



Product innovation and risk culture: The experiences of product managers

R Rajpaul

 **orcid.org/0000-0001-8096-8676**

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Supervisor: Dr S Gilliland

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Student number: 31424686

ABSTRACT

Launching innovative products without risk-taking is nearly impossible. On the other hand, overly stringent risk management practices can have a detrimental effect on an organisation's ability to launch innovative products. In a telecommunication organisation, initiatives were implemented to create awareness of, and to improve the risk culture, one of which was the updating of the product risk management framework. Based on these updates there was a perception in the organisation's product development function that risk practices were too severe, resulting in fewer innovative products being launched. The aim of this research was to investigate the effect of the organisation's risk culture on product innovation. Limited academic articles were found that explore risk culture specific to product innovation and none analysed the impact of a risk management framework on product innovation. The main research question was "Is the risk culture of the organisation too risk averse to maximise the potential of product innovation?" A qualitative study was undertaken, using semi-structured interviews with 12 product managers as the primary data collection method. The findings indicate that the product risk management framework did not adversely affect product innovation. Product managers indicated that they obtained value from the framework, as it gave them a sense of assurance that the launching of products was aligned with the organisation's risk appetite. I also found that certain risk averse characteristics existed in the organisation which could be improved in order to minimise their long-term effect on product innovation. Recommendations were obtained from product managers about possible improvements to the framework. The findings from this study provide a view of the effect of a product risk management framework on product innovation and therefore the risk culture in one organisation. Furthermore, the findings can guide risk practitioners and academics on factors that can improve such a framework.

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Keywords: risk culture, risk management, product innovation, product risk management, telecommunications

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CHAPTER 1: INTRODUCTION (RESEARCH PROJECT OVERVIEW)

In 2016 two risk culture surveys were conducted in a telecommunications organisation after which various programmes were implemented to create awareness of, and to improve, the culture of risk, one being the updating of the product risk management policy. As a result of the updates to this product risk management policy, the perception arose in the organisation that risk practices were too severe, delayed product time to market, and forced product managers to anticipate risk at every product phase. The aim of the present research is to build on previous studies conducted in the organisation by investigating the effect of the risk culture on product innovation as well as to provide recommendations for improvement of the product risk management framework that would best support innovation.

In the introduction section, I introduce the problem statement and the research question guiding this study. The main research question was “Is the risk culture of the organisation too risk averse to maximise the potential of product innovation?” The background section examines the current literature to explore previous research on the impact of risk culture on product innovation. Furthermore, the background section explains how the product risk management framework was utilised in the organisation where the research was conducted. The method section describes the methodology used to conduct this research. A qualitative study was undertaken with 12 product managers in this telecommunications organisation utilising semi-structured interviews as the primary data collection method. The results section presents the findings from this study, with the key themes and components that emerged from the interviews. In the discussion, the empirical findings are compared to results from the previous academic literature. The conclusion provides the reader with an overall synopsis of the study, highlighting the key contributions and limitations discovered. In the appendices, documentation that supports this research are added, including the research code book, interview guide with questions, and the interview transcripts.

Topic selection

The researcher is currently responsible for the management of the product risk team in the organisation. Based on her involvement in the product risk process, she envisioned that it would be valuable to analyse the impact of the product risk management framework on product innovation in an applied setting. The findings from this study will be utilised by the organisation to improve the product risk management framework.

Research contribution and audiences

Limited academic literature was found that examines the impact of risk culture on product innovation. Furthermore, articles that were found propose frameworks on how to conduct product risk management but do not investigate the impact of the risk framework on product innovation. The present research provides a view of the effect that an internal product risk management framework

has on product innovation, and therefore on the organisation's risk culture. The outcomes of the study can be utilised by risk practitioners to improve their product risk management framework. Furthermore, this research will contribute to the academic literature and to knowledge about risk management and its impact on product innovation.

Selected journal

The *International Journal of Project Management* is a leading accredited journal in the field of project management and organisation studies. It focuses on futuristic, innovative research in the field of project management. The purpose of this journal is to present new knowledge in all areas of project management including programme and portfolio management, projects, project networks, and project-orientated societies (Huemann, 2019). It is dedicated to project management from the perspectives of organisational behaviour, strategy, change, and innovation (Huemann, 2019). The 5-year impact factor of this journal as measured in 2018 was 5.617 (Elsevier, 2018). Since every product in the researched organisation was essentially managed as a project, the researcher deems this journal to be a good fit for the topic being researched. Furthermore, a large part of the readership of this journal would be project and programme managers, who could influence the implementation and management of a product risk management framework in their organisations. This could ultimately result in an improvement in risk culture.

CHAPTER 2: ARTICLE

Product innovation and risk culture: The experiences of product managers

Abstract

Launching innovative products without risk-taking is nearly impossible. On the other hand, overly stringent risk management practices can have a detrimental effect on an organisation's ability to launch innovative products. In a telecommunication organisation, initiatives were implemented to create awareness of, and to improve the risk culture, one of which was the updating of the product risk management framework. Based on these updates there was a perception in the organisation's product development function that risk practices were too severe, resulting in fewer innovative products being launched. The aim of this research was to investigate the effect of the organisation's risk culture on product innovation. Limited academic articles were found that explore risk culture specific to product innovation and none analysed the impact of a risk management framework on product innovation. The main research question was "Is the risk culture of the organisation too risk averse to maximise the potential of product innovation?" A qualitative study was undertaken, using semi-structured interviews with 12 product managers as the primary data collection method. The findings indicate that the product risk management framework did not adversely affect product innovation. Product managers indicated that they obtained value from the framework, as it gave them a sense of assurance that the launching of products was aligned with the organisation's risk appetite. I also found that certain risk averse characteristics existed in the organisation which could be improved in order to minimise their long-term effect on product innovation. Recommendations were obtained from product managers about possible improvements to the framework. The findings from this study provide a view of the effect of a product risk management framework on product innovation and therefore the risk culture in one organisation. Furthermore, the findings can guide risk practitioners and academics on factors that can improve such a framework.

Word count: 299

Keywords: risk culture, risk management, product innovation, product risk management, telecommunications

Introduction

In 2011, product innovation in the South African telecommunications and transport industries contributed to 9% of the country's GDP and R174.621 billion in revenue (Manzini, 2015). This indicates the extent and potential that innovative products offer as key drivers for a country's success (Malinga, 2019; MyBroadband, 2019). However, innovation and risk are said to belong together in that development of innovative products is impossible without risk-taking (Joubert, 2016). Technical advancements with high risk profiles, such as the internet of things (IoT), artificial intelligence (AI), and blockchain technologies highlight the importance for organisations to determine and manage the risk associated with the innovative products they are launching (Nursoo, 2019). In the telecommunications environment in particular, the risk profile of such products is elevated as increased competitor pressure makes for shorter product development lifecycles and shorter innovation cycles (Luo, Li, Zhang, & Shim, 2010). This situation emphasises the need for thorough risk assessments on new products. The current issue faced by all telecommunication organisations is that traditional revenue sources such as voice and data no longer provide the profitability of the past. So launching innovative products that can contribute to the generation of new sources of revenue is key, as is the management of the risks involved.

The spotlight on risk practices and risk culture gained prominence after the 2008 financial crisis, resulting in increased regulatory pressures (Ashby, Palermo, & Power, 2012; Australian Prudential Regulatory Authority, 2016). The importance of effective risk management and a sound risk culture has been recognised (Ntim, Lindop, & Thomas, 2013) and has led organisations to implement initiatives to keep improving their risk management practices. This can lead to tension between the need to support and encourage product innovation and the need to control the associated risks. The challenge is to foster a risk culture that accommodates both.

Problem statement

Results from the telecommunication organisation's publicly available 2018 interim report show a steady decline in share price in the past three years by an average of 31% for the 3 year period (Group Limited, 2018). A risk culture in which risk management applies an unsuitably rigid product risk framework can have a detrimental effect on a business's ability to develop, launch and benefit from innovative products (Oehmen, Olechowski, Robert Kenley, & Ben-Daya, 2014). Reduced innovation in consequence of an overly risk-averse culture can potentially undermine an organisation's success in a sector where product-related innovation offers major competitive advantage (Deschamps & Nayak, 1995). However, ignoring product risk can have devastating consequences if the product goes to market and fails in some important way, as occurred for example, in the recall of the Samsung Note 7 mobile phone because of incidents of spontaneous

combustion, which costed Samsung more than \$17 billion in revenue loss and could have been avoided with proper product risk management (Lee, 2016).

The aim of the present research was to investigate the experiences of a group of 12 product managers on how risk culture in their telecommunications organisation affects product innovation. The study was guided by the following research question: “Is the risk culture of the organisation too risk averse to maximise the potential of product innovation?” A qualitative data collection methodology was used in which semi-structured interviews were conducted. The objectives of the study were, first, to determine whether and how the internal product risk management framework was affecting innovation in the organisation and, second, to provide recommendations for a product risk management framework that would best support product innovation and manage the risk involved.

Background

In today’s globally competitive environment, organisations’ success largely hinges on their ability to develop innovative products (Dereli, 2015; Sarbacker & Ishii, 1997). Introducing new products creates marketing and revenue growth opportunities essential for long-term profitability (Crossan & Apaydin, 2010; Morgan & Govender, 2017). Product innovation, however, is an area that demonstrates exceptionally clearly the importance of risk management (Joubert, 2016); it also forces organisations to balance the opportunities that arise and the threats that can cause them damage (Christensen, Sondergaard, Serwanski, Bojsen, & Tambo, 2018)

The organisation where this study was performed has re-evaluated some of its risk practices in the light of two previous risk culture studies conducted there. The first study focused on the maturity of the organisation’s risk culture (Meiring, 2016) and the second focused on the level of understanding of risk management concepts and risk practices in general (Harding, 2016). Based on these research outcomes, the risk management department implemented a risk management system as well as various programmes to create awareness of and improve the organisation’s risk culture. The department also introduced risk management training and expanded its risk frameworks. One of the frameworks that was updated in 2017 was the product risk management framework. This is an internal framework that was developed by the risk management team with the purpose of specifying the risk appetite for new product development as well as listing the minimum risk criteria for new products.”

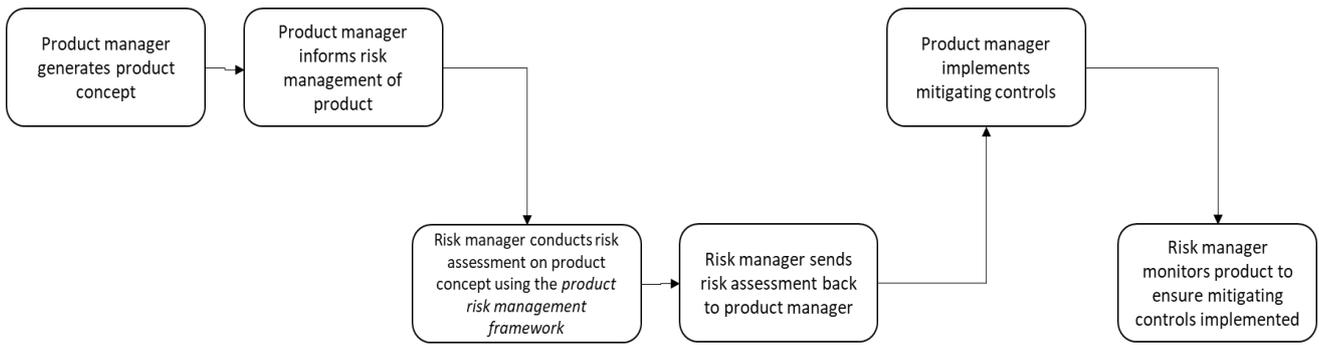


Figure 1: Example of implementation of the product risk management framework

The product risk management framework is implemented in the following steps as illustrated in Figure 1:

1. The product manager generates a product concept document.
2. The product manager informs the risk management department of the potential product.
3. The risk manager conducts a risk assessment utilising the product risk management framework. The risk manager ensures that the product aligns to the organisation's risk appetite.
4. The risk manager sends the product risk assessment document back to the product manager.
5. The product manager implements the mitigating controls recommended by the risk manager.
6. The risk manager monitors the product until it is launched to ensure that all mitigating controls have been implemented.

The product risk management process is applied to all new products and product enhancements in the organisation. The research study investigated product managers' experiences of how the prevailing risk culture perceived through the product risk management framework affected product innovation.

Product innovation and culture

The academic literature contains different definitions of product innovation (Garcia & Calantone, 2002; McDermott & O'Connor, 2002; Treasury, p. 1). The Oslo manual, however, which provides guidelines on collecting, reporting and using data on innovation, offers the most apt definition for the purposes of this research: "A business innovation is a new or improved product or business process (or combination thereof) that differs significantly from the firm's previous products or business processes and that has been introduced on the market or brought into use by the firm" (OECD & Communities, 2005).

Crossan and Apaydin (2010) suggest that a climate of innovation depends on a supportive organisational culture, which is built on supportive leadership, open communication and cross-functional teamwork. Dereli (2015) further states that a culture of innovation means empowering employees to proceed with their innovative ideas. Joubert and Van Belle (2012), however, have

observed that giving employees the freedom to experiment should also be accompanied by employees' awareness and understanding of the organisation's propensity to take risks.

The implication is that, ideally, organisations with a high culture of innovation are aware of their risk appetite, are able to tolerate failure, and are comfortable about learning from employee mistakes. This type of organisation is considered to be risk tolerant. By contrast, organisations with a high level of risk adversity may curb innovation through over-stringent risk practices (Manders, de Vries, & Blind, 2016). Furthermore, organisational culture also plays a major role in decisions to avoid or accept risk (Christensen et al., 2018; Manders et al., 2016). The risk culture of an organisational group is described by the Centre for Applied Risk Management as "the importance given to considering risk when the group makes decisions" (H. Zaaiman, Pretorius, H., Van der Flier, H., & Born, M. P, In Progress). Cultures that are risk averse are more likely to have senior managers who play it safe, avoid decisions about innovative products, and concentrate on producing incremental improvements rather than bold innovations (McDermott & O'Connor, 2002).

Product innovation and risk

All product innovation and new product development introduce risk and the threats associated with it. In fact, the presumption is that the more highly innovative a product, the higher the element of risk to which the company is exposed (Oehmen et al., 2014). For the purpose of this study the ISO 2009 definition of risk is used where risk is "the effect of uncertainty on objectives" (Standardization, 2009). In most organisations, risk management is associated with identifying and managing threats (Oehmen et al., 2014).

Current innovation trends worldwide include new complex technologies that increase uncertainty and therefore the risks connected to the product (Nursoo, 2019). In addition, increased regulatory pressures sit side-by-side with the need to beat competitors (Luo et al., 2010). These factors put organisations under pressure to deliver innovative products within shorter timeframes, which in turn further increases the risk profile of such a product.

Innovative product development is undeniably crucial for an organisation's long-term success (Joubert, 2016), despite the risks involved. Furthermore, taking risks in product innovation is unavoidable. Sarbacker and Ishii (1997) some time ago warned that ignoring risks can lead directly to unsuccessful products, but Oehmen et al. (2014) also warn that organisations with overly rigid product development governance policies inhibit product innovation. Joubert (2016) further observes that many organisations use traditional practices to manage product risks, but that these traditional practices are not well suited to a fast paced, highly complex, ever changing product environment.

This leads most organisations to a crossroad: how to balance high-level product innovation with the kind of risk management that protects the organisation.

Based on the huge advantage that innovative products can offer, this study set out to discover whether the risk culture of the organisation selected for this research was too risk averse to maximise the potential of product innovation. It did so by drawing on the experience of product managers.

Method

Research approach

The aim of this exploratory and interpretive research was to investigate the experiences of product managers on how risk culture affected product innovation. A qualitative method was selected as is common in studies where the researcher wants to gauge insights, acquire depth of understanding, and obtain perspectives from individuals, all of which is often difficult through quantitative studies (Vaismoradi, Turunen, & Bondas, 2013; Zikmund, Carr, Babin, & Griffin, 2013). The potential limitation of the narrow sample in an exploratory, qualitative study is that the findings cannot be generalised; however, the outcomes of this study give useful direction for further research.

Sampling

The non-probability technique of homogeneous purposeful sampling was used. It allowed the researcher to select participants who were knowledgeable and experienced in terms of the problem being researched (Myers, 2019; Palinkas et al., 2015). A sample of 12 product managers was chosen, as these were the people most affected by the product risk management framework during the product innovation process (Johnson, 2005). The sample population was selected from different work levels in the organisation across four business areas, with the aim of getting a range of responses and enabling the evaluation of experiences from product managers at more than one level.

Table 1: Sample population

Department	Seniority	Number of interviews
Digital Services	Executive Head	1
	Portfolio Manager: Products	1
Consumer Business Unit	Executive Head	1
	Portfolio Manager: Products	1
	Senior Specialist: Products Manager	2
Enterprise Business Unit	Executive Head	1
	Portfolio Manager: Products	1
	Senior Specialist: Products Manager	1
Internet of Things	Portfolio Manager: Products	1
	Senior Specialist: Products Manager	2

Data collection

The data were collected by means of semi-structured interviews. Semi-structured interviews are a data collection technique that involves individual meetings with a small number of respondents (Fossey, Harvey, McDermott, & Davidson, 2002; Palinkas et al., 2015). These interviews were selected as the primary data source as this method supported the research objectives of understanding opinions, experiences, attitudes, values and processes associated with risk

management during product innovation (Rowley, 2012). The main advantages of this data collection method are that the researcher can develop rapport with the participants, which encourages sharing, and also extract more insights by asking follow-up questions that probe for additional information (Fossey et al., 2002; Palinkas et al., 2015). Finally, semi-structured interviews are frequently used to facilitate exploring elements of a specific topic, in this case the relationship between risk culture and product innovation (Rowley, 2012).

Interview process

The interview consent form (Appendix C) was emailed to the interview sample population two weeks before the scheduled interviews. This form gave each participant an overview of the objective of the interview, stated the research problem, and highlighted the controls that would be implemented to ensure participant confidentiality. Interview questions were pretested with two colleagues and reworked for clarity prior to the interviews. The researcher followed the interview guide (Appendix B) when carrying out the interviews. All interviews were recorded to ensure accurate transcription and minimal loss of data (Willumsen, Oehmen, Stingl, & Geraldi, 2019). The recorded data were transcribed shortly after interviews had been conducted while the material was still fresh in the researcher's mind.

Data analysis

Data analysis is the process of categorising, ordering, and summarising data in order to obtain answers to a research problem (Qu & Dumay, 2011). Thematic analysis, in accordance with the research objectives, was then applied. Braun, Clarke, Hayfield, and Terry (2019) define thematic analysis as a method of text coding and systematically identifying, organising, and offering themes across a data set to yield patterns of commonalities and similarities across data sets (Braun et al., 2019; Green et al., 2007). The six step approach to thematic analysis (Figure 2) was employed for this research as prescribed by Braun and Clarke (2006).

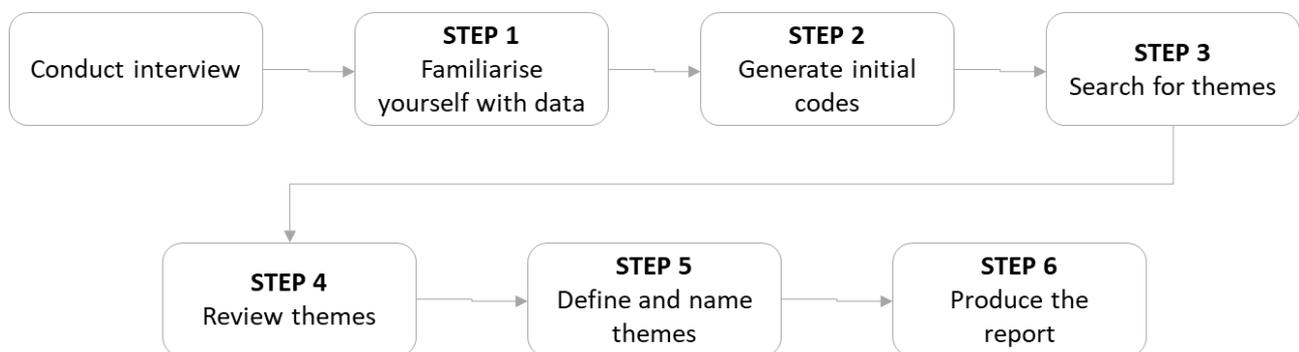


Figure 2: Thematic analysis approach (Braun & Clarke, 2006)

Step 1: The researcher familiarised herself with the data collected from the interviews by transcribing the interview recordings and reading the transcripts.

Step 2: The researcher identified initial codes by utilising the Atlas.ti coding tool. The UARM Risk Culture Indicator Model and Codebook (H. Zaيمان, Van der Flier, & Born, In progress) was used as the basis for parent codes (Figure 3).

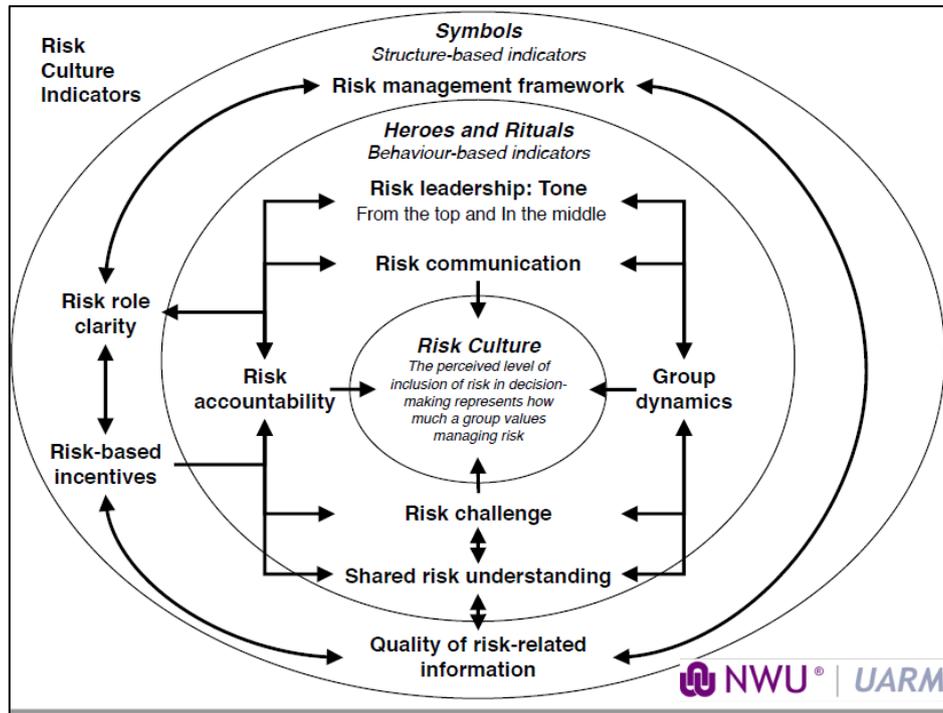


Figure 3: UARM Risk Culture Indicator Model

Step 3: In the third step, the researcher started the process of searching for themes by interpreting the codes. The codes were collated and then sorted into overarching themes.

Step 4. In the fourth step, the researcher reviewed the initial list of potential themes and then determined whether themes should be combined, refined, separated or discarded. The purpose was to ensure that the data correlated meaningfully.

Step 5: In the fifth step, the researcher refined and reevaluated the names of themes to ensure that each proposed theme was unique, specific and related to the research objectives.

Step 6: In the final step, the researcher completed an analysis of her findings, which are discussed in the next section.

Ethical considerations

Permission to conduct the study was granted by the NWU's ethics committee and the company's Chief Risk Officer. The researcher undertook not to reveal the company or participants' identities, thereby ensuring their confidentiality and anonymity. All participants in the study participated voluntarily and gave written consent to have their interview recorded and their data collected.

Results and discussion

The following sections discuss the results based on the participants' perceptions of product innovation and risk culture. Post data analysis, 22 codes emerged from interviews. These codes were then grouped into three main themes to answer the research question, namely: product innovation, risk culture, and recommendations for improvement. The researcher focused only on themes that directly related to the research objectives of this study. Figure 4 presents the themes, codes and sub-codes of this research graphically. The complete codebook can be found in Appendix E.

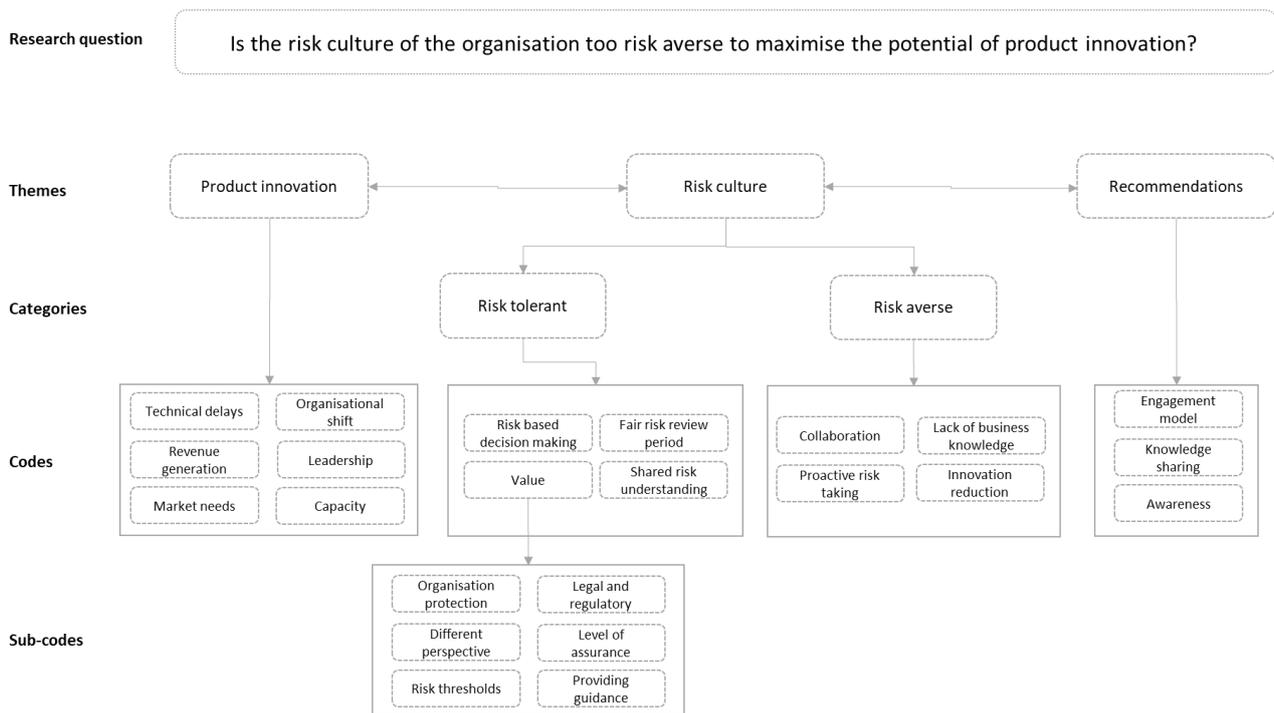


Figure 4: Result themes and codes identified for the research

Product innovation

One of the objectives of this research was to determine how the internal product risk management framework was affecting product innovation. Table 2 depicts the codes related to *product innovation*, as well as the frequency with which they appeared in interviews.

Table 2: Product innovation codes obtained from the interviews

Participant	Codes					
	Technical delays	Revenue generation	Market needs	Organisational shift	Leadership	Capacity
1						
2				✓		
3		✓	✓			
4			✓			
5		✓				
6	✓		✓			
7	✓	✓	✓			
8				✓	✓	
9	✓	✓				✓
10	✓					✓
11	✓	✓				
12	✓		✓		✓	

As many as half of the participants felt that *technical delays* were a deterrent to product innovation. They also mentioned technical delivery limitations, such as technical capacity, the technical prioritisation model, and system delivery restrictions as factors that reduced such innovation. Furthermore, they also indicated that technical limitations resulting from the way technical teams were structured, the product prioritisation process, and the agile development process had an adverse effect on product delivery timelines. For example, Participant 7 explained that over-rigid technical processes can unnecessarily hold back the development of new ideas:

With regards to technical developments, there is always constraint..., because we have to follow a roadmap and unfortunately sometimes your product needs to be prioritised and sometimes it could take years to develop an innovative product.

This view was supported by Participant 10 who illustrated the impact of the inability of the technical environment to support the amount of innovative ideas generated in the organisation:

We need a far better engine room to be able to actually do the launching. The ideation process is there, there is no shortage of innovative ideas. But even then most, if not all of these ideas fail at the same point which is that they all end up in a [technical] funnel which is if there is a 100 ideas, only 2 come out!

Overall, almost all these participants agreed that product delays could be avoided if the technical delays were reduced or managed more efficiently.

Revenue generation and *market needs* were further codes that emerged, with product managers indicating that these elements were normally considered during product conceptualisation. If a potential product was not meeting market needs or would not be contributing to short-term revenue generation, it would be discarded. Participant 11 viewed as a flaw the organisation's focus on short-term benefits, such as quick revenue generation, instead of investing sufficiently in innovative ideas that may only generate revenue in the long term.

A couple of participants also strongly felt the need for an *organisational shift* in the decentralised way in which the organisation was currently set up to develop and launch innovative products. Participant 2 explained:

I think an organisational shift is required in the way we do product innovation. I do not think the constructs of the business is set up to handle the way an organisation can launch innovative digital products. The current challenge is that the areas that is required to deliver products and services is not within our [product managers'] control and is spread across multiple business units. This causes an issue with prioritisation and the ability to deliver innovative products.

Mention was also made of the fast pace of the organisation, which led to too little time and lack of *capacity* for product managers to maximise innovative potential. Participant 10 expanded on this point:

As a product team I don't think we spend enough time thinking about how we could innovate better because everyone is so busy just trying to deliver existing requirements. So it's not like there isn't an appetite for innovation because we all believe we need to be innovative, but there's no time or capacity.

Finally, two participants observed that the *leadership* inadvertently held back the level of innovation in the organisation. This was emphasised by one participant who felt that the leadership of the organisation was too cautious of risk taking by maintaining control over what products the organisation launches. Participant 9 elaborated further:

We [product managers] don't really come up with any of the ideas – we just get told what to do and most of the time it comes from the CEO's office.

To summarise the *product innovation* theme, participants implied that the constructs of the organisation were not set up to provide sufficient support for product innovation. In another context,

Dereli (2015), for example, has indicated that organisational processes must constantly be re-evaluated and set up in new ways so as not to deter product innovation. Such reorganisation in the organisation studied here would solidify the interactions between the product teams and the technical teams. A further study (Joubert, 2016) makes a similar point, suggesting that early interaction between the product and technical teams could improve the quality and time efficiency of technical delivery. Where technology is one of the main drivers of product innovation, coherence between technical and product teams drives a culture of innovation, especially in a fast-changing telecommunications environment.

Finally, and unexpectedly, no product manager mentioned the impact of risk management as a product innovation deterrent.

Risk culture

This study specifically concentrated on the impact of risk culture on product innovation, which is managed through the product risk management framework of the organisation. The components of the product risk management framework and its impact on product innovation were explored with the participating product managers. The *risk culture* theme yielded risk tolerant codes and risk averse codes as presented in Table 3.

Table 3: Risk culture codes

Participants	Risk tolerant codes				Risk averse codes			
	Value	Risk-based decision making	Fair risk review period	Shared risk understanding	Collaboration	Proactive risk taking	Lack of business knowledge	Innovation reduction
1	✓		✓	✓	✓			
2	✓	✓			✓			
3	✓		✓					
4			✓				✓	✓
5	✓	✓			✓	✓		
6	✓	✓	✓		✓			
7	✓	✓	✓					
8	✓	✓		✓				
9	✓	✓	✓		✓	✓	✓	
10	✓	✓		✓				
11	✓			✓		✓		
12	✓		✓			✓		

Risk tolerant codes

All but one of the participants indicated that the company’s product risk management framework provided *value* to the product development process. In order to explore fully the characteristics of value, this code was broken down into further sub-codes for a clearer understanding of the type of

value the risk management department was perceived to be adding (Table 4). Some of these sub-codes will be discussed further.

Table 4: Value sub-codes

Participants	Value sub-codes					
	Organisation protection	Different perspective	Risk thresholds	Legal and regulatory	Level of assurance	Providing guidance
1	✓	✓	✓	✓		✓
2	✓		✓	✓		
3	✓	✓	✓			✓
4						
5		✓			✓	
6	✓	✓	✓		✓	
7	✓	✓	✓			
8	✓		✓		✓	
9			✓	✓		✓
10	✓	✓		✓		
11	✓	✓				
12	✓	✓			✓	

Four participants indicated that the value derived from risk management encompassed the *additional level of assurance* it gave to product managers. Nine product managers implied that they experienced a feeling of comfort if their products underwent a risk assessment. These product managers further stated that risk assessment *protects* the *organisation* brand, and considers variations that product managers tend to overlook. This implied that the risk assessment gave the product managers a sense of comfort that a product was safe and aligned to best practice guidelines. For example, Participant 7 explained:

I think the risk management division is vital in the product development lifecycle, I think their feedback and the assurance of their rubber stamp is needed. There are often things that you guys [risk management] find that we [product managers] have not thought of, I mean, I have had a lot of situations where we had to take your feedback in consideration to protect our brand and our customers, it is an added layer of assurance.

Participants explained that product managers look mainly at revenue and ‘go to market’ strategies but that risk management, through their risk assessment, is able to provide a completely *different perspective* on the product. Participant 5 also pointed out that the level of detail included in risk management’s risk assessment, such as quantification and looking at actual numbers, usually contextualised risks for money-chasing product managers.

By contrast, only one participant believed that risk management was detrimental to the product innovation process because the risk assessment process was too rigorous and many of its findings irrelevant. He expressed his views as follows:

I do find that they [risk management] do not add a lot of value, and I always find that they tend to nit-pick on small issues. When you actually go through the risk assessment that they provide you with, maybe out of the 15 findings only 1 or 2 are actually relevant, because they are just nit-picking on things that are not actually there.

Risk thresholds, also referred to as risk appetite, are the boundaries of what is acceptable in line with the organisation's risks standards. *Risk thresholds* also emerged from the interviews as a sub-code. As many as seven participants indicated that they relied on risk management to indicate what the acceptable risk thresholds were, which gave them an additional *level of assurance* that they were on track with their products development and not contravening the organisation's risk appetite.

Participant 3 explained this:

I think they [risk management] are there to guide product managers and give them assurance that they are on the right path with their products and that they are not exceeding any company threshold. It is like an added layer of assurance.

Significantly, three participants with longer tenures as product managers indicated that, when designing products, they used the product risk management framework as a tool to verify risk boundaries.

Four participants indicated that they relied on risk management to provide direction on *legal and regulatory* matters, including compliance to the telecommunications regulator as well as general guidance on South African acts and laws. This was an unexpected finding as the organisation already had a dedicated legal team that supported product development.

To summarise the *value* code, all product managers, with one exception, indicated that the product risk management framework provided *value* to the product development lifecycle. The results from this section support the view of Oehmen et al. (2014), who indicated that a formal or standardised risk management process for products creates value for an organisation.

Risk-based decision-making, or the consideration of risks by product managers when new products were designed, was a further code that emerged. The views varied: five participants indicated that they performed product design without considering potential risk, whereas the other seven indicated the exact opposite, especially if they had been exposed to similar types of risks in previous product development. Working closely with the risk teams from an early stage allowed these product managers to pre-empt risks, as Participant 5 explained:

When you [product manager] work on one product and it has a potential risk, that information sticks to you. So when you are doing another product and it touches on the same thing - you

already know how to take that risk into account in your design, and start collaboration with the risk teams at that initial stage to see how we can mitigate it.

Thinking about known risks during product design and creation did not, in their view, make their products less innovative, but rather made them safer:

We [product managers] do consider the potential risks on products when designing it, or anticipate potential risks on products based on experience, but that just makes the product more secure, not less innovative. (Participant 6)

The remaining five product managers specified that they designed products without considering any potential risks and relied solely on the risk management team to identify risks for them. In summary, more than half (58%) of participants considered risks when doing product designs. This implies that risk-based decision was prevalent in the product division. Based on the RCI model, this links back to an established risk culture (H. Zaaiman, Pretorius, H., Van der Flier, H., & Born, M. P, In Progress), which the product risk management framework promotes. The implication is that the product risk management framework helped product managers to consider risk, thereby allowing them to make more informed decisions. This *risk-based decision-making* contributes to an improved risk culture (FSB, 2014).

The amount of time it takes risk managers to complete a risk assessment of a product without causing product delays, referred to as a *fair risk review period*, was a further code that emerged from the analysis. As many as seven participants mentioned that if risk management were involved at the correct time (that is, at project initiation), you would not experience any delays with launching your products on time, while two participants indicated that involving risk management upfront actually enabled them to launch products more quickly. This is summed up by the following quotation from Participant 9:

I think including the risk team from the get go [product initiation] definitely reduces time lines, and it doesn't hinder the process in any way.

In summary, more than half (58%) of participants felt that the time taken by risk management to conduct a risk assessment on a product was reasonable and two participants indicated that timely involvement of risk management could cause products to go to market earlier. These comments imply that product managers perceived the value provided by the risk assessment to outweigh the time taken to perform the risk assessment. In the Joubert (2016) framework for product risk management it is recommended that the *risk review period* should be managed by having service level agreements approved by product managers and risk managers.

Shared risk understanding, which is the shared level of understanding of what the product risk management framework is about, is a further code that emerged. Four participants indicated that awareness and understanding of the risk assessment process allowed them to be more responsible

about risk-based decision in their product development. Participant 10 implied that everyone was responsible for risk management, not just risk management. He further stated that understanding the product risk management framework allowed him to ask appropriate risk-related questions during product conceptualisation. This is encapsulated in his following statement:

I think risk is a responsibility of everyone, I think if you understand the framework and if you anticipate it, then you [product manager] know what questions to ask during product design.

Risk averse codes

Lack of timely *collaboration* between the risk team and the product team was identified as a code. Five participants explained that starting engagement with the risk management team when they were almost ready to implement their product normally tended to delay product launch owing to risks raised at that late stage. Furthermore, Participant 5 pointed out that the current engagement approach between risk management and product managers was not *collaborative* and risk management did not assist in finding solutions to the risks that were raised. This was supported by Participant 6 who further implied that she viewed the interaction with risk managers as a dictatorship in which they dictated to her what to fix. She suggested that a more collaborative approach would be beneficial, where the product manager and the risk manager could assist each other in finding solutions. Participant 5 shared these sentiments when she suggested:

We need more interaction, as well as the approach to problem solving to be changed to be more collaborative, and say let's work together [product manager and risk manager] on this. The *collaboration* findings indicated that nearly half (42%) of the product managers felt that inadequate collaboration between the risk manager and product manager were the reason product delays occurred. Inadequate collaboration implies that the rules of engagement between risk management and product management need to be improved. To promote a culture of innovation, open channels of communication allow different perspectives to be combined and creativity to be stimulated (Dereli, 2015). The importance of open collaboration is also supported by the FSB (2014), which advises that open communication among stakeholders is a requirement for constructive engagement to promote a healthy risk culture.

Four participants indicated that more *proactive risk taking* was required in the organisation. Participant 5 implied that the organisation lacked the ability to embark on risk taking without weighing out the consequences. She further suggested that the culture of the organisation lacked 'out of the box' thinking and was extra risk averse. Participant 12 pointed out that the biggest challenge was getting organisation leadership to take more risk in order to be more innovative, as risk taking and innovation go hand in hand. Participant 5 further suggested that, as an organisation, it was too focused on the immediate risks related to a product instead of considering the strategic long-term benefits enough. This is summed up in the following comment from Participant 5:

It is a lot of outside the box thinking – more proactive than reactive decision making and just having the guts to ahead and do stuff. A lot of the time we look at the impact to revenue, or the potential risks and sometimes we just need to take the risk and go ahead and do it! So short term there will always be an impact but we need to have a longer term view.

To conclude the discussion on proactive risk taking, the organisation's risk culture could be potentially perceived as risk averse due to the leadership of the organisation controlling the level of risks the organisation takes. This is described by the FSB (2014) as 'tone from the top', where organisation leadership sets expectations for the organisation's risk culture and takes a range of steps to manage these expectations. From a risk culture perspective, the messages that the senior leadership of the organisation sends out is that the organisation is *risk averse* and that senior leadership of the organisation wants to control the level of risk to which the organisation is exposed.

Only two participants felt that the risk team had a *lack of business knowledge*, which contributed to delays during the product risk assessment process. Participant 4 indicated that explaining business concepts to the risk team was time consuming and further implied that the risk team lacked strategic knowledge, which led to them failing to see the bigger picture or strategic intent of a product. Participants 4 and 5 also stated that this lack of business knowledge often led product managers and risk managers to go round in circles instead of coming to an agreeable solution. This point is encapsulated by Participant 4:

I ... find that the risk team sometimes don't have a very good understanding of business as usual. Therefore, when they ask questions in their feedback, it is delaying, not only from a risk assessment point of view but also from a lack of understanding point of view.

In summary, two product managers felt that the risk management team lacked business knowledge, which contributed to delays in resolving risks raised. Oehmen et al. (2014) obtained a similar finding and recommended that risk managers be regularly trained on new product concepts so that the issue of *lack of business knowledge* can be alleviated.

Only one participant felt that the product risk management framework considerably *reduced innovation*. This product manager strongly felt that the amount of time and resources spent on performing a risk assessment did not add value and reduced a product's innovation. He implied that the risk assessment process was cumbersome and too time consuming, and that the risk managers were too thorough with the assessment, which often wasted a product manager's time. The following comment echoes his sentiments:

I do find that they do not add a lot of value. I always find that they tend to nit-pick on small issues and when you actually go through the risk assessment that they provide you with, maybe out of the 15 findings only 1 or 2 are actually relevant, because they are just nit-picking on things that are not actually there. (Participant 4)

Participant recommendations

The components of a product risk management framework that would best support innovation were explored with the participants and the main codes that emerged are displayed in Table 5.

Table 5: Recommendation codes

Participants	Recommendation codes		
	Engagement Model	Knowledge sharing	Awareness
1		✓	✓
2	✓	✓	
3		✓	
4	✓		
5	✓		
6		✓	✓
7	✓		
8	✓		✓
9	✓	✓	
10	✓	✓	✓
11	✓		✓
12	✓		

The *engagement model* referred to in this study is an outcome of the product risk management framework that is shared by the product manager and the risk manager. A key characteristic of this engagement model is the collaboration that occurs to mitigate the risks identified for the product. As many as three-quarters of the product managers indicated that the engagement model between risk management and product managers needed to improve. Six participants suggested that while formal risk communication was required to track risks, informal face-to-face engagements would be more beneficial as these would save time, alleviate lack of understanding, and allow for speedier risk resolutions. A similar finding was found in a recent study by Willumsen et al. (2019) on project risk management, where there was also a preference for ad hoc or dialogue based approaches over formal risk documents in the fast paced project environment. All the product managers in the present study also indicated that risk management should get involved earlier in the process so that identified risk mitigating actions could be integrated in the project plan, instead of identifying and fixing risks when the product is ready to be implemented. Participant 7 summed this up when he said:

Risk input is critical at project kick off. If risk is involved at the outset, they are able to spot any issues that need to be addressed, instead of the project going too far down the line and then us having to go back and back-track having to fix things [risks] up.

As many as five participants mentioned the importance of risk management *awareness* and indicated that they were eager to understand the objectives and processes of product risk management. They highlighted their view that knowing what product risk management was about, and what potential

risks are looked for in products, would equip them with insight that they could use when designing products. This point is supported by the FSB (2014), which agrees that awareness and understanding of risk processes are crucial elements to support a mature risk culture.

Knowledge sharing was another code that emerged from the interviews. The product managers with longer tenure pointed out that knowledge sharing was critical for new product managers to assist them with understanding common product risks. This knowledge could be used by the product managers to create a culture of shared risk understanding, as well as providing them with ammunition to identify common risks. This is summarised in the statement by Participant 8:

Risk can also establish some standards to say ..., from all the products we work on, these are the things we have come up with around which FAQs can be built around that highlight common product risks for product managers to look out for. That will help a lot. This will help especially the newer product managers....

Other suggestions that emerged from the interviews were cheat sheets and an online portal with questions that product managers need to consider when developing products. In this context a cheat sheet is a quick reference guide with the aim to educate product managers on common product risks and their mitigating controls. Participant 6 also suggested that a forum be created in which there are representatives from product management. The purpose of this forum would be for risk management to inform product managers of emerging risks and to provide tips on how to handle these risks from a product risk perspective.

Results and discussion summary

The purpose of this study was to address the research question “is the risk culture of the organisation too risk averse to maximise the potential of product innovation?” The analysis of the data highlighted that the risk tolerant codes had a higher frequency than the risk averse codes (Table 3). Based on this result, it was concluded that the organisation is more risk tolerant than risk averse. Overall participants indicated that the organisation’s risk culture is risk tolerant and that product innovation is not being negatively affected by the product risk management framework.

The first research objective was to determine how the internal product risk management framework was affecting product innovation in the organisation. The risk tolerant findings indicated that all but one of participants felt that the product risk management framework added *value* to the product development process by providing assurance to product managers that their products were being built according to organisational and legal thresholds. More than half of the participants considered risks when designing their products, which implies that *risk-based decision making* is prevalent in the organisation. *Shared risk understanding* prevailed in the organisation where participants understood the product risk methodology. Finally, most participants implied that they were satisfied with the amount of time it takes to conduct to risk assessments. By contrast, the risk averse findings

indicate that fewer than half (42%) of the participants felt that collaboration between product managers and risk managers was inadequate and detrimental to product development. Furthermore, the inability of organisational leadership proactively to take risks was raised as a concern by participants. Two participants also felt that risk managers had inadequate business knowledge, which caused delays in resolving risks raised. Finally, one participant believed that the risk assessment process was not valuable and reduced product innovation.

The second research objective was to provide recommendations for a product risk management framework that would best support innovation as it was managing the risk involved. The recommendations on how to improve the product risk management framework included the following: *early engagement* where risk management gets involved in projects at the early product ideation phase to minimise later product rework and to ensure that products are implemented as planned; the introduction of *awareness* sessions on the purpose of risk management and on the process of the product risk management framework so as to promote shared risk understanding; and *knowledge sharing* sessions with product managers with the aim of keeping product managers informed of emerging risks of providing them with tips on how to deal with these risks and what to look out for.

The findings from this research align with current literature (Christensen et al., 2018; FSB, 2014; Joubert, 2016; Willumsen et al., 2019), which indicates that components of a product risk management framework should include engagement between stakeholders from inception, training sessions on processes to share knowledge, and risk awareness to ensure alignment of risk management practices.

Conclusion

In this study, I reviewed the literature on how risk culture can impact product innovation and found two aspects that contributed to current work on the subject: first, there is a lack of literature that analyses the impact of a product risk management framework on product innovation and, second, the right balance needs to be found between high-level product innovation and the kind of risk management that protects the organisation. The present research constitutes an exploratory investigation to determine whether the organisation selected for this research was too risk averse to maximise the potential benefits of product innovation. The face-to-face interviews conducted with 12 product managers in an applied setting explored concepts of product innovation, risk culture, and recommendations for improving the product risk management framework.

The research found that the organisation had a risk tolerant culture that promoted product innovation. In addition, its product risk management framework provided the organisation's product managers with value and assurance that their product development aligned with the organisation's internal as well as legal and regulatory thresholds. Furthermore, it was found that the organisation possessed certain risk averse characteristics, including inefficient interdepartmental collaboration, lack of proactive risk taking, and inadequate business knowledge. These risk averse characteristics could potentially have a negative effect on product innovation and organisational risk culture if not addressed. Finally, suggestions were obtained from the participants on how the product risk management framework could be improved in ways that would best support product innovation. These recommendations included: regular awareness sessions, early engagements between risk management and product management, and risk-based knowledge sharing to promote a culture of shared risk understanding. The research findings showed how a product risk management framework was perceived in an applied setting and demonstrated, through the eyes of product managers, what elements might have an impact on product innovation.

The research reported here had limitations. It was conducted as an in-house study of a single organisation where the research question was initiated as a result of the researcher's own risk management role in the company. The results could therefore have been influenced by interpreter bias through sample selection, formulation of the interview questions, and subjectivity of the researcher (Myers, 2019). Furthermore, the sample selected for this exploratory study was too small to be generalisable, and a bigger sample could have produced additional or different results.

Nevertheless, enough valuable information emerged from this research for risk practitioners to be able to utilise the findings to suggest possible ways to enhance their own product risk management framework and to extend their understanding of factors that can contribute to a risk culture which supports product innovation. The recommendations of this study can also help to guide organisations in improving their product risk management frameworks.

Future studies could include conducting comparative studies between different departments to evaluate differences in risk culture perception, following the observation of Sheedy, Griffin, and Barbour (2017) that sub-cultures can exist among different departments in an organisation. In addition, whereas this research mainly focused on innovative products in the organisation studied, further research could include technologies generated from the fourth industrial revolution, as research on the impact of risk frameworks on these technologies is limited (Nursoo, 2019).

This research has demonstrated how an organisation's risk culture could affect product innovation. The results and lessons learned provide a basis for further studies, valuable pointers for product risk managers relating to factors that contribute to risk tolerance, and, most important, recommendations on how to keep improving existing product risk management frameworks.

Number of words: 7680

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CHAPTER 3: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS (REFLECTION)

I undertook this programme, as I was interested in evaluating and improving the risk culture at the telecommunications company where I work. I chose the research topic of product risk management because of my direct involvement in this organisational function and because product innovation is a critical success factor in the organisation's success.

Unexpectedly, the results from this study did not align with the preconceived findings that I thought this research would generate. Working closely with product managers, I had experienced them as judging the product risk management framework negatively. The findings, however, surprisingly indicated that these product managers found value in the framework and relied on it as an assurance tool. This was a comforting finding and I will ensure that the recommendations from this study are implemented to increase the value of the product risk management framework further, which I hope will, in turn, result in a more mature risk culture.

Learning

Some of the learning that I hope to apply in my next research project will include the following:

- I will ensure that I triple check my interview questions, as I believe I could have omitted some of the interview questions to reach my research objectives, as certain questions did not link to the overall objectives of this study.
- Given that, prior to this study, my exposure to the issues that product managers face was purely from a risk management point of view, I will ensure that, for my next study, I will more fully understand the roles and responsibilities of my research participants so that they can be more relatable.
- On a personal level I learnt that research is more time consuming than expected, therefore it is critical to always build in extra time for research.

Next steps

The research outcomes will be applied as follows:

- The results of this study will be presented to risk management executives as well as product management executives;
- To ensure that the findings from the study are translated into actionable items, a project plan with timelines and responsibilities will be compiled that will cover the recommendations for improvement that this research generated.

APPENDICES

APPENDIX A: PROPOSED INTERVIEW QUESTIONS

Question(s) What do I want to know?	Reason for the question(s) Why do I ask this?	Objective What objective(s) will the answer address?	Justify from the literature?
Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?	Setting context and introducing the product innovation topic	Exploring if the internal product risk policy is affecting product innovation	(Sarbacker & Ishii, 1997)
Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?	Introducing the product risk policy topic. Getting their views on this	Exploring if the internal product risk policy is affecting product innovation	(Oehmen et al., 2014)
In your view how does the product risk management policy affect your ability of being innovative with your products?	Asking the how, how does the policy affect innovation. Is the process too long? Are there too many checks, etc.	Exploring if the internal product risk policy is affecting product innovation	(Ntim et al., 2013)
How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?	Asking what and this time asking for examples.	Exploring if the internal product risk policy is affecting product innovation	(Ntim et al., 2013)
In your opinion what value does the product risk management policy add to the product development lifecycle?	Focussing on the positive, what value is the policy adding to the process	Exploring if the internal product risk policy is affecting product innovation	(Ntim et al., 2013)
There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?	Determining the effect of the policy. Does it have an effect on the product manager? Is the product manager scared to contravene it?	Exploring if the internal product risk policy is affecting product innovation	(Oehmen et al., 2014)
In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?	Asking for recommendations for continuous improvement	Provide recommendations to the product risk policy that would best support innovation	

APPENDIX B: INTERVIEW GUIDE

MCom Applied Risk Management UARM873 Mini-dissertation study Interview Guide

Study title: Perceptions of risk culture on product innovation

Student: Renisha Rajpaul

Study supervisor: Dr Sonja Gilliland

Supervisor contact details: sonja.gilliland@nwu.ac.za (016) 910 3265/1

Document aim

The aim of this document is to provide as a guide to the student on how s/he will be conducting the interview after obtaining informed consent from the interviewee (see MARM Interview Consent Form for this study for information provided to the interviewee before the interview).

Interview process

1. Clarification of understanding of informed consent form at start of the interview

process:

Thanks for agreeing to participate in this study. I appreciate your willingness to assist me with this research.

Do you have any further questions or concerns on the informed consent form that you would like to discuss before we start the interview?

- If the interviewee has questions/concerns, discuss the questions before continuing with the interview. Remind the interviewee that s/he is allowed to leave the interview at any time during the interview.
- If the interviewee does not have questions or concerns, continue with the interview.

2. Interview:

- Pose the interview questions in the pre-defined sequence:
 1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?
 2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?
 3. In your view how does the product risk management policy affect your ability of being innovative with your products?
 4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?
 5. In your opinion what value does the product risk management policy add to the product development lifecycle?

6. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?
 7. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?
- Facilitate the interviewee responses only when required by asking non-leading further questions:
 - Do not overdo probing questions to avoid influencing the interviewee responses.
 - Do not lead your respondent into providing information that you expect to be the answer to your research questions.
 - Pre-prepare non-leading probing questions for your interview. Example questions:
 - *When you say, what do you mean by that?*
 - *Tell me more about.... (referring to something the respondent said, not what you wanted him/her to say)*
 - *Please give me an example (concrete examples provide more information about the actual situation than general statements about a situation)*
 - *What does this look like in practice?*
 - *How does this happen? (note: ask 'how' rather than 'why' questions – see Harvard interview strategies document available on link listed at the end of the document)*
 - *How is this important to you?*
 - *How is this important to the organisation?*
 - *How is this important in the context of risk management (or insert a phrase related to your specific research objective) in the organisation?*
 - *If the person refers to how somebody else or a group feels about something, ask: How do you feel about this?*
 - *How does this information relate to the topic under discussion? (steer respondent back to topic when s/he digresses from the topic)*

3. Interpersonal aspects of interviews to keep in mind

Your behaviour during the interview will influence the interviewee's responses.

- **Do:**
 - Keep the possible biases and limitations of interviews in mind when designing, executing and writing up your interviews – interview transcriptions will assist you and others to evaluate how your own expectations and natural biases may have influenced the interview data.
 - Understand the aims of your interview questions in the context of your research project.
 - Ask simple questions that will provide information related to your research objectives.
 - Pilot and practice your interview before formal data gathering so that you can see what works and what doesn't work.
 - Ask only one question at a time.
 - Give the person time to think about the question – stay quiet during that time.

- Listen attentively to the interviewee.
 - Ask clarifying questions where necessary for purposes of your research.
 - Remain ethically sensitive as described in the informed letter of consent – do not change the rules of engagement during the interview.
 - Stay warm and empathetic (not sympathetic – see under ‘Don’t’ below) during the interview – you do not have to suddenly become a ‘cold fish’ during the interview.
 - Relax and enjoy the interview.
 - At the end of the interview, state why you are grateful to the participant for her/his time and inputs to allow the respondent to feel appreciated for their efforts to contribute to your research question.
- **Don’t:**
 - Interrupt your interviewee.
 - Convey any approval, sympathy, or disagreement, with your interviewee’s comments through words or actions (e.g. avoid encouraging nods, frowns, verbal affirmations or disagreements) – the interview is about what the person thinks, and not about how you feel about what they think.
 - Answer the question for the interviewee.
 - Don’t ask questions that can be answered with one word, such as ‘yes’ or ‘no’.
- **What if the interviewee becomes frustrated or emotional during the interview?**
 - Stay calm.
 - Do not interrupt, try to defend, comfort the interviewee, or ‘fix’ the situation – say as little as possible and allow the person to calm down.
 - Turn the audio-recording off if the person requests this.
 - When the person has calmed down, ask a question that acknowledges the emotion, such as *What about the situation prompted these strong emotions?*

4. Further preparation for the interviews

Use other useful interview advice available online to prepare yourself for the interviews, e.g.: <https://msu.edu/user/mkennedy/digitaladvisor/Research/interviewing.htm>

https://sociology.fas.harvard.edu/files/sociology/files/interview_strategies.pdf

APPENDIX C: INTERVIEW INFORMED CONSENT FORM

MCom Applied Risk Management UARM873 Mini-dissertation study Interview Informed Consent Form

Study title: Perceptions of risk culture on product innovation

Student: Renisha Rajpaul

Study supervisor: Dr Sonja Gilliland

Supervisor contact details: [sonja.gilliland@nwu.ac.za/](mailto:sonja.gilliland@nwu.ac.za) (016) 910 3265/1

Document aim

The aim of this document is to provide potential interview study participants the opportunity to provide formal informed consent to participate in this study.

Why this interview?

This is an academic study at master's degree level, which provides the student the opportunity to learn how to do an interview-based study, while obtaining data expected to be useful for your organisation.

Informed consent process

The interviewer will obtain written consent from participants before setting up the interviews. Written consent is given by completing and signing this form.

Permission to do this study

The organisation has provided formal permission for this study to be conducted. This study has been approved by the North-West University Faculty of Economic and Management Sciences Research Ethics Committee (EMS-REC.) NWU-00396-19-A4.

Study aim

There is a perception in the organisation that product managers have become cautious in introducing risks in their products as they are more aware of the consequences of faults, defects and flaws. This implies that there has been a reduction in the proposal and development of innovative products in the organisation. The aim of the present research was to investigate the experiences of a group of 12 product managers on how risk culture in their telecommunications organisation affects product innovation.

Main research question

Is the risk culture of the organisation too risk averse to maximise the potential of product innovation?

Research objective

- Exploring if the internal product risk policy is affecting product innovation
- Provide recommendations to the product risk policy that would best support innovation

Why have you been invited to take part?

For this research the non-probability technique of purposeful sampling method will be used. I will be utilising participants intentionally selected to be representative with the key characteristics of this study. The target population of this study includes 10 to 15 Product Managers from the organisation. Product Managers have

been selected as they have direct contact with the product development process as well as the product risk management process.

Interview process – what to expect from the interview

The scheduled interview will last 30 minutes. I may request more information from you post interview if necessary for clarifying study data. However, I shall endeavour to keep post-interview follow-up questions to a minimum.

The interviews will be run in a semi-structured manner, meaning that I shall ask a set of open-ended questions and may ask additional questions to clarify my understanding of your response.

I need to audio-tape your interview to allow me to transcribe and analyse your responses post-interview. This will allow me to give full attention to your responses during the interview and not get side-tracked by multiple note-taking. I therefore kindly request that you consent to such audio-taping based on the requirement that the recordings be deleted after transcribing (see Study data management).

Study data management

The audio-recordings will be deleted after the information was transcribed by the researcher or transcriber. If a separate (i.e. not the study researcher) transcriber is used, s/he will sign a confidentiality clause before transcribing (i.e. the transcriber may not talk to anybody about the study data). Neither the company, nor the interviewee will be identified in the study transcriptions. The transcriptions constitute the raw data for this study, which will be stored safely by the researcher for three years. The interview content will be analysed and reported on anonymously. Responsible members of the North-West University may be given access to the anonymised data for supervision and/or audit of the research.

The researcher may wish to directly quote some of your responses in the study report, without identifying you. You will be asked to give permission for each such quote to be used.

Publication of the study results

The study will be written up as a confidential study report in the researcher's mini-dissertation. The report will be made available to the organisation in which the study was done. Post examination, the study may be published as an academic article if formal permission to do so has been received by the organisation.

Potential risks to you and the organisation in taking part in this study

In order to reduce any potential risks, the researcher will ensure all information collected from the interviews will only be used for purposes of the study and interviewee's personal details will be kept confidential.

Should you have any other concerns about taking part in this study, please contact the researcher or study supervisor to discuss your concerns.

Potential benefits to you in taking part in this study

Contribute your voice to this important issue of product innovation and risk management in the organisation

Should you have concerns on this study?

The interviewer has been trained to do the interview in an ethical and academically sound manner. Should you have any concerns about the interview that cannot be allayed by the researcher, either before or after the interview, you are welcome to contact the student's supervisor (contact details above) to discuss these concerns. Should you wish to further escalate your concerns, please contact the module leader, Prof Hermien Zaaiman at hermien.zaaiman@nwu.ac.za (082 921 0463)?

Informed consent

	yes/no
I have read and understood this consent form.	
I have had a chance to ask the researcher questions on the study.	
These questions have been adequately answered for me to be able to provide informed consent to participate in this study.	

I understand that taking part in this study is voluntary.	
I have not been pressurised to take part in this study.	
I understand that I may exit the study at any time without being penalised or prejudiced against in any way.	
I hereby provide consent to contribute to this study under the conditions explained in this form.	

Initial each page and sign

Participant name:

Signature:

Date:

APPENDIX D: INTERVIEW TRANSCRIPTS

Participant 1

Tenure: 2.5 years

Level: Product Manager

- 1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?**

There is an innovation team at the organisation that gets ideas from anyone that can be productised if feasible. The problem is that those idea don't filter down to the product team, and there is no calibration. The way we currently take on products is by responding to a market or customer need or responding to competition.

- 2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?**

I disagree with that. I think they are there to point out risks and if u follow the process and involve them from inception there will be no delays to your product reaching the market. They are definitely needed and show things that we cannot see. I have not experienced such an issue.

- 3. In your view how does the product risk management policy affect your ability of being innovative with your products?**

I don't think it affects being innovative in any way. The product manager is coming up with a new product idea, and the product manager thinks mostly about the commercial stuff, we can't think of everything. That is why risk is there - to see if there is any issues. So I think that risk is needed to ensure that we are con-
travening anything and guiding us with issues that we may have not foreseen when we are trying to launch and be innovative.

- 4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?**

I don't think there was such a case – I actually cant thing of any product where this occurred.

- 5. In your opinion what value does the product risk management policy add to the product development lifecycle?**

Guiding us and ensuring that we are not stepping on anyone's toes such as ICASA rulings and regulations, but also giving us a different perspective which we may have not been able to see being a product manager. So I think definitely guiding us where there is gaps from a different perspective.

- 6. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?**

Current experience with a project - IOT.NXT. Risk has raised awareness of outstanding issues with the vendor that I was not aware off - even though I was the product manager. It was valuable because did not know that the issue was still pending. If risk did not make me aware of the issue - I could have been in trouble - later on. If risks are raised at the correct time - upfront - it actually helps us resolve the risks faster which enables us to launch much more quicker...

- 7. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?**

Awareness in the team especially for the new product managers. have new people and I don't think they aware of what the process is - secondly what risk management is about and what risk management is accessing products against - because I think if we are more knowledgeable about what risk management is accessing a product against - it will help product managers know what to look out for - instead of coming to risk management and then finding out that the product needs to be changed because of X and Y risks. And definitely knowledge sharing and if the risk team can share information that we do not know - like about up and coming risks - then we also aware of what to look out for.

Participant 2

Tenure: 13 years

Level: EHOD

1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?

I think it requires a re-organisational shift in the way we do resourcing. I don't think the constructs of the business is set up to handle the way an organisation can launch innovative digital products. The current agile way of work that we adopted has the framework - but the organisation is not geared up to handle the framework. The current challenge is that the areas that is required to deliver products and services is not within our control and is spread across multiple business units. This causes an issue with prioritisation and the ability to deliver innovative products

2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?

I think the rigidity in what that business unit does is required. I think the issue is that we engage to late - almost when we ready to go to market, and then there are process that we have to adhere to - to ensure that we are compliant. So what happens is that most areas will see it as a hindrance. So I think that the engagement model needs to change and we need to engage right at the beginning of a project.

3. In your view how does the product risk management policy affect your ability of being innovative with your products?

No - not at all - either the journey is impacted quite a bit. Example - inform customer of the data privacy issue. Most of the time is it re designing journeys which normally does not change the core construct of the product.

4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?

I can't think of such an example

5. In your opinion what value does the product risk management policy add to the product development lifecycle?

The biggest value is that it protects our organisation as a brand. If we do something that is non-compliant - then we run the risk of regulatory fines. We ensuring the customer is protected and that our brand is protect.

6. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?

As we pull the risk team closer to use, we see trends in terms of how we think of products risks, etc. it is in the back of our mind. Right now that relationship is not too close - that business unit and digital services, if we have to develop products - we definitely have the risks associated with products at the back of my mind. This does not affect my ability to be innovative

7. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?

If we have better view of the processes and the guidelines we should be following and if we have it in the back of our minds, it will make designing products easier. We need constant engagement and inclusion upfront so that boundaries of risks can be identified that will help us when designing products.

Participant 3

Tenure: 6 months

Level: Product manager

1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?

There needs to be new innovative solutions and technology that are obviously matches that and I think they also need to understand more specifically customer pain points and hold these products actually solve them.

2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?

They offer a completely different perspective on the product that we trying to launch and ultimately needs a different view to take away the risks through the product - provides a different perspective or view on the product itself. The product managers only looking at go to market strategies, revenue uptake risk but risk provides like the long term strategy along the product so I'm in agreement with it I think the time that you guys take this is sufficient.

3. In your view how does the product risk management policy affect your ability of being innovative with your products?

It does not affect our ability in being innovative, rather it gives us an alternative view of how our product can be perceived. So in my experience it has been helpful so far. So I think it is important

4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?

I think I've launched about 2 initiatives with the product risk team and I haven't gotten much feedback on that as yet on the new product. For the initiatives that were launched there was no requests to change it so that my products becomes less innovative.

5. In your opinion what value does the product risk management policy add to the product development lifecycle?

I think they are there to guide product managers and give them assurance that they are on the right path with their products, that they are not exceeding any company threshold. It is like an added layer of assurance basically.

6. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?

I don't think it affects the ability to be innovative. We design our products to be as innovative as possible within the boundaries of what is technically available. I think it could potentially be the technical limitations that make products less innovative.

7. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?

An online portal we actually log our initiatives that has multiple questions that will guide the risk team in assessing the product similar to what technology security is doing. This will reduce the back and forth and the time taken to access a product.

Participant 4

Tenure: 13.5 years

Level: Product Manager

1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?

It's a mixture of things, I think the first thing is insights from segment and marketing because you can't build something that your customer does not want. We generally tend to be a segment led organisation so we try and look at insights from different segments. But I do also think that sometimes customers don't know what they want. They think they know what they want until you bring out something that they did not realise that they need and suddenly they want that. So I think it is a mixture of this sort of innovative thinking like we have the innovative program which is a new way of harvesting the brains in the organisation to come up with cool ideas and then looking at the insights from segment which will help you decide which products you are more likely to make profit from.

2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?

I tend to agree - having worked in the product management division for over 5 years now we find that as an organisation - a lot of the times we have to react to the market. If you take the time to go and do hectic risk analysis, it obviously delays your launch and that obviously puts you in a competitive disadvantage. I am not saying that risk is not important - I just feel that they get involved too late in the process and I also find that the risk team sometimes don't have a very good understanding of business as usual. Therefore when they ask questions in their feedback it is delaying, not only from a risk assessment point of view but also from a lack of understanding point of view.

3. In your view how does the product risk management policy affect your ability of being innovative with your products?

I think it affects us a lot, because a lot of the time if you think of companies in the past, they have had to take risks to launch innovative products and if you don't take that risk you never going to know. I understand that yes, there is a certain element that you have to make sure that you not taking too much of risk in terms of financial loss or legal potentially. I also think that the risk team is so worried about the risk that they don't see the bigger picture and the potential. Like for example the iPhone- a lot of people said u crazy to launch a phone without a stylus, how can people use a phone without a stylus because everyone had stylus back in the day but they had to take that risk and be innovative. So I do think the risk assessment framework stifles a lot of innovation.

4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?

A good example would be e-sim. E-sim is a new technology that has entered the market where physical sim cards are being replaced by electronic sim cards. This organisation was the first to launch it and I was the product manager for that. So it went through the risk assessment process and one of the risks was non-compliance to RICA. SO the issue was compliance or being innovative and we were having this constant battle of whether an e-sim needs to be RICA'ed like a physical sim. So we launched the e-sim in such a way that it was not a stand-alone sim card - it was linked to an existing physical sim card. We had constant feedback from risk saying the e-sim will need to be RICA'ed. So that is a classic example of us wanting to be innovative and risk management saying no!

5. In your opinion what value does the product risk management policy add to the product development lifecycle?

I do find that they don't add a lot of value as I always find that they tend to nit-pick on small issues and when you actually go through the risk assessment that they provide you with, maybe out of the 15 findings only 1 or 2 are actually relevant Because they are just not picking on things that are not actually there. So they do add value sometimes like there has been times before on projects where they identified things that we did not think about, for example wholesale rates and interconnect fees between network and there was a value add because u realise if they were not involved, you would not have thought about it but that was in 2013.

6. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?

It does not affect my ability of being innovative. I tend to design my product the way I want and wait for the risk management team to raise the risks. When u have a certain amount of experience you kind of are aware of the risks upfront. We don't go and design stupid products where we know it is going to damage the business and things like that. We might not be aware of all the risks but we definitely don't go in blindly but we definitely don't go in saying we know every risk either. But we do try and be as innovative as possible and the risk team will come in afterwards and raise the relevant risks.

7. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?

I feel that risk should be involved at the beginning- so it should not be a department that sits in a silo. There should be risk person in every single product team overseeing every single project and looking at the risk before we even start putting documents out and putting systems in. That way we would be able to eliminate

- any rework. This would mean from the get -go there is a person sitting there with a risk hat on - that can identify where the potential risks are, to notify the product manager before they document or submit anything so that we cater for the risks upfront - rather than coming afterwards and go - u need to change your product due to potential risks. This will prevent us from going backwards.

Participant 5

Tenure: 6 years

Level: Portfolio Manager

1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?

It's a lot of outside the box thinking - more proactive than reactive decision making and just having the guts to ahead and do stuff. A lot of the time we look at the impact to revenue, or the potential risks and sometimes we just need to take the risk and go ahead and do it - so short term there will always be an impact but we need to have a longer term view.

2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?

I don't think the process is rigid but I think the approach to the process needs to be changed. The risk manager normally points out the risk from a defensive stand point by saying this is the risk and this is the impact - which makes it seem like a blocker to the product manager saying this is why the product is not a good idea. They don't propose solutions by providing recommendations- just say that u can't do this because of this. This often leads the product manager and the risk manager going around in circles with the product manager proposing ideas and the risk manager saying no to the idea. This back and forth can be avoided if the risk manager just provided recommendations on how the product should work. Because as a product manager I am not aware of all the risks. And I can never know everything. I don't think the process is rigid and too restrictive. I actually think it is through because as part of that document you actually realise things you do not think about. remember product managers are always working in a rush- we trying to get things done as soon as possible and we might miss something - the risk process help us realise things that we have not done and things that we need to do. It helps me - almost like a check box for Mr - to say that everything is covered for the product. - So that a good think but I think the interaction can be improved to be more collaborative rather than dictate.

3. In your view how does the product risk management policy affect your ability of being innovative with your products?

Until there a risk - being raised - because when u come up with a product you are all excited and then u start the engagement with risk and then if risks are identified - there is some form of dread- u actually dread the engagement because it becomes sort of like a pleasant engagement - it's more like a wrist slapping and u already know that u not going to get solutions - more like be pointed out as to why something is a problem, instead of solutions which is what u are looking for. So that part is not pleasant.

4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?

An example will be data auto purchase, as a product manager we want the best possible experience for the customer but then there is limitations is what we can deliver from a technical standpoint- which is another reality and essentially we end up launching with what's technically possible. So what happened with DAP is what was technically possible is not the best ideal journey but that is what we had to launch with and risk was not happy with that as there was no real time way of tracking due to potential bill shock. So in this case we had to way the risks but initially a big and forth but hindered getting a resolution because we RAC needed to be signed I think it could have been handled better.

5. In your opinion what value does the product risk management policy add to the product development lifecycle?

M is an added buffer- because product managers are money hungry - and allot of the risks raised are valid. The RM are very helpful in helping business recognised risk that they have not taught of. And sometime the level of detail they put in quantifying things like actually looking at actual numbers -like no of customers impacted - actually puts things into perspective. I know that sometimes it seems like risk managers are being unreasonable or they are hindering the process but in the end u actually see the value.

6. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?

7. Definitely - even from a legal perspective - because u learn about new regulations as u go. When u do one product and it has a potential risk that info sticks to u - so when u doing another product and it touches on the same thing - u already know and take the risk into account in your design and start collaboration with the risk teams at that stage to see how we can motivate it. U learning as u go.

8. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?

Interaction - and the approach to problem solving - to be changed to be more collaborative and say let's work together on this. With Legal - we like to interact with Legal as she will provide recommended solutions when there is a problem - not just point out the problem and leave u at a dead end to figure it out. If the product division know u are going to try and help - it will be most likely the way we perceive u and even how we approach u to engage with u because we already know that the interaction will be positive. And risk management will not be seen as blockers.

Participant 6

Tenure: 11 Years

Level: Product Manager

1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?

We run allot of incentive to try and generate innovation. Allot of collaboration, allot of insights from the segment teams. Segment lead proposition that targets markets gaps. We have an inbox where the public can send us innovative ideas that we act on.

2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?

I never had the risk team delay any of my products, so I have not personally experienced that. That's not even happened in my experience. If there were delays it was normally not because of risk but because of the technical team delays.

3. In your view how does the product risk management policy affect your ability of being innovative with your products?

We normally have technical limitations that make our products less innovative, rather than product changes due to risk. It could be the nature of my area - being prepaid products. I have never had risk make me change the way something was done in my product. We normally work around issues and come up with a way that works for both of us.

4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?

I can't think of any example that I have experienced

5. In your opinion what value does the product risk management policy add to the product development lifecycle?

I think the risk management division is vital in the product development lifecycle, I think there feedback and the assurance of their rubber stamp is needed. There are often things that you guys find that we have not thought of, I mean I have had allot of situations where we had to take your feedback in consideration to protect the organisation and our customers. I think it vital that u guys give input into the product lifecycles - from the beginning in fact - it is an added layer of assurance. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?

6. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?

Yes, we do consider the potential risks on products when designing it, or anticipate potential risks on products based on experience but that just makes the product more secure - I won't say less innovative.

7. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?

We don't have allot of sight of what u guys are doing. A few years ago we had a forum where we were informed of what u do. So maybe that's what we need a sort of forum where u have representatives where u inform us what u working on and what to look out for. We don't really know otherwise. That will be quite informative. To know what u guys are working on, what's changed and what's needed from the product managers.

Participant 7

Tenure: 3.5 years

Level: Product Manager

1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?

Faster delivery times. When we look at market trends and customer needs, we want to build innovative products. The issue is the amount of red tape and also sometimes because u are the biggest market player- sometimes u can't be as innovative as u like because it has financial repercussions. I think also - with regards to technical developments, there is always constraint from their side, because we have to follow a roadmap and unfortunately sometimes your product needs to be prioritised and sometimes it could take years to develop a products Technical constraints is the biggest blocker to being innovative..

2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?

I think there is a few factors that delays taking a product to market. I can understand where risk comes from because you would need to access the entire product, even from a consumer perspective. Because generally product managers just see products from the organisation's side. So we appreciate the risk feedback. I personally have not had any of my products being delayed by risk.

3. In your view how does the product risk management policy affect your ability of being innovative with your products?

So feedback from risk is generally what would make us change our product, but we would take that feedback back to drawing board to see how we can make the changes to the product without sacrificing the innovation concept

4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?

Can't think of any examples

5. In your opinion what value does the product risk management policy add to the product development lifecycle?

Definitely add allot of value and I think for me - being a product manager when we do product design we forget to look at it from an all rounded perspective, how it would affect a customer and what are some of the comebacks a product could have. Although sometimes we are in although position because technically we in a tough position because technically it's not possible to do things that risk is asking us to do - so we have to have numerous meetings. As product manager - u stuck in the idle because u know system capabilities and what the risk department wants - but u have to be in the middle and make it intertwine to make everyone happy and find a middle ground.

6. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?

We normally would see what would flag issues and see how we can resolve it by having a meeting or to determine what our options are on the concerns being raised. Normally if we are proactive, there is no impact to the innovation factor or the product.

7. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?

Risk input is critical at project kick off. If risk is involved at the outset, they are able to spot any issues that need to be addressed, instead of the project going too far down the line and they us having to go back and back track having to fix things up. Risk engagement from concept and product design phase is quite helpful and that should be the way we work.

Participant 8

Tenure: 12 years

Level: Product Manager

1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?

I think it's a culture things, things are changing on a daily basis - but from a cultural perspective - we still building and launching similar types of products in a similar way. We are not diversifying ourselves. There is collaboration with our consumers. We are not using our resources to grow and do different things.

2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?

I don't agree with the statement. I think there are other reasons why product gets delayed and it is generally because people don't want to change and do new things - so it takes forever to get them to understand what u trying to do. But this is not risk - so I don't agree with this statement.

3. In your view how does the product risk management policy affect your ability of being innovative with your products?

I think for me - I plan to the T and take risks, service, and consumer considerations into account when I am designing my products. I would say that I am risk adverse and always consider risks sometimes more that the risk management department for my products. I have gotten to the stage where I fully understand the risk framework after working with the risk team for 5 years and I fully understand what potential risks a product journey can have. I think for me it is also crucial to understand what is the objective of the product and where does the objective come from, was it delivered on or was it not. I think sometimes as company we don't see the full picture and we take short term risks without seeing the long term effect. Due to this many times, we have seen articles on the My Broadband with negative publicity.

4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?

I can't think of any example that I have experienced

5. In your opinion what value does the product risk management policy add to the product development lifecycle?

It add allot of value, because to me they are the custodians that make sure we don't jeopardise the company, they are there to remind me of what I need to work towards or what I need to work within. They give me a framework that I can work within without jeopardising the company. for example - look at how we do marketing's - as a team we can do whatever we want to - but risk will tell us what we allowed to do as well as tell why. The risk framework is important because it keeps u in check, that's the value of it to me.

6. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?

Yes - it does and it helps me with a number of things, it helps me in understanding the terms and conditions that we need to present and how we need to position and present the product to the customer. For example like with airtime advance, we were sharing data with a company in Greece and some of the information the company did not require it over an unsecured line. So obviously one of the requirements was that we need encryption. So that for me was a key risk requirement that I had to put in - based on my knowledge of what risk does, that is how I specified it in my design.

7. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?

For me its involvement. Risk needs to be involved from the onset. When I say from the onset, I mean somebody, even a junior person is there from the onset so that when we move 6 -7 steps down we don't have to re-present this concept to risk, and there is already and understanding on the product works. Risk as that time should also be able to present their proposals to say - please look out for something like this or that. This input will help a great deal because the current process of briefing and then from briefing risk is brought in in later - it is a challenge. Risk can also establish some standards to say guys - from all the products we work on - these are the things we have come up around which risk can build FAQ's that highlight common product risks for product managers to look out for. That will help allot. This will help especially the newer product managers.

Participant 9

Tenure: 10years

Level: EHOD

1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?

I think the biggest issue at the moment is that there is such a volume of products in the pipeline from different division so trying to get priority for anything that is not kind of pre specified. I don't think we put enough time into innovation, and there is the innovation team, where we invite innovations from everyone - customers, staffs but there are some really great ideas and when we have reviewed the ideas and given it the go ahead - trying to find a priority is almost impossible because there is already a backlog of products. As a product team I don't think we spend enough time thinking about how we could innovate better because everyone is so busy just trying to deliver existing requirements', so it's not like there isn't an appetite for innovation because we all believed we need to be innovative and there's no time or capacity

2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?

I think including the risk team from the get go definitely reduces time lines and it doesn't hinder the process in any way and in fact having risk/ legal/ regulatory involved right upfront means that we understand where the limitations are- we can we can understand when where we need to make changes and but I don't think it might change how are how we develop something - it doesn't stop it.

3. In your view how does the product risk management policy affect your ability of being innovative with your products?

Sometimes - it could in a small way but I can't think of any examples specifically where that might have happened. I say getting the risk team involved early in the project makes more sense because then there's that time when we haven't sent the development teams off in one direction and then you as a project team in a completely different change your direction - because you've had guidance up front and you know what is allowed and what's not allowed. I just can't think of an example where we had an idea and risk is coming and said no can't work like that - too late in the process so yeah I'd I don't think I don't think it's detrimental to protect development but it has to have it has to have them from the get go

4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?

I can't think of any examples - there has been frustrations before would have been sitting on deployments go/no meetings late at nights and risk said this can't be allowed, which was frustrating. But that was long ago. Privacy does come into it at all because things like privacy of as we know that is a risk you don't to some extent. I don't believe that the product team is familiar enough with all the acts and the regulations are there and we don't have to know-it-all comes which is why we need to have you guys involved and advising us. I kind of feel like if we did things differently instead of working in isolation the way we do currently where somebody told us what they want because don't be under any illusion the project team - the guy sitting at the desks - we don't come up with any of the ideas - we just get told what to do and most the time it comes from CEO's office or from somebody who's looked at revenue and sees the need to make some changes or you know you know - the product team just does what needs to be done we don't sit and innovate I think it's a pity - we are more drivers instead of innovators. What will be great is if there were more opportunities to innovate - like we have started the hackathon, where you have developers and people sitting and coming up with ideas based on the problem that is being addressed. I would love to sit with people sitting in teams and actually coming up with innovative solutions to real problems and coming up with a nice ideas that might make an interesting product - and these are real customer issues and it's not a look at a small issue because we've had a number of queries or calls about it and how do we fix it then we present it to the risk people and you know understand like what are the guidelines of this idea and where are the boundaries for us and how can we make changes then if we had these sort of brainstorming sessions. I think we might be able to be a little bit more innovative in the way we approach things but if we just we really do more of the same, if a product works we rename, rebrand and just change a few mechanics - that is variation that is not innovation.

5. In your opinion what value does the product risk management policy add to the product development lifecycle?

I definitely think in terms of you know - explaining where the boundaries are, understanding the regulations/ highlighting the risks that that we might have - I think that's really important. In fact I'd rather have a discussion where we actually like can be bouncing ideas because if we worked face-to-face more it will be easier. I was a bit frustrated recently dealing with regulatory, because we were try to find a solution but I needed regulatory to tell me where were the bounds and it became an up and done email thing which took forever to resolve - i don't like email - I want to bounce idea's because I need risk regulator legal to help me find solutions and better ways of doing things that are within the boundaries - but still allow me to be innovative and find better ways of doing stuff. You know so I like a face-to-face process as it works much

better because I can say well what if I did this and then you say - have you considered that and it continues - like a collaborative approach that's so how i would like to see us working.

6. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?

I think it does not - it just makes u more aware - it like it's stuff that you think about - like this is going to be a Pope issue or u might remember when we had that and limited is a mace service that was being abused how do we manage for that etc. so I suppose the long you've been around, the he more projects you worked on - the more exposed you been to risks that have been raised - the easier it becomes to do that I think starting out for new products managers, it's probably a little harder because just don't know what you don't know.

7. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?

I think it's about collaboration, where we're actually talking to you and saying this is what I'm thinking. What I realized in this company is that interpretation is everything, for example I send you an email and I'm explaining how a product's going to work but you're thinking something different and so you're giving me risks based on how you think it's going to work - but actually if we were chatting about it - you could question me and I could say no this is actually how it's going to work and then it might change the risk profile of whatever was envisioned you know. So collaboration is really important. I think maybe -refreshers to the product team and things that you really need to be thinking about guys you know - every time there's a risk audit that comes round I like what are the regulations!!!. Where I go and find them or I have a particular issue risks not front of mind. I suppose maybe if there was like a little cheat sheet kind of thing that as a product manager I got a checklist and have I considered this this and this. This is specifically for the younger product managers who haven't had as much exposure to these risks so like a cheat sheet would be very useful. A collaborative discussion where we can talk about what's required and then get guidance so that I feel more confident that what I'm proposing has been considered, and although the risk profiles have been kind of checked of and managed for before we even get the project a project started I think that could help.

Participant 10

Tenure: 5.5 years

Level: EHOD

1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?

We need a far better engine room to be able to actually do the launching. The ideation is generally - there's no shortage of ideas - there could be improvements in the frameworks to vet those ideas and a lot of those ideas can vested in the opinions of certain stakeholders more than a considered rational scientific weight to decide which ideas get treated. But even then most, if not all of these ideas fail at the same point which is that they all end up in a funnel which is if there is a 100 ideas, 2 come out. I am saying that as an arbitrary number but that describes the key issue.

2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?

I disagree, I think risk is a responsibility of everyone, I think if you understand the framework and if u anticipate - and then you know what questions to ask. I think also not everything is a one way door. There are cases where products have been launched that should NOT have been launched because they did not go through correct process but because of the stakeholders needed them to launch. So it is what it is and you play catch up because that's how things work. In other cases you forward anticipate legal questions/ risk questions/process questions whatever the case may be and then sometimes you doing it properly and then you don't have to work and the risk manager in the case says ok cool, u are sorted.

3. In your view how does the product risk management policy affect your ability of being innovative with your products?

In my case generally speaking I've just seen this is opportunities to take up the challenge to say - OK how can ask still keep my idea while finding a way to mitigate the risk. I have never really had that that problem. An example was Prince raised the concern around sort of the risk around how we went to allow Play Inc. the subscription to be sold via vouchers. His concerns were valid in terms of like accounting risk principles around when you recognize revenue through the revenue but I didn't perceive that as OK I can do it - I perceived that as solve that thing. So it's more a case of I never had a case where the risk was not valid. More importantly to be honest if there's a situation where the risk raised materially impacts innovation then it's a dangerous innovation to go through and then you've got to understand the risks involved in doing so. I would imagine that when we speak about E school and or Mum and Baby that process sensitive pieces of information we have to consider those risks carefully or those products carefully. Those products still exists and it's not like someone ignored the risks but someone had to deal with them

4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?

I can't think of any example that I have experienced

5. In your opinion what value does the product risk management policy add to the product development lifecycle?

I think in the case of a specialist experience colleagues it does provide a framework of things to think about and obviously steps to in terms of how -I guess I'm just quite used to the process now so I understand the cues from a governance perspective on what I need to think about. I know security needs to be thought about at some point, I know legal aspects/ data controls/ POPI controls/ all have to be considered. I think as you get more experienced the tendency is obviously to call the risk team less, that's maybe one challenge but fundamentally I think especially if because you have to consider turnover/ you have to consider standardization of process it makes a lot of sense to have those things in place, it's just around how robust people are to observe the process.

6. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?

It depends on what it is, generally speaking I do pre-empt which I guess comes from experience and having worked closely with the risk team and also generally speaking the risks are consistent across products so it's not they are going flag something materially different between one product and another.

So if u dealing with for example information about minors, you know have to address how to obtain the information so that it does not become a privacy risk. I think the only ones I have a resistance to or sort of don't agree with is risk raised around commercial aspects. I will give you an example when someone raises a risk on why we doing a product when we observed from our perspective that there are not enough devices that can use a service. For those type of commercial risks I am like " I did the research, trust me'. But those are few and far between. The other more governance related cases is more difficult for product managers to pre-empt so that is not build into the product design. So in short if I am aware of the risk I will anticipate it and see how I can mitigate it in product design, if I don't know about then there is nothing I can do.

7. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?

I think we focus too much on launch, because all the operational gaps I struggle with right now is all the product upkeep. For example we are late on security penetration tests because those certificates have expired - so how do we operationally make sure that the process is managed. This is unfair but I know there is allot of focus on digital services and how it runs, I don't know how my colleagues work in other departments but digital services operate very lose so it might make allot of sense for someone from risk to sit in the area - to really just sit back and observe - see the chaos and say we get what the ideal risk framework is but how can we adopt the process to suit the changing digital services environment who are chasing speed and quick wins.

Participant 11

Tenure: 5 years

Level: Portfolio Manager

1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?

There are so many factors involved in launching innovative products, there is so many things that must come together and I think looking back, the organisation was very innovative and I think it's been harder for the organisation to innovate as the company has grown. For example if u think about the innovation of prepaid versus the innovation in the telecoms space today they are not so life changing. I think that one of the thing is risk - so what I find with the organisation - the organisation is less willing to take risks because risks mean long term revenue realisation. As u know revenue is our key KPI. In certain departments like digital services, revenue is the only KPI that we talk about so the product managers job is to grow revenue - all the products that u launch need to start showing revenue realisation from the beginning so you can't take risk investing in something where revenue realisation will only happen after 5 years. Facebook for example did not make money in the initials years. Allot of these new digital products. They don't make money initially but I see that the organisation does not want to take the risk of investing for 5 years with no revenue. So for me that the biggest thing that is holding us back. We can try and be innovative by just making small incremental changes on existing products that we know works.

2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?

I have to say I don't view that way, honestly I don't so. I never found the risk team slow to respond and the questions asked by risk is always very on point, they do raise things that we have not thought about. I honestly don't experience risk as a blocker. I think the other thing is where in the process do you do go to risk which makes a big difference. I feel other people might go to the risk department late in the process and then it's their own fault if they have to redesign their product. But if u bring in risk in earlier you don't experience any delays because then from the start you building it according to their guidelines. I actually think that risk is very good value adding function and I have not experience any issues with delays to my products from them.

3. In your view how does the product risk management policy affect your ability of being innovative with your products?

It's hard to say generally because you have to be in a specific situation. I think there is bigger blockers to innovation than risk honestly in the organisation. I don't think risk is the thing that is blocking innovation. It's also depends on what innovation - because sometimes the innovation that u doing is kind of borderline ethics even and then u don't want to do that kind of innovation and that innovation could bring revenue and subscribers and things but you don't actually want to do that. There I think - in that situation - risk is seen as a blocker. Because you blocking revenue rather than innovation. The other thing is - if risk is comfortable with a certain journey and if a product manager makes a change to that journey - then it does take a bit of time to explain to risk why the new journey is better. But it part of a product manager job to explain that - if we can explain why the new journey is better then why are we even doing a new journey.

4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?

I can't think of any example that I have experienced

5. In your opinion what value does the product risk management policy add to the product development lifecycle?

I definitely think there is value and I think it is looking at product from a different perspective. So when we are designing products we try and put customers at the centre of the product design but in our minds, the customer is almost like the perfect customer, the ideal customer/ the customer that will behave in the perfect way. So I think the value that risks adds is that they think about other customers, customer who will do something unexpected that we as product managers do not think about. Risk thinks about the negative use cases, rather than the simple positive use cases. That for me is the big value. But then looking at the negative use cases, we can cater for it earlier in the process, design it and build it - instead of designing and building only happy day scenario's and getting a surprise post launch.

6. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?

I don't think I would have anticipate risks when I am designing a product. When I am designing a product I am really thinking about how the product is going to solve a problem for customers, so I am not thinking about the risks, except for like privacy. I think that is because we have has privacy drummed into us so much - I do think of privacy concerns for product design. But generally do not consider other parts of the risk framework initially even though we should. I think when I am initially designing products I just think about how we are going to solve a problem for the customer and how we going to make money for the organisation, not what are the risks.

7. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?

To explain to product managers what is a big risk or what is an unacceptable risk versus a good risk to take. I think people are scared in the organisation for something things, they are scared of losing their jobs if they make a mistake so based on that I think people lose perspective on where we can take risks and where we should not take risks. I think in terms of experimenting and trying new things we don't really have that culture and how could risk in terms if your process support innovation. I think risk is so important to consider - if we did not have a risk department looking at these things it will be a big problem for the organisation. So I would suggest that risk and product management should be integrated better so that it is a co-creation kind of thing - rather than an evaluation that happens.

Participant 12

Tenure: 4 years

Level: Product manager

1. Innovative product development is crucial for an organisation's long term success. What do you think is needed in our organisation to launch innovative products?

In general what would be needed is people who are risk takers because innovation is something that either no one else has done or very few have. So one of the things that the organisation really needs is leadership that can be allot more risk taking, rather than risk averse for these innovations to see the light of day in the first place. That for me I believe is the immediate challenge. Currently I think the organisation only sometimes launched innovative products and for the ones that they do they are very risk averse in the sense that if totally new - don't advertise it yet. Let see how the market reacts and all of the above/ let's see what happens to our financial model.

2. Many individuals in the organisation believe that the product risk management process is too rigid, delays time to market and reduces innovation. What are your views on this?

I think it goes both ways in terms of ways of working. If u bring the risk management team in on your product on the last minute when u about to launch then obviously you would feel that they are rigid and delay things. However from my experience when u involve the risk team upfront, already from ideation - they can actually start assisting you throughout the project and come launch time, it does not feel like there's any delays. I believe the strictness that they have is worth it - because they are there to protect the company's risks, however I do believe that when they can actually be engaged, they do the work on time. It does not delay the process.

3. In your view how does the product risk management policy affect your ability of being innovative with your products?

It can affect both positively and negatively in the sense that with certain products that can affect like for example people's behaviour - you realise there is allot more moving away from the risk. However there are other cases where the risk management team are open. For example if it's an enhancement to an existing product they are very much more comfortable and the risk assessment is painless but when there is a totally new product in the market then the risk assessment process is very through and in detailed and that is balance that we need to strike.

4. How and when did the product risk policy affect your ability to propose an innovative idea or just be innovative? Can you provide me with at least one example?

One example is the organisation's business data that was launched in 2016 and part of the product has an auto allocation feature and the customer has to actually sign a contract amendment form to confirm that they actually understand that the product comes with an auto allocation feature. This amendment form was requested by the risk team and we had we ensure that every store had this amendment form that they asked customers to sign when they take on the product. We tried to make the amendment forms digital but we did realise that the amendment forms did not affect the process. The customer liked the product, they understand the auto allocation part so they were more than happy to sign the amendment. It had no impact on product uptake.

5. In your opinion what value does the product risk management policy add to the product development lifecycle?

I believe they are a very, very important aspect to product development in the sense that we have a view when we launch products of what we believe in best for the customer and sometimes we also forget what is best for the organisation. That's where risk management comes in and say - look as much as you want to service customer needs, manage yourself as well so you don't put yourself in hot water. For example - with some of the customer details that you collect or how you actually position your products to customers.

So risk holds a lot of value in terms of how the organisation actually looks while trying to service customer needs.

6. There is a perception that the product risk policy forces you, as a product manager to anticipate risk at every phase of the product lifecycle. How does this affect your ability to deliver an innovative product?

So the process we try to do at first is have a Utopia view of how we want our product to work fully without any restrictions and that's generally how the team works. And then we take that Utopia view and bring it to risk management and say- here is how we want to build the product, here's what we want to do. No tell us what some of the risks we should anticipate are. There other thing with innovative products is that you don't want to restrict yourself from the start, what we rather want to do is see what is our perfect picture, what are the risks and how can we mitigate those risks or do then make changes to our initial view.

7. In your opinion how can changes be implemented to the policy to allow for more innovative ideas and products or to make it less strict?

I really endorse the SPDA process that was implemented recently by risk because you can engage with the risks teams from idea conception. I think we need to see risk management a lot more in inception of the projects, in fact to the point where risk management is required to sign off the product template. That would be something that I would recommend. I fully endorse the process where risk should be involved from concept level once we designing.

APPENDIX E: CODEBOOK

RCI Match	Code	Sub code	Meaning	Linked to Objective	Quote
Communication	Awareness		The process of raising awareness/ communicating to business the risk management process and its objectives.	Recommendations	Awareness in the team especially for the new product managers. I don't think they aware of what the process is, secondly what risk management is about and what risk management is accessing products against. I think if we are more knowledgeable about what risk management is accessing a product against - it will help product managers know what to look out for
Communication: Risk Averse	Collaboration		The impact of lack of collaboration for risk related information both verbal and non-verbal.	Risk Culture	I think the interaction can be improved to be more collaborative rather than dictate
Communication	Engagement Model		The engagement model between risk management and product manager, which produces verbal and written risk communication.	Recommendations	I would suggest that risk and product management should be integrated better so that it is a co-creation kind of thing - rather than an evaluation that happens.
Communication	Knowledge sharing		The process of sharing/ communicating risk related information to business to aid with decision making when designing their products.	Recommendations	Definitely knowledge sharing and if the risk team can share information that we do not know - like about up and coming risks - then we also aware of what to look out for.
Group Dynamics	Capacity		Lack of time and resources to create a culture of innovation	Product Innovation	As a product team I don't think we spend enough time thinking about how we could innovate better because everyone is so busy just trying to deliver existing requirements'. So it's not like there isn't an appetite for innovation because we all believed we need to be innovative and there's no time or capacity
Product innovation	Market Needs		Market needs are a characteristic that is considered when products are being conceptualised. This is a contributor to product innovation	Product Innovation	When we look at market trends and customer needs, we want to build innovative products
Product innovation	Organisational shift		Shifts required in the way the way the organisation comes up with new innovative products and the way the organisation is set up to develop and launch innovative products	Product Innovation	I think it requires a re-organisational shift in the way we do resourcing. I don't think the constructs of the business is set up to handle the way an organisation can launch innovative digital products
RMF: Risk Impact: Averse	Proactive risk taking		The ability of the organisation to take risks more proactively instead of reactively.	Risk Culture	It allot of outside the box thinking - more proactive than reactive decision making and just having the guts to ahead and do stuff.
Product innovation	Revenue generation		Revenue generation are a characteristic that is considered when products are being conceptualised. This is a contributor to product innovation.	Product Innovation	All the products that you launch need to start showing revenue realisation from the beginning so you can't take risk investing in something where revenue realisation will only happen after 5 years.
Product innovation	Technical Delays		The impact that the dependency of the technical teams may have on product delivery.	Product Innovation	With regards to technical developments, there is always constraint from their side, because we have to follow a roadmap and unfortunately sometimes your product needs to be prioritised and sometimes it could take years to develop an innovative product

RMF: Risk Impact: Averse	Innovation reduction		The negative impact of the Product Risk Assessment process that reduces product innovation	Risk Culture	I do think the risk assessment framework stifles a lot of innovation.
RMF: Risk Impact: Averse	Lack of business knowledge		The lack of business knowledge that the risk team has which negatively affects the duration it takes to complete a risk assessment.	Risk Culture	I just feel that they get involved too late in the process and I also find that the risk team sometimes don't have a very good understanding of in business as usual.
RMF: Risk Impact: Averse	Leadership		The impact of the risk related messages sent by the behaviour of the leaders of the organisation	Risk Culture	We just get told what to do and most the time it comes from CEO's office or from somebody who's looked at revenue and sees the need to make some changes or you know you know - the product team just does what needs to be done we don't sit and innovate I think it's a pity.
RMF: Risk Impact: Tolerant	Fair risk review period		The amount of time it takes risk managers to complete a risk assessment against a product without causing product delays.	Risk Culture	The product managers only looking at go to market strategies, revenue uptake risk but risk provides like the long term strategy along the product so I'm in agreement with it I think the time that you guys take this is sufficient
RMF: Risk Impact: Tolerant	RMFW Impact: Tolerant: Value RMFW	Legal and Regulatory Guidance	The outcome of a product risk assessment that legal and regulatory guidance has been considered	Risk Culture	Guiding us and ensuring that we are not stepping on anyone's toes such as ICASA rulings and regulations
RMF: Risk Impact: Tolerant	RMFW Impact: Tolerant: Value RMFW	Level of Assurance	The outcome of a product risk assessment that gives product managers at the assurance that their products are risk compliant	Risk Culture	it is an added layer of assurance
RMF: Risk Impact: Tolerant	RMFW Impact: Tolerant: Value RMFW	Organisation Protection	The outcome of a product risk assessment ensuring that all potential risks against the organisation has been considered.	Risk Culture	The biggest value is that it protects our organisation as a brand
RMF: Risk Impact: Tolerant	RMFW Impact: Tolerant: Value RMFW	Providing Guidance	The ability of the product risk team to provide guidance to product manager during product development.	Risk Culture	So I think that risk is needed to ensure that we are not contravening anything and guiding us with issues that we may have not foreseen when we are trying to launch and be innovative
RMF: Risk Impact: Tolerant	RMFW Impact: Tolerant : Value RMFW	Different Perspective	The outcome of a product risk assessment that gives product managers a different perspective on their products	Risk Culture	They also giving us a different perspective which we may have not been able to see being a product manager
RMF: Risk Impact: Tolerant	RMFW Impact: Tolerant: Value Risk-based	Risk Thresholds	The risk appetite or boundaries of what is possible according to the organisation's Product Risk Framework	Risk Culture	They are there to guide product managers and give them assurance that they are on the right path with their products, that they are not exceeding any company threshold. It is like an added layer of assurance.
RMF: Risk Impact: Tolerant	RMFW Impact: Tolerant: Value Risk-based decision making		Product Managers considering potential risks when designing their products.	Risk Culture	Yes, we do consider the potential risks on products when designing it, or anticipate potential risks on products based on experience but that just makes the product more secure - I won't say less innovative
RMF: Risk Impact: Tolerant	Shared Risk Understanding		The shared level of understanding of what the product risk assessment process is about.	Risk Culture	I think risk is a responsibility of everyone, I think if you understand the framework and if you anticipate - and then you know what questions to ask.

