct findings, no studies have researched deeper to understand how challenges posed by resources influence the FEI, both from a management and an employee perspective.

1.3- Research Purpose

The purpose of this study is to contribute to literature on the FEI, by developing a deeper insight on resources, which is limited in this area. The case company studied has a pool of resources shared by the whole organisation. There are resources in the individual markets, however vary depending on which country they are in. Therefore, this study aims to understand how resource challenges (type, level and flexibility) influence the FEI in a positive or negative manner. This topic could not be identified in the current literature in the FEI; therefore, it is clear there is a gap for this study to contribute to. Previous studies have only identified resources as key for innovation, however, no study has taken this further with the FEI. Resources have been studied in general innovation literature and it would be interesting to apply this to area to the FEI to see what challenges are posed from them and how they influence this stage. Additionally, as the banking sector primarily provide services, there has been studies in the front-end of new service development, however none related to resources, only focusing on customer involvement (Alam, 2005) and also how new service development program can be managed (Alam and Perry, 2002). Nonetheless, none of these refer to resources, making this the first study to look into this industry on this specific topic. By concentrating on this key aspect of the FEI, allows fruitful insight to be obtained and to recommend managerial implications on this specific area, which is an integral part for FEI success (Koen *et al.* 2014).

The banking sector is of interest as it has become increasingly competitive since the financial crisis in 2007-08, intensifying regulations, new standards and the introduction of financial technologies (Fin Techs) looking for innovative solutions (Romanova and Kudinska, 2016). The disruptive changes with information and technology enabling banks to serve customers in an unconventional way, via Internet and smartphones has also changed the banking landscape (Martovoy and Mention, 2016). With traditional banks losing parts of their market share (Romanova and Kudinska, 2016), it is key they look into how to stay competitive and reconsider how they do business (Martovoy and Mention, 2016), which is why the FEI is an integral part of this outcome. However, even for large banking organisations, it is increasingly difficult to invest in new projects, as the majority of resource capabilities are needed to keep up with regulation and compliance. The purpose of this study is also to shed light on this unique industry, which is highly competitive and is crucial to invest in new projects- incremental or radical. This study will also have input in realising how resource challenges influence idea generation and development, which can potentially interfere with keeping up with new and existing competition that is ever increasing.

1.4- Research Question

It can be identified there is a gap to be filled in the literature, to provide fuller explanation between the relationship of the FEI and resources. After taking into account observations and informal interviews within the case company, a specific problem was identified:

How do resource challenges influence the front-end of innovation in the banking industry?

Our initial understanding of the related outcomes is the challenging state of resources will pose a number of constraints and therefore influence this stage; through quality and time at the front-end, certain conditions or structures to be altered, as well as potentially, other key factors, such as what techniques are used to deal with these constraints. It is not simply the level of resources that will be looked at. Warnier *et al.* (2013) found that a consideration for the type of resource be taken into account; some resources may have much higher strategic value than others and also the finding that some resources may constitute a “strategic liability” weakening the position of the organisation. This study will also consider the flexibility or accessibility of these resources as explained by Trotter (2011). This refers not only to the amount of resources available, but also the speed and efficiency by which these resources can be accessed and utilised without constraint. This study will be looked at in the perspective of management involved in the early stages and employees who have carried out projects at this stage too, to clarify the challenges faced and the influence this has on the FEI. This will provide hands on experience and fuller insight between the FEI and resources. There was an even divide between the two perspectives, also taking into account the views from the individual country markets, whom three employees have submitted ideas from (the other two submitted from central), and also from the central headquarters in Sweden, whom were mainly responsible for activities and supporting the front-end rather than playing an active role in carrying an idea through this stage.

This research question is relevant to current literature, as what is known on resources in the front-end is lacking. All that has been identified so far in the literature is that it is key for front-end success, as companies that allocate sufficient resources deem to have successful outcomes (Kim and Wilemon, 2002). It can also be a major barrier (Trotter (2011), as lack of resources are allocated due to uncertainty and lack of organisation at this stage (Koen *et al.* 2001). There is clearly an important relationship between resources and the FEI. This study

aims to further develop and clarify the link between these two fields and how resource challenges influence the FEI.

1.5- Case Company

The organisation, opened for business in 1995 in the south of Sweden, yet operates internationally with 9 offices across Europe. It is involved in the banking industry and services consumers – via loans, mortgages, savings accounts and credit cards - as well as businesses (predominantly in the form of retailers)- via factoring services, leasing and rental options, loyalty cards and store cards. The organisation is currently in a transition phase as it gets accustomed to a recent re-structuring which saw a shift towards centralisation from independent branches of different territories. It is a web-based bank with no traditional brick and mortar contact with its customers. The organisation has around 1200 employees and will therefore be classified as a large firm under the European commission recommendation (European Commission, 2003). This case study is centred around this company and the history it has in operating within the front-end, mainly on past projects and experiences from employees working within the front-end. The organisation itself has no explicit framework or process specifically dealing with parts the front-end. It does, however, have a platform on which employees may submit ideas. This platform was designed to deal with smaller ideas that are more process orientated and involve an investment of less than 1000 working hours. The company, environment and the industry that it works within will be taken into consideration too.

Chapter 2: Literature Review

2.1- The Front-End of Innovation

According to Koen *et al.* (2001), the early stages of innovation poses a significant possibility for improving the overall process of innovation. Two terms have been used related to the front-end of innovation; Fuzzy Front-End (FFE) or Front-End of Innovation (FEI). FFE was first termed by Reinertsen (1999) and has caught on with an array of authors over the years (Reinertsen, 1999; Khurana & Rosenthal, 1998; Kim and Wilemon, 2002; Florén and Frishammar, 2012; Zhang and Doll, 2001; Jou and Yuan, 2016; Stevens, 2014; Christiansen and Gasparin, 2016; Alblas and Jayaram, 2015; Herstatt and Verworn, 2001; Poskela and Martinsuo, 2009). However, Koen *et al.* (2001) suggested this portrays uncertainty, indefinable and unmanageable connotations and in their study, proposed to change this terminology to the FEI. The FEI is the term used throughout this study. Koen *et al.* (2001) does have a point though, as calling it the FFE, projects are ultimately set up to fail due to its lack of clarity and clearness. Nonetheless, the FEI can have a positive impact on the success of new product development, as this stage develops ideas and gives them direction. There seems to be a collective understanding this stage sits between when an idea is first generated, up until its approval or rejection into the formal stage-gate process (Florén and Frishammar, 2012; Koen *et al.* 2001; Kim and Wilemon, 2002; Schweitzer and Gabriel, 2012). However, Khurana & Rosenthal (1998) thought otherwise, stating the FEI is fully covered when the business unit decides to fund and launch the new product concept or decides to stop it. Koen *et al.* (2001) went onto identify there is a continuum between the FEI and New Product Process Development (NPPD), clarifying the differences between each stage. It turns out the characteristics of each are quite different (Table 1); from

the nature of work (chaotic/structured), the uncertainty involved at the FEI to the financial resources available (Variable/budgeted) for each stage.

	Front End of Innovation (FEI)	New Product Process Development (NPPD)
Nature of Work	Experimental, often chaotic. Difficult to plan Eureka moments.	Structured, disciplined and goal-oriented with a project plan.
Commercialization Date	Unpredictable.	Definable.
Funding	Variable. In the beginning phases, many projects may be "bootlegged," while others will need funding to proceed.	Budgeted.
Revenue Expectations	Often uncertain. Sometimes done with a great deal of speculation.	Believable and with increasing certainty, analysis and documentation as the product release date gets closer.
Activity	Both individual and team in areas to minimize risk and optimize potential.	Multi-functional product and/or process development team.

Figure 1: Difference Between FEI and NPPD (Koen *et al.* 2001, pg.47)

2.1.1- The Front-End of New Product Development (NPD)

Moving onto the front-end stage of NPD, Cooper (1988) built a stage-gate process that was divided into four stages from idea generation to concept evaluation. This process was made with a market and technological perspective, as activities are undertaken in parallel and decisions are made by cross-functional teams at each gate (Herstatt and Verworn, 2001). However, Cooper (1996) found a stage-gate process was only successful for incremental innovations, with this formalised approach potentially being counterproductive for more radical innovations (Herstatt and Verworn, 2001). Cooper and Kleinschmidt (1995) later confirmed the front-end of NPD consisted of idea generation, preliminary assessment and concept definition. Nonetheless, other processes have been developed to establish the front-end.

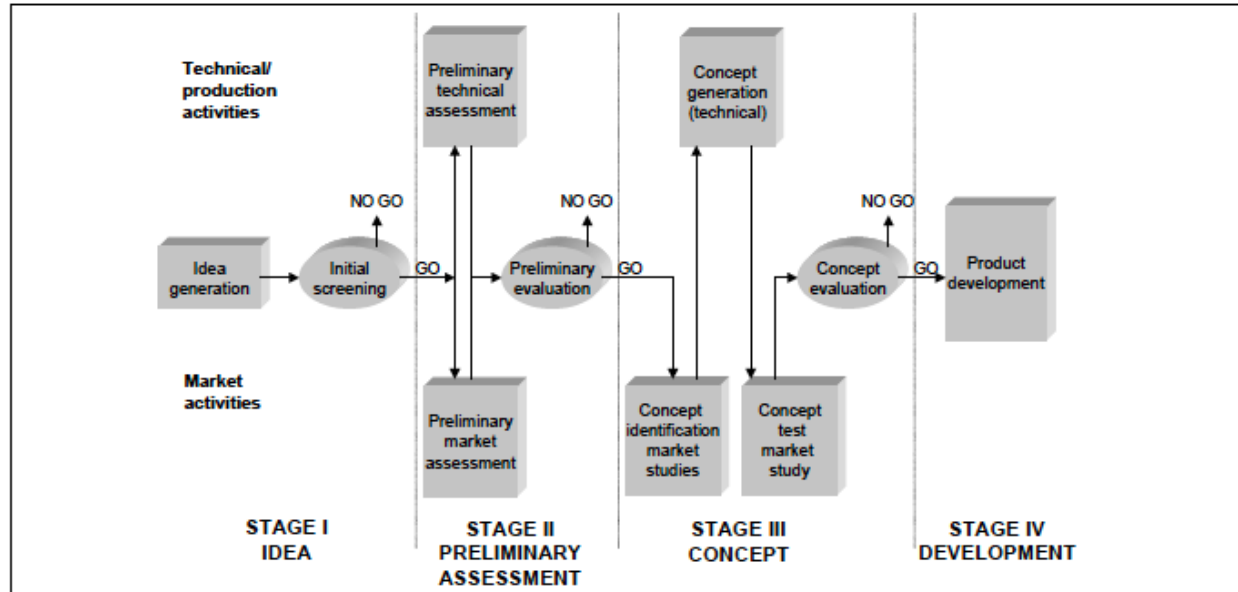


Figure 2: Front-End Stage-gate Process (Cooper, 1988, cited from Herstatt and Verworn, 2001, pg.8)

Khurana and Rosenthal (1998) developed their own and included “product strategy formulation and communication opportunity identification and assessment, idea generation, idea definition, project planning and executive reviews” (Herstatt and Verworn, 2001). According to Herstatt and Verworn (2001), these two models above are effective to structure and visualise front-end activities, seek clarity and have good communication, however, a lack of flexibility in them have been criticised. Therefore, a more flexible approach is more suitable to use.

In more recent years, Florén and Frishammar (2012) realised the importance the FEI has on NPD and went onto explore an integrative framework suitable to the FEI (figure 5). They based this framework off three key activities; idea/concept development, broken down into screening and refinement, idea/concept alignment and idea/concept legitimisation. Refinement deals with the expansion of a new idea, while screening filters out the good from the bad. Alignment refers to the idea being aligned internally, with the product strategy and externally, with the competitive landscape and market changes. Finally, legitimisation consists of the socio-political factors in the company, and highlighting the idea to key stakeholders, so the idea can receive the supportive backing needed from top management to proceed with the right development (Florén and Frishammar, 2012). This framework also identified the important changes when it came to radical innovation; mentioning that radical products create more challenges, noting the considerable differences in time, decision-making and technological uncertainty.

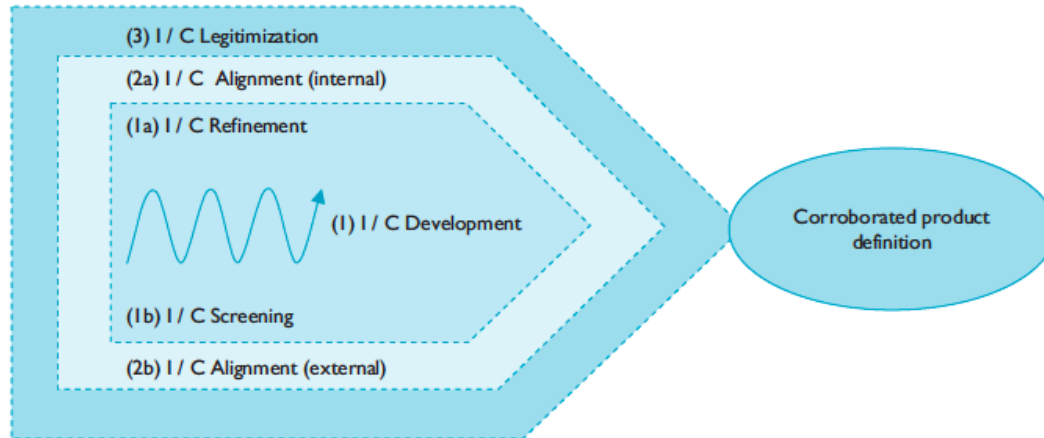


Figure 3: Framework for the Front-end of NPD (Floren and Frishammar, 2012, pg.22)

2.1.2- The Front-End of New Service Development (NSD)

As the study is conducted in the financial sector, where services are provided, it is only right to look at the current NSD literature. NSD has grown into a strategic imperative for service firms (Alam, 2005). Most of the front-end literature has focused on NPD, however it does not incorporate the different dimensions related to services (de Brentani, 1989), which include intangibility, heterogeneity, perishability and inseparability. It is believed these dimensions could affect new service innovations of service firms (Alam, 2005). From Alam and Perry (2002), it was identified the front-end of NSD contained idea generation, idea screening and concept development. Another iteration of the front-end of NSD came from Tatikonda and Zeithaml (2002), as they identified different criteria at this stage, which consisted of strategic positioning, idea generation and concept development. However, it could be suggested there are overlaps with Alam and Perry (2002). The first two stages are almost identical, as it could be said due to Alam and Perry (2002) conducting their study the financial sector, management in this sector pay more attention to idea screening. Additionally, Alam and Perry (2002) go on to state idea screening can be due to the amount of ideas being generated for service firms, to get rid of weak ideas. Tatikonda and Zeithaml (2002) briefly mentioned screening and refining ideas in their concept development stage, to create a more focused service concept, which could relate to this point made by Alam and Perry (2002).

Out of all the research conducted at the front-end of NSD, the main focus has been on idea generation, with little attention going to the other stages (Alam, 2005). Nonetheless, much attention has been put on this stage due to its importance of starting off the innovation process, mainly revolving around sources of ideas and idea generation techniques (Alam, 2005). For example, Alam (2005) found customer interactions at all three stages at the front-end have positive influences for service success. Love *et al.* (2011) also found openness at the FEI can reduce the fuzziness this stage includes, as the early stages can benefit from an open and collaborative innovation strategy for idea generation and development. Furthermore, Magnusson (2009) established the role ordinary users and lead users have on ideation at the front-end of new product and service development, finding ordinary users can contribute by allowing an organisation to learn about their needs and acts as an inspiration to innovate, with lead users contributing more to radical innovations.

2.1.3- New Concept Development (NCD) Model

The NCD Model (figure 6) was created by Koen *et al.* (2001), to enhance the understanding and create a common language at the FEI. The model consists of three key parts; the inner area defines the key elements essential for the FEI- ideas genesis, ideas selection, opportunity analysis, opportunity identification and concept and technology development; the middle drives the front-end elements, also known as the engine- which is stimulated by leadership and culture of the organisation; and the outer, defining the external factors/environment affecting the front-end including organisational capabilities, business strategy, competitive factors, organisational capabilities and the maturity of technologies to be employed (Koen *et al.* 2001).

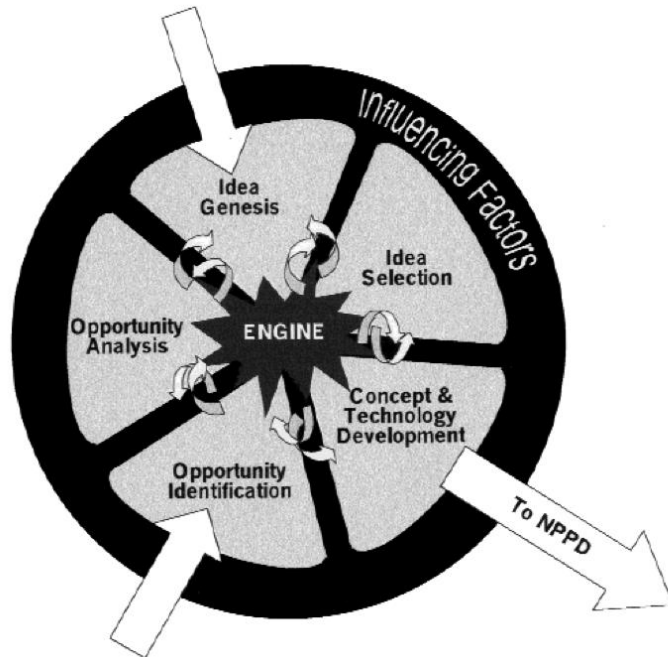


Figure 4: NCD Model (Koen et al. 2001, pg.47)

Koen *et al.* (2014) further developed this model, by focusing on the engine, identifying attributes key for front-end success. This was part of a three-year study, including 197 large US based companies, suggesting it has high reliability and validity. The results identified key attributes in senior management commitment: involvement at the FEI, vision: the direction for future products, strategy: the alignment with the vision and a sufficient roadmap for investing in incremental and radical innovations, resources: sufficient funds are available at this stage, culture- behaviours, attitudes and feeling in an organisation, effective teams: employees enjoy their job and spend time beyond job requirements and are fully committed to front-end projects. Kuratko *et al.* (2011) also implies characteristics of an entrepreneurial individual is commitment/perseverance/determination, team leadership: leaders have credibility and experience, and communities of practice: the organisation supports communities of practice with a budget and a coordinator (Koen *et al.* 2014). The behaviours included in these key attributes ultimately lead to a culture fostering innovation in the FEI. As culture is such an important aspect of innovation, it is key to give autonomy to employees, allowing employees to get better at their work and giving them a feeling of purpose in their job (Koen *et al.* 2014).

2.2- Types of Resources

McKinney (2016) develops on the need to commit to investment in innovation and many companies may be likely to invest when they have an excess of resources and convenient to do so. However, this commitment must be translated into an embedded pledge to invest even when budgets are tight as it may be tempting to concentrate on present initiatives. Resources, however, is not a uniform term. There are different types which may prove to be more easily managed or perhaps more effective than others. There has been an evolution in terms of the research into types of resource. Koen *et al.* (2001) starts with their offering that resources in general should be dedicated to different activities in the front-end. McKinney (2016) then goes on to discuss the resources themselves as opposed to their purpose and, like many other researchers, simply chose to categorise resources in 4 classes; people, time, money and equipment. The people are an organisation's greatest asset and in order to prioritise innovation, people need to be involved; top performing employees involved, however these are usually saved for more important tasks, which is unfortunate (McKinney, 2016). Time sometimes is not classified as a resource, as time is always scarce, however if an organisation is dedicated to innovation, time is usually put aside to do so. Of course, funds are needed to be able to bring ideas to reality and tangible resources are needed to test and carry out innovative activities (McKinney, 2016). This classification is useful where resources are to be analysed fully - as this research will do - as a simple method for identifying what can constitute a resource. Some authors have also considered how restricted the use of different types of resources may be; or their level of stickiness (Woschke *et al.* 2017). For instance, financial resources may be applied to a variety of different areas for different uses, however human resources are said to have a much higher level of stickiness as the expertise and competencies of these employees may be bound to specific activities. This categorisation is perhaps a little too basic so further research has been done in the form of the resource advantage theory (Bell *et al.* 2013). Under the resource advantage theory, which looks at the different characteristics of external and internal resources, as well as tangible and intangible resources, the resources can be categorised more explicitly. In the context of the case company, mainly involved in digital service offerings, these resources can be financial; physical (e.g. IT capacity/server space); legal; human; organisational; informational; and relational (Bell *et al.* 2013). Not all of these resources are finite and will therefore not be subject to control mechanisms. For instance, the strength of a brand with suppliers and customers does not have to be allocated to projects. Furlan *et al.* (2014) dives deeper into the external resources, saying a true entrepreneurial firm is not restricted by its "competitive handicap". In basic terms, it is not constrained by the resources

they currently control. These firms will seek to leverage existing relationships or to establish new ones in order to get access to external resources. This goes hand in hand with Salazar (2017), who explains the value of individual resources being inherently minimal, however, the configuration of these resources, routines and embedded assets produce real value. The resources must not only be protected and invested wisely but they must also be managed effectively as a whole to ensure optimal results and maximum value.

2.3- Resources at The Front-End of Innovation

The literature on resources at the FEI is under developed, mainly being a side note to studies focusing on other areas. The factor of resources has been mentioned in relation to senior management commitment, as it is them who will be releasing, or seen to be releasing these resources to be used in the FEI. This resource element concerns the extent to which sufficient funds are directed to the front-end and organisations should have sufficient resources for: 1) Opportunity identification 2) Idea generation 3) Idea selection and 4) Concept definition (Koen *et al.* 2014). Florén and Frishammar (2012) identified resource availability can also refer to investing in the FEI process itself, as opposed to specific projects, as this will need to be fully capable of handling projects as a foundation. This view of the importance of resources is backed by Trotter (2011) who categorised it as the number one most important barrier to innovation and stated flexibility of the resources is also important to consider. Nonetheless, Kim and Wilemon (2002) studied the strategic issues at the FEI and resources were not mentioned. Koen *et al.* (2014) explained this can be challenging for companies with an obvious lack of resources to invest but also because the results are sometimes difficult to see, or may take some time to emerge, yet resourcing these activities is essential to a successful FEI process. The understanding of the concept and the information to base assumptions/predictions off, can also be limited, and therefore it can be difficult for organisations to see if any return will even materialise- again affecting the allocation of resources (Koen *et al.* 2001). Although, once an idea evolves into a slightly more certain concept, it is likely resource allocation will increase with the increasing knowledge and understanding (Florén and Frishammar, 2012). Effectively in most cases, perhaps to the detriment of the idea, Rosenthal and Khurana, (1997) suggest it is the idea that must fit to the resource capabilities rather than the other way around for projects to attain resources. However, a lack of resources can in fact help the front-end development in that it may be easier to convince departments/individuals to contribute rather than seek official approval (Stevens, 2014).

2.4- Top Management Commitment

There is a discussion as to whether top management and their commitment can be defined as a resource to be exploited by organisations in their quests for innovation. This element mainly pertains to the support for FEI activities in terms of their own participation and also in the championing of the efforts promoting FEI processes (Koen *et al.* 2014). Top management are essentially able to open doors for projects to receive the more traditional resources. They may not be a resource per se, however, their role as an executive sponsor can be instrumental in acquiring resources (Trotter, 2011). The degree to which senior management; plays a central role in project reviews, participates in making key decisions in project reviews, champions major new FEI projects, is strongly committed to FEI activities and plays an integral role in most FEI projects, all fall under this factor. Koen *et al.* (2014) also state commitment in project specific initiatives may not be as effective as investing resources into initiatives addressing the whole FEI process itself. It will also be the senior management who will have power to manage further challenges influencing the FEI development. They will be releasing, or seen to be releasing these resources to be used in the FEI on such initiatives. As well as having the power, senior management will also be in central social positions to have a balanced view of FEI performance than other employees (Smith-Doerr *et al.* 2004). This central position also means they may be more knowledgeable in certain areas than other employees and therefore they will be able to provide information to aid FEI development and become a resource themselves (Frishammar *et al.* 2013).

Senior management commitment can also provide a “hygiene factor” (Frishammar *et al.* 2013), which legitimises the project and ensures support from the wider organisation, otherwise known as taking on the role of an executive champion (Florén and Frishammar, 2012). A balance will then need to be struck for the level of this commitment, if these managers with lots of sway get too involved due to emotions it can be harmful for the overall process as many of these projects fail (Cooper *et al.* 2001). It is also seen employees below senior level, value the commitment more than senior management themselves (Trotter, 2011), showing the balance to be struck is to be involved enough to appease employees but not too involved so as to hinder the process itself. Top management alone may not be able to decide on how much their commitment in terms of resource investment is perceived. Furthermore, the culture and strategy may also have an effect here, as if these are not conducive to innovation, the management will be forced to allocate these resources in line with organisational directives, rather than at their own discretion (Mohan *et al.* 2017). Management must be able to maintain their culture, as it is something that

cannot be forgotten. Great leaders also create cultures that empowers employees to be creative (Koen *et al.* 2014). When new employees are hired, and even if they are the right employees, they can still bring idiosyncrasies and different ways of interacting that cannot be anticipated (Cherry, 2017). It needs to make sure they can maintain and sustain an innovative culture so resources are not mismanaged.

2.5- Resource-Based View (RBV)

The RBV can be applicable to this research in examining how the firm's resources are chosen to be invested by the organisation, when looking at the FEI compared to other business processes. The RBV is a dominant theme within literature regarding innovation and pertains to the ability of a firm to innovate faster than its competitors based on the strategic resources it is able to make use of (Wernerfelt, 1984). These resources may be split into resources and capabilities, where resources are traded yet capabilities are specific to an organisation (Amit and Schoemaker, 1993). Barney (1991) state these resources should be judged on how they are valuable, inimitable, non-substitutable and rare. With these characteristics present, it should be possible for firms to move from a more short-term competitive advantage into a more long-term and sustainable one. These critical resources are then needed to be explicitly protected so that these characteristics do not change. In terms of the model by Baron (1991), considerable research has been done in relation to this and the RBV.

This view has been widely said to be too basic as it does not take into account the context of the use of these resources (Sedera *et al.* 2016; Brush and Artz, 1999). The RBV is said to be of particular interest to organisations operating in turbulent environments with customer behaviour and the characteristics of the markets uncertain and hard to predict (Azzone *et al.* 1995). However, a large proportion of this research has been assigned to look at strategic resources compared to others (Warnier *et al.* 2013). Strategic resources are aligned with a sustainable competitive advantage, which very rarely refer to the majority of firms, as they lack this advantage (Warnier *et al.* 2013), showing this does not have a true reflection on all firms. In essence, it is not only what resources an organisation has access to, but how these resources are utilised strategically and managed (Gu *et al.* 2016). By combining the organisation's dynamic capabilities to exploit these resources and transform them from a short-term advantage into a long-term advantage, can form its own competitive advantage, which in turn leads to increased performance (Chen *et al.* 2011). It is generally accepted capabilities (such as knowledge, skills and experience) along with intangible resources (such as reputation, networks

and intellectual property) are more likely to constitute key to a competitive advantage, whereas tangible resources (such as equipment and capital) are not, mainly due to their inherent imitability (Clulow *et al.* 2007). Many studies discussing the standard input-output models do not take into account the heterogeneity in resource allocation as a firm may have resources but these are not allocated on a representative basis (Klingebiel and Rammer, 2013). These resources can be in the form of new resources that have not been utilised yet or by the recombination of existing resources.

One of the major implications of the RBV is that organisations should not focus on offering standardised products or different offerings but on creating maximum customer value based on resources it can access (Andersén, 2010). This perception of what is possible within an organisation can also have a major effect on the future performance through its level of aspiration, as it can affect what the organisation believes to be realistic goals (Chun, 2016). This RBV within an organisation will also therefore have an effect on the amount of resources deemed to be necessary to invest into reaching these goals. It is said to be of more theoretical use for small medium enterprises (SMEs) (Hadjimanolis, 1999), and that these SMEs may have to make a choice as to whether they will pursue new resources or a recombination depending on the type of innovation (Woschke *et al.* 2017). Although this conundrum should be analysed here in the context of a larger firm.

Additionally, in relation to the RBV, the majority of research has studied the strengths of resources, however, they can also be weaknesses (Wernerfelt, 1984). Research from West and DeCastro (2001) analysed the concept of resource weaknesses, Sirmon *et al.* (2010) studied capability weaknesses; with an individual capability having positive performance outcomes only when they are valuable and rare, and Arend (2004) studied strategic liabilities, which refer to negative effects on performance of firms; all finding this can be a major cause for a competitive disadvantage and emphasises some limitations, which are not covered in the RBV.

2.5.1- Knowledge Based View (KBV)

This section is mainly related to the knowledge-based theory of the firm (Grant, 1996) and Organisational Knowledge Management Systems (Meso and Smith, 2000), these relate to a firm's ability to create, leverage and to protect their knowledge resources. It builds upon the RBV stating knowledge is not always generic, as it can be unique to firms and that also different types of knowledge can have different characteristics; transferability; aggregation;

appropriability; specialisation; and knowledge as the input for production. Knowledge is increasingly being recognised as the only true strategic resource from the perspective of the RBV; it may be the only real source of a sustainable competitive advantage (Meso and Smith, 2000). "Innovations occur as a result of incorporating new knowledge with existing knowledge to reconfigure organizational capabilities and competencies, resulting in value-added products" (Al-Sa'di, Abdallah and Dahiyat, 2017). This can also be phrased as a combinative ability - the ability to synthesise current knowledge as well as acquired knowledge to a firm's advantage (Kogut and Zander, 1992). Being in the financial services industry, knowledge is one of the most important resources an organisation can hold, as opposed to physical resources, especially in an increasingly knowledge-based economy (Stenius *et al.* 2015). Knowledge may be said to be far and above the most important resource, however, the quality of this knowledge is intimately linked to the resource it stems from (Sabetzadeh and Tsui, 2015). A firm's ability to innovate is said to be closely associated with its intellectual assets and the knowledge which it possesses; the ability to deploy these is just as important. The innovation process is therefore said to be the most knowledge intensive process within organisations (Martín- de Castro, López-Sáez and Delgado- Verde, 2011). The work completed to collect and share the knowledge learnt at an organisational level, as well as an external or network level, is central in enabling innovation and knowledge spill over (Martín-de Castro, López-Sáez and Delgado-Verde, 2011). The knowledge value chains must be analysed, in regard to the evolution of this knowledge i.e from creation to storage. The context of these value chains and their inter-dependencies must also be analysed. Once this knowledge is within the organisations control, it then has to be stored effectively and harnessed properly to maximise its value and to avoid any loss quality and to aid in developing them further (Sabetzadeh and Tsui, 2015). This approach of having formal management systems in place is more applicable if knowledge is regarded as an object, rather than a belief (Stenius *et al.* 2015). Kogut and Zander (1992) also speak of the need to transfer this knowledge from an organisational object into an individual or social object so it can be made use of in reality by employees; the transfer of knowledge across boundaries/markets needs to be as efficient as the transfer of products (Grant, 1996).

2.6- Resource Scarcity

One of the main discussion points regarding resource scarcity is where the optimal level of resources could be placed. Scarce resources can be defined as a level of resources which is below the level needed to ensure the required level of output can be achieved (Woschke *et al.* 2017). It has been suggested the amount of resources do not necessarily affect the

performance of a firm and innovation within it (Maratano-Vargas and Gomez-Tagle Rangel, 2007; DeSabro *et al.* 2008; Newbert, 2008). However, some scholars state resources should be sufficient and readily available so the firm is able to invest in exploring paths which may yield no return (Paladino *et al.* 2007), yet others tend towards the view that by having limited resources firms are forced to be more creative in their thinking and approach to innovation (Bradley *et al.* 2011). Some employees, when bounded in limited resources, incubate the most diverse and creative ideas (Finke *et al.* 1992; Goldenberg *et al.* 2001; Moreau and Dahl, 2005). However, missing specific competencies due to a shortage in human resource can reduce innovation (Diaz-Diaz *et al.* 2008). Organisations not including the human capacities too, can reduce innovation, as the employee's main focus is their day-to-day duties, they develop operational skills, however not the capacity and skill-sets important for long term growth for the organisation (Rivera, 2017).

Resource scarcity has been explored by following different avenues in literature as well, in terms of what factors may mitigate the challenges posed, yet this is very limited. For instance, a strategy will need to be in-line with the firm's vision and provide a meaningful roadmap for investing in both incremental and radical innovations (Koen *et al.* 2014), essentially how the company defines its intentions. With this strategy being aligned with the FEI, a smooth flow of valuable and well managed ideas should be produced (Koen *et al.* 2001), which will therefore mean resources to be invested will be lower. The dynamics of the teams involved have also been looked at; the presence of a champion who should be an effective communicator and therefore raise the profile of the team as a whole and be able to sell the concept in general should mean a proficiency in getting resources/favours (Trotter, 2011; Kim and Wilemon, 2002). Furthermore, in terms of having a leader who will have developed networks and credibility, a leader will be able to lobby for support and resources to a greater extent (Florén and Frishammar, 2012), forging a link between teams and resources.

2.7- Overcoming Resource Challenges

According to Pinchot (2011) and his ten commandments for intrapreneurs, one suggests keeping an idea underground for as long as possible as the publicity will trigger the corporate immune system. This will result in much reluctance and constraints for the idea at hand. According to Kuratko *et al.* (2011), a corporate entrepreneur must be political savvy to be able to influence key stakeholders. If the intrapreneur is not able to influence these key stakeholders, the process can slow down, almost to a standstill. This is where building political tactics can be

important, to obtain the right resources to help aid the development of an idea (Kuratko *et al.* 2011). These tactics can leave the employee in good stead to achieve legitimacy, obtain resources and overcome inertia and resistance that may be hindering an idea. There is an array of different tactics to use, such as personal-political tactics; relying on friendships to aid in leveraging or requesting specific resources, favours and political allies in other departments. Pinchot (2013) also explains the importance of making and keeping friends and allies in other departments to try and gather resources. This can also refer to Pinchot (2011) by only working with the best people, with the right skills and competencies, when developing an idea. Furthermore, rule-oriented tactics can also be used, by referring to rules that mean a request does not need to be met and also appealing to a common authority to get the request revised or withdrawn, allowing the idea to cut corners through governance rules and processes (Kuratko *et al.* 2011). This correlates with one of Deloitte's five insights into intrapreneurship, where they tend to bend the rules hindering them from achieving their goals, however are not aiming to negatively affect the organisation in any way (Deloitte, 2015).

Being able to acquire resources for entrepreneurial projects within organisations mainly falls down to "resourceful politicking", according to Block and MacMillian (1993); being able to borrow and loan certain resources, such as capacity, personnel and finance to secure the resources needed for an idea (Kuratko *et al.* 2011). According to Starr and MacMillian (1990), four techniques can be used to do so- borrowing: temporarily secure resources, begging: appealing to the owner's goodwill, scavenging: receiving resources others do not intend to use, amplifying: attain more value out a resource than previously perceived. Furthermore, it has been found building these relationships in an informal manner, as opposed to formally, can be essential for acquiring resources from the 'investor' (Lam, 2010). Lam (2010) backs this up with the statement networks where investments and favours can be sought are mainly social structures, rather than formal. Additionally, Morris *et al.* (2010) defines resource acceleration as being able to obtain resources at the early stage of development. The ability to leverage resources to drive an ideas development is led to believe to reduce the lack of resources usually not available at this stage. Nonetheless, this can be a lengthy process and persistence is needed to keep going when time gets tough (Pinchot, 2013). Once these resources are required, it is up to the product champion to then make the most out of them whilst available (Pinchot, 2013).

Chapter 3: Methodology

3.1- Research Design

3.1.1- Research Philosophy

Business research does not exist within a vacuum, it is shaped by the social world and the context it exists within; for this reason, the philosophical foundations and implications must be taken into consideration in order to provide credibility (Bryman and Bell, 2011).

In terms of the epistemological considerations, the types of knowledge considered acceptable and the sources of data must first be taken into account. The research will mainly focus on events already occurred, as opposed to events rooted in the present. By using past events, it is somewhat linked to business history, with researchers believing it may be risky to write too openly about the status of the data and analysis, as it can undermine the credibility in terms of the arguments and conclusions (Bryman and Bell, 2011). Taylor *et al.* (2009) argue if writers were more open about epistemological assumptions it would be more credible. The epistemological considerations will be based within an interpretivist approach, in accepting the data from the interviews will not be receiving strictly objective. The realisation of the organisation will be acquired from social actors, which may be different from the laws of natural sciences (Bryman and Bell, 2011). There should be an appreciation for the differences between experiences and views, which will allow for a more holistic result.

Within ontological considerations, the nature of these social entities (organisations), should also be considered. Adopting a constructionist approach is most fitting here. Constructionism accepts social actors working in relation to the social entity are who mainly shape it (Bryman and Bell, 2011). For the purposes of this study, this is translated into the employees of the case company being the ones who are main influences on its operations, rather than vice versa. It is believed the social structures and level of innovation within the culture will be only a couple of influencers on how resources are managed. Employees mentioned the regulatory environment of the financial services industry may constrain them to an extent, however, this is not significant enough to alter this studies position.

3.1.2- Research Strategy, Approach and Design

This study is exploratory in nature, which are predominantly in the form of a qualitative research strategy. As a result, this type of research can provide conclusive answers to research problems/gaps and also aid future research direction (Wilson, 2014). A qualitative approach was used, as this tends to be applied when a study is generating theory rather than testing it (Bryman and Bell, 2011). This study aims to understand how resource challenges influence the FEI in the banking sector, which has not previously been researched. This study wants to take into consideration experiences and phenomena within an organisation, with this type of research strategy, findings can be more in-depth, achieving greater insight on the matter. As this is an exploratory research study, it is only right to use an inductive approach (Wilson, 2014). Bryman and Bell (2011) highlighted a qualitative strategy and inductive approach go hand in hand. Collis and Hussey (2009) defined inductive as a strategy for developing theories. Nonetheless, the research does have some deductive elements on how certain elements from literature were used as inspiration, for instance, in the interview guide and in certain labelling of the data.

Furthermore, a common research design related to the methods above, is a case-study design. This will be the most suitable to use, as this study wishes to “investigate a contemporary phenomenon within its real-life context, especially when the boundaries between the context and phenomenon are not clearly evident” (Yin, 2003, pg. 13). In this case, the phenomenon of resources and how the challenges from these influence the FEI will be investigated. Therefore, it is important to use a case company to understand the context of this industry and this stage of the innovation process. This case-study design will be an analysis of a single case, allowing the research to develop an in-depth study.

3.1.3- Research Process

Firstly, the study was initiated by observations, unstructured interviews with current employees and investigations into previous case reports. The inductive approach therefore is not entirely valid. Bryman and Bell (2011) state the collection of data occurs before theories are developed, which is not the case here. The initial research allowed for the identification of different aspects in the case company to current literature, to understand already existing studies would not be worthwhile exploring. Connections and gaps in the literature could then be identified that may be interesting to undertake for both the case company and to contribute to current literature.

Therefore, it is clear an iterative process involving some deduction was followed to develop the research question.

3.1.4- Case Company

The initial experiences and observations immediately highlighted challenges potentially affecting any FEI development the company may pursue. It was this initial learning that would eventually form the basis for this case study. Eisenhardt (1989) stated the selection of a case to be studied must be made with a consideration for the need that the case should either replicate or extend theory by filling conceptual categories, essentially the efforts should be focused on theoretically useful cases. This study had little control over the choice of case company, however, had free reign in deciding on which areas to explore. For all intents and purposes, the task was not to find a case to fit a theoretical gap; rather find a theoretical gap to fit the case company. Resources challenges at the FEI is a very under-developed theme within business literature and this gap appeared to be very evident to us. There is currently no explicitly defined process for working within the front-end at this company, therefore by extension, the process and awareness of resources at this stage should be assumed immature as well. The resources are centrally controlled, in terms of funding and IT capacity and project management; however, there are some resources sitting in different countries, which are low and also vary depending on the countries.

With the revision of the Directive on Payment Services (Council Directive 2007/64/EC) being passed by the European commission in 2015, it is anticipated there will be an influx of competition entering the financial services industry (EU Commission, 2015), and perhaps capitalising on the case companies market segments and business lines. This increased competition will likely lead to a renewed emphasis on effective management; resources and profitability being a vital component of this (Narwal and Pathneja, 2016). In being part of the banking sector the regulatory requirements are extremely complex and strict (Hogan and Manish, 2016). The potential uniqueness of the industry in terms of the demands placed on resources backs up the need for research of this kind.

3.2- Data Collection

The data collection method used for this study were observations of meetings, unstructured interviews and then subsequently more in-depth semi-structured interviews. This allowed the study to gain insight into participants attitudes and beliefs about this specific subject, as well as

a deeper understanding due to both verbal and nonverbal communications (Wilson, 2014). Semi-structured interviews were chosen as they have some leeway in relation to asking further questions, rather than only focusing on the intended questions (Bryman and Bell, 2011), which can further enhance the depth participants can go into for specific questions and topics. However, due to the organisational structure in our intended case company, some participants are not based in Sweden and were interviewed over a video call. Unfortunately, this cannot be avoided and does pose some limitations, such as no nonverbal analysis for some participants i.e body language and difficulties in explaining complex questions (Wilson, 2014). Additionally, other data collection methods were disregarded as questionnaires would have not provided the depth of answers this study was looking for, there was limited access to ongoing projects and due to the time constraints of the study, observations would have not been practical for an in-depth analysis.

3.2.1- Interview Selection

In trying to identify which interviewees would be beneficial to reach the research aims, a snowball sampling approach was used (Bryman and Bell, 2011). The initial unstructured interviews and observations with people from across the organisation helped to apply a clear vision of how they operate and, more importantly, who would be suitable and interesting to speak to further. An internal mentor provided a list of who could be useful to speak to, this list was then supplemented with references these people provided and also suggestions of departments which could be of interest. Once it became more obvious which interviewees would be of the most beneficial to speak to, non-probability purposive sampling was used to draw up the list of interviewees. The knowledge and insight gained aided in the design of the interview selection which was agreed would be most relevant. By adopting this approach, it meant there was a larger say in deciding the form the research would take. If a random sample was used, the amount of control would have been diminished; essentially the element of bias in choosing the interviewees enabled more control (Bryman and Bell, 2011). The semi-structured interview approach as mentioned by Gioia *et al.* (2012) contributes to this as well.

For the ideal candidates to interview, it was beneficial to have candidates involved in the development of individual ideas during the front-end (*Active*), as well as candidates that have responsibilities that affected and contributed to how the front-end development is structured and supported (*Responsible*). From the initial unstructured interviews, several individuals who have been active within front-end idea development were encountered. These persons were deemed

to have worth to this research. Higher level positions in the form of heads of departments, as well as individuals working in operations development and business change who would be closely linked to the front-end were also targeted. The aim is to reach theoretical saturation in the data collection as highlighted by Eisenhardt (1989).

Position	Type of Respondent
Head of Commercial Development (Interview E)	<i>Responsible</i>
Business Control Manager (Interview F)	<i>Responsible</i>
Chief Financial Officer (Interview D)	<i>Responsible</i>
Head of Business Change (Interview I)	<i>Responsible</i>
Key Accounts Manager (Interview A)	<i>Active</i>
Digital Store Manager (Interview B)	<i>Active</i>
International Business and Product Manager (Interview G)	<i>Active</i>
Branch Manager (Interview H)	<i>Active</i>
Product Manager Savings (Interview C)	<i>Active/Responsible</i>

Table 1: Interviewee Selection

3.2.2- Interview Preparation

Unstructured interviews were used to gain an initial understanding of the organisation and any challenges or distinctive factors that made the organisation interesting. Having a relationship already established with the interviewees (Bryman and Bell, 2011), opens up the interview to more sensitive areas that may not have been shared before to strangers. For these reasons the unstructured interviews helped in establishing a dialogue with the interviewees before any formal interview date had been set. Once the interviewees were defined and the interview guide was developed (see appendix A), it was decided to use a semi-structured interview format, meaning the interviewer should be familiar with the topics and covered themes. This is different to a structured interview where the interviewer only needs to administer the interview guide/questionnaire in a strict manner. This argument comes from the fact a semi-structured interview is a more flexible discussion, where the order of the questions can be altered and

questions may be added and a response is of special interest to the interviewer for their purposes (Bryman and Bell, 2011). A structured interview however, is carried out with the aim of bundling all responses together in a generic fashion. Therefore, all questions must be delivered in the same order and using the same wording leaving no flexibility for the interviewer (Bryman and Bell, 2011).

The provided input from the references was essential for administering the interviews. In completing the literature review, the knowledge on the area of the front-end and resources was crucial in developing knowledge related to the study and in tailoring the interview guide to the objectives. It also enabled probing deeper into relevant areas or to link in new areas unidentified by the interviewee. Bryman and Bell (2011) found forming a dynamic with the interviewee by being casual, to an extent, can be beneficial in semi-structured interviews. It means the interviewee can have more freedom of thought which may be insightful and mitigates the effect the interviewer may have on the interview. The formalities were also relaxed from the moment the interviewee was approached with the invitation to interview. The interviewee was given power as to where/when they would prefer the interview to be conducted, so there would be fewer interruptions or stress that more important work was being neglected, as it is deemed beneficial for the quality of interviews (Bryman and Bell, 2011). All of these tactics should aid in adopting the characteristics of a successful interviewer such as being knowledgeable, gentle, open and steering (Bryman and Bell, 2011). It is also regarded the use of a pilot interview as it allows the interview guide to be tested for valuable content, as well as the logistics (such as length or any leading questions) of the interview. Furthermore, it can help to expose any sensitivities in the questions that had not been realised and can also help to highlight the value of questions. Damgaard *et al.* (2000) speak of the dangers of going native. It is not an absolute imperative, as the researcher must let down his guard to a certain extent to see the perspectives through the interviewees eyes but they must also be able to analyse the data objectively. In recognition of this phenomenon it was ensured to keep this theory in mind, in order to safeguard against the disadvantages this could bring, but also to exploit the advantages it could bring. Essentially, an optimal balance between going fully native and not having any appreciation for context was attempted.

The interview guide was designed with all of these aspects taken into account. From the beginning, it was decided the interview guide should attempt to reveal more general experiences and perceptions, as opposed to specific examples of cases worked. This was

decided due the decision to interview two types of interviewees; responsible and active. By approaching the analysis in a more general sense the data should be easier to generalise and reveal more valuable insights. The wording of each question was scrutinised to ensure they were not leading or exposing the interviewee to any new knowledge influencing their thinking. The questions were also designed to be as open as possible to remove any potential “yes or no” answers, which would likely offer very little empirical value. In similar vein, the questions were not to be worded too complicated; the majority of interviewees did not have English as a mother tongue, yet the interviews were to be carried out in English (Bryman and Bell, 2011).

The opening section of questions were made with the aim of ‘breaking the ice’, as well as building a foundation, providing some concrete context for the interviewees’ differing perspectives and perceptions. The following section was created with the intention of focusing the interviewees mind on the general scope of the area - front-end development - being researched, as well as providing further context. What is hoping to be highlighted here are the constraints faced at the FEI, in general, which could allow potential relations to the next section about resources. Challenges, such as high uncertainty, lack of vision and organisation, the timing it takes to go through this stage, resulting in delayed concepts to market (Khurana and Rosenthal, 1998), as well as a balance between stringent screening and evaluation of ideas, (Kim and Wilemon, 2002) and top management commitment (Koen *et al.* 2014), may all be identified, leading to possible relations to resources. The final section is where it is hoped the richest data will be obtained, regarding resources as it is the topic most intimately linked with the research question. For this reason, it is the most extensive section. The aim here is to identify; the scope the interviewee is thinking within in terms of resources; what their perceptions are of the resources, factors relating to resources; and also, what these perceptions may lead to i.e benefits, challenges, techniques to reduce/increase these benefits/challenges. There are three main characteristics of resources that will be examined; level of resources; the type; and flexibility/accessibility. The level of resources will be mainly concerned to whether they are scarce under the definition from Woschke *et al.* (2017), or not scarce at all. The level is also linked to the access to resources, which will be used in reference to Trotter (2011), as well as Florén and Frishammar (2012), in relation to certain management and sponsors having easier access to resources at this stage. Furthermore, Gu *et al.* (2016) will also be used in terms how the resources accessible are utilised strategically. These two are intimately linked in that the level of resources will directly affect the ability to determine accessibility. Furthermore, the ability of the organisation to leverage resources was not immediately obvious, internal and external

relationships further applies to accessibility. This goes back to Furlan *et al.* (2014) and the “competitive handicap”. By looking at its resources and abilities in a more holistic manner it should be able to find new combinations of resources to achieve a unique outcome. This is also in-line with Salazar (2017), who regards individual resources as having negligible value, by combining resources the true value is realised. The type of resources will be determined using the categories identified by this study's definition, influenced from Bell *et al.* (2013) and McKinney (2016) as earlier stated, by categorising the resources separately it should help to pinpoint, more explicitly, which constraints are caused. The quality of these resources will also be linked to the type as this factor is likely to affect profitability of an organisation, whereas quantity and accessibility are more likely to affect growth (Azzone *et al.* 1995). The flexibility of resources will be examined using Trotter (2011), McKinney (2016) and Kuratko *et al.* (2011) as a foundation as discussed above. By looking at attributes other than simply the level of resources, the analysis should take on a more qualitative quality with more intricate connections between resources being unearthed. The data will hopefully directly answer the research question while also bringing up relationships and provide more nuanced data to be used for a more developed analysis.

3.3- Data Analysis

3.3.1- Method

During each interview, one of the researchers would lead in the questioning whilst the other would aim to take more detailed notes on pertinent observations – both visual and verbal – with the aim of being able to better pick up on areas to probe deeper into. These interviews were recorded digitally to later be transcribed. These were then first looked at individually by the authors and then together to analyse it, in order to establish our independent views and to then collaborate (Bryman and Bell, 2011).

Bryman and Bell (2011) advise an established and practised approach should be followed. There are many approaches which one may rely upon in analysing qualitative data. The tools suggested by Gioia *et al.* (2012) are chosen to be utilised during this research. The Gioia *et al.* (2012) approach fits well with this study's research philosophy as it allows for the subjective answers of the interviewees to be taken into account and in accepting the employees who are the architects of any process or phenomenon analysed. Bryman and Bell (2011) also suggest an important part of the analysis of data is the coding, turning the narrative into more malleable

dimensions that can be more effectively analysed and generalised. The sheer amount of data can become very imposing and lead to confusion if not managed properly. With Gioia *et al.* (2012), this begins generating first order codes from the data provided, at this point the only influence the authors have on the data was picking out certain quotes deemed interesting. It is also known by plucking quotes out of the transcripts, can lose context of what is said (Bryman and Bell, 2011), which is something to consider when carrying this out. In being knowledgeable agents, both from research on literature and from internal insights, the authors were able to decide for themselves which quotes had value as data to answer the research question.

Once the first order codes had been generated it was then needed to turn these into second order themes. These themes would have elements of theory applied to the first order codes in order to make them more workable in terms of research related to literature. This stage was made possible with the prior research on the surrounding literature which made us into knowledgeable agents (Gioia *et al.* 2012). The aim was to transcribe and analyse the interviews soon after they had been conducted in the hope the analysis would prove to be an advantage in subsequent interviews to have an increasingly developed understanding. These first stages were able to be worked simultaneously with the data collection itself to ensure subsequent interviews could be shaped to better fit this study's objectives. This would also be key in ensuring it was known if or when theoretical saturation had been reached (Eisenhardt, 1989).

Once the data had been analysed to a sufficient extent, the second order themes were looked at in unison to find aggregate dimensions (Gioia *et al.* 2012) that linked the data together in ways to address our question. This synthesis of all data as one ensures unifying findings should eventually emerge. If the process of analysis is done correctly, the value of these findings should rely on the quality of the data, rather than the quality of the analyst. The outcome is expected to be due to the input of the interviewees, allowing the researchers to go beyond initial expectations (Eisenhardt, 1989).

The first order codes, second order themes and aggregate dimensions with relevance were identified; Lack of Cross-Functional Collaboration; Lack of Engagement; Lack of Dynamic Development; Lack of an Efficient Structure; and Unsupportive Front-End Strategy. The resource challenges, i.e. type, level and flexibility, relate to how they influence the front-end, with the constraints they make i.e the dimensions above. The final aggregate dimension - Overcoming Constraints - goes on to address how the constraints in the front-end are attempted

to be overcome by employees, with these working practices being another influence on the FEI. Chapter four will explain what these aggregate dimensions consist of. Chapter five will then go on to build transparency in supporting how these dimensions were identified from the first order codes and literature will be applied to justify the value of the findings. The findings will be shown to answer the research question and any relationships between the dimensions will be analysed.

3.3.2- Validity, Replication and Reliability

Three crucial factors in any study are the validity, replication and reliability it contains. Validity refers to the probity of conclusions taken from a piece of work (Bryman and Bell, 2011). This concept is split into internal and external validity; internal validity concerning the extent the study measures what it is intended to measure and external validity referring to whether the study can be generalised to other cases or settings (Wilson, 2014). In order to improve validity, it is suggested to; incorporate a wide range of different perspectives rather than on just one group; to achieve a broader viewpoint explaining the truth of the situation, pay attention to data which contradicts of the study, have a clear perspective of the process of data collection and analysis and to use more than one data source (Wilson, 2014). These will all be assured of when undertaking the study, however only one data source will be used, as it is felt in-depth interviews are where the most relevant and fruitful data can be gathered in terms of the study, along with the time constraints it contains. Furthermore, due to the nature of a single case study, it is not easily generalised (Bryman and Bell, 2011). Nonetheless, it can be possible to develop new understandings of different concepts, which can be used for further studies to improve generalisation (Bryman and Bell, 2011).

In order for the study to be replicable, the procedures have to be well documented, otherwise it is impossible (Bryman and Bell, 2011). This also relates to reliability, as in order to measure a concept, the procedures have to be well documented and replicable in other studies.

Nonetheless, by documenting the process taken in this study, such as the methods used, the interview guide, including relevant quotes of each interview in the appendix and not tampering with these quotations used, can allow this study to be further replicable.

Finally, reliability refers to whether results are stable and consistent, as well as repeatable (Wilson, 2014). Although more concerned with quantitative data (Bryman and Bell, 2011), it should still be considered for qualitative data. External reliability should be considered; the

changes of social setting affecting the ability to repeat the study in a similar fashion (Bryman and Bell, 2011), however this is difficult to assure with this type of qualitative study.

Furthermore, internal reliability, concerning whether more than one researcher has the same interpretation of results (Bryman and Bell, 2011) also needs to be considered, as there are two researchers undertaking this study. It is crucial there is a level of coherence between the two in terms of the data, therefore, the analysis of the findings should be undertaken together to assure internal reliability of the study.

Chapter 4: Findings

4.1- Resource Challenges

In this chapter, the findings of the data collection will be presented. There is a distinct pattern, to varying degrees throughout the data that resource scarcity is evident and realised within the FEI. The types, level and flexibility of resources were all found to be sub-optimal for the effective performance of the front-end. This is done to justify the relationship between the elements of the front-end identified and them being influenced by the resource challenges.

4.1.1- Level of Resources

Scarce resources can be defined as a level of resources which is below the level needed to ensure the required level of output can be achieved (Woschke *et al.* 2017). In relation to the findings, it was evident the level of resources is scarce at this stage. It can be seen by the data presented below there is a collective agreement resources are low. The second order themes; Local Markets; Central; and General are all in agreement resources are all below the level needed to work effectively in the front-end. However, Interview H explains in their market branch they do have resources available for this stage, nonetheless time is a constraint there and when central resources were needed, this is when projects got put on hold. Therefore, it can be considered some resources are still scarce in the markets.

Level of Resources	
<i>Oh, it's like it's a very low, it's it right now it's very low, it's understandable and I know it's it's it's it's a price we have to pay to. Climb to the next level but it's low</i>	Interview A (Local Markets)
<i>If I were to consider the resources needed on this preparatory phase I think we got them locally</i>	Interview H (Local Markets)
<i>We just need to find the time between the daily duties and so our lights are still on and the electricity will not be turned off</i>	
<i>In terms of technology preparation and IT, here their situation is a little bit different because here there is a permanent fight within the magic project triangle</i>	
<i>I would say they were scarce (resources)</i>	Interview B (Central)
<i>Eh, tiny. Even my time, yeah tiny</i>	Interview C (Central)
<i>Well again, based on the things that we have on our agenda it's low, we simply don't have enough resources to do all the projects and the day to day business well</i>	Interview E (Central)
<i>If there is a scarce resources and there is in any company resources so therefore you go in and you say you know where I prioritise your efforts, for example in I.T, but also at the business business line then you say you know you need to prioritise according to this</i>	Interview D (General)

Table 2: Level of Resources

4.1.2- Flexibility of Resources

This study also aimed to consider the flexibility of these resources as explained by Trotter (2011). This refers to the speed and efficiency by which these resources can be accessed and utilised without constraint. Within the data collected, it was clear there are challenges in being able to access resources needed at this stage of development, resulting in constraints being spawned from this. It can be seen by the data presented below there are two main second order themes; Length of Process; and Accessibility. The length of time to get hold of resources after requesting them is deemed to be too long due to the processes one must adhere to. The accessibility of these resources mean even once the resources have been agreed to be

invested, the effect is not immediate. The flexibility of these resources is somewhat too rigid, potentially resulting in projects being stopped or delayed.

Flexibility of Resources	
<i>I mean I wouldn't even dream to get anything in six months (IT)</i>	Interview A (Length of Process)
<i>The process is long, especially at the stage of the company you are applying for a resource</i>	Interview F (Length of Process)
<i>Yeah, within local, it is a short time (to get resources). Within central it is short to mid-term. If you get to technology access. It is too long.</i>	Interview H (Length of Process)
<i>For X is that we are also internally really tight on resources. People seem to be very booked, like if you need to talk to some internal people about risk related thing or PMO or support, it looks like people have 3 months booked</i>	Interview A (Accessibility)
<i>There will be some blocker in IT that will mean that it doesn't go forward</i>	Interview C (Accessibility)
<i>if you take a java developer if you can get him in typically a month's time but it takes time for him to be really efficient it's not about just getting people in it's getting the right people....so yeah, I guess with some resources the effect is more immediate but with a programmer they need to kind of get up to speed first</i>	Interview D (Accessibility)
<i>The thing worth having access to would be project management, we ain't got those skills locally, so the whole preparation and the whole discipline to put in our things is in our own hands</i>	Interview H (Accessibility)

Table 3: Flexibility of Resources

4.1.3- Types of Resources

This paper, with contributions from McKinney (2016) and Bell *et al.* (2013) define the resource types as financial; human (e.g. the skills and knowledge of a firm's employees); organisational (e.g. competences- being the collective knowledge of the company controls, policies, culture); and time. These terms are taken to be the second order themes as they effectively describe the findings from the data. In terms of the case company the financial resources used in the front-end would tend to be billable hours charged by consultants or outsourcers for development tasks e.g. legal work, IT development work or external investigations. The human resources are in terms of the internal people who have skills or knowledge to guide and offer experience in navigating the front-end or to complete tasks to develop an idea e.g. legal workers, IT development workers, business analysts, product champion. This knowledge is regarded as an object and therefore a resource in line with Stenius *et al.* (2015) and the KBV. Organisational competences are mainly in terms of the general acceptance of the importance of the front-end and the organisational knowledge and experience in working in it. Time, as a resource, relates to the amount of time devoted and available to work on projects within the front-end as opposed to the day-to-day responsibilities of the case company. The diverse types of resources appear to pose varying degrees of problems to the front-end, for instance the level and flexibility of financial resources is not seen as a big problem; yet there was one case briefly mentioned which meant a project was stopped due to a lack of financial resources. However, the level and flexibility of human, organisational and time resources are a major challenge

Types of Resources	
<i>trying to get working groups together to work powerfully and at speed with good quality output is quite difficult</i>	Interview B (Human)
<i>lots of people that know about the customer but in this sort of kind of development there are only a small number of the right level you have access access to</i>	Interview C (Human)
<i>we cannot just hire in enough people so we need to we need to organize around the people</i>	Interview D (Human)
<i>you need to mitigate you need to have less resource here you know to cut corners not to have a worsen outcome just to make it in time</i>	Interview D (Time)
<i>It is not about the lack of resources it's rather the limitation that only extends the time because we are all willing to do more and better for the customers sometimes we just need to find the time between the daily duties</i>	Interview H (Time)
<i>So, I think we could be more wise about the money we are spending or efficient in our projects and not overbuild and know what it is we are doing so we don't spend as much money on things that we shouldn't</i>	Interview E (Financial)
<i>Financial resources I think we could have enough...but, compliance eats up a lot of our financial resources</i>	Interview E (Financial)
<i>I think it's very random, haphazard construction</i>	Interview E (Organisational)

Table 4: Type of Resources

It is now clear the level of resources available at the FEI are scarce, the accessibility of these resources and the types of resources defined are also posing challenges at this stage. One of these resource factors, or a combination of these factors, are assumed to cause or contribute to the constraints identified. Therefore, the constraints from the findings are broken down into aggregate dimensions (constraints) below related to the criteria above, based on Gioia *et al.* (2012); Poor Cross-Functional Collaboration, Lack of Engagement, Limited Dynamic Development, Lack of an Efficient Structure and Unsupportive Front-End Strategy.

4.2- Constraints Influenced by Resource Challenges (Aggregate Dimensions)

4.2.1- Poor Cross-Functional Collaboration

The first dimension consists of poor cross-functional collaboration at the FEI, from central functions, as well as with the different branches in each market. This relates to the low level of time devoted to the FEI to develop the structure and process, as well as the lack of organisational resources i.e knowledge about the FEI, to know cross-functional collaborations can be an integral part for development at this stage. The second order themes are described below, divided into central collaboration and central-market collaboration.

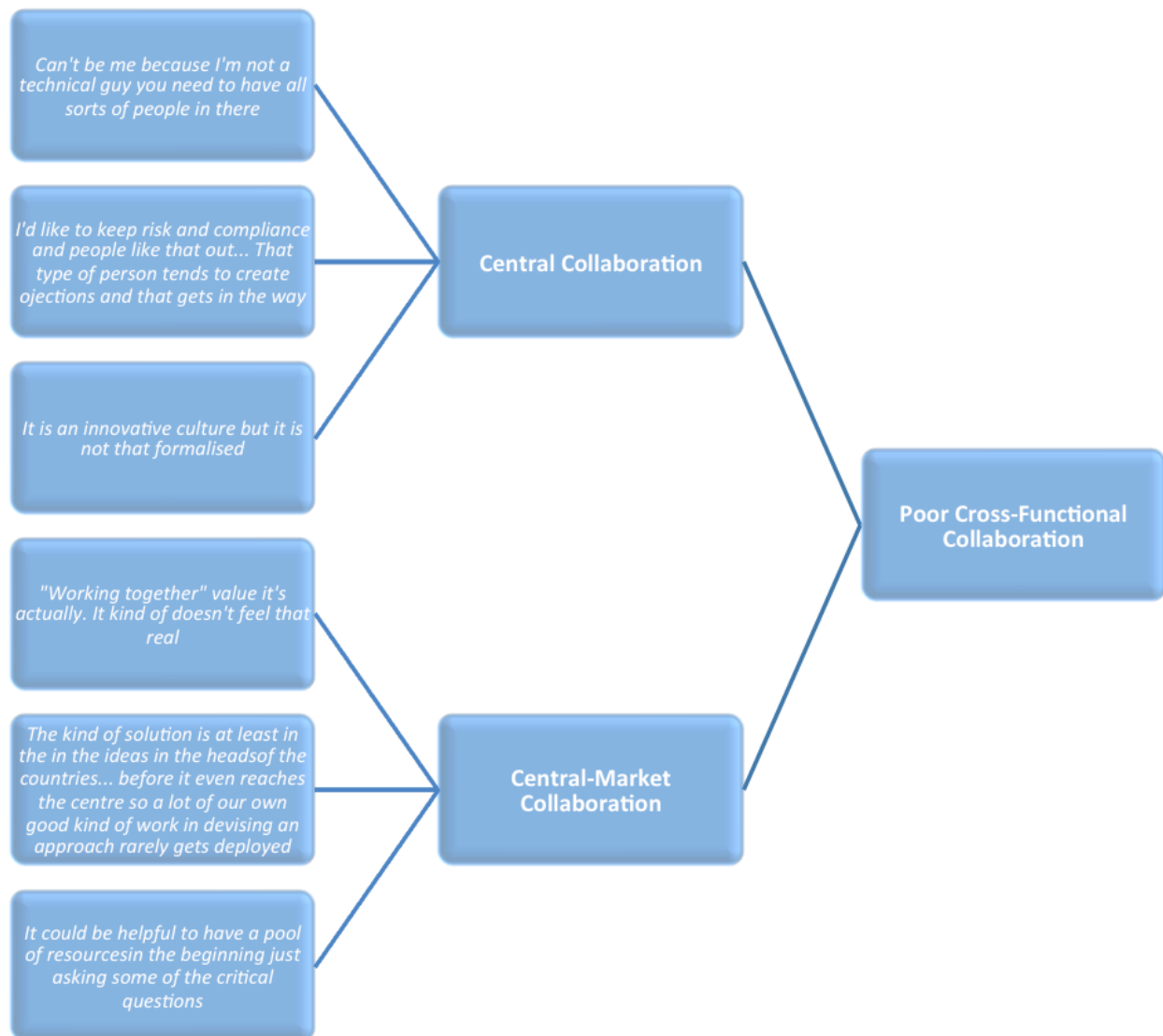


Figure 5: Poor Cross-Functional Collaboration

Central Collaboration

It was seen there should be more than one person in a team at this stage, to compensate for certain skills and expertise. Employees have also disregarded certain functions as they may negatively influence innovative ideas. Furthermore, there is an issue in creating the correct working environment to encourage creativity, as their innovative culture has not been formalised. A challenge related to this is creating a common language, as most ideas, it seems must be translated into IT language, that not all employees know. In relation to experienced

employees, the sponsors assigned to current projects have not necessarily been the most qualified, in terms of knowledge about the idea and area it is within. More relevant sponsors are being considered to take over the current sponsors.

Market-Central Collaboration

There seems to be communication issues between central functions and country markets at their FEI process. The structure/process had not been communicated to the markets when a new business idea is generated, as an employee from the market have not heard of certain committees which new ideas should adhere to. The lack of collaboration occurs when the markets get very far in their thinking, however a lack of documentation is prescribed with the ideas they present, which the central functions demand. When the markets do bring the idea centrally, usually progress is stopped and the idea should be re-worked. Furthermore, when employees who are seeking help with an idea approach another colleague who does not have the time to offer their expertise, however, has a fellow co-worker in a different country who could help, they usually do not forward this onto the other co-worker, as it is beyond their experience to do so. This then relates to the idea of 'working together'- one of the organisations values, to be somewhat superficial. It has also been stated bluntly there is a lack of virtual teams, with a forum type concept being mentioned, to communicate with different people in several functions within the organisation. Interacting with employees with experience, to ask critical questions at this stage, would be beneficial too.

4.2.2- Lack of Engagement

The second dimension consists of a lack of engagement in the FEI from employees and management. This can relate to the level of resources available as well as the flexibility/accessibility causing these constraints to occur, for employees to generate and develop ideas and top management to show engagement with front-end activities. The second order themes within this dimension are broken down into; employees and management.

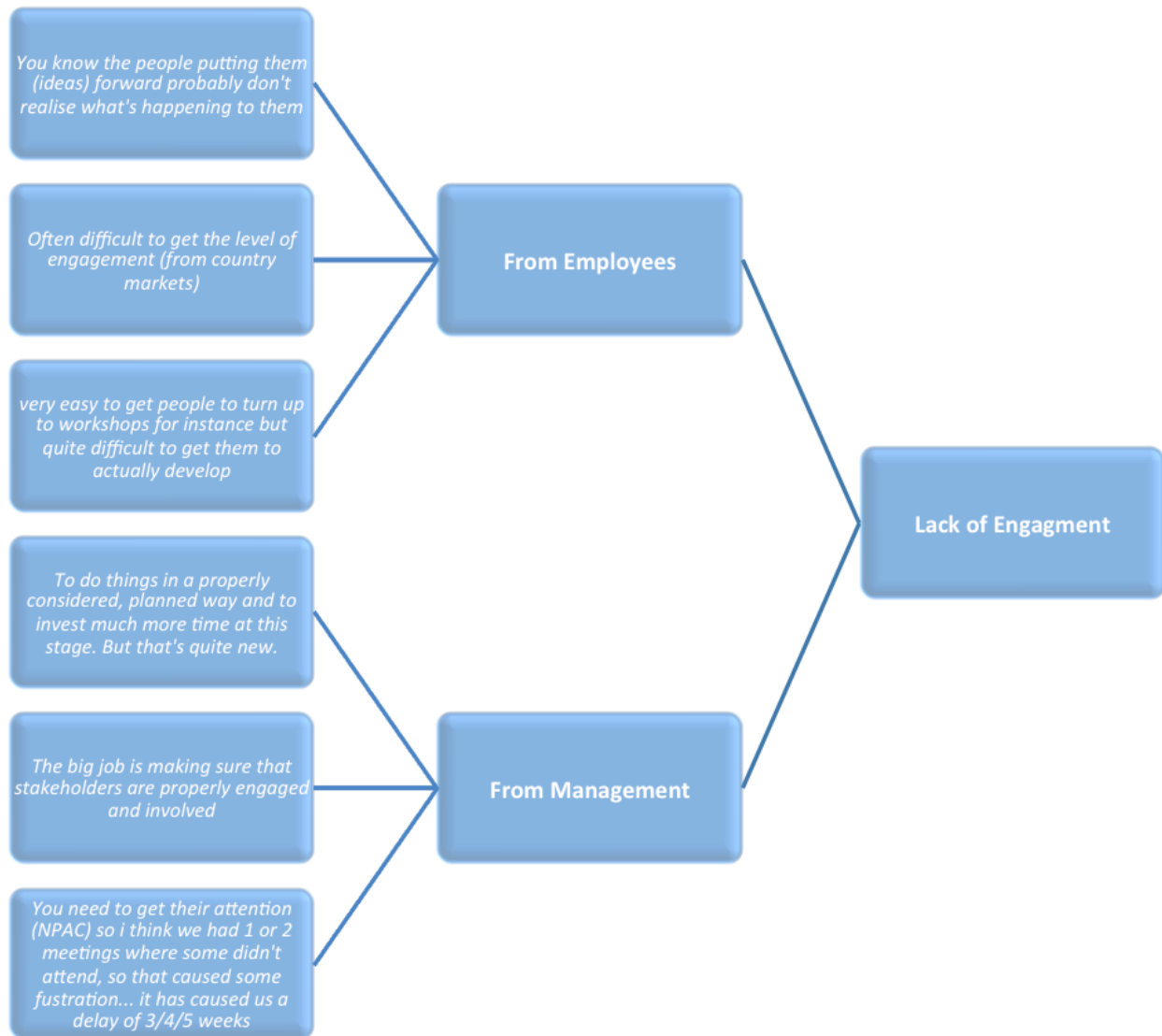


Figure 6: Lack of Engagement

From Employees

It has been portrayed a level of engagement can be difficult to receive from the markets at the front-end. Getting people to attend workshops is not difficult, however engaging and putting pen to paper to generate new ideas is. Employees who submit ideas sometimes do not follow up on the idea, as they feel someone else will carry it on; some not knowing what happened to the idea at all. Furthermore, it is seen certain department employees can do very little and expect other to do all the work for them in some respects.

From Management

Some projects have also depended on the eagerness of the product champion, with the lack of commitment given from management towards new ideas. Some management are not proactive enough when it comes to other responsibilities related to the FEI, aside from their daily tasks, or they are too busy. This builds frustration and time constraints. There is also a large task of engaging and involving stakeholders at this stage, as this is not consistent at present. Nonetheless, planning in this stage is to be considered somewhat new within the organisation.

4.2.3- Limited Dynamic Development

The third aggregate dimension realised was limited dynamic development, proven to be an evident constraint as ideas and employee competencies are difficult to be improved or developed. Dynamic development is defined as utilising dynamics within functions, or between functions, so employees can learn from those who are most successful in different areas (Bright, 2017). This can also apply to the idea itself in this case too. It is also the ability of the organisation to develop their resources and competencies effectively when needed. This occurs from the limited time employees and management devote to the front-end; either to support projects, generate ideas or develop the current process. This also relates to the lack of flexibility of resources, i.e people, as accessing them can be lengthy. Furthermore, the lack of human resources with the right competencies to pass on is limited. The second order themes here, relate to low capacity issues, limited competencies of employees and time constraints.

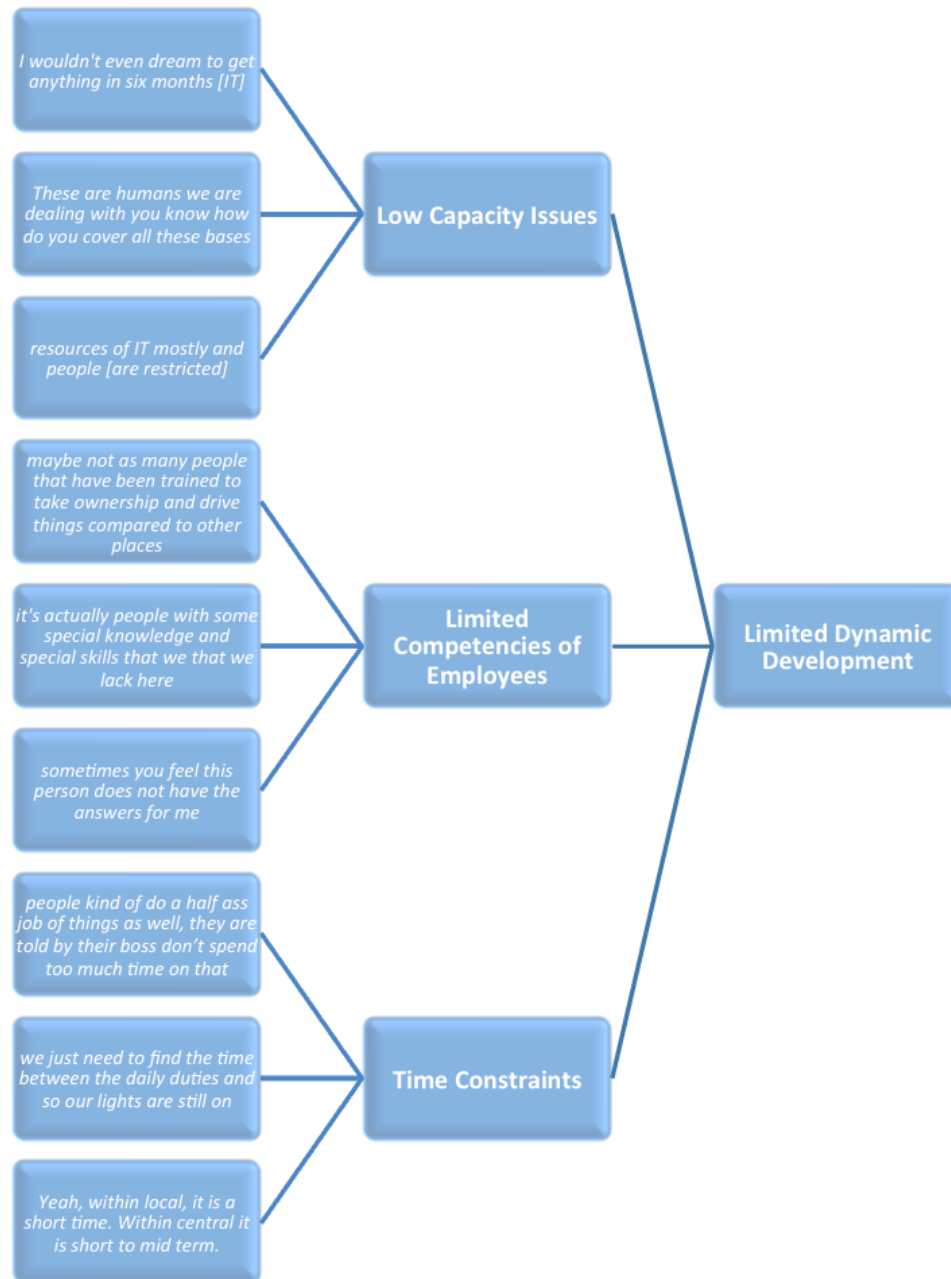


Figure 7: Limited Dynamic Development

Low Capacity Issues

It is a common theme that employees within the organisation have a lot of work to do, which backs up their schedules, making them difficult to access quickly. Some employees have been described as working 200%. For example, in the markets, it could take up to six months to receive IT expertise due to the backlog. The low IT capacity has stopped projects in the past to move forward. However, there have been many service issues IT has had to address lately, taking up much of their time. This is an example of a bottleneck within the organisation.

Nonetheless, developers can be accessed informally and will work on projects if they like the idea, however, this is still limited due to the amount of work they must carry out before that. Two years ago, an idea would go straight to a developer, this is no longer the case. Furthermore, in the markets, the capacity of some resources is more limited than others, as legal in Denmark/Norway is quite limited.

Limited Competencies of Employees

In the initial stages of development, it is quite difficult to find people with the knowledge to provide useful information. There are some very knowledgeable people within the organisation, however not exploited in the front-end. It is clear these employees would benefit this stage due to their knowledge and expertise. Currently, external consultants have been acquired to carry out work which is not of a certain standard within the organisation. However, the knowledge then leaves with these people and the organisation and a lot of information about the organisation too, which are not necessarily used again. It has been clearly stated some employees lack the knowledge and specific skills for this type of stage. In relation to market knowledge, employees within the market are very knowledgeable in this area, however central functions do not have the competencies to handle all this information presented to them from different markets. It has also been stated the characteristics related to driving and owning a project lacks within the organisation. There seems to be a set of high performers and the rest can carry out their day-to-day job. Employees tend to overestimate budgets for projects too, which later causes issues.

Time Constraints

Within the organisation, prioritisation of projects is key, mainly with legal and compliance dominating the top of the list. It is also key for resources on how they are requested and allocated, as there is much discipline in this. Some projects in the markets have stopped due to time constraints, allowing employees to lose focus and look for other opportunities in the market. There is also a tendency to not spend too much time on certain tasks, as a lot of employees are restricted by time on other daily tasks, affecting the overall quality of the outcome of these. A lot of employees are restricted to daily tasks in general, which takes away from being able to generate and develop new ideas for their customers. Furthermore, the process of applying and receiving resources is lengthy, especially if it is in the initial stages of development and there is no convincing business case to back up their requests. Technological resources, such as IT, take the longest to receive, which can affect the time projects take to

launch. An option is to outsource certain resources, however if the quality in house is the equivalent but takes longer, the organisation will usually opt for the latter.

4.2.4- Lack of an Efficient Structure

Another of the aggregate dimensions identified as a constraint influenced by the scarce level resources, is a consistent lack of efficient structure. This structure relates to the activities themselves as well as the processes and mechanisms surrounding the FEI. This dimension was found to be influenced by the challenging state of resources; mainly the low level available. This is both in terms of the amount invested by the organisation to ensure a solid structure exists and in terms of the amount available to ensure the structure continues to develop. Human, organisational and time resources could be the most important resources needed to support the creation and development of an efficient front-end structure. Flexibility of resources is also important to make sure the structure is fluid and does not constrain ideas, rather than encourage them. The aggregate dimension is made up of the second order themes of unclear structure, central avoided by markets, use of personal knowledge, structure affects performance and deterioration of structure.

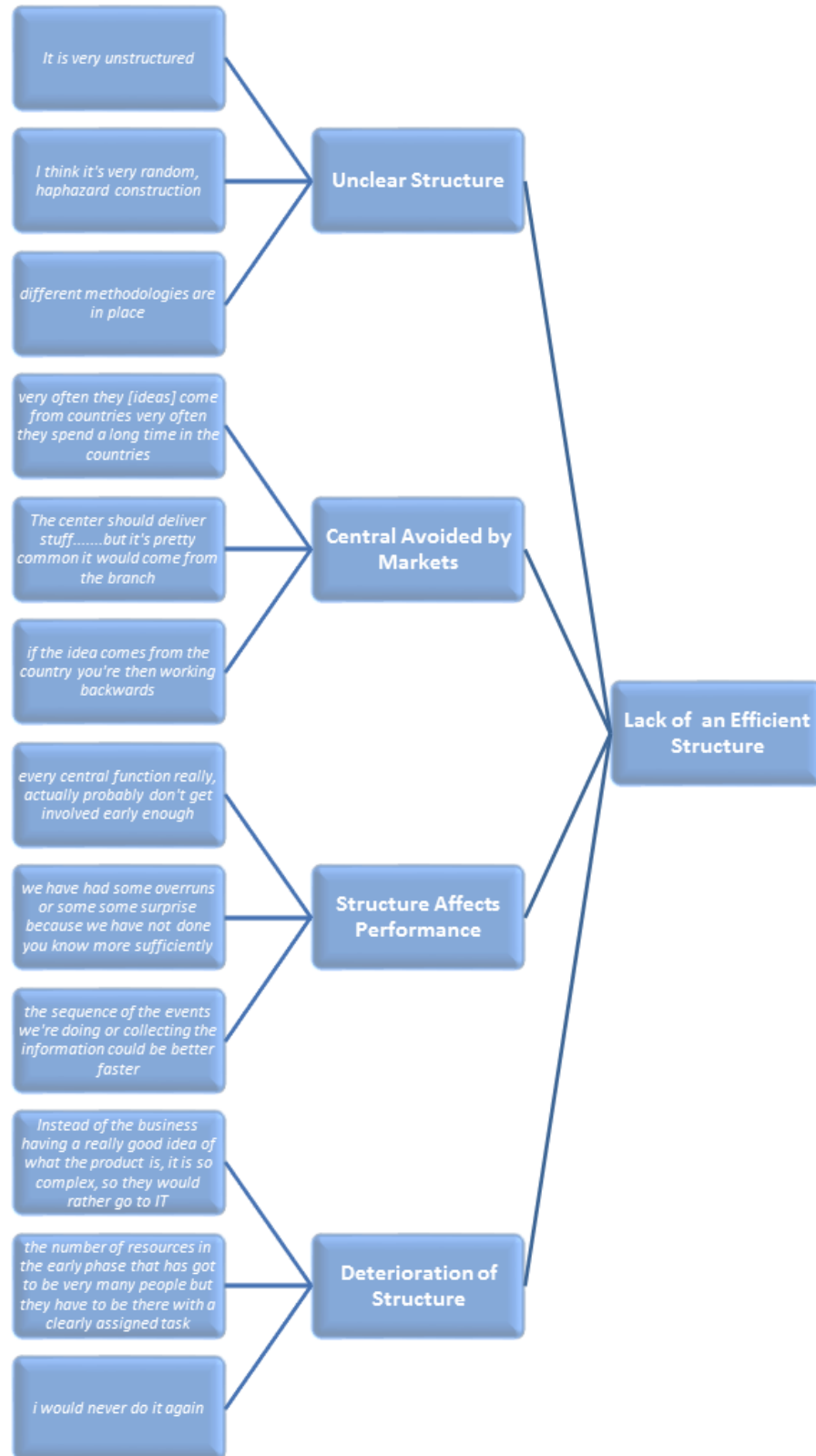


Figure 8: Lack of an Efficient Structure

Unclear Structure

One of the common narratives amongst the second order themes was an inability to know how to progress in developing ideas, as there is little guidance to what should be done and in which order. If the structure is noticed at all, it can be deemed as nonsensical and illogical in the way that it is constructed. This leads to spending time to understand how it can be used to benefit these FEI stages, and in which order steps must be taken. The requirements in place within the structure are also not embedded well enough to act as guideposts for development.

Requirements may be realised at the last moment and therefore become stumbling blocks for projects to overcome.

Central Avoided by Markets

It is evident local branches tend to work on their own as much as they can, only when they require wider acceptance from the organisation to get resources do they move more centrally. The central operations are generally expected to collect ideas and develop them; however, it is often the case this happens within the country and stays outside of central knowledge for extended periods of time. When this shift towards working centrally happens, there often seems to be difficulties arising due to differing structures. There are different structures used in the FEI and these can clash when they meet each other, meaning work needs to be re-worked completely or at the least be evaluated to see if it is adequate.

Structure Affects Performance

The quality of work completed at the FEI also suffers due to this lack of an efficient structure; perhaps due to being desperate to acquire the scarce resources. Due to the structure focusing on certain KPI's, such as profit, these areas may be worked in a way to ensure these numbers are attractive to the organisation, therefore increasing the likelihood of acceptance. However, these practices are not sustainable and are eventually found out, leading to problems. By compromising on certain tasks the overall idea can also suffer, by not working enough during the FEI, the later phases can become lengthier and/or costly. Quality can also suffer due to different approaches focusing on some elements more than others, some may focus more on customer benefits, whereas others will focus more on IT capabilities, when both should be equally important.

Deterioration of Structure

By having a structure which is inefficient for the FEI, a vicious circle appears to develop, where the sub-optimal structure means less resources are available to rectify problems, and therefore deteriorates further. For instance, some departments appear to have ready access to resources whereas others do not, meaning a divide in the structure is appearing where some are better able to work in the FEI than others. By not having a structure where learnings and competencies are sufficiently stored and developed, work completed in the FEI does not benefit the organisation as well as it should. The areas that have experience become the “experts” when they are not qualified to act as such. The central structure overseeing such developments, is also found to mean workers outside of this central environment are losing their ability to contribute to development themselves.

4.2.5- Unsupportive Front-End Strategy

This final aggregate dimension for constraints, refers to the strategy of the case company and if it is conducive to the FEI in allowing it to function as it should. The FEI is under-funded and therefore under-performing, meaning there is little room for an effective strategy to work. In not having enough resources, the strategy has been found to be unclear, affecting the way employees are able to work within the FEI and directly work against the FEI. The resources needed to form an effective strategy are mainly organisational resources to clearly define and allow for commitment to a FEI strategy. Time is also needed to provide time to focus on the FEI, and not more day-to-day activities. The organisational resources, in defining a strategy which promotes the FEI, should help the level and flexibility of resources to make use of. This aggregate dimension is made up of the second order themes strategy directly against innovation, unclear strategy for innovation and strategy forcing change in working habits.

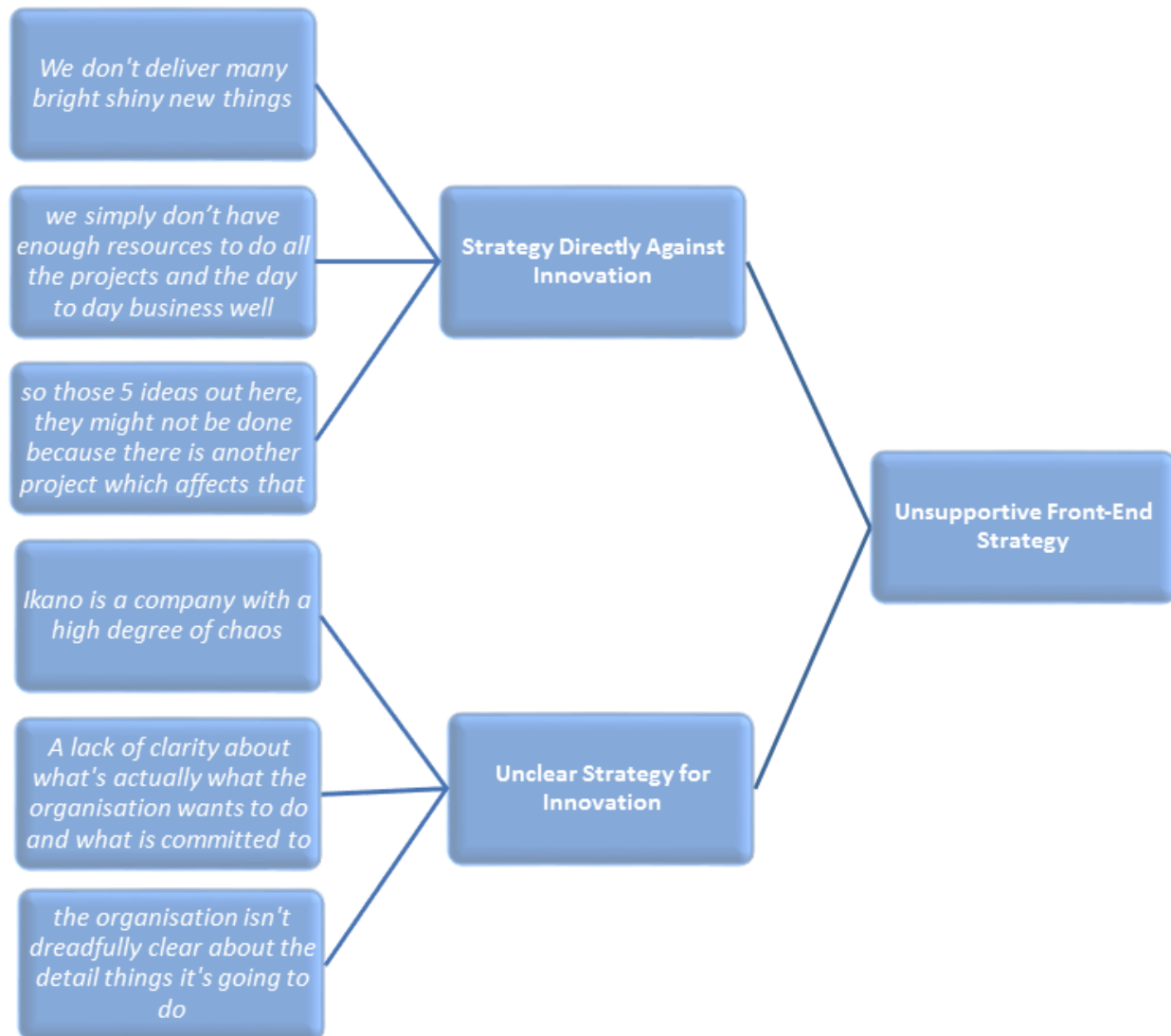


Figure 9: Unsupportive Front-End Strategy

Strategy Directly Against Innovation (do not innovate)

It was sometimes found the strategy firmly hinders FEI efforts in developing an idea and pushing it through the process. The organisational strategy ensures the lion's share of resources are devoted to legal and compliance projects, meaning the clear majority of projects outside of these areas have an uphill battle from the beginning. They must prove themselves to have much more value to the organisation than high priority legal and compliance projects. This prioritisation of areas more linked to day-to-day business operations than future development has meant the strategy is more short-term and less accepting of more radical ideas. The

projects that are more radical are likely to involve the company's largest client and only them. This client has massive power within the organisation and the strategy reflects this; ideas which are not linked to this client may also have an immediate disadvantage. The size of the market which the idea relates to can also be a crucial factor, with the UK, Sweden and Germany felt to be taking precedence. The true value of the idea regardless of market or area is also affected by the strategy; these ideas are said to be judged on time, cost and scope, if one must be sacrificed it would usually be the scope of the project, with time and cost being such crucial elements within the organisation. It is the hard benefits holding the most weight within the strategy.

Unclear Strategy for Innovation (innovate like this...or like this...or maybe like this)

This factor regards the strategy of the organisation being unclear, to such an extent it is negatively affecting the FEI development process. Unlike the previous theme, it is not strictly opposed to the FEI, however, it does not consider the FEI effectively meaning work is hindered. The strategy is said to be extremely unclear, to the point of chaos, generally leading to ideas being worked on which are then later judged to be misaligned with the strategy, wasting resources and thusly making them even more scarce. It is also said the different interpretations of the strategy can lead to the company slowly moving in different directions which are perhaps not sustainable in the long run. This perhaps linked to a finding that the organisation is much more strategically focused on business to customer finance as the main priority rather than business to business finance.

4.3- Reducing the Influence of Resource Challenges

4.3.1- Overcoming Constraints

This aggregate dimension does not relate to any constraints influenced by resources challenges, rather the strategies used to overcome these by employees. It mainly pertains the strategies utilised internally to mitigate the constraints resource challenges cause, as well as the strategies used to utilise resources which are external to the case company. The strategies identified are closely related with the constraints they will be analysed together.

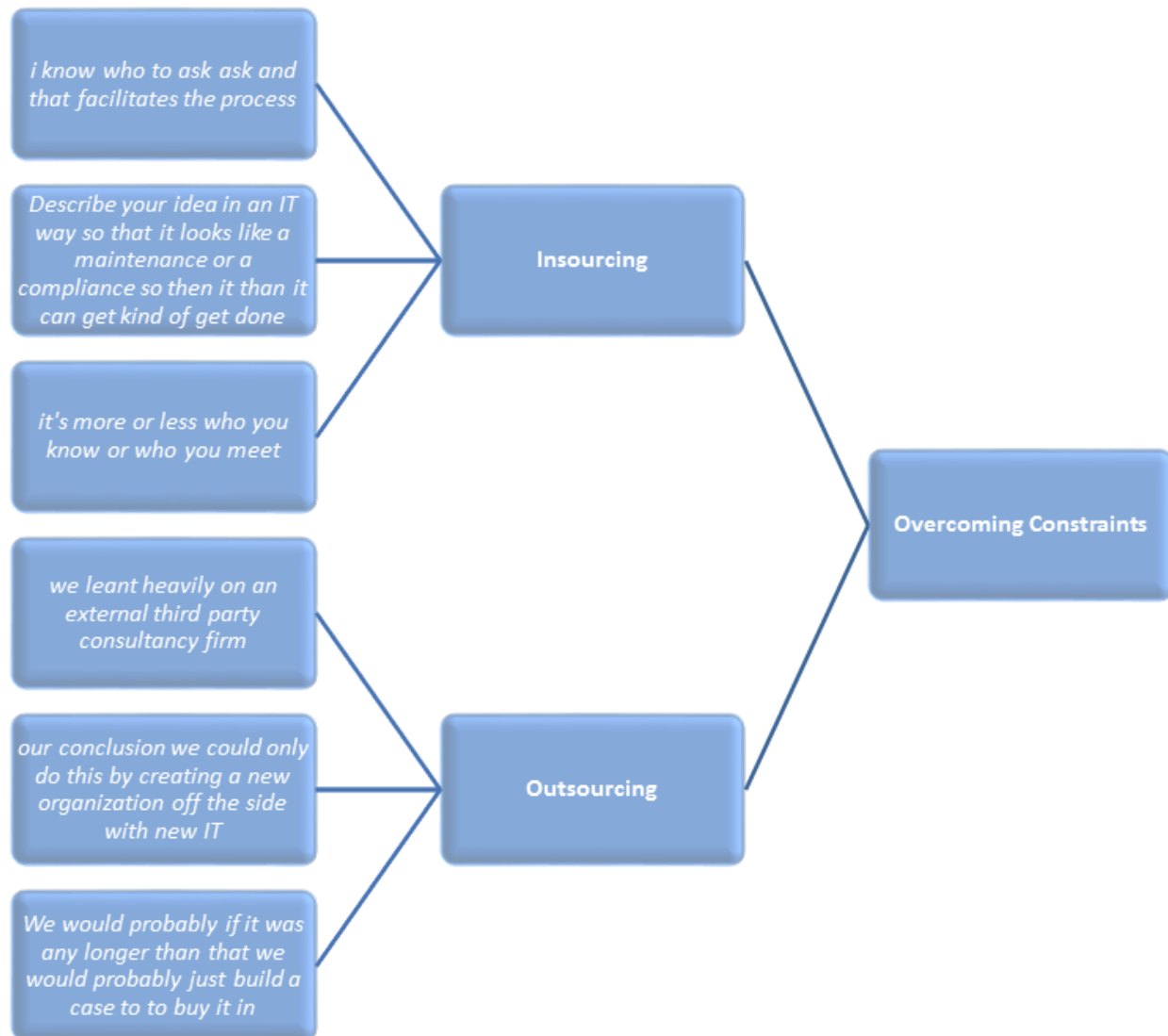


Figure 10: Overcoming Constraints

Insourcing

Insourcing can be defined as, “The fact of work being done by the employees of a company rather than another organisation being employed to do it” (Cambridge Dictionary, 2017).

The scarce resources within the case company have been shown to force employees to leverage their own networks and knowledge of loopholes to keep idea developing, meaning the person can have a larger effect than the quality of the idea itself. It was found more difficult to follow accepted routines and processes to get commitment or resources than using personal networks and calling in favours. Loopholes are also seen to be used to bend the rules to increase chances of acceptance, such as re-phrasing ideas to fit into structures differently.

Outsourcing

This second order theme regards the general strategy which favours outsourcing to try and ensure scarce resources are not wholly limiting. The internal resources have meant outsourcing of important tasks has had to be utilised; this is said to cost more in cash terms but can mean the quality is greater than it would have been had it been performed internally with the limited resources. It is also recognised by outsourcing, the competencies for the tasks in question are not able to be developed meaning the organisation becomes more reliant on outsourcing. This is not to say many of these tasks cannot be completed in-house to the same quality, but there is too much demand for these resources to cope. The strategy therefore seems to favour outsourcing of tasks even where it may be preferred and more beneficial to do the work internally.

Chapter 5: Analysis and Discussion

5.1- Poor Cross-Functional Collaboration

The resource challenges at the FEI can influence poor cross-functional collaboration. This is due to management not devoting enough time to the FEI to support and develop the structure and activities in place; *“there is lack of virtual teams”* (interview C). This can also relate to organisational resources lacking; as they may not have knowledge and experience to develop FEI structures i.e allocate cross-functional communication and teams for new ideas. According to Koen *et al.* (2014) top management are required to spur on innovation and support FEI activities. This is not the case here, as communication about the FEI has not been spread throughout the organisation, resulting in less collaborative efforts for new ideas. One interviewee never heard of a screening committee for new ideas before; *“Oh no, no, no, no, I’m the only one who has been there from Finland”* (interview A). This then does not allow for cross-functional collaboration as employees do not know the structures in place to follow and what/who can aid an ideas development. Developing and sharing of organisational knowledge/resources is vital to aid innovation and spill over of further knowledge (Martín- de Castro, López- Sáez and Delgado- Verde, 2011). Interview C stated, *“so currently these ideas often come from countries they get very far in their thinking and then construct value propositions and then we come in... we often need to make them go back to the drawing board we demand feasibility studies we demand this customer value proposition canvas and sometimes even the business model canvas if it’s such a fuzzy idea”* and *“The kind of solution is at least in the in the ideas in the heads of the countries it’s there before it even reaches that the centre so a lot of our own kind of good work in devising an approach rarely gets deployed”*. There is a clear breakdown in communication and collaboration between markets and central, as employees in the markets cannot take advantage of central function’s knowledge and expertise, partly due to lack of structure in place and a clear strategy of what is intended at this stage. This then relates to *“working together” value it’s actually. It’s, it’s kind of doesn’t feel that real”* (interview C). An inefficient FEI process, ideas having to be re-worked; the quality is affected, taking valuable time employees do not have as the right people are not communicated with in the FEI, all occur. By not devoting enough time and not developing understanding of the FEI and its beneficial activities, the innovative culture is stifled.

Due to limited time devoted to the FEI, there is a lack of cross-functional collaboration, which influences the organisation's culture. Within the organisation *“It is an innovation culture but it is*

not that formalised” (interview F); one aspect of formalising the innovative culture can be using cross-functional teams. By not implementing this concept, limits communication between several functions and creativity that could be achieved, as these teams are vital for the front-end (Rosenthal and Khurana, 1997). This can be due to the organisation's limited knowledge on what is appropriate to drive innovation and spur creativity. Management must be able to maintain their culture, this is something that cannot be forgotten (Cherry, 2017). This can have detrimental effects on the FEI, as culture is one of the main drivers of success at this stage (Koen *et al.* 2014). In this case, no collaboration stifles creativity, leading to less ideas being properly developed to their potential, reducing the overall quality.

Project sponsors also relate to poor cross-functional collaboration, as they have not been able to utilise the correct employees from several functions for this role. This can be due to scarce organisational knowledge of this stage, not knowing who to assign to certain projects or not having employees with the competencies to carry out this role; *“so if we put three operations development managers sitting in customer service, with the focus to optimise processes when people call in maybe to customer service, those are not relevant for them to understand how a product works for the end customer, maybe, so that would be better to have someone responsible from D2C loans”* (interview I). The sponsor in the FEI is vital for project support and experienced sponsors can usually access resources more easily (Florén and Frishammar, 2012), which is currently a major constraint in this organisation. Again, by not having the correct employees from several functions, which have the correct experience and expertise of an idea, the quality of support may be lower, resulting in being unable to leverage the right resources and aid in the development of a specific idea, which is crucial at this stage.

Interview B suggested cross-functional teams are needed at this stage; *“can't be just me because I'm not a technical guy you need to have all sorts of different people in their”*, understanding one person cannot develop an idea alone; however, this cannot be the case now as employees have no time to devote to this stage, referring to their lack of engagement. This also relates to a lack of dynamic development for the idea and employees involved, as by not exploiting employees in other departments, the product champion cannot learn and the idea cannot develop to its fullest, as an array of expertise is lacking in the team. A forum type concept allowing different employees to contact each other is needed; *“Definitely people obviously. You need time to but you need also need forums, you need places where you can*

meet". Currently, this does not happen, and it can reduce the quality and time of the idea substantially as certain expertise and experiences would be valuable at this stage.

Overcoming Poor Cross-functional Collaboration

With the level of cross-functional collaboration being limited, it can be difficult to identify and contact functions to help FEI development. It therefore appears easier for workers to form cross-functional teams themselves' *"But but here we don't have that concept of a virtual cross functional team you know, you're picking out people you know you get along with or a favour or you know are good and you really appreciate their input rather than it being a formalized obligation"* (interview C). These cross-functional teams are vital for FEI development (Rosenthal and Khurana, 1997), therefore using social networks is necessary (Pinchot, 2013). The access to human resources as well as the speed to access them can increase by using these networks. These connected people are essentially able to cherry pick resources deemed most valuable, with other unconnected people or business processes having to make do with lesser resources.

Additionally, overcoming this constraint to gain expertise in the form of favours/resources is the supply of these favours/resources. With a lack of communication and collaboration between departments concerning the FEI, there exists a large amount of unmonitored space where workers are able to exercise their self-imposed autonomy; *"If projects are being underestimated or change requests are being spent too much time on, it still what have the people done during all that time because I think a lot of the time they're doing a lot of investigation and they're doing a lot of favours, at the cost of what their time reporting is on their general basis"* (interview I). This unmonitored space is ideal for allowing informal social relationships to form (Lam, 2010). It has also been suggested a lack of resources can help FEI development, as it may be easier to convince departments/individuals to contribute rather than seek official approval (Stevens, 2014). This tends to be the case, due to a lack of cross-functional collaborations formally created at this stage.

5.2- Lack of Engagement

With poor cross-functional collaboration, this can relate to lack of engagement, also influenced by resource challenges. Due to the low level of time being spent on the front-end to develop it i.e allocating resources (people and finance), and promote it over the whole organisation, can lead to a lack of engagement from employees and management. There tends to be scarce resources in the amount of people devoted to the FEI, in terms of management commitment, playing a central role in project reviews within the organisation; *“you need to get their attention (NPAC), so I think we had 1 or 2 meeting where some didn’t attend, so that caused some frustration, as there was 5 people sitting waiting for them and didn’t show up... it has caused us a delay of 2/3/4 weeks”* (interview G); *“There is a board meeting at the 26th of April, not going to fly, the next one is in June”* (interview G). It can be seen in some circumstances; the level of engagement tends to be lacking as time is scarce. This can be due to the lack of commitment to attend these meetings or other projects/work are more important than new business development presently. McKinney (2016) explains time is sometimes not classified as a resource, as it is always scarce, however if an organisation was dedicated to innovation, time is usually put aside to do so. As this is not the case, this slows down projects and can ultimately lead to de-motivation in employees, which would affect them not pursuing innovative ideas again; *“I would never do it again”* (interview G). This can also lead to a lack of legitimisation in the front-end, which is vitally important (Florén and Frishammar, 2012) to ensure wider support from the organisation. Additionally, Trotter (2011) explains employees below senior management value the commitment more than management themselves, which is not clearly justified at this stage by the lack of commitment shown to employees below them. Again, leading to demotivated employees, stifling creativity.

In terms of employee engagement, the inflexibility of resources (people and time) influences this; resources are tied up in projects, especially ones which run over run and go over budget. The low level of people at this stage, to show engagement and commitment, is clear from employees as it is *“often difficult to get the level of engagement (from countries)”* (interview B); *“Yes it was often very easy to get people to turn up to workshops for instance but quite difficult to get them to actually develop and then you know commit thoughts to paper and be involved* (interview B). Employees are a main source of innovative ideas (Kuratko et al. 2011), however, in this case, they are not utilised correctly due to the inflexibility of these resources, slowing down the overall process for an idea at this stage. *“You know the people putting them (ideas) forward probably don’t realise what’s happening with them”* (interview B), can suggest they may

be willing to carry an idea forward, however time is not available. This can relate to; *“bit of a challenge with it with the business resource for example even my team I have a person who is working two hundred per cent”* (interview D) and *“These are humans we are dealing with you know how do you cover all these bases”* (interview C), suggesting the lack of engagement is due to too many tasks already needing to be carried out, which are more important in the present moment for the organisation. Again, this links with poor cross-functional collaboration, as employees simply do not have time to commit to the FEI, even in an informal manner, limiting the communication/interactions needed for further idea development and extends the time spent at this stage searching for supplementary resources.

Additionally, it has been stated; *“I only have insight into how people work here, and there are a lot of functions where people can hide in a corner and do very little and expect other people to always book meetings, always be the one taking notes on stuff be the ones driving everything”* (interview E), suggesting the level of engagement can relate to employee’s lack of competencies and their limited dynamic development, as they not seem to want to develop themselves. One of the main skills an entrepreneurial individual possesses is commitment (Kuratko *et al.* 2011) and is evident from the data collected people at this stage, do not portray this competence, or do not have the time to show it. Koen *et al.* (2014) explain effective teams are a key factor relating to FEI success, which the team members being fully committed and willing to do extra work on top of their daily duties are vital for this. It does not seem the case here. Nonetheless, interview G stated, *“it is a bumpy road... I am doing the work in assembling the people, actually doing the documents, they are not proactive... It is not streamlined well enough”* and *“the progress has been dependent on my my eagerness of driving it”*, showing they have the skills, however poses to be the only exception. By not being engaged to contribute to the FEI, a lack of ideas being generated as well as a lack of ideas being carried forward for development can stifle new business development and the overall competitiveness of the organisation.

Overcoming Lack of Engagement

It appears engagement is low and due to the lack of time invested in the FEI and the difficulty to access resources, as employee’s lack of time to devote to this stage. To be able to fast-track ideas from the slow process of accessing these resources (people), top management’s backing seems to be very important; *“I have used the argument about the value, the initiative is expected to deliver. That doesn’t always work more important to have the commitment from.*

The. Individuals, senior or BAMT” (interview C) and *“If you want a piece of legal person’s time it needs to be very clear where your permission for that comes from”* (interview C). Therefore, persistence is key at this stage to obtain resources (Pinchot, 2013). It is also useful to gain legitimisation as quickly as possible, as top management support is critical to gain additional resource support and greater probability of the idea being developed (Florén and Frishammar, 2012). This should allow the idea to be able to receive resources needed to develop it at this stage, speeding up the development process. There were no techniques identified to increase engagement from employees on an intrinsic level.

5.3- Limited Dynamic Development

Resource challenges were also found to influence the dynamic development of ideas and the product champion. Firstly, this is through the lack of time employees can devote to the FEI, as well as the flexibility of human resources, as they are not easily accessible. It is difficult to prioritise time for the front-end when resources in general are scarce, however, McKinney (2016) explained the need to commit to investment in innovation. Currently, employees do not have the time to work within the FEI, even if there was investment in resources (people, time, finance) at this stage; *“Eh, tiny. Even my time, yeah tiny (discussing the level of resources)”* (interview C) and *“some of my projects have been down prioritised but I think I still have the impression we have the certain, mandatory, regulatory compliance projects that we have to do”* (interview A). As this occurs, ideas cannot receive the correct development needed, with input from different departments lacking, as there is not a dedicated amount of resources applied to this stage. Resources are heavily scarce due to day-to-day legal and compliance projects using up the time and manpower available, meaning less time for development in the FEI. This results in ideas not being able to receive the quality input needed for development, and the product champion cannot learn from different employees from cross-functional departments, stifling their personal development within this area and being unable to help them gain knowledge within different fields, which can help them in future projects too.

Again, due to scarce time of employees, in relation to IT, *“I mean I wouldn’t even dream to get anything in six months (IT)”* (interview A) and *“There will be some blocker in IT that will mean that it doesn’t go forward”* (interview C), all have negative influences on an ideas dynamic development. This again, relates to the lack of engagement at this stage, as it will clearly slow down or stop the development of an idea, resulting in less learning being created for the champion, negatively influencing their own development and the ideas by not getting expertise

help when needed. This is also relevant in other departments when special expertise is needed; *“for X is that we are also internally really tight on resources. People seem to be very booked, like if you need to talk to some internal people about risk related thing or PMO or support, it looks like people have 3 months booked”* (interview A). This again, slows down the process and due to these missing competencies from limited human resource at this stage that cannot be compensated elsewhere, ultimately can reduce innovation overall (Diaz-Diaz *et al.* 2008). Employees may stop submitting ideas, as they know the capacity of certain departments will hinder its dynamic development and potentially their own development.

Scarce employee competencies were another factor resulting in limited dynamic development, as the level of people with competencies able to provide value and distribute it at this stage is limited; *“it's not you're not it's not just people it's actually people with some special knowledge and special skills that we that we lack here”* (interview C), *“Ehm we have some skilled people here as well, if I should be honest compared to other places I've worked, the skill level that is required for a bank is quite low here, alarmingly so, just to be honest”* (interview E) and *“would say generally we have resources that can do their job and also we have some high performers”* (interview F). All three different interviewees stated there is a scarce number of competencies from various employees, which seems to be a difficult challenge within the organisation. However, if employees do not have the right expertise and knowledge, then this can produce lower quality development for an idea and new business, as a lack of knowledge is being shared with other employees to develop them. Sirmon *et al.* (2010) studied capability weaknesses; with a capability, i.e employee competencies, having positive performance outcomes only when they are valuable and rare. It can be seen only a limited number of employees are high performers, suggesting they can bring meaningful value to the FEI and rare competencies too. However, it may not be enough to only depend on this selective group for positive outcomes, compared to their vast workforce. Furthermore, by not having these cross-functional collaborations, within the markets, due to a lack of human resources in specific areas, results in other employees compensating for these skills and expertise, suggesting a reduction in the quality of output; *“The thing worth having access to would be project management, we ain't got those skills locally, so the whole preparation and the whole discipline to put in our things is in our own hands”* (interview H). This defeats the purpose of dynamic development, as they are not learning from employees with the capable experiences in the different departments. By not investing in, and developing, these vitally important knowledge based resources, the performance within innovation will suffer (Meso and Smith, 2000).

In relation to being able to take ownership of a project and further develop ideas/concepts; again, relating to scarce competencies of human resources, it is suggested the organisation do not have enough employees with these competencies, *“maybe not as many people that have been trained to take ownership and drive things compared to other places”* (interview E). The product champion should be an effective communicator and therefore raise the profile of the team and be able to sell the concept in general should mean a proficiency in getting resources/favours (Trotter, 2011; Kim and Wilemon, 2002). Currently, this does not seem to be evident. The human competencies employees hold is beneficial for everyday job tasks, however, may not possess the right skills and competencies for new business development (Rivera, 2017), which can also relate to a lack of engagement occurring in the front-end. As employees have not been able to learn from cross-functional departments who have experience in certain areas, hinders their development, as these qualities have not been able to be passed on. Therefore, without people in the organisation with these skills and capabilities, it may be sufficient for idea generation, however when it comes to taking the idea forward and developing them, there may be a reluctance to do so.

Additionally, human resources are said to have a much higher level of stickiness as the expertise and competencies may be bound to specific activities (Woschke *et al.* 2017). This suggests some employees may be restricted to certain types of activities, relating to the competencies of employees mentioned above, restricting them to what they can do within the FEI; *“There are some really really good and experienced people and then sometimes you feel this person does not have the answers for me”* (interview A). By not being able to get in contact with the right people, ending up with lesser qualified employees that cannot give you the information needed, can reduce the champions development as well as the ideas, which results in frustration and a time-consuming process. It is also suggested by McKinney (2016) top employees should be involved in the innovation process as employees in general are the greatest asset to an organisation, however they are usually saved for the more important tasks, which can again reduce the dynamic development of the idea and the champion. This refers to the inflexible nature of some resources, being difficult to access at this stage. Resources are usually condemned to legal and compliance projects, which are time consuming, again affecting the capacity available for other FEI projects; *“using the product management team. Really, four product managers in the traditional sense. So not many”* (interview C). As the project managers are occupied with major projects taking up a lot of time, they have very limited time to share

knowledge and expertise, with ideas having very little input from them at the FEI, stifling the development of an idea too.

Overcoming Limited Dynamic Development

As the capacity of human resources are constrained with more important projects, employees had to find a way to access these resources and aid their dynamic development of the idea and themselves. A few techniques have been used, *“And again it's it's still very much based on who you know and if it's somebody you can kind of. Describe your idea. In an IT way so that it looks like a maintenance or a compliance so then it than it can get kind of get done”* (interview A); *Being in the centre is especially difficult... I've been to a country manager to ask for both compliance and legal resource. Even though both those resources are central functions but without country management manager's permission to use locally based but centrally reporting”* (interview C) and *“I think the majority, this is because, in the nature of the beast, to get resources, you need to have a proven business case or a good business case that beats other business cases, that's why people tend to overestimate their profit (over budget)”* (interview F). These strategies revolve around bending the rules to be able to access resources. Interview A wanted to disguise their project to look like compliance, relating to rule-orientated tactics explained by Kuratko *et al.* (2011), not needing to go through another process taking longer to receive resources. Interviewee C also bent the rules, going through a country manager for central resources. Lastly, some employees tend to overestimate the financials relating to projects - which is bending the rules - however this can negatively affect the organisation in the long term, which is not an intrapreneurs intention (Deloitte, 2015), as they will likely to run over budget, which will result in more resources being taken away from other projects that may be desperate for them. These techniques tend to be the way resources are allocated so an idea can be developed with the hand of an array employees in departments.

Outsourcing has also played a large part in compensating for resources that cannot be attained; *“We would probably if it was any longer than that we would probably just build a case to to buy it in”* (interview C) and *“get people in relatively fast is using consultants but also has the disadvantage to be a little bit less sticky which is a challenge when you would like to build up something long term”* (interview D). This tends to be a more effective and faster way to receive resources than internally. This can also increase the quality of development as the expertise and experience can be accessed as *“Innovations occur as a result of incorporating new knowledge with existing knowledge to reconfigure organisational capabilities and competencies,*

resulting in value-added products” (Al-Sa’di, Abdallah and Dahiyat, 2017). Outsourcing is an effective way of overcoming human resource scarcity, as missing specific competencies due to a shortage in human resource can reduce innovation (Diaz-Diaz *et al.* 2008) and hinder the dynamic development of employees too. Nonetheless, interview D stated, these competencies do leave with the person it came with, resulting in less knowledge and expertise being kept internally. This outsourcing causes a break in the internal knowledge value chain (Sabetzadeh and Tsui, 2015) meaning the parent company is not able to capitalise fully on the knowledge and skills based on the work completed.

Furthermore, the product champions can overcome a lack of competencies of employees resulting in insufficient dynamic development at the FEI by; *“But but here we don't have that concept of a virtual cross functional team you know, you're picking out people you know you get along with or a favour or you know are good and you really appreciate their input rather than it being a formalized obligation”* (interview C). Personal-political tactics were used; relying on friendships to aid in leveraging or requesting specific resources and favours from people within other departments. They also overcame this constraint by only working with the best people available, with the right skills and competencies (Pinchot, 2011) they can learn from and who they thought were adequate to make sure the idea was able to receive the utmost knowledge and expertise available to aid its development. The right people are essentially cherry picked.

5.4- Lack of an Efficient Structure

The structure of the FEI was found to be influenced largely by the resource challenges within the case company. The level of resources is insufficient to allow for meaningful investment into the FEI, meaning the structure is developing very slowly, if at all. The only noticeable development of the process appears to be derived from employees working within this phase e.g. interviewee G being forced to structure/organise a screening committee themselves, even though it was supposed to be formalised already. The organisation seems to invest a negligible amount of resources in to structuring the FEI. Alam and Perry (2002) argue management in the financial sector tend to focus more of their attention to screening activities rather than development activities. This aligns with findings that the structures that exist are more centred around screening. The lack of human, organisational and time resources also means any structuring attempts are made significantly more challenging. Financial resources alone would be unable to rectify the deeply embedded problems with the front-end structure. In structuring terms, human resources are needed to guide the process and allow it to progress and develop,

organisation resources are needed to allow the phase to be embedded with policies and controls, and time resources are needed to allow projects to be worked on to provide the best performance. The inflexibility of the resources mean the structure of the FEI can be stop-start or “bumpy” (interview H). The long waiting times mean projects may have to be paused as they are being worked on, due to having to wait for a re-stock of resources.

The FEI is a distinct phase with separate processes and structures when compared to the later and more formal stage-gate phases (Gremyr *et al.* 2014). Khurana and Rosenthal (1998) found the FEI will usually tend to be less organised than it should be, which can lead to sub-optimal performance in terms of speed and effectiveness. Poskela and Martinsuo (2009) do say a certain element of freedom in terms of less structure can be beneficial, however, the lack of structure within the case company was found to be detrimental. The clarity of how this phase is structured and the usefulness of these structures does not seem to be fully appreciated; *“From idea phase to DP0, I think it really depends on who is assigned to drive it and you can either get a really structure very thorough process or you can get something that you know was virtually non-existent”* (interview E). The different approaches used by different individuals mean projects will not be able to be compared as well as they could have been, had they been developed the same way; *“The issues is that there is no structure around how we do that kind of analysis”* (interview E). This also means some ideas may be developed in several ways, depending on the champion and their knowledge/experience; *“PowerPoint basically, very in general, without any business case, it was more describing what competitors are doing, the drivers for change, competition, regulations and accounting standards”* (interview G) and *“different methodologies are in place”* (interview D). The lack of clarity also means it is a task simply deciding how to proceed with a project so the organisations needs are met, rather than the project’s needs; *“it actually took us some time in understanding what the next step was going to be”* (interview G). The unclear structure and different approaches to development used can mean the ideas are not always developed to a sufficient quality by the time it is presented to management for consideration as a formal project. This may either be discovered at the screening stage or during the project stage, meaning resources are wasted as work may need to be re-done and therefore time is also wasted. The quality of work completed during the FEI also suffers due to this lack of efficient structure, perhaps due to being desperate to acquire the scarce resources; *“you need to have a proven business case or a good business case that beats other business cases, that's why people tend to overestimate their profit”* (interview F). The FEI is also compromised with ideas suffering- *“we either have to abandon or we deliver later and its poor*

quality because we don't spend enough time in that critical phase between somebody has an idea and now we start executing it" (interview B). This lack of structure, by extension, implies even if workers wanted to engage in developing an idea to its full potential the structure prevents them from doing so. This suggests this dimension is linked to a lack of engagement; the structure should be formulated in a way to allow workers to engage fully. By not having a clear and distinct structure the FEI can be rushed through, meaning little value is taken from it. This blurriness of the structure is closely linked with the cross-functional collaboration of the FEI the structure could be as clear and effective as possible, however the cross-functional collaboration is vital to ensure it is made use of.

It is said a vital component of the FEI is giving employees enough autonomy to not be constrained by structures which do not consider the uncertainty of innovation, providing development opportunities so they may focus on areas which are not necessarily valued by the core business. This ensures employees have a sense of purpose in these innovation activities (Pink, 2011). The state of resources within the organisation simply do not allow for an ability to commit to granting widespread autonomy for staff to develop themselves - outside of their day-to-day responsibilities. It is also evident local branches tend to work on their own as much as they can, only when they require wider acceptance from the organisation to get resources do they move more centrally; *"there is an expectation that the centre should deliver stuff... but it's pretty common it would come from the branch"* (interview C) and *"very often they [ideas] come from countries, very often they spend a long time in the countries"* (interview C). When this shift towards working centrally happens, there often seems to be difficulties arising due to differing structures. There are different structures used in the FEI and these clash when they meet each other- *"if the idea comes from the country you're then working backwards"* (interview C) and *"we evaluate them internally, what we can do locally and then when it starts to be obvious that it should be a central initiative then it gets complicated"* (interview A). The lack of autonomy to work within the FEI, as well as the tendency for local markets to avoid going central, hints at a relationship with the dynamic development of employees and an idea. By not having a sufficient level of capacity to allow freedom to work in a central environment, employees are being constrained, as well as the markets.

Due to the levels of informality, uncertainty and lower levels of structure accepted to characterise the FEI (Khurana and Rosenthal, 1998), the nature of work should be more experimental. Ideas should be given the chance to develop, rather than be excessively

structured before they enter the later stage-gate process (Koen *et al.* 2001). As explained, the lack of structure is perhaps too extreme to be beneficial to the FEI. However, the structures that do exist, can then come as shocks to the people developing ideas as they did not know about them; *“No no I had no idea, absolutely no idea, it [Wash Council] came, it was not an enabler, it was a block”* (interview A). The structures also may not be embedded effectively, meaning ideas have to effectively support the structures rather than the structures supporting ideas; *“first I had to identify the assessors [for a mandatory Q&A session] as that wasn’t done automatically. It should have done but it wasn’t... so that was a calendar exercise in itself”* (interview G). By having sporadic areas of structure not well known about, in a phase with little structure, it may do more harm than good. The ideas slow down as they should work to appease these structures, quality will likely also suffer as the work is done just to satisfy the requirements rather than add value.

Overcoming Lack of an Efficient Structure

There appears to be vast autonomy in terms of how people can acquire resources and in how they develop ideas; *“outside of the project allocation, there is no formal allocation of resources”* (interview E). This lack of structure surrounding the acquisition of resources means workers can be forced to use their own methods; there can be a massive differential in how much commitment an idea may receive. The experience and knowledge of the champion is always important (Kuratko *et al.* 2011), however, it seems within the case company it is perhaps too important; the value of the idea may not always be the key consideration- *“I know who to ask ask and that facilitates the process... Unconnected people could have it harder”* (interview G). These people may have to use their knowledge and experience to get input from other functions, as well as concrete investment; *“when there is not that kind of a forum, it’s more or less who you know or who you meet, if you just happen to be in the right meeting and pitch your idea and someone has actually had the same idea and then it gets forward and I think there are a lot of good ideas that we have missed because of that, it just didn’t pop up in the right place at the right time”* (interview A). This can help workers to get access to the right type of resources, as well as perhaps gaining them quicker. The people who have knowledge of where resources are available are then able to cherry pick them. This is backed up by Stevens (2014) who argues a lack of resources in the FEI can make it easier to gain resource commitment informally, rather than via formal processes. The structure of the FEI also seems to favour smaller ideas due to them being less complex, employees can therefore aim to use a rule-oriented tactics (Kuratko *et al.* 2011), which the structure itself is used as a loophole. The

workers can aim to make their idea fit to the least strict rules, in terms of investment; “*We can do this one as well and knowing some bypasses, for instance so you don't have to do the end part if you do this below this certain threshold or that kind of things, like and you can do it as a maintenance*” (Interview A). This enables greater flexibility, capacity and access to diverse types of resources. Workers in positions with enough power, may also create their own structures to deal with the FEI before they have no option but to move centrally - “*then created locally within the governance structure a local body that is kind of a project review team*” (interview H). This then allows employees to develop ideas in the way they think is appropriate, helping the flexibility of resources.

5.5- Unsupportive Front-End Strategy

The FEI strategy was also identified as being influenced by resource challenges. This is mainly due to organisational resources (McKinney, 2016) being of an insufficient level within the FEI; this lack of investment is compounded by the scarcity of time resources. By not having sufficient time to focus on FEI development as well as day-to-day business, there is a systematic prioritisation of organisational resources on projects and initiatives outside of the FEI. These organisational resources for strategy include the quality and capacity of decision-making by top management to focus on FEI projects (Florén and Frishammar, 2012), the efforts of communicating a positive FEI strategy and the balancing of the product portfolio (Koen *et al.* 2001). The amount of resources available for investigation on new opportunities, which may lead to strategic renewal (Poskela and Martinsuo, 2009) is also limited.

The strategy for FEI developments should not only allow it to function but also help it in functioning effectively (Koen *et al.* 2014). By having a strategy which is aligned with the FEI, the ideas developed should be more strategically in tune, meaning return on invested resources should be greater (Koen *et al.* 2001).

It can be said companies with the strongest product portfolios – which is what the development of FEI projects can contribute to – place more emphasis on strategic fit rather than financial factors when selecting projects (Trotter, 2011). It is therefore important strategy encourages innovation. If this strategy is congruent to the development process, a smooth flow of valuable and efficiently managed ideas should be produced (Koen *et al.* 2001), which will mean resources needed to be invested will be lower. The decision-making processes will also be influenced greatly by the strategy itself as if it is not conducive to innovation, management may

be forced to allocate resources in line with organisational directives, rather than at their own discretion to help innovation (Mohan *et al.* 2017). These points were highlighted as harming the FEI within the case company, with an emphasis on financial factors when evaluating ideas; *“I would say mostly profit, which is kind of sad... That should be something, ideas get generated and prioritised on the customer value”* (interview B). The strategy which values legal and compliance far above other areas also means power to make certain decision is taken out of management's hands; *“we have the certain mandatory regulatory and compliance projects that we have to do and then the ones we can kind of pick which ones we want to take further”* (interview A). By having a focus on performance factors which decision makers have little room to deviate from, there is the possibility for ideas with potential – but the wrong type of potential – to be disregarded without having a fair chance to develop i.e. if a project may bring massive value to customer satisfaction but little profit. This alignment of the strategy can relate to top management being prepared to engage and commit to the FEI, however they are perhaps limited by capacity; by committing more to the FEI, the day-to-day business may end up suffering.

The levels of uncertainty going together with the FEI means the process should be iterative so decisions and assumptions can be constantly reassessed and modified if needed as additional information is gathered. This uncertainty can show itself with the development team not having a clear vision of the development path to follow, or in the form of a well-defined concept being uncertain as to whether it will be in-line with an organisation's strategy (Zhang and Doll, 2001) – *“That there is the organisation isn't dreadfully clear about the detail things it's going to do and I think that's why people are coming up with ideas relatively easy”* (interview C). It seems; therefore, this unclear strategy is clogging up the FEI with ideas being looked at which may not be within strategy (through no fault of the employees). There must also be a mutual understanding of the strategy (Eling *et al.* 2013), as without a clear and well-defined strategy these decisions may take longer to ensure they fit with the strategy or may be made quickly but against the strategy. This relationship between the FEI performance and its strategy is two-way, as strategy can directly influence development but it can also work vice-versa (Poskela and Martinsuo, 2009). For instance, it seems to be a theme strategy is understood differently by some than others – *“you know I still see different interpretations of that... it's like [Client X] first so everything in this particular country will be [Client X] first when actually my take on the strategy is slightly different”* (interview C). Some employees may focus on or neglect certain types of ideas when in fact they are all valid and within strategy, meaning the use of resources

within the FEI is not as efficient as it could be. The collaboration between several functions needs to be functioning to an effective level to ensure the strategy is clear enough and understood the same, to ensure a strategy conducive to FEI activities works as intended.

By effectively utilising FEI development, any information gathered on latest technologies or markets may force a change of strategy, a form of strategic renewal (Poskela and Martinsuo, 2009). By not investigating all ideas effectively, the full organisational learning potential from the development is not realised. The valuable knowledge lost by not examining and protecting these knowledge value chains means resources are wasted compared to the potential value gained (Sabetzadeh and Tsui, 2015). With projects being in line with the strategy, only projects with a realistic chance of strategic success will have resources invested in them later. By recognising if projects have strategic value early on they should not take up unnecessary resources later. With the lack of capacity to properly devote sufficient effort and resources to each idea, the strategic renewal is hampered.

Thanasopon *et al.* (2015) state openness at the FEI can reduce uncertainty, as these initial stages can benefit from an open and collaborative innovation strategy for idea generation and development. As explained above in relation to structures and capacity, this form of strategy is also lacking due to the limited resources, meaning branches will tend to keep ideas to themselves, and away from central – *“very often they [ideas] come from countries very often they spend a long time in the countries”* (interview C) – also illustrating a link between the front-end strategy and the lack of structure in the front-end.

Koen *et al.* (2014) state strategy should allow for FEI developments to align with the wider organisation and therefore provide a credible and clear roadmap for investing in incremental and radical innovations. It is a clear view the FEI is not performing as it should, the day-to-day business operations are valued above long term future innovations. *“We don’t deliver many bright shiny new things”* (interview C), *“Well again, based on the things that we have on our agenda it’s low, we simply don’t have enough resources to do all the projects and the day to day business well”* (interview E) and *“And I think it’s nice actually to give people who are running the business today the opportunity to have a piece of that time that’s actually looking forward. 1,2,3 years ahead and being part of that next stage”* (interview C). This lack of a credible road map for upcoming innovations and a longer-term strategy simply means output of the FEI is limited, both in quality and quantity.

Overcoming Unsupportive Front-End Strategy

With the FEI strategy recognised by some employees as incompetent at dealing with all types of FEI projects, some are now using this to their advantage. A tactic of using the solid support the strategy offers to certain areas as a shortcut to gain support for their own projects; *“it’s still very much based on who you know and if it’s somebody you can kind of describe your idea in an IT way so that it looks like a maintenance or a compliance so then it than it can get kind of get done”* (interview A). This take on a rule-orientated tactic means by simply re-framing an idea in the correct way, acquisition of resources can become immensely easier (Kuratko *et al.* 2011). It can also mean with an unclear FEI strategy for some areas, the more politically minded person may be able to force their idea through sheer force of will and guile - *“It is rarely actually the right decision that is being made. and that is what we have been trying to establish with our processes, to make sure they are weighable measures comparable measures with all and then you can’t bullshit your way through”* (interview I).

5.6- Resource Challenges Model

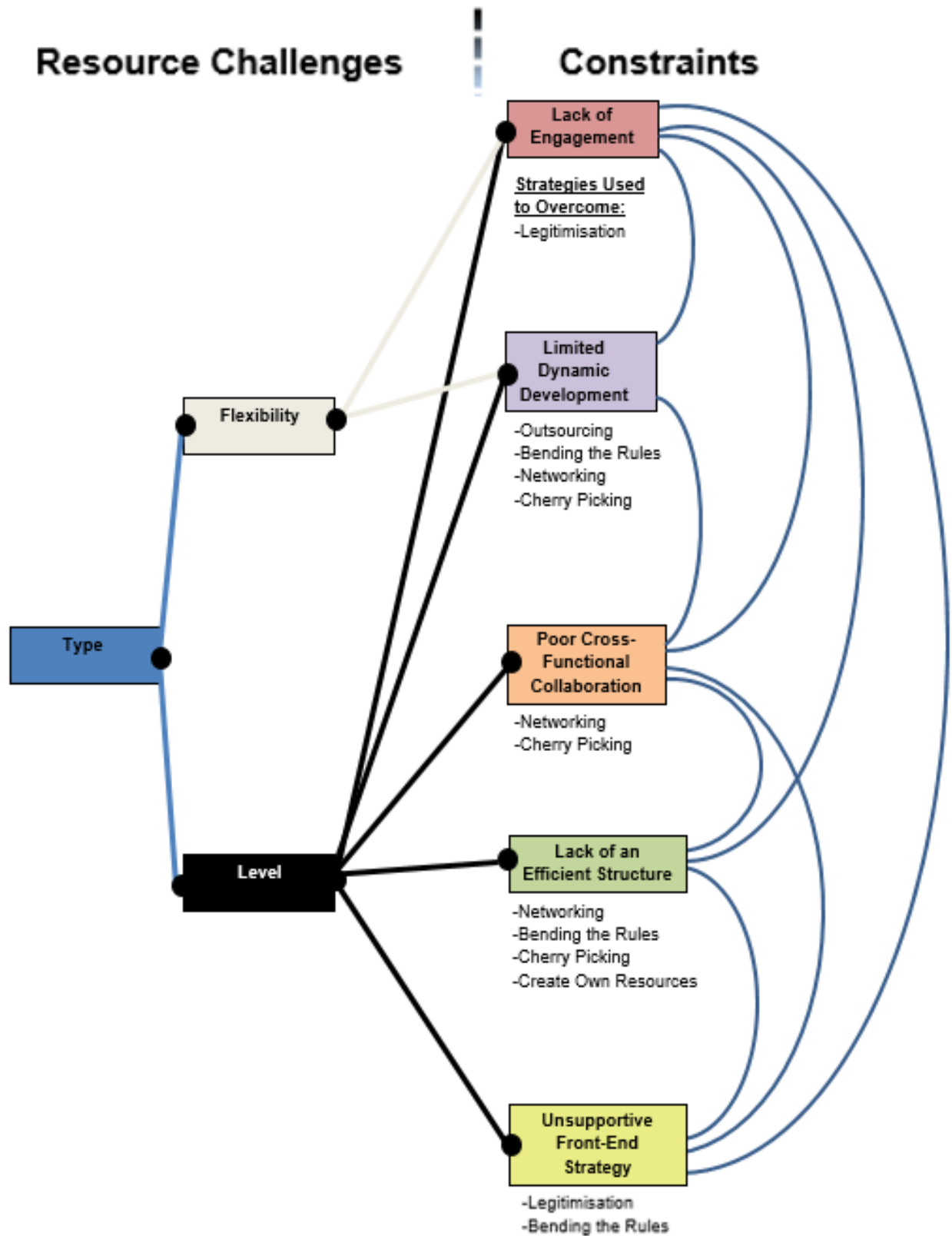


Figure 11: Resource Challenges Model

Resource Challenge to Constraint Relationships

The relationships between characteristics of the resources (whether they be human, organisational, financial or time) and constraints differ slightly depending on the constraint. The Level of resources was found to be a cause of the constraint in all cases, however the flexibility of these resources only appeared to affect 'Lack of Engagement' and 'Limited Dynamic Development'.

Constraint to Constraint Relationships

The constraints themselves were found to not only be linked to resource challenges, but also to each other. Some constraints may not only lead to the worsening of FEI performance, they may also have an influence on the way other constraints affect the organisation. 'Poor Cross-Functional Collaboration' and 'Lack of Engagement' were found to be related to all aggregate dimensions.

Constraint to Strategies Relationships

The constraints identified through the analysis of data collected were found to be related to the strategies identified to overcome the constraints. In other words, the strategies were found to only be used in reaction to certain constraints; there was no strategies common with all constraints throughout the case company.

Chapter 6: Conclusions and Implications

6.1- Conclusions

The guiding objective of this thesis was to make a valuable contribution to the FEI, and more specifically, its relationship with resources. From the observations within the case company it was immediately obvious the state of resources was challenging, which in turn had various influencing effects on the FEI. There is a general acceptance in the related literature resources will influence the FEI, however how these effects may present themselves and whether these influences are good or bad is not explored.

There had been suggestions scarce resources can benefit the FEI, as it forces greater levels of creativity (Bradley *et al.* 2011). This relates to the findings concerning the techniques used to overcome constraints, however, this study's findings show the FEI was negatively influenced by resource challenges. Therefore, in relation to the guiding research question, it could be answered the sub-optimal state of resources in terms of type, level and flexibility influencing varying constraints at the front-end which negatively affected output from FEI activities. The varying constraints are not independent, they have influencing effects on each other too; the constraints can lead to different strategies being used to mitigate them.

The final 'Resource Challenges Model' proposed adds a new level of depth to the area, exploring deeper into the influence of resources on the FEI and how the resulting state of the FEI is manifested.

6.2- Limitations

This study examines how resource challenges influences the FEI in the banking industry, however one limitation is the use of the single case-study approach, as the findings cannot be generalised (Bryman and Bell, 2011). Nonetheless, it could be suggested the same findings may occur and built upon, as a new regulation was introduced, implying other banks may be focusing more resources to legal and compliance projects, resulting in scarce resources for their FEI activities. The organisation is also in a transition phase, forming a more centralised structure, again, which could influence the findings. In relation to resource challenges, another limitation refers to the focus on resource scarcity in this study, with less focus on other challenges that may be valid too. Furthermore, one of the interviews was carried out through a

video call, which can result in certain questions being misinterpreted as it can be difficult to explain certain questions through this type of interaction (Wilson, 2014).

6.3- Managerial Implications

This research can be useful in practice for several reasons. Firstly, the findings highlight the importance of having a developed level of knowledge and experience within the FEI, therefore unleashing the full potential of this early phase. In terms of management, it should be considered vital to invest as much effort into establishing and continually developing a FEI that can then be hoped to constitute an organisational competency. All the constraints highlighted are clear and able to be rectified with a carefully considered plan. They are all reversible. A smoothly functioning FEI is good for the organisation as well as the individuals involved.

Secondly, management should consider the added value committing resources – type, level and flexibility – can bring to the FEI. When management are considering the investment of resources they should look at the bigger picture, the value from preventing these constraints from appearing as well as value from gaining this organisational competency should also be considered. In other words, management should attempt to develop their understanding of how important resources can be.

6.4- Further Research

As discussed, this is the first study related to resource challenges at the FEI, implying further research on the same matter is recommended to increase the validity of the findings. This could be carried out in the same industry, or elsewhere, to then compare findings and if any additional constraints can be highlighted. To start, studies involving similar sized organisations should be applicable, however the research could then venture into SMEs to understand if the results are similar. Future studies could also focus on one of the perspectives taken here (active and responsible) to gather further in-depth outcomes from either perspective. The resource challenges within this case company relate to scarce resources, however, there may be room to explore challenges related to varying levels of scarcity, or even abundance. Additionally, further research could explore the techniques identified to overcome these constraints, identifying if similar or different techniques are used elsewhere at this stage and what influence they also have on the FEI.

References

- Alam, I. (2002), An Exploratory Investigation of User Involvement in New Service Development. *Journal of The Academy of Marketing Science*, 30(3), 250-261.
- Alam, I. (2005), Removing The Fuzziness From The Fuzzy Front-End Of Service Innovations Through Customer Interactions. *Industrial Marketing Management*. 35 (1), 468-480.
- Alblas, A. and Jayaram, J. (2015), Design Resilience In The Fuzzy Front End (FFE) Context: An Empirical Examination, *International Journal Of Production Research*, 53(22), 6820-6838
- Al-Sa'di, A. Abdallah, A. and Dahiyat, S. (2017), The mediating role of product and process innovations on the relationship between knowledge management and operational performance in manufacturing companies in Jordan. *Business Process Management Journal*, 23(2), 349-376.
- Amit, R. and Schoemaker, P. (1993), Strategic assets and organizational rent. *Strategic Management Journal*, 14(1), 33-46.
- Andersén. J. (2010), Resource-based competitiveness: managerial implications of the resource-based view, *Strategic Direction*, 26(5), 3-5
- Arend, R.J. (2004), The definition of strategic liabilities, and their impact on firm performance, *Journal of Management Studies*, 41(6), 1003-1026
- Azzone, G. Bertelè, U. and Rangone, A. (1995), "Measuring resources for supporting resource-based competition", *Management Decision*, 33 (9), 57-62
- Barney, J. (1991), Firm Resources And Sustained Competitive Advantage, *J. Manage*, 17(1), 99-120.
- Bell, J.E. Mollenkopf, D.A. and Stolze, H.J. (2013), Natural resource scarcity and the closed loop supply chain: a resource-advantage view, *International Journal of Physical Distribution and Logistics Management*, 43(5/6), 351-379

Block, Z. and MacMillan, I. C. (1993), *Corporate venturing: Creating new businesses within the firm*. Boston, Mass: Harvard Business School Press.

Bradley, S.W. Shepherd, D.A. and Wiklund, J. (2011), The Importance Of Slack For New Organizations Facing 'Tough' Environments, *Journal Of Management Studies*, 48(5),1071-1097.

Brush, T.H. and Artz, K.W. (1999), Toward A Contingent Resource-Based Theory: The Impact Of Information Asymmetry On The Value Of Capabilities In Veterinary Medicine, *Strateg. Manage. J.* 20(3), 223–250.

Bryman, A. and Bell, E. (2011), *Business Research Methods*. Oxford, United Kingdom: Oxford University Press.

Bright. (2017), *Dynamic Development*. Available:
<https://www.brightrelation.com/solutions/features/dynamic-development>. Last accessed 11/05/2017.

Burg, E. Podoyntsyna, K. Beck, L. and Lommelen, T. (2012), Directive Deficiencies: How Resource Constraints Direct Opportunity Identification In SMEs. *Journal Of Product Innovation Management*, 29(6), 1000-1011.

Cambridge Dictionary (2017), Insourcing Meaning in the Cambridge English Dictionary. [online] Dictionary.cambridge.org. Available at:
<http://dictionary.cambridge.org/dictionary/english/insourcing> [Accessed 5 May 2017].

Castellion, G. and Markham, S. (2012), Perspective: New Product Failure Rates: Influence of Argumentum ad Populum and Self-Interest. *Journal of Product Innovation Management*, 30(5), 976-979.

Cherry, J. (2017), *HOW TO BUILD A GREAT COMPANY CULTURE WHEN MONEY IS SCARCE*. Available: <https://consciouscompanymedia.com/workplace-culture/build-great-company-culture-money-scarce/>. Last accessed 28/04/2017.

-
- Chen, J. Guo, Y. Huang, S. and Zhu, H. (2011), The determinants of the choice of innovation source for Chinese firms. *International Journal of Technology Management*, 53(1), 44-68.
- Christiansen, J.K. and Gasparin, M. (2016), Managing Controversies In The Fuzzy Front End. *Creativity And Innovation Management*. 25 (4), 500-514.
- Chun, D. (2016), Exploring connections: aspiration levels, culture and the resource based view, *Journal of Strategy and Management*, 9(2), 202-215
- Clulow, V. Barry, C. and Gerstman, J. (2007), The resource-based view and value: the customer- based view of the firm. *Journal of European Industrial Training*, 31(1), 19-35.
- Collis, J. and Hussey R. (2009), *Business Research: A Practical Guide For Undergraduate And Postgraduate Students*. London: Palgrave Macmillan.
- Cooper, R.C. (1988), Predevelopment Activities Determine New Product Success, *Industrial Marketing Management*, 17(2), 237-248
- Cooper, R. Edgett, S. and Kleinschmidt, E. (2001), Portfolio Management For New Product Development: Results Of An Industry Practices Study, *R And D Management*, 31(4), 361–380.
- Cooper, R.G. (1996), Overhauling The New Product Process; *Industrial Marketing Management* 25(6), 465-482
- Cooper, R.G. And Kleinschmidt, E.J. (1986), An Investigation Into The New Product Process: Steps, Deficiencies, and Impact, *Journal Of Product Innovation Management*, 3(2), 71-85
- Damgaard, T. Freytag, P. and Darmer, P. (2000), QUALITATIVE METHODS IN BUSINESS STUDIES. *Advances in Business Marketing and Purchasing*, 9, 143-186.
- De Brentani, U. (1989), Success And Failure In New Industrial Services, *Journal Of Product Innovation Management*, 6(1), 239-258

Desarbo, W.S. Benedetto, C.A.D. and Song, M. (2007), A Heterogeneous Resource Based View For Exploring Relationships Between Firm Performance And Capabilities, *Journal Of Modelling In Management*, 2(2), 103-130.

Deloitte. (2015). Pinchot, G. (2011), *The Intrapreneur's Ten Commandments*. Available: <http://www.pinchot.com/2011/11/the-intrapreneurs-ten-commandments.html>. Last accessed 7/05/2017.. Available: https://www2.deloitte.com/content/dam/Deloitte/de/Documents/technology/Intrapreneurship_Whitpaper_English.pdf. Last accessed 7/05/2017.

Díaz-Díaz, N.L. Aguiar-Díaz, I. and De Saá-Pérez, P. (2008), The effect of technological knowledge assets on performance: The innovative choice in Spanish firms. *Research Policy* 37(9), 1515-1529

DIRECTIVE 2007/64/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 November 2007 on payment services in the internal market amending Directives 97/7/EC, 2002/65/EC, 2005/60/EC and 2006/48/EC and repealing Directive 97/5/EC

Eisenhardt, K.M. (1989), Building Theories From Case Study Research, *Academy Of Management Review*, 14(4), 532-550.

European Commission (2015), Payment services directive: Frequently asked questions. Available at: http://europa.eu/rapid/press-release_MEMO-15-5793_en.htm?locale=en (Accessed: 24 February 2017).

EU Commission Recommendation Of 6 May 2003 Concerning The Definition Of Micro, Small And Medium-Sized Enterprises (Notified Under Document Number C (2003) 1422) (OJ L 124, 20.5.2003, 36-41)

Florén, H. and Frishammar, J. (2012), From Preliminary Ideas To Corroborated Product Definitions: Managing The Front End Of New Product Development, *California Management Review*, 54(4), 20-43.

Finke, R. A. Ward, T. B. and Smith, S. M. (1992), *Creative cognition: Theory, research, and applications*. Cambridge, MA: MIT Press

Frishammar, J. Lichtenthaler, U. and Richtnér, A. (2013), Managing process development: key issues and dimensions in the front end. *R&D Management*, 43(3), 213-226.

Furlan, A. Grandinetti, R. and Paggiaro, A. (2014), Unveiling the growth process: entrepreneurial growth and the use of external resources, *International Journal of Entrepreneurial Behavior & Research*, 20(1), 20-41

Gioia, D.A. Corley, K.G. and Hamilton, A.L. (2012), Seeking Qualitative Rigor In Inductive Research: Notes On The Gioia Methodology', *Organizational Research Methods*, 16(1), 15-31.

Grant, R. (1996), Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(S2), 109-122.

Gremyr, I. Witell, L. Löfberg, N. Edvardsson, B. and Fundin, A. (2014), Understanding new service development and service innovation through innovation modes. *Journal of Business & Industrial Marketing*, 29(2), 123-131.

Goldenberg, J. Lehmann, D. R. and Mazursky, D. (2001), The idea itself and the circumstances of its emergence as predictors of new product success, *Management Science* 47(1), 69-84.

Gu, Q., Jiang, W. and Wang, G. (2016), Effects of external and internal sources on innovation performance in Chinese high-tech SMEs: A resource-based perspective. *Journal of Engineering and Technology Management*, 40, 76-86.

Hadjimanolis, A. (1999), Barriers To Innovation For Smes In A Small Less Developed Country (Cyprus), *Technovation*, 19(9), 561-570

Herstatt, C. and Verworn, B. (2001), The "Fuzzy Front End" Of Innovation. Working Paper No. 4, Department Of Technology And Innovation Management, Technical University Of Hamburg.

Herstatt, C. Verworn, B. and Nagahira, A. (2004), Reducing project related uncertainty in the "fuzzy front end" of innovation: a comparison of German and Japanese product innovation projects. *International Journal of Product Development*, 1(1), 2-25.

Hogan, T.L. and Manish, G.P. (2016), "Banking Regulation and Knowledge Problems" In *Studies in Austrian Macroeconomics*, 213-234.

Jou, G. and Yuan B. (2016), Utilizing A Novel Approach At The Fuzzy Front-End Of New Product Development: A Case Study In A Flexible Fabric Supercapacitor. *Sustainability*, 8(740), 1-18.

Khurana, A. and Rosenthal, S. (1997), Integrating The Fuzzy Front End Of New Product Development, *Sloan Management Review*, 15(2), 103-120.

Khurana, A. and Rosenthal, S. (1998), Towards Holistic "Front Ends" In New Product Development. *Product Innovation Management*. 15(1), 57-74.

Kim, J. and Wilemon, D. (2002), Strategic Issues In Managing Innovation's Fuzzy Front- End, *European Journal Of Innovation Management*, 5(1), 27-39.

Klingebiel, R. and Rammer, C. (2013), Resource Allocation Strategy For Innovation Portfolio Management, *Strategic Management Journal*, 35(2), 246–268.

Koen, P. Ajamian, G. Burkart, R. Clamen, A. Davidson, J. D'Amore, R. Elkins, C. Herald, K. Incorvia, M. Johnson, A. Karol, R. Seibert, R. Slavejkov, A. and Wagner, K. (2001), Providing clarity and a common language to the 'fuzzy front end'. *Research-Technology Management*, 44, 46–55.

Koen, P. Bertels, H. and Kleinschmidt, E. (2014), Managing The Front End Of Innovation—Part I: Results From A Three-Year Study, *Research-Technology Management*, 57(2), 34-43.

Koen, P. Bertels, H. and Kleinschmidt, E. (2014), Managing The Front End Of Innovation—Part II: Results From A Three-Year Study, *Research-Technology Management*, 57(3), 25-35.

- Kogut, B. and Zander, U. (1992), Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology, *Organization Science*, 3(3), 383-397.
- Kuratko, D.F. Morris, M. H. and Covin, J. G. (2011), Corporate Innovation & Entrepreneurship. International 3rd Edition. South Western Cengage Learning.
- Kurkkio, M. (2011), Managing The Fuzzy Front-End: Insights From Process Firms, *European Journal Of Innovation Management*, 14(2), 252-269
- Laforet, S. and Tann, J. (2006), Innovative characteristics of small manufacturing firms, *Journal of Small Business and Enterprise Development*, 13(3), 363-380.
- Lam, W. (2010), Funding gap, what funding gap? Financial bootstrapping. *International Journal of Entrepreneurial Behavior & Research*, 16(4), 268-295.
- Leithold, N. Haase, H. and Lautenschläger, A. (2015), Stage-Gate® For SMEs: A Qualitative Study In Germany, *European Journal Of Innovation Management*, 18(2),130-149.
- Love, J.H. Roper, S. Bryson, J.R. (2011), Openness, Knowledge, Innovation and Growth in UK Business Services, *Research Policy*, 40(10),1438–1452.
- Madrid-Guijarro, A. García-Pérez-de-Lema, D. and Auken, H.V. (2016), Financing constraints and SME innovation during economic crises, *Academia Revista Latinoamericana de Administración*, 29(9), 84-106.
- Magnusson, P.R. (2009), Exploring The Contributions Of Involving Ordinary Users In Ideation Of Technology- Based Services. *Journal Of Product Innovation Management*, 26(5), 578-593.
- Maranto-Vargas, D. and Gómez-Tagle Rangel, R. (2007), Development Of Internal Resources And Capabilities As Sources Of Differentiation Of SME Under Increased Global Competition: A Field Study In Mexico, *Technological Forecasting And Social Change*, 74(1), 90-99.

Martín- de Castro, G. López- Sáez, P. and Delgado- Verde, M. (2011), Towards a knowledge-based view of firm innovation. Theory and empirical research. *Journal of Knowledge Management*, 15(6), 871-874.

Martovoy, A. and Mention, A. (2016), Patterns Of New Service Development Processes In Banking, *International Journal Of Bank Marketing*, 34(1), 62-77

McKinney, P. (2016), *What Innovation Resources Are Needed To Thrive?* Available: <http://philmckinney.com/the-law-of-resources-what-does-innovation-need-to-thrive/>. Last Accessed 27/02/2016

Meso, P. and Smith, R. (2000), A resource- based view of organizational knowledge management systems. *Journal of Knowledge Management*, 4(3), 224-234.

Mohan, M. Voss, K.E. and Jiménez, F.R. (2017), Managerial Disposition And Front-End Innovation Success, *Journal Of Business Research*, 70, 93-201.

Morris, M.H. Kuratko, D.F. Ireland, R.D. Allen, J. and Schindehutte, M. (2010), Resource Acceleration: Extending Resource Based Theory in Entrepreneurial Ventures, *Journal of Applied Management and Entrepreneurship*, 15(2), 4-25.

Moreau, C. P. and Dahl, D.W. (2005), Designing the solution: The impact of constraints on consumers' creativity, *Journal of Consumer Research*, 32 (1),13-22.

Narwal, K.P. and Pathneja, S. (2016), Effect Of Bank-Specific And Governance-Specific Variables On The Productivity And Profitability Of Banks, *International Journal Of Productivity And Performance Management*, 65(8), 1057-1074.

Newbert, S.L. (2008), Value, Rareness, Competitive Advantage, And Performance: A Conceptual-Level Empirical Investigation Of The Resource-Based View Of The Firm, *Strategic Management Journal*, 29(7), 745-768.

Otero-Neira, C. Lindman, M. T. and Fernández, M. J. (2009), Innovation And Performance In SME Furniture Industries: An International Comparative Case Study, *Marketing Intelligence & Planning*, 27(2), 216-232

Paladino, A. (2007), Investigating The Drivers Of Innovation And New Product Success: A Comparison Of Strategic Orientations, *Journal Of Product Innovation Management*, 24(6), 534-553.

Pinchot, G. (2013), *Getting the Resources You Need: The Way of the Intrapreneurial Warrior*. Available: <http://www.pinchot.com/2013/03/getting-the-resources-you-need-the-way-of-the-intrapreneurial-warrior.html>. Last accessed 7/05/2017

Pinchot, G. (2011), *The Intrapreneur's Ten Commandments*. Available: <http://www.pinchot.com/2011/11/the-intrapreneurs-ten-commandments.html>. Last accessed 7/05/2017.

Poskela, J. and Martinsuo, M. (2009), Management Control And Strategic Renewal In The Front End Of Innovation, *Journal Of Product Innovation Management*, 26(6), 671-684.

Reinertsen, D.G. (1999), Taking The Fuzziness Out Of The Fuzzy Front End, *Research Technology Management*. 42 (6), 25-31.

Rivera, M.J. (2017), Leveraging innovation and intrapreneurship as a source for organizational growth, *International Journal of Innovation Science*, 9(2), 1-32

Románova, I. and Kudinska, M. (2016), Banking And Fintech: A Challenge Or Opportunity? *Contemporary Issues In Finance: Current Challenges From Across Europe*, 98(1), 21-35

Sabetzadeh, F. and Tsui, E. (2015), An effective knowledge quality framework based on knowledge resources interdependencies. *VINE*, 45(3), 360-375.

Salazar, L. (2017), The Resource-Based View and the Concept of Value The Role of Emergence in Value Creation. *Mercados y Negocios*, 1(35), 27-46.

Saunila, M. and Ukko, J. (2014), Intangible aspects of innovation capability in SMEs: impacts of size and industry, *Journal of Engineering and Technology Management*, 33, 32-46.

Schweitzer, F. and Gabriel, I. (2012), Action At The Front End Of Innovation, *International Journal Of Innovation Management*, 16(6), 12400101–124001023.

Sedera, D. Lokuge, S. Grover, V. and Sarker, S. (2016), Innovating With Enterprise Systems And Digital Platforms: A Contingent Resource-Based Theory View, *Information & Management*, 53(3), 366-379.

Sirmon, D.G. Hitt, M.A. Arregle, J.L. and Campbell, J.T. (2010), “The dynamic interplay of capability strengths and weaknesses: investigating the bases of temporary competitive advantage”, *Strategic Management Journal*, 30(13), 1386-1409

Stenius, M. Hankonen, N. Haukkala, A. and Ravaja, N. (2015), Understanding knowledge sharing in the work context by applying a belief elicitation study. *Journal of Knowledge Management*, 19(3), 497-513.

Stevens, E. (2014), Fuzzy Front-End Learning Strategies: Exploration Of A High-Tech Company, *Technovation*, 34(8), 431-440.

Starr, A.J. and MacMillian, I.C. (1990), Resource Co-Optation Via Social Contracting: Resource Acquisition Strategies for New Ventures, *Strategic Management Journal*, 11(Summer), 79-92

Tatikonda, M.V. and Zeithalm, V.A. (2002), Managing The New Service Development Process: Multi-Disciplinary Literature Synthesis And Directions For Future Research. In: Boone And Ganeshan *New Directions In Supply-Chain Management: Technology, Strategy And Implementation*, Unites States: American Management Association, 200-233.

Taylor, S. Bell, E. and Cooke, B. (2009), Business History And The Historiographical Operation, *Management and Organizational History*, 4(2), 151-166

Thanasopon, B. Papadopoulos, T. and Vidgen, R. (2015), The Role Of Openness In The Fuzzy Front-End Of Service Innovation, *Technovation*, 47(1), 32-46.

Tidd, J. and Bessant, J. (2014), *Strategic Innovation Management*. United States: John Wiley & Sons.

Trotter, P. and Vaughan, J. (2012), Innovation In UK Companies. An Evaluation Of The Implementation Of Best Practice In Front End Innovation Processes And Methodologies, *International Journal Of Innovation Science*, 4(4), 191-204.

Trotter, P.J. (2011), A New Modified Total Front End Framework For Innovation: New Insights From Health Related Industries, *International Journal Of Innovation Management*, 15(5), 1013-1041

Warnier, V. Weppe, X. and Lecocq, X. (2013), Extending resource-based theory: considering strategic, ordinary and junk resources, *Management Decision*, 51(7), 1359-1379

Wernerfelt, B. (1984), A resource-based view of the firm, *Strategic Management Journal*, 5(1), 171-180.

West, G.P. and DeCastro, J. (2001), The Achilles heel of firm strategy: resources weakness and distinctive inadequacies, *Journal of Management Studies*, 38, 417-442

Williams, T. and Samset, K. (2010), Issues in front-end decision making on projects, *Project Management Journal*, 41(2), 38-49.

Wilson, J. (2014), *Essentials Of Business Research*. London: SAGE Publications

Woschke, T. Haase, H. and Kratzer, J. (2017), Resource Scarcity In Smes: Effects On Incremental And Radical Innovations, *Management Research Review*, 40(2), 195 - 217

Yin, R.K. (2003), *Case Study Research, Design And Methods*, 3rd Edition, Newbury Park, CA: Sage

Zhang, Q. and Doll, W.J. (2001), The Fuzzy Front End And Success Of New Product Development: A Causal Model, *European Journal Of Innovation Management*, 4(2), 95-112.

Appendix A: Interview Guide

Section 1: Introduction

1. Could you briefly tell us about your background?
2. How would you describe your current role within the bank?
3. Have you always worked in this role?
4. How long have you been working at this organisation?

Section 2: Understanding of the front-end

1. Ideally, how would you describe the process between idea generation and DP0? (*Idea generation is the first identification of opportunities a business may want to pursue*) (if DP0 isn't understood we'll say the formulation of a business case- all questions)
2. What are the challenges during this stage from idea generation to DP0? (*Time, Is the process clear/structured, support, screening, autonomy etc*)
3. What is/was/how would you like to be involved in the process between idea generation and DP0?

Section 3: Resources (*explain this all concerns process between idea generation and DP0*)

1. What would you categorise as resources?
2. What are the main challenges you feel are faced between idea generation and DP0 due to the characteristics of resources? *Explain what we mean by characteristics- level/accessibility, type, flexibility*
3. How important would you say that resources are for the processes between idea generation and DP0?
4. Would you say that a lack of resources is always bad or do you think it can be beneficial too?
5. What kind of arguments do you have to make when applying for resources? E.g is profit more important than brand image
6. What are your opinions on an aligned strategy and vision having an influence on the amount of resources allocated for new projects? why?
7. In your opinion, how important would you say top management commitment is between idea generation and DP0? (*Define top management commitment*)

Follow up questions- only ask questions which have not been answered

Type

8. How would you rate the quality of resources available from idea generation to DP0?
Why?
9. Which resources are lacking from idea generation to DP0? If any
10. Has the bank ever used external resources from idea generation to DP0, i.e outsourcing? Do you think external resources could be used more for this stage if there aren't enough resources internally?

Flexibility

11. Once resources are allocated between idea generation and DP0, is a level of autonomy given, allowing you/the employee with an idea to use these resources how they want?
12. How quick is the process between requesting resources and obtaining them/using them?

Level/Accessibility

13. How would you categorise the level of resources available between idea generation and DP0?
14. How many projects would you say over-run/go over budget? Is there a certain type of project that overruns?
15. *Responsible- Which techniques have you seen people use to deal with a lack of resource availability/how would you imagine people do deal with them?* *Active- How have you dealt with a lack of resource availability? What techniques to counter this have been effective?*
16. Do you feel that the way in which resources are allocated/distributed benefits some departments/employees more than others? why?
17. What would your opinions be on a separate pool of resources for between idea generation and DP0?

Appendix B: Data Structure

Aggregate Dimension- Poor Cross-Functional Collaboration

Quotes from Data Collection	2nd Order Themes
<i>can't be just me because I'm not a technical guy you need to have all sorts of different people in there- Interview B</i>	Central Collaboration
<i>I like to keep risk and compliance and people like that out... That type of person tends to create objections and that gets in the way- Interview C</i>	
<i>Challenge of translating that into IT language (idea)- Interview D</i>	
<i>you have also a problem if everybody is criticising everything wants to change everything. Is also you need to have certain to see stability and calm work environment so to say in certain aspects- Interview F</i>	
<i>It is an innovation culture but it is not that formalised- Interview F</i>	
<i>The thing with this idea process is, its early stage, you don't need a lot of resources from my point of view. You just need to have the right sponsors- Interview F</i>	
<i>governance and relevance- so if we put three operations development managers sitting in customer service, with the focus to optimise processes when people call in maybe to customer service, those are not relevant for them to understand how a product works for the end customer, maybe, so that would be better to have someone responsible from D2C loans- Interview I</i>	
<i>The next step we are going to do now as I see it we will promote that sponsor role to more relevant people in the company- Interview I</i>	
<i>Oh no, no, no, no, I'm the only one who has been there from Finland (on people knowing about wash council in markets)- Interview A</i>	Central-Market Collaboration
<i>Definitely people obviously. You need time to but you need also need forums, you need places where you can meet- Interview B</i>	
<i>there is lack of virtual teams- Interview C</i>	

<p><i>“working together” value it's actually. It's, it's kind of doesn't feel that real-</i></p> <p>Interview C</p>	
<p><i>The kind of solution is at least in the in the ideas in the heads of the countries It's there before it even reaches that the centre so a lot of our own kind of good work in devising an approach rarely gets deployed-</i></p> <p>Interview C</p>	
<p><i>It's not a practice typically really, I guess and sometimes It's beyond the experience for them to say oh I can't do it but I've got a colleague in Denmark or Sweden that can pick it up. You know what I mean. It should be possible but it doesn't really doesn't tend to work like that so we are very dependent on key individuals and what else they have got going on at the moment at the same time-</i></p> <p>Interview C</p>	
<p><i>so currently these ideas often come from countries they get very far in their thinking and then construct value propositions and then we come in... we often need to make them go back to the drawing board we demand feasibility studies we demand this customer value proposition canvas and sometimes even the business model canvas if it's such a fuzzy idea-</i></p> <p>Interview E</p>	
<p><i>it could be helpful to have a resource pool in the beginning just asking some of the critical questions-</i></p> <p>Interview G</p>	

Aggregate Dimension- Lack of Engagement

Quotes from Data Collection	2nd Order Themes
<i>often difficult to get the level of engagement [from countries]- Interview B</i>	From Employees
<i>trying to get working groups together to work powerfully and at speed with good quality output is quite difficult and I can't really put my finger on why. It's not that we haven't got smart people that know the business. You know, we do, but we can't press the right buttons for many people- Interview B</i>	
<i>You know the people putting them [ideas] forward probably don't realise what's happening with them- Interview B</i>	
<i>Yes, it was often very easy to get people to turn up to workshops for instance but quite difficult to get them to actually develop and then you know commit thoughts to paper and be involved- Interview B</i>	
<i>I only have insight into how people work here, and there are a lot of functions where people can hide in a corner and do very little and expect other people to always book meetings, always be the one taking notes on stuff be the ones driving everything- Interview E</i>	
<i>You need to find the right people as well and also from my experience at least if you want to bring, you have to be in a creative mode... So you need to also create that type of environment- Interview B</i>	From Management
<i>To do things in a properly considered, planned way and to invest much more time in this kind of first stage. But that's quite new- Interview C</i>	
<i>the big job is making sure that stakeholders are properly engaged and involved- Interview C</i>	
<i>If someone is so to say revealing his idea you have to be there and otherwise those guys get frustrated so you have to have a certain process that guarantees you a certain speed in handling such ideas so saying pushing back or maybe comment on it but you have to comment and appreciate every idea that comes out and in response time or response phase otherwise you lose your so to say your spirit your culture- Interview F</i>	

<i>it soon became clear to us that some stakeholders involved, of the functions involved actually didn't understand what we are talking about, to the extent we would have liked to see it, we then offered to run them a separate Q&A again with every function- Interview G</i>	
<i>There is a board meeting at the 26th of April, not going to fly, the next one is in June- Interview G</i>	
<i>it is a bumpy road... I am doing the work in assembling the people, actually doing the documents, they are not proactive... It is not streamlined well enough- Interview G</i>	
<i>you need to get their attention [NPAC], so I think we had 1 or 2 meeting where some didn't attend, so that caused some frustration, as there was 5 people sitting waiting for them and didn't show up...it has caused us a delay of 2/3/4 weeks- Interview G</i>	

Aggregate Dimension- Limited Dynamic Development

Quotes from Data Collection	2nd Order Themes
<i>for X is that we are also internally really tight on resources. People seem to be very booked, like if you need to talk to some internal people about risk related thing or PMO or support, it looks like people have 3 months booked- Interview A</i>	Low Capacity Issues
<i>I mean I wouldn't even dream to get anything in six months (IT)- Interview A</i>	
<i>some of my projects have been down prioritised but I think I still have the impression we have the certain, mandatory, regulatory compliance projects that we have to do- Interview A</i>	
<i>Oh, it's like it's a very low, it's it right now it's very low, it's understandable and I know it's it's it's it's a price we have to pay to climb to the next level but it's low- Interview A</i>	

<p><i>Yeah not very highly, but we are we are kind of quite limited in terms systems and we have quite old systems- Interview B</i></p>	
<p><i>I would say they were scarce in terms of, yeah (resources)- Interview B</i></p>	
<p><i>There will be some blocker in IT that will mean that it doesn't go forward- Interview C</i></p>	
<p><i>You know we for big operational change which has created, you know, quite a number of services issues. In Scandinavia, specifically but you know other places too. We have had continuing IT challenges, i mean the the most challenging challenging times in IT- Interview C</i></p>	
<p><i>These are humans we are dealing with you know how do you cover all these bases- Interview C</i></p>	
<p><i>Eh, tiny. Even my time, yeah tiny- Interview C</i></p>	
<p><i>Using the product management team. Really, four product managers in the traditional sense. So not many- Interview C</i></p>	
<p><i>Look at the project portfolio and also the resource gap you know where are we struggling a lot- Interview D</i></p>	
<p><i>bit of a challenge with it with the business resource for example even my team I have a person who is working two hundred percent- Interview D</i></p>	
<p><i>bottlenecks is is holding things back on delivery of projects- Interview D</i></p>	
<p><i>you need to mitigate you need to have less resource here you know to cut corners not to have a worser outcome just to make it in time- Interview D</i></p>	
<p><i>time is the other thing, and we do too much, we would be able to use the people better if the people did fewer things because there would be time to do things and things with quality and to do them more quickly because people aren't spread out thing- Interview E</i></p>	
<p><i>if there's a developer who thinks it's interesting and fun and can make themselves available for two hours they will often do it, but ad hoc things I think they all have considered in their schedules that they should have some time to</i></p>	

<p><i>just talk about stuff and do stuff, but the problem is they have fifteen projects that they're supposed to be working on-</i> Interview E</p>	
<p><i>It depends, of course, in the markets there are rarer resources and resources that are more available. For example, we are always lacking IT resources-</i> Interview F</p>	
<p><i>One due to money (Sweden/Finland shutdown but Denmark/Norway allowed to continue)-</i> Interview G</p>	
<p><i>Delegated to the to Denmark and Norway to the local legal office there to design the contracts... know they are having a hard time, because they're quite limited-</i> Interview G</p>	
<p><i>The thing worth having access to would be project management, we ain't got those skills locally, so the whole preparation and the whole discipline to put in our things is in our own hands-</i> Interview H</p>	
<p><i>And then there are two ways, the nice one which leads to relatively fast results is the one which does not require IT, and the other one that is bumpy is there one where we need technology and we need time of our developers-</i> Interview H</p>	
<p><i>in terms of technology preparation and IT, here the situation is a little bit different because here there is a permanent fight within the magic project triangle as you know-</i> Interview H</p>	
<p><i>resources of IT mostly and people (are restricted)-</i> Interview I</p>	
<p><i>I think that we if we try to do too many things at the same time and we sit and juggle with these projects back and forth and and then then I think it will get more costly-</i> Interview I</p>	
<p><i>two years ago, anyone who came with an idea went directly to a developer-</i> Interview I</p>	
<p><i>it is easy to want a product in Finland but it would be valuable to see something is actually fit for X as a whole. So those discussions can sometimes be quite hard-</i> Interview A</p>	

<p><i>There are some really really good and experienced people and then sometimes you feel this person does not have the answers for me- Interview A</i></p>	<p>Limited Competencies of Employees</p>
<p><i>Exceeded, so gone over budget absolutely I don't know if it happens at X that it goes under budget- Interview A</i></p>	
<p><i>It's also kind of it's not to have such a strict project start but to maybe being able to pull in a PM at an earlier stage because quite soon it becomes clear this is going to become a project so this is an initiative that we're going to do and so already at that point to pull in a PM to have a proper quality already before going to the PMO, I think that will be increased the quality quite a bit- Interview A</i></p>	
<p><i>one of the reasons we had to engage third parties was just because kind of the ability to conduct research with real consumers and you know not the the kind of simple what kind of product would you like type research but getting really underneath those kind of hidden needs that would offer up that kind of specialism that we don't have here- Interview C</i></p>	
<p><i>it's not you're not it's not just people it's actually people with some special knowledge and special skills that we that we lack here- Interview C</i></p>	
<p><i>So, I spent a year working with externals on X and we've not used them probably since. They have got a lot of our intellectual property walking around in their head. You know spent a lot of money with them- Interview C</i></p>	
<p><i>so, I think we lack both the number of people and the subject matter experts in the functions for the amount of activities we have ongoing- Interview E</i></p>	
<p><i>If I had to guess a percentage I would guess it's like eighty (projects overrunning/over-budget)- Interview E</i></p>	
<p><i>So, I think we could be more wise about the money we are spending or efficient in our projects and not overbuild and know what it is we are doing so we don't spend as much money on things that we shouldn't, so the people and money, yeah- Interview E</i></p>	
<p><i>Ehm we have some skilled people here as well, if I should be honest compared to other places I've worked, the skill level that is required for a bank is quite low here, alarmingly so, just to be honest- Interview E</i></p>	

<p><i>maybe not as many people that have been trained to take ownership and drive things compared to other places- Interview E</i></p>	
<p><i>would say generally we have resources that can do their job and also, we have some high performers- Interview F</i></p>	
<p><i>We miss people in the product or business line that are very knowledgeable how the process and the product is working, or we miss the likes of requirement analysts or business analysts or even people in development dedicated to architecture- Interview I</i></p>	
<p><i>it's more like there are local countries where people understand what the customer in the local market needs and then there's the central team which is too scarce to handle it all- Interview I</i></p>	
<p><i>Ninety percent, I think it's a lot (change requests overrun/over budget) ... I haven't heard of any project that has come to budget... a history of running them very long and rarely following up on benefits in a good way- Interview I</i></p>	
<p><i>Those three dimensions, is then prioritising how those resources are requested and also how they are allocated and this is because there's so much discipline in this... You must ensure that the project you put into prioritise, you take few of them and you put them through, a few of them put them through, so that that's why they are so as you can see quite quite detailed here- Interview D</i></p>	Time Constraints
<p><i>if you take a java developer if you can get him in typically a month's time but it takes time for him to be really efficient it's not about just getting people in it's getting the right people... so yeah, I guess with some resources the effect is more immediate but with a programmer they need to kind of get up to speed first- Interview D</i></p>	
<p><i>And then people kind of do a half ass job of things as well, they are told by their boss don't spend too much time on that just spend two hours on it and whatever you get done, that happens a lot around here already when the quality suffers because of that- Interview E</i></p>	
<p><i>The process is long, especially at the stage of the company you are applying for a resource...On the one hand side and the other, it is also the strategic fit and whole convincing your business cases- Interview F</i></p>	

<p><i>I think we got them locally, it is not about the lack of resources it's rather the limitation that only extends the time because we are all willing to do more and better for the customers sometimes we just need to find the time between the daily duties and so our lights are still on and the electricity will not be turned off-</i></p> <p>Interview H</p>	
<p><i>The question is always with the added value. If we can do something with comparable quality in house, even if it takes a little bit more time, we will go for this option rather than external-</i></p> <p>Interview H</p>	
<p><i>Yeah, within local, it is a short time. Within central it is short to midterm. If you get to technology access. It is too long. And it is not about running always for the first place and being always the fastest, but we must be able to deliver solutions within the market time-</i></p> <p>Interview H</p>	
<p><i>if we suddenly want to get into the project and preparations, it's a fantastic opportunity, it's great for the customer, let's do it, we must have but we forget that later in the stage it will require some time to process. It is easy to burnt really fast and we have already seen this in the past, amongst our colleagues. If you really lose this moment and opportunity because you missed the full picture of the organisation from inside, people start looking for other opportunities in the market, which is always a loss-</i></p> <p>Interview H</p>	

Aggregate Dimension- Lack of an Efficient Structure

Quotes from Data Collection	2nd Order Themes
<i>It is very unstructured-</i> Interview A	Unclear Structure
<i>No. no I had no idea, absolutely no idea, it came. It was not an enabler, it was a block [wash council]-</i> Interview A	
<i>It doesn't need to be a person or an organisation but some kind of instructions and maybe that forum or someplace where you can ask from people that have had similar ideas kind of what to do when you meet in the same office so you can ask someone that you went there and you had an idea so how to go further so you can share experiences so I guess in a way you need someone to coordinate that to to post it or write the templates or whatever-</i> Interview A	
<i>you also need to be able to quite quickly kill an idea that's not feasible-</i> Interview B	
<i>different methodologies are in place-</i> Interview D	
<i>Challenge is the flow from from the idea to the prioritisation-</i> Interview D	
<i>I think it's very random, haphazard construction-</i> Interview E	
<i>From idea phase to DP0, i think it really depends on who is assigned to drive it and you can either get a really structure very thorough process or you can get something that you know was virtually non-existent-</i> Interview E	
<i>The issues is that there is no structure around how we do that kind of analysis-</i> Interview E	
<i>we spend too little time in the exactly that phase trying to understand; should we be even doing this, we very rarely ask ourselves that question at any point but we don't ask and we ask it it's all really you know in relation to other projects we have not is it a good idea for X to do something like that and then in addition to asking the right questions we don't ask them in the same way it's really varies-</i> Interview E	

<p><i>outside of the project allocation, there is no formal allocation of resources-</i> Interview E</p>	
<p><i>first challenge is to collect the ideas and sort of say getting hold of them at the early stage and then also to sort them out-</i> Interview F</p>	
<p><i>Yeah, I mean there really, we don't have this clear process in X-</i> Interview F</p>	
<p><i>We were three business line managers sitting together, working jointly on a document, a PowerPoint basically, very in general, without any business case, it was more describing what competitors are doing, the drivers for change, competition, regulations and accounting standards-</i> Interview G</p>	
<p><i>I am negotiating with IT and I am having discussions with finance and risk, I need to somehow respond to those requirements, I'm unsure how to document that, maybe an email or-</i> Interview G</p>	
<p><i>200 ideas/ demands-</i> Interview I</p>	
<p><i>[wants projects with change requests together] so then you can have an effective dialogue with development in a structured way-</i> Interview I</p>	
<p><i>Yeah, I would say that things might not get investigated at all, if you need to speak with the teams and they are occupied it will have to sit and wait, maybe you don't discover a really low hanging fruit in that case-</i> Interview I</p>	
<p><i>Finland is a small market, it being kind of remote, it is rather hard cause we get different ideas all the time and then, kind of a we, we evaluate them internally, what we can do locally and then when it starts to be obvious that it should be a central initiative then it gets complicated-</i> Interview A</p>	<p>Central Avoided by Markets</p>
<p><i>To have a good quality on the ideas and new initiatives and on the other hand you have a kind of central support-</i> Interview A</p>	
<p><i>very often they [ideas] come from countries very often they spend a long time in the countries-</i> Interview C</p>	
<p><i>if the idea comes from the country you're then working backwards-</i> Interview C</p>	

<p><i>things often need to be revisited and not necessarily reworked massively but revisited and and which is unfortunate- Interview C</i></p>	
<p><i>because they're often thinking well why do I need to do that we've got the solution we've given the state and you're just asking me to do rework- Interview C</i></p>	
<p><i>not using a great business case template so that needs to be explained and really recreated for for the centre which is a nonsense isn't it really- Interview C</i></p>	
<p><i>if it is a country initiated development then they own the market so it doesn't go as far as approval really which is feels a bit strange- Interview C</i></p>	
<p><i>there is an expectation that the centre should deliver stuff...but it's pretty common it would come from the branch- Interview C</i></p>	
<p><i>the branches pay a service charge for a central function surely that's their job that ideas get filtered in and gets gets produced and clearly that is not the way it does happen- Interview C</i></p>	
<p><i>We don't have a budget, we don't have. We haven't used any resources so to speak. [not applied formally for resources so don't have to set targets]- Interview G</i></p>	
<p><i>With have then created locally within the governance structure a local body that is kind of a project review team because we've got many different ideas and we've got many different needs for individuals, operations got one set of needs then legal got other obligations, business or the other things, marketing got different ideas so only on the forum we are able to discuss in an open way what is cooking what should be the priority and how the existing priorities should change- Interview H</i></p>	
<p><i>key reasons so the early evaluation and the requirements were not done properly and it's also due to a lot of people changing, so the project managers going off- Interview A</i></p>	<p>Structure Affects Performance</p>

<p><i>All that you need different expertise, you probably need some content some UX designer maybe some front-end developers in this case at least, some product owners. If you put all those together in a room they can probably make something brilliant out of it but there's no real at X I think there is no real forum to make those ideas grow-</i> Interview B</p>	
<p><i>very often promises are made to third parties also which or if not promises some level of commitment or expectation which often means you're as well as feeling that you see something that's that's probably not been as well formed as you would like you're then faced with a you know a short time frame to try and cover the points and make sure that you've got a very strong proposition and you know it could base for if not a business case a compelling business rationale-</i> Interview C</p>	
<p><i>which is just about every central function really, actually probably don't get involved early enough-</i> Interview C</p>	
<p><i>we have had some overruns or some some surprise because we have not done you know more sufficiently. Comprehensive work at that time-</i> Interview D</p>	
<p><i>but from having projects that take longer than expected, cost longer than they should or that we expected, that we either have to abandon or we deliver later and its poor quality because we don't spend enough time in that critical phase between somebody has an idea and how we start executing it, exactly that space is what I think it our Achilles heel-</i> Interview E</p>	
<p><i>I think the majority, this is because, in the nature of the beast, to get resources, you need to have a proven business case or a good business case that beats other business cases, that's why people tend to overestimate their profit [over budget]-</i> Interview F</p>	
<p><i>first, I had to identify the assessors as that wasn't done automatically. It should have done but it wasn't...so that was a calendar exercise in itself-</i> Interview G</p>	
<p><i>we are involving the assessors and actually some resources from their side, and there is still a risk the board will not approve the initiative-</i> Interview G</p>	
<p><i>I would say that caused the main issue in this project [not having resources in place]-</i> Interview G</p>	

<p><i>it actually took us some time in understanding what the next step was going to be- Interview G</i></p>	
<p><i>So, we need to find the proper person who is the owner communicate and understand whether the things that we do are in line would be doing for the whole bank because this sometimes can also require additional time- Interview H</i></p>	
<p><i>So sometimes the sequence of the events we're doing or collecting the information could be better faster and done in a more effective way- Interview H</i></p>	
<p><i>if people had sat down and figured out what is it really, we want to achieve towards the end customer, how could that process look, without thinking about IT. then they could get a lot of ideation done without being constrained by resources- Interview I</i></p>	
<p><i>it should be able to go out to customers as quickly as possible to see the results. So, you need a platform to publish it to customers. Which has always been easier for me as I own them but but but for people who don't do that might be hard to find a way to show it to customers- Interview B</i></p>	<p>Deterioration of Structure</p>
<p><i>the number of resources in the early phase that has got to be very many people but they must be there with a clearly assigned task they have to be there with heart and respect and then later on of course they have to has this more or less functioning resource allocations- Interview F</i></p>	
<p><i>I would never do it again- Interview G</i></p>	
<p><i>They set it up two years ago and maybe they changed jobs or whatever and then they go to IT and ask how did we set it up in the system... instead of the business having a really good idea of what the product is, it is so complex, so they would rather go to IT and say how can we solve this and almost IT have to come up with how the customer or user is supposed to react- Interview I</i></p>	
<p><i>we've also had a culture or a set up in the organisation in the last couple of years where the local businesses that often have a need for development for change, they're being told you're going to be selling and marketing you're not supposed to be product development that's X's and her teams but that wasn't really reasonable in the way that was set up and so therefore I think they've been becoming more and more stupid- Interview I</i></p>	

Aggregate Dimension- Unsupportive Front-End Strategy

Quotes from Data Collected	2nd Order Themes
<p><i>we have the certain mandatory regulatory and compliance projects that we have to do and then the ones we can kind of pick which ones we want to take further-</i> Interview A</p>	
<p><i>Yeah so, I guess we are also, but it wasn't so that our project or initiative was stopped in that sense, it was more like a decision to wait-</i> Interview A</p>	
<p><i>I would say mostly profit, which is kind of sad...that should be something, ideas get generated and prioritised on the customer value-</i> Interview B</p>	
<p><i>We don't deliver many bright shiny new things-</i> Interview C</p>	
<p><i>It's just so much going on and a big part of that is you know we've probably but we found some quite difficult trading conditions relationships with [client X] probably been quite dangerous in some respects we've lost some important retail partnerships-</i> Interview C</p>	
<p><i>Being in the centre is especially difficult... I've been to a country manager to ask for both compliance and legal resource even though both those resources are central functions but without country management managers permission to use locally based but centrally reporting-</i> Interview C</p>	
<p><i>You are not building that knowledge and you know working together thing-</i> Interview C</p>	
<p><i>And I think it's nice actually to give people who are running the business today the opportunity to have a piece of that time that's actually looking forward. 1,2,3 years ahead and being part of that next stage-</i> Interview C</p>	
<p><i>But I do definitely think that to work effectively you need to give people permission, perhaps an obligation to get involved in this stage to to make sure</i></p>	<p>Strategy Directly Against Innovation</p>

<p><i>the scene is important and valuable because without it there isn't you know the next phase for the bank- Interview C</i></p>	
<p><i>normally you can you connect is a ten percent shortfall I mean you can normally arrange for that in the organisation, we have learned but what more than that is difficult- Interview D</i></p>	
<p><i>to be a bank you need to have anti money laundering in place so this so therefore it has a high priority to say that that is one two three it's basically the whole regulatory, so that's also quite quite high then the compliance data- Interview D</i></p>	
<p><i>if there is a scarce resources and there is in any company resources so therefore you go in and you say you know where I prioritize your efforts, for example in I.T. but also at the business business line then you say you know you need to prioritise according to this if you want doubt this is so basically drill down from top to bottom- Interview D</i></p>	
<p><i>time cost and scope...maybe you would like to take the scope down from what you it was originally thought- Interview D</i></p>	
<p><i>we look at the profitability we look at the strategic wish- Interview D</i></p>	
<p><i>the business ones are related to X [largest retail customer] so therefore it is quite high on the agenda and this is due to the strategy that puts a natural prioritisation into our into our into our project prioritization- Interview D</i></p>	
<p><i>IFS accounting standards coming in first of January next year be better we need to be in place to basically we have a team of lawyers and compliance people and then people who has the job description to screen and to be aware of what is coming and what is being what is being expected from us from the regulatory point of view- Interview D</i></p>	
<p><i>they can say OK the smarter thing is not to do it is very smart things is a little bit in another way and we actually achieve what we would like to do in a smarter and cheaper way- Interview D</i></p>	
<p><i>there's a tendency that you create a project that is a rolls Royce but no one wants a rolls Royce most people would like to have a nice Passat- Interview D</i></p>	

<p><i>The point is no bank can just stop doing projects and stop changing and then just run the business, so we don't have enough of the people resources-</i></p> <p>Interview E</p>	
<p><i>One is, is the area important enough to have that focus and generate enough revenue and is it complex enough that it needs a person focusing on it, a new person but the other this is strategic-</i></p> <p>Interview E</p>	
<p><i>then it's sometimes negotiated with different projects if they're looking for the same resources OK well maybe you should work on that project since its higher priority or if the timeline is critical, so even though the other project is higher priority it doesn't have critical paths for that resource so bla bla bla-</i></p> <p>Interview E</p>	
<p><i>Well again, based on the things that we have on our agenda it's low, we simply don't have enough resources to do all the projects and the day to day business well-</i></p> <p>Interview E</p>	
<p><i>[resources are] very limited of course there are committed to ongoing change requests and compliance issues and regulatory blablabla-</i></p> <p>Interview G</p>	
<p><i>we got in Poland banking that is really well regulated and the level of regulation is really increasing so we need to comply the same way the biggest banks in Poland will comply... because when the regulation comes you need to understand it and you need to make this work in a daily business-</i></p> <p>Interview H</p>	
<p><i>Second, naturally, is business volume, and here we are not in the best position for Poland because we are not the size of Swedish business, German or U.K business. So when you compare business wise, it is always hard. And we will never be or their size if we do not invest-</i></p> <p>Interview H</p>	
<p><i>we always do the most beneficial demand, from a financial aspect/benefit, from a compliance/regulatory, but also from an urgency point of view-</i></p> <p>Interview I</p>	
<p><i>If there is a partner that needs something, if we don't do it they will sack us or whatever-</i></p> <p>Interview I</p>	
<p><i>2000 hours of job development, so those 5 ideas out here, they might not be done because there is another project which affects that-</i></p> <p>Interview I</p>	
<p><i>we're being ground in compliance I mean there's always new regulations and that comes up where we are reactive we just have to do it and you could set aside a third of the project budget just to do regulatory thing and not let those affect the ideas and that could be a good thing to do-</i></p> <p>Interview I</p>	

<p><i>I really think they should work on a strategic level but doing that they could enable Ideation by making sure that people are dedicated and get the roles and being responsible and get the time to actually figure out and work on those things and also get areas of responsibility that are at the right level- Interview I</i></p>	
<p><i>you can put ten really good business analysts on the job but if you put them on the wrong ideas then it doesn't matter how good they are and I think that's the case that we have right now we've had...It's a little bit hard to- Interview I</i></p>	
<p><i>[client X] responsibilities in Sweden, they still go straight to the development teams and they still take them out to partner meetings and run try to run their own show- Interview I</i></p>	
<p><i>A lack of clarity about what's actually what the organisation wants to do and what is committed to and the communication of that back out- Interview C</i></p>	<p>Unclear Strategy for Innovation</p>
<p><i>That there is the organisation isn't dreadfully clear about the detail things it's going to do and I think that's why people are coming up with ideas relatively easy- Interview C</i></p>	
<p><i>you know I still see different interpretations of that...it's like [Client X] first so everything in this particular country will be [Client X] first when actually my take on the strategy is slightly different- Interview C</i></p>	
<p><i>Still not getting it right every time but big people are well aware and know it needs to be fixed- Interview C</i></p>	
<p><i>you need to understand what is the strategic path of the company so X bank- Interview D</i></p>	
<p><i>X is a company with a high degree of chaos- Interview F</i></p>	
<p><i>I hate to admit it X bank is more a consumer based finance company and business or corporate business is more it hasn't had the most significant attention- Interview G</i></p>	
<p><i>We've had a bit of the weak company strategy the last couple of years... I think the bank has gone through a couple of those realisation and the whole business has and then also the shock of compliance or regulatory demands from the financial crisis so for that reason the bank hasn't had a very strong strategy and a narrow strategy- Interview I</i></p>	

Aggregate Dimension- Overcoming Constraints

Quotes from Data Collection	2nd Order Themes
<p><i>when there is not that kind of a forum, it's more or less who you know or who you meet, if you just happen to be in the right meeting and pitch your idea and someone has actually had the same idea and then it gets forward and I think there are a lot of good ideas that we have missed because of that, it just didn't pop up in the right place at the right time-</i> Interview A</p>	Insourcing
<p><i>And again, it's it's still very much based on who you know and if it's somebody you can kind of describe your idea in an IT way so that it looks like a maintenance or a compliance so then it than it can get kind of get done-</i> Interview A</p>	
<p><i>We can do this one as well and knowing some bypasses, for instance so you don't have to do the end part if you do this below this certain threshold or that kind of things, like and you can do it as a maintenance-</i> Interview A</p>	
<p><i>internal resources are extremely slow and external is, that is not based on persons, rather on the process. You can always call people and ask them stuff but it is hard to get everyone to do the extremely proper way, following all the process then it would be really hard to manage to do-</i> Interview B</p>	
<p><i>But but here we don't have that concept of a virtual cross-functional team you know, you're picking out people you know you get along with or a favour or you know are good and you really appreciate their input rather than it being a formalised obligation-</i> Interview C</p>	
<p><i>I have used the argument about the value, the initiative is expected to delivers. That doesn't always work ... more important to have the commitment from the individuals, senior or BAMT-</i> Interview C</p>	

<p><i>Being in the centre is especially difficult... I've been to a country manager to ask for both compliance and legal resource even though both those resources are central functions but without country management managers permission to use locally based but centrally reporting- Interview C</i></p>	
<p><i>If you want a piece of legal person's time it needs to be very clear where your permission for that comes from- Interview C</i></p>	
<p><i>I think the majority, this (going over budget) is because, in the nature of the beast, to get resources, you need to have a proven business case or a good business case that beats other business cases, that's why people tend to overestimate their profit- Interview F</i></p>	
<p><i>we have already starting doing the system requirements in parallel, so we are doing it a little bit off the records- Interview G</i></p>	
<p><i>I know who to ask ask and that facilitates the process... unconnected people could have it harder- Interview G</i></p>	
<p><i>then created locally within the governance structure a local body that is kind of a project review team because we've got many different ideas and we've got many different needs for individuals, operations got one set of needs then legal got other obligations, business or the other things, Marketing got different ideas so only on the forum we are able to discuss in an open way what is cooking what should be the priority and how the existing priorities should change- Interview H</i></p>	
<p><i>who is the loudest and expresses himself and also the one that sits the highest up at the organisation- Interview I</i></p>	
<p><i>It is rarely actually the right decision that is being made. and that is what we have been trying to establish with our processes, to make sure they are weighable measures comparable measures with all and then you can bullshit your way through- Interview I</i></p>	
<p><i>If projects are being underestimated or change requests are being spent too much time on, it still what have the people done during all that time because I think a lot of the time they're doing a lot of investigation and they're doing a lot of favours, at the cost of what their time reporting is on their general basis. It's also</i></p>	

<p><i>a matter of follow up on how you follow up on the quality of that follow up-</i> Interview I</p>	
<p><i>Oh, yes yes, I wouldn't say often but it's quite clear that it's the only possibility to get anything forward today so we actually did purchase a chat service as a service so we outsourced that we would have never been able to do it in-house-</i> Interview A</p>	Outsourcing
<p><i>I think, we did it because we didn't have the resources in house, I think it would be better if we did it in house... in a perfect world, we would have the resources in house-</i> Interview B</p>	
<p><i>We would probably if it was any longer than that we would probably just build a case to to buy it in-</i> Interview C</p>	
<p><i>get people in relatively fast is using consultants but also has the disadvantage to be a little bit less sticky which is a challenge when you would like to build up something long term-</i> Interview D</p>	
<p><i>So, I think we should be smarter about looking at what makes sense to outsource and in principle anything that can be outsourced should be considered but then based on the strategy and what's important to use then we can decide what to outsource and how to structure out work but it again requires that we understand the business quite well-</i> Interview E</p>	
<p><i>we had a lot of consultants sometimes it makes sense, sometimes not, purely costly but you don't need to have every know how in house, if you don't need it regularly-</i> Interview F</p>	
<p><i>If you want to choose the ideas that brings the most value to us, then we could buy resources off the shelf from an external, I'm not sure that's the way it works, because they might not be up to speed to deliver something-</i> Interview I</p>	
<p><i>there's also a resource perspective in the way that competences need to be kept in house and so on that has affected a lot of the projects here-</i> Interview I</p>	

Appendix C: Links Between Constraints

	Cross-Functional	Engagement	Dynamic Development	Structure	Strategy
Cross-Functional		X	X	X	X
Engagement	X		X	X	X
Dynamic Development	X	X			
Structure	X	X			X
Strategy	X	X		X	

Appendix D: Techniques linked to Overcoming Constraints

	Networking	Outsourcing	Bending the rules	Legitimation	Cherry picking	Create own resources
Cross-Functional	X				X	
Engagement				X		
Dynamic Development	X	X	X		X	
Structure	X		X		X	X
Strategy			X	X		