

Strategic Programme Management: A Multiple Case Study Analysis of Maturity

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Declaration

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Master of Philosophy is entirely my own work, and that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

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Abstract

The execution and delivery of corporate strategy is critical to the growth and survival of organisations. Programme management is seen as the vehicle to deliver ever changing strategic direction of organisations. With the importance of programme management one would think the level of research conducted in this area would be high, however the opposite is true. The author saw an opportunity for research in this area, and through a detailed review of the literature, unearthed the need for a maturity assessment of current programme management practice, developing twelve maturity guiding principles to direct the research. An institutional theory lens was used to explain characteristics of project and programme management, plus the business sectors in the research. This study is unique in that no maturity assessment of programme management in practical or theoretical settings is evident, nor the use of an institutional lens to describe practice and business sectors, one can infer a low level of maturity from a theoretical perspective. A qualitative assessment using a multi-case study tradition was employed across ten business sectors, using survey type qualitative interviews, and a custom analysis model to interrogate data and provide research findings. Results from the research show a contrast in maturity from the theoretical perspective, where a medium level of maturity exists in the empirical setting across the business sectors involved in the research. Furthermore, analysis carried out during this research yielded a generic programme management lifecycle, and a generic definition of a programme. These outputs from the research can be a considered significant contribution to the current theory. Future research opportunities are outlined which include quantitative investigations into each of the twelve maturity guiding principles developed, the testing of the generic programme lifecycle and definition developed, and the use of learning cycles to enhance benefits realisation and programme success.

Noel Hassett

1 Introduction

1.1 Introduction

This section of the dissertation will outline the structure of the thesis document, with a brief overview of the various sections. It will also outline where and why this research has been pursued, its structure, intended outcomes, and its significance.

1.2 Structure of the Document

This thesis document has three predominant sections, chapter two presents an overview of project and programme management literature, its key themes and significant gaps. The chapter has four sections dealing with the origin and definition of programmes, what and how they deliver, and further research requirements. The chapter takes each of the four sections of literature, and uses the gaps identified in the research to develop twelve programme management maturity guiding principles, and their current respective levels of maturity as inferred by the literature. Each of these maturity guiding principles were used to guide and develop the research structure of the study. Under each of the guiding principles, a number of related questions were put to interview candidates in an effort to determine programme management maturity across numerous business sectors. The gauging of programme management maturity in an empirical study is not evident from the current body of research to the point in time of this study. Chapter two also provides an independent lens, that of institutional theory, to explain the features of project and programme management emanating from the literature. The chapter concludes with a programme management maturity framework which, it proposes, will yield the level of programme management maturity across a number of business sectors.

Chapter three outlines the research methodology this study intends to pursue, the researcher's standpoint and where their interest in this research emanated from. Next, the research

perspective is set, outlining that the study is being carried out from either an 'insider' or 'emic' standpoint. The ontological, epistemological and axiological viewpoints are discussed and explained, and a pragmatist view was determined the most appropriate for this research. The methodology chapter next addressed the analytical approach to the research, where a qualitative approach was deemed appropriate. Following on from this, the various qualitative disciplinary traditions were assessed, and how the study chose to employ a multiple case study approach. All of the work to this point in the methodology chapter led to a conceptual research framework being developed and outlined. The chapter next reviews the options for collection of data, where qualitative interviews were seen as the most appropriate data collection method. Following on from this, the subject of data analysis is addressed for both a multiple case study approach and for qualitative interviews. The chapter then comes to a point where an overview of the research execution is given, and an overarching research methodology model is outlined to put the research methodology into perspective. The research execution begins with the interview design process, outlining amongst other things the initial interview design, the pilot interview process, finalised interview question design and the interview process. Next the interview population is assessed, with justifications for pursuing a multi-sector population, followed by an outline of the interview execution process. The analysis of interviews is then addressed, where the processes of transcription, analysis and scoring were outlined. Finally, a description of the process of programme management maturity guiding principle scoring and case study analysis was outlined, and concluded the chapter.

This study dissertation next progresses to outlining the results of the qualitative interviews, and puts them in a multiple case study format, the chapter commences with an overview of the analysis model. Each of the ten case studies commence with a description of the business sectors and the activities they are engaged in, this is coupled with institutional theory view of the sector, as a means of explaining sector characteristics. The case studies then progress to giving an overall view of the programme management maturity in each of the sectors, this includes the scoring of the sectors across all of the maturity factors, and how this translates into an overall maturity score. All of the data when fed into this scoring and analysis was harvested from the qualitative interviews, fifteen in total carried out. The case studies also outline any significant or key findings compared to what the literature has outlined, these points are supported by relevant quotations from the interviews. The results chapter also carries out a cross sectoral analysis of the data and information collected. It compares the maturity scores for each of the programme management maturity guiding principles across all of the business sectors to demonstrate the variances in maturity. Finally, the results chapter outlines the overall

programme management maturity score across all of the business sectors, this is based on the maturity across all of the guiding principles, and across all of the business sectors.

The dissertation then moves onto chapter five, the discussion chapter, which is structured in such a way that each of the programme management maturity guiding principles are examined based on what the literature review states are the gaps and deficiencies in the practice of programme management. The study then states what it sees as the literature's level of maturity for the respective guiding principles, it compares and contrasts this to what the empirical findings of this study states are for the maturity factors in practice, and outlines areas for further investigation where needed. This chapter also discusses the overall maturity of programme management, and its impact on the current body of work. Finally, chapter six, the conclusion chapter, provides a review of the key conclusions derived from the research. It takes the research questions listed in the introduction chapter, and describes how the respective maturity guiding principles address these questions. The chapter then proceeds with highlighting the limitation of the study and the recommendations for future research.

1.3 Origins of This Research

The research conducted in this study has emerged from the author's experience as a project and programme manager in numerous business sectors including pharmaceutical, medical device and gas utilities. It was during the author's time as a programme manager in the pharmaceutical sector engaged in the transferring of products from one site to another, known as a technology transfer, where some deficiencies in practice became apparent. The primary deficiency centred on the definition and communication of roles and responsibilities in the programme, where the various programme team members did not understand or appreciate their roles within the programme structure. The author had thought about furthering their education, where up to that point included an undergraduate degree in manufacturing engineering, and a master's in business administration which focused on project management. With a possible gap in the practice of programme management in mind, the author contacted the Dublin City University Business School with the view to discussing a possible doctoral degree in the area of programme management. The process of assessing a possible MPhil subject commenced with a short review of programme management literature, it became apparent that this was a subject of little focus from the academic community.

1.4 Rationale for the Research

The rationale for this study lies in a number of areas, the research to date has been less than what this author would have expected for a management practice of such importance to organisational strategy implementation. The current literature supports this view, and the need for further investigation. The author's professional experiences in seeing some lacking of maturity in programme management practices is supported by the literature's view that there is a lack of research conducted in this area. The evident lack of any maturity assessment being carried out to date on this management area justifies the progression of this study to ascertain the current level of maturity both holistically, and within business sectors. Finally, any study which attempts to add to the current body of work, and enhance current empirical practice, this author sees as a justification for pursuing.

1.5 Research Objective

As the author progressed to reviewing the literature further, the lack of attention from the academic community became more apparent, and with this a number of gaps appeared in the literature. The literature review has provided the outputs of these gaps in the form of programme management maturity guiding principles, where specific areas of programme management were seen to be of a low maturity, and would benefit from an empirical investigation, these can be seen in table 1.1.

Item	Areas of Programme Management That Would Benefit from Investigation
1	Confirmation of the origin of programme management, and if its origins are from project management
2	The confusion and lack of distinction between projects and programmes
3	The definition of a programme
4	The definition of programme success

- 5 The alignment of programmes to business needs
- 6 The lack of established programme techniques
- 7 The lack of a standard approach to programme management
- 8 The lack of a generic model of programme management
- 9 Lack of clearly defined governance, roles and responsibilities
- 10 Clarification on the leadership competencies of successful programme managers
- 11 The need for further research in the area of programme management

Table 1.1 – Areas of Programme Management that would benefit from Investigation

When the gaps of the literature were assessed from a high level, it was apparent to the author that an overarching maturity assessment would provide a beneficial contribution to the current body of work. The maturity assessment would serve to set a marker of where the discipline of programme management currently lies, and may focus future research in a direction that enhances both practice and research. The assessment would take into account all of the gaps this study sees emerging from the literature, and provide an assessment of their current status i.e. have they matured, and will feed into an overall maturity score. There is a final objective, which will create opportunities outside the realm of this study, where the programme management maturity guiding principles outlined can be used in future research as a constant to measure further progression, or regression, in programme management maturity.

1.5.1 Research Questions

Upon review of the literature and the gaps identified in the current research, a number of research questions have come to mind, these are outlined in table 1.2

Item	Research Questions
1	What is the current level of maturity in the practice of programme management, and how does this compare to the current theoretical perspective?
2	What is the origin and definition of programme management?
3	What is being delivered by programmes?
4	How are programmes being delivered?
5	Is further research required in programme management?

Table 1.2 – Research Questions

The questions in table 1.2, detailing the current state of programme management, were used to develop the research methodology best suited to enabling a significant contribution to the current theoretical perspective, and are answered in the discussion chapter.

1.5.2 Overall Objective

There are a number of aspects to the objective of this research. When one looks at the practice of programme management from the theoretical perspective, and the gaps that have been identified, it translates into a research objective to determine the current level of maturity for the practice. Another objective is to attempt to address the other research questions listed table 1.2, and confirm if the empirical view can narrow the research gap in any way and provide more insight into this management discipline. Finally, the overarching research objective is to deliver a unique piece of research which can significantly add to the current theoretical perspective.

1.5.3 Key Contributions

This study makes a number of key contributions to programme management theory and practice. Firstly, it provides an overall maturity assessment for the practice of programme management based on the gaps identified in the literature. Such a contribution is not evident in the literature reviewed up to the time of this research, and therefore is unique. This creates a platform for current and future maturity assessments, and can support future initiatives to bring greater maturity into this field. The maturity framework that has been established uses twelve guiding principles that have been developed to assess maturity across various aspects of programme management, and across various business sectors. Finally, an independent lens, that of institutional theory, has been used to qualify and explain key features of programme management and the respective business sectors, which to date, has not contributed to the current theoretical or empirical perspective it seems.

1.6 Summary

This chapter has provided an introduction to this study by way of a broad outline of the structure of the dissertation. It details how each of the chapters are structured, with the key sections summarised to give an appreciation of the document. The chapter continues by describing the research objective, where the key themes from the research are listed. It follows this by listing the key research questions which have emanated from the literature review, and describes what the high level research objective is. Based on the research objective and questions, the rationale for pursuing this study is described and justified. Finally, the key contributions of the study are defined, paving the way for the study to be pursued. Next attention is turned to the literature, where a detailed review is carried out.

2 Literature Review

2.1 Introduction

The purpose of this study is to build a picture of the maturity of programme management in an empirical setting. The literature review covers a breadth and depth of programme management literature, however, it also outlines the prominent themes from the project management literature. The rationale for this is to demonstrate where programme management has emerged from. Tied into the review of both of these management disciplines is an institutional theory analysis. This gives a neutral lens by which to analyse both disciplines, but also to add an explanation of their respective themes. Figure 2.1 outlines the structure of this review, which will be divided into four broad areas to describe programme management and its themes. Coupled with this, the respective sections will outline where gaps lie in the literature, the respective research opportunities, guiding principles by which research can be conducted, and the current level of maturity attributed to these guiding principles.

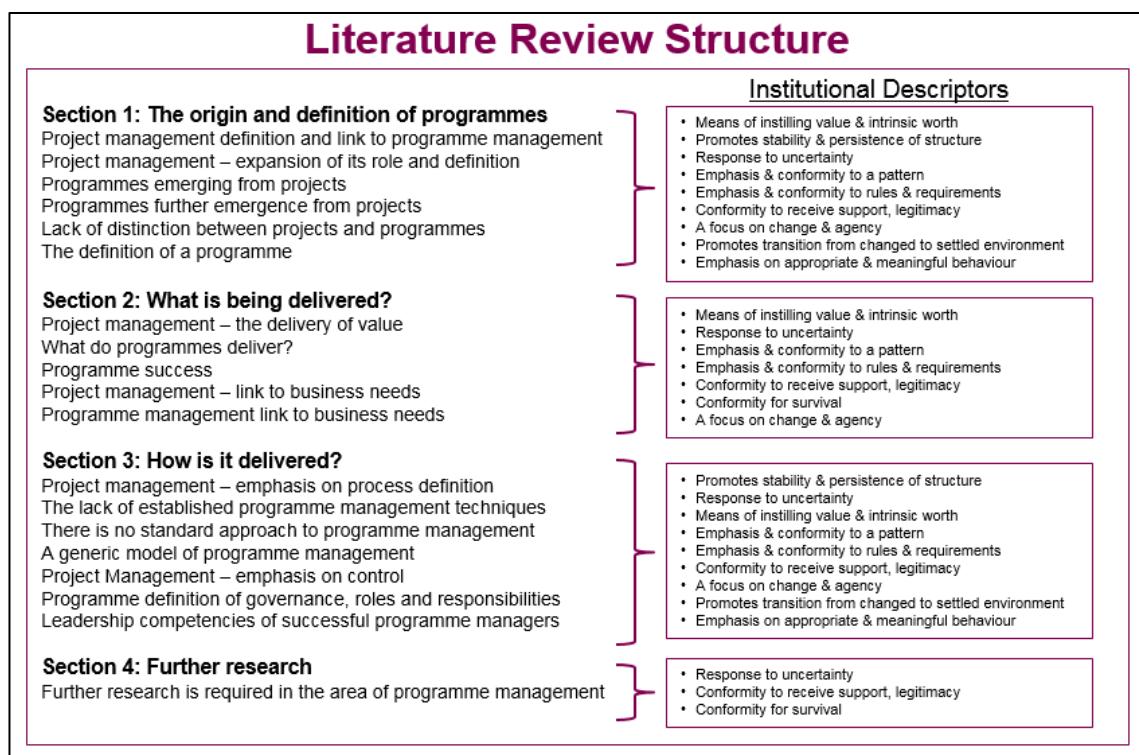


Figure 2.1 – Literature Review Structure

2.2 The Origin and Definition of Programmes

2.2.1 Introduction

The literature review starts with an outline that attempts to describe the origins of programme management. This commences with a review of project management literature, and how this is linked to programme management. It goes on to outline the differences between projects and programmes, plus the range of definitions of programmes. An institutional lens will be used to analyses key themes uncovered in the review. Recommendations will be made for research which this study intends to pursue.

2.2.2 Project Management - Definition and Link to Programme Management

Project management has it's origins from the nineteen fifties (Stretton, 2007, p. 3), where it was primarily used by the aerospace and construction sectors according to Stretton's (Stretton, 2007, p. 9) referencing of Kerzner (Kerzner, 1992). It evolved to being used for a growing type of uses in organisations and sectors (Urli & Urli, 2000, p. 40). Before one is to progress a review of academic work in this area, it is useful to explain the meaning of the term 'project management'. As a management practice, it has numerous definitions, the Project Management Institute (PMI, 2004, p. 5) states:

'A project is a temporary endeavour undertaken to create a unique product, service or result.'

Turner (Turner, 1993, p. 8) gives greater detail by stating a project is:

'... an endeavour in which human, material and financial resources are organized in a novel way, to undertake a unique scope of work, of given specification, within constraints of cost and time, so as to achieve beneficial change defined by quantitative and qualitative objectives'

While Schneider (Schneider, 1995, p. 248) gives an alternative view, in terms of what projects do, by saying:

'Project management provides methods and processes which facilitate: setting the goal; planning of the tasks and organisation; defining project responsibilities; processing information and decision making; and selecting project employees'

However, Schneider (Schneider, 1995, p. 248) also goes further by giving an alternative definition, this time in terms of an organisation, and states:

'Projects can therefore be seen as small companies; they are, however, limited time organisations.'

This author's experience as a project and programme manager has led to his definition:

'A project is a unique event, executed under a defined structure, to produce an output to a customer's specific needs, within a specific timeframe and budget'

Project management has diverged into the management of multiple projects (Urli & Urli, 2000, p. 38; Van Der Merwe, 1997, p. 225). With this comes a possible link to programme management, where this discipline is also seen by some as the management of multiple projects (Pellegrinelli, et al., 2007, p. 42; PMI, 2004, p. 368). One could perceive this development in project management as the genesis of programme management. The emergence of such an important relationship warrants a further review of the project management literature to ensure comprehensive research into programme management.

Institutional theory, as a lens through which to describe and explain project or programme management, has a number of traits which can be used for this purpose. The definitions of project management which have been outlined, could be interpreted as aligning to the institutional trait of promoting stability & persistence of structure as described by Scott (Scott, 1987, p. 494) in his referencing of Selznick (Selznick, 1957, p. 17). This interpretation can be made by viewing projects as instilling a structure to generate a specific output. DiMaggio and Powell's (DiMaggio & Powell, 1983, p. 150) description of 'coercive' isomorphism which outlines the Institutional trait of emphasis and conformity to a pattern is somewhat supported by Meyers and Scott's (Meyer & Scott, 1983, p. 141) outlining how institutionalism places emphasis on conformity to a pattern. Both of these institutional traits could be also interpreted as aligning to project management's definitions and how they describe structures being conformed to and being put in place. Finally, the processes, structures and constraints as described in the project definitions show further alignment to institutional theory traits and descriptors. For example, Scott (Scott, 1987, p. 497) references Zucker (Zucker, 1977, p. 5) in stating how institutionalism

places emphasis on appropriate and meaningful behaviour, one could interpret project management structures and process as instilling something similar.

In summary, project management has emerged and developed since the nineteen fifties where it can be described under numerous definitions. With its development, comes a link to programmes through the management of multiple projects. An alternative view of project management can be seen through an institutional lens or descriptors. Institutional traits which could be interpreted as describing projects are conformity to a pattern, an emphasis being placed on appropriate and meaningful behaviour, and conformity to patterns. Next, the view of programmes emerging, and or, developing from projects is investigated further.

2.2.3 Programmes Emerging from Projects?

Section 2.2.2 outlines a message that programme management has its origins in project management. One rationale behind this message is the progression of project management from managing a single project to managing multiple projects. The second rationale is their use in delivering organisational strategy and change, all of which, as outlined in sections 2.2.4 and 2.2.5, shows similarities to programmes. The programme management literature supports the perceived notion in section 2.2.2 that programmes are derived from projects, it states the majority perspective of programme management is that it is project based, and an extension of project management (Pellegrinelli, et al., 2007, p. 41). This statement is further supported where one could infer from the PMI's PMBOK guide definition of a programme being '**a group of related project managed in a coordinated way**' (PMI, 2004, p. 368). Programmes, projects and sub projects all have similar characteristics (Gray & Bamford, 1999, p. 362), again, aligning with the theme of programmes being derived from projects. This makes a connection to the project management literature's linking projects to programmes supported by Evaristo and Fenema's (Evaristo & Fenema, 1999, p. 276) referencing of Turner and Speiser (Turner & Speiser, 1992). This paragraph is a further demonstration of a connection between projects and programmes, and builds on an inferred view that programmes have emerged from projects through the latter's expansion to managing multiple projects.

Institutional Theory has been touted as promoting stability and persistence of structure over time (Selznick, 1957; Scott, 1987, p. 494). This trait of institutional theory can be seen in project

and programme management were both processes implement structures to produce pre-defined outputs and outcomes. Institutionalism is seen as the emphasis and conformity of an organisation to a pattern, plus rules and requirements as inferred from Oliver's (Oliver, 1991, p. 148) referencing DiMaggio and Powell, plus Meyer and Rowan (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). It could also be stated that programmes and projects place emphasis on conformity to a pattern as a result of the management structures they put in place, and that they focus on the delivery of a requirement. Another trait of institutionalism is that of a process that places an emphasis on what is appropriate and meaningful behaviour (Scott, 1987, p. 497; Zucker, 1983, p. 5). With the use of the structures used in project and programme management, one could interpret these as appropriate and meaningful behaviour to achieve organisational goals.

To conclude, one can infer with further support, that programme management has its origin in project management. A number of institutional traits can be used to describe projects and programmes, namely conformity to a pattern, and emphasis on appropriate and meaningful behaviour. Next, a review of how project management's role and application has expanded, and how this can be linked to programmes, and programme management.

2.2.4 Project Management – Expansion of its Role and Application

Section 2.2.2 has outlined how project management has a long association with the construction and aerospace sectors, with earlier project management literature making reference to these sectors (Crawford, et al., 2006, p. 176; Stretton, 2007, p. 9). However, there has been proliferation of this management area into new sectors outside of those of construction and defence (Stretton, 2007, p. 9; Kerzner, 1992). A significant expansion of the uses of projects comes with its link to organisational strategy and change (Urli & Urli, 2000, p. 15; Kwak & Anbari, 2009, p. 436). This theme is an important one for this research as it provides a possible link to programme management. It too is connected to the implementation of strategy and change (Pellegrinelli , et al., 2007, p. 42). With the expansion of projects roles and applications has come the management of multiple projects, and multiple projects at multiple sites (Evaristo & Fenema, 1999, p. 276). The emergence of multi-site and multiple project management can lead one to the literature covering project classifications and typologies. Some classifications outlined start from single projects, to the management of multiple projects, multiple projects on one site,

multiple projects in discrete locations, and finally multiple projects in shared locations (Evaristo & Fenema, 1999, p. 278). With the evolution of project management from managing single to multiple projects, specifically a small cluster of projects, the programme management term has been brought into projects, as has been noted by Evaristo and Fenema's (Evaristo & Fenema, 1999, p. 276) referencing of Turner and Speiser (Turner & Speiser, 1992). Evaristo and Fenema (Evaristo & Fenema, 1999, p. 276) further state that the project management literature progresses this by outlining the types of information systems required for programme management, again in their referencing of Turner and Speiser (Turner & Speiser, 1992). It also presents the concept of a group of projects needing to be managed by the same management team as inferred from Van Der Merwe (Van Der Merwe, 1997, p. 224).

Here, once more, this is an evolution which can be described as significant, as it could be interpreted as the genesis of programme management. The project management literature takes a further step by defining a programme and outlining its link to organisational needs. It states through Evaristo and Fenema's (Evaristo & Fenema, 1999, p. 277) referencing of Turner and Speiser (Turner & Speiser, 1992) programmes are:

'... the process of coordinating the management, support and setting of priorities on individual projects, to deliver additional benefits and to meet changing business needs.'

It also reinforces the definition of programme management and its link to business needs, while differentiating from projects. It states a programme's objective is (Evaristo & Fenema, 1999, p. 277):

'....the global optimization of the parent company's needs as compared to local optimization in traditional single project management.'

It has been outlined that focus on project management has moved away from the likes of construction and engineering based activity to alternative industries (Betts & Lansley, 1995, pp. 211,214) Interest has also come from business, economics departments and mainstream disciplines (Betts & Lansley, 1995, p. 214). With the stretching of project management across sectors, and its evolution to manage broader organisational initiatives, one could hypothesise this development is linked to the attention from more mainstream disciplines in academia.

When one assesses the expansion of the roles and application of projects from an institutional perspective, it can be described by a number of institutional traits. Institutionalism has been described as being a response to uncertainty (DiMaggio & Powell, 1983, p. 150). According to

Phillips and Tracey (Phillips & Tracey, 2009, p. 169) who reference Greenwood and Hinings (Greenwood & Hinings, 1996), and according to Kostova et al (Kostova, et al., 2008, pp. 995,996) institutionalism focuses on agency and change. With the expansion of the role and application of projects as described in this section, from an institutional perspective, one can infer this to be a response to uncertainty, and a focus on change to meet organisational needs.

In short, the expansion in the role and application of projects shows an evolution and expansion of project management. It demonstrates its uses from a narrow section of industries to a broad range of uses, sectors, and acceptance across the spectrum. Significantly, with this comes a link to the genesis of programme management through project management evolving to manage multiple projects, and being linked to strategy and change, akin to programmes. With this progression and development of project management comes the institutional descriptors of a response to uncertainty, and a focus on change. The expansion in the role and application of projects further progressing toward programme management and leads to the next stage of this review, which looks at the possible further emergence of programmes from projects.

2.2.5 Programmes Further Emergence from Projects?

There has been an acknowledgement of projects being adapted by organisations to support them in accomplishing change, and developing new capabilities with tighter constraints on time and resources across sectors (Pellegrinelli, et al., 2015, p. 154; Morris, 1994; Pellegrinelli, 2011, p. 232; Pellegrinelli, 1997, p. 141), this is also supported in Stretton's (Stretton, 2007, p. 2) referencing of Morris (Morris, 1994). It has been stated that growth in the use of projects has prompted the development of the disciplines of programme and portfolio management (Pellegrinelli, et al., 2015, p. 154). Pellegrinelli goes further by stating that programme management has filled the need by organisations of projects in developing capabilities and infrastructures toward strategic goals (Pellegrinelli, 2011, p. 233). It is discussed how organisations use both disciplines; with their use of projects and programmes to facilitate change, and has led to both being embedded into organisations (Pellegrinelli, 2002, p. 229). One could interpret this as programmes having originated/progressed from projects.

The programme management literature has outlined how it sees programmes originating from projects. This could be interpreted as a parallel theme to that of projects being used to meet

organisational needs as outlined in section 2.2.4. This is a significant link, as it could be interpreted as programme and project management literature inferring programmes originate from projects. Some concepts move on from the stating of programme management originating from project management, to state it is an extension of project management (Pollack, 2012, p. 880; Pellegrinelli, et al., 2007, p. 42). Others state programmes can be interpreted as a scaled up project (Pellegrinelli, et al., 2007, p. 43; Lycett, et al., 2004, p. 289). This could support an assessment of programmes originating from projects, yet in an alternative manner. Here again is a significant link, if it were interpreted as aligning to the concept of programmes being conceived from projects, however it could also be interpreted as not aligning to this concept.

With the concept of programmes being seen as an extension to projects, an alternative view is given on the concept of programme management moving away from project management. The PMI gives the reason for this movement, in achieving benefits by managing projects in a collective sense as opposed to individually (PMI, 2008, p. 5). Research has supported the move away from programmes being seen as a scale up of project (Arto, K., et al., 2009, p. 9). Despite their similarities, project management creates issues around control, flexibility and cooperation (Lycett, et al., 2004, p. 289). The use of what is described as the 'constructionalist' programme management model over the 'functionalist and instrumental model' of project management is an alternative rather than extension (Pellegrinelli, 2011, p. 238). This seems to be a reason for the movement away from project management, as programmes offers more flexibility and choice to organisations (Pellegrinelli, 2011, p. 238).

The current model of project management has flaws in the delivery of a wide range of initiatives according to some, as Pellegrinelli's (Pellegrinelli, 2011, p. 238) referencing of Williams (Williams, 2005) and Hodgson and Cicmil (Hodgson & Cicmil, 2006). The movement away from project to programme management, if not carried out, can lead to poor performance and missed opportunities (Pellegrinelli, 2011, p. 238; Pellegrinelli & Partington, 2006, p. 6). Here, one can see a rationale why there has been a movement from the project management discipline away from managing multiple projects. This movement has occurred due to constraints of projects, but also benefits attributed to programmes. This is significant in that it can be construed as a rationale for the programmes developing from project.

With some stating that programme management has its origins from project management (Pellegrinelli, 1997, p. 141), they also state the conception of programme management being far from clear and agreed (Pellegrinelli, 1997, p. 141). They have questioned the underlying theories that underpin programme management, stating the need to be revisited as a result of

inadequate guidance and processes in texts advocated by professional bodies (Pellegrinelli, 2011, p. 232). Upon a review of this statement, it could be questioned if programme management, has in fact, emerged from project management. Some literature suggests that programmes, as dealt with in the business literature, do not deal with multi project environments or organisations (Artto, K., et al., 2009, p. 10), that it is in fact derived from several theory bases along with project management (Artto, K., et al., 2009, p. 10).

Finally, some of the literature does state directly that 'the conception of a programme is far from universal' (Pellegrinelli, 1997, p. 141). It seems that the genesis of programme management is not agreed, however, the weight of the literature does point to project management as a possible origin.

Upon a review of the literature pertaining to the origins of programme management, two specific themes can be identified. One centres on programmes emerging from projects, whilst the other states that there is a difference of opinion as to its origin. These are significant findings and demonstrate a gap in research which this study intends to investigate. It will look to provide further evidence as to the origin of programme management by investigating under the direction of the following guiding principles:

'Programme management is derived from project management'

'The conception of programme management is not universally agreed'

With this study identifying these two guiding principles to investigate an aspect of programme management maturity, it must now identify the current level of maturity attributed to these principles in order to set a base by which to compare research findings. The research in this section has mentioned the divergence of projects into programmes, and where in section 2.2.3 it speaks of a perceived notion of programmes being derived from projects, particularly in light of both disciplines having similar characteristics. Furthermore, section 2.2.4 outlines how project uses have expanded with links to organisational strategy and change, this being similar to programmes and where one could infer a link between both disciplines. Section 2.2.4 also describes how the project management literature has provided a definition of a programme, again one can infer programmes being derived from projects from this example. **When one looks holistically at the literature's assessment of programmes being derived from projects, one can see inferred views as opposed to information and data to support its assessment, for this reason this study considers the maturity of the guiding principle 'programme management is derived from project management' of medium maturity.** When one turns

attention to the guiding principle ‘the conception of programme management is not universally agreed’, earlier in this section it has been stated how growth in the use of projects has prompted the development of programmes, inferring the latter was conceived from the former. This is further supported in this section where it is stated how programmes have developed capabilities on from projects for achieving strategic goals. However, earlier in this section it is noted that some see programmes as an extension of rather than being conceived from projects, and that they are in fact moving away from projects. Finally, the business literature sees programmes as not dealing with projects, and that their conception is far from universal. **With the varying views on the conception of programmes evident, this study sees the current level of maturity attributed to the guiding principle ‘the conception of programme management is not universally agreed’ as low.** The level of maturity inferred from the literature is significant in that it will set a base level against which the maturity in practice will be assessed, an outline of the analysis criteria for assessing guiding principle maturity is outlined in section 3.13.3.3 of the methodology chapter. Furthermore, the interview questions that will be used to investigate the level of maturity for these particular guiding principles will have their own maturity criteria developed based on the themes from the literature, this is outlined in section 3.13.3.2 of the methodology chapter.

From an institutional perspective, one can apply the traits outlined in section 2.2.4 to programmes further emergence from projects. However, further institutional traits can be seen from this development in programme management. The use of projects and programmes for implementing organisational change as outlined in section 2.2.4 and in this section could be described, from an institutional perspective, as a response to uncertainty (Selznick 1996, p.273). The rationale for this description is an organisation’s use of projects and or programmes to implement strategy to respond to uncertainty impacting the organisation. Further institutional analysis on this perspective of programme management could describe it as focus on change and agency (Pellegrinelli & Garagna, 2009, p. 655) (Pellegrinelli & Garagna 2009, p.655). Here, one can argue that the pressures of uncertainty put on an organisation lead it to focusing on change. The aspect of agency enters the fray with the use of programmes and resources to implement change. This can also be interpreted through Dowling and Pfeffer (Dowling & Pfeffer, 1975) and Zucker’s (Zucker, 1987, p. 451) referencing of Pfeffer and Salancik (Pfeffer & Salancik, 1978) in the institutional trait of supporting conformity to receive support and legitimacy. Institutional organisations are ‘characterised by the elaboration of rules and requirements to which individual organisations must conform if they are to receive support and legitimacy’ (Scott, 1987, p. 498). From this statement, one could draw a parallel to projects and programmes

in that their output and outcomes lead to conformity for an organisation, for which they may receive support and legitimacy.

To summarise, there is not agreement on the conception or origin of programme management. It is weighted toward programmes being derived, or evolving from projects, but other sources put forward a broader base to the development of programme management. Institutional traits can be used to describe the further progression of programmes from projects. These traits include a focus on change, and conformity to receive legitimacy and support. The literature can be analysed to deliver guiding principles, both of which this study considers of medium and low maturity respectively. This study will use these guiding principles as part of a maturity framework, to assess programme management maturity, but also add to the current body of research.

2.2.6 The Lack of Distinction between Projects and Programmes

The theory of programmes emanating from project management as a result of its (projects) expansion in uses and capabilities has been outlined (Pellegrinelli, 2011, p. 233). It is suggested that some see programmes as large projects (Martinsuo & Lehtonen, 2007, p. 341; Yu & Kittler, 2012, p. 740), while others point to their being similarities between project and programme management (Blomquist & Muller, 2006, p. 55; Lycett, et al., 2004, p. 294). One can speculate the reason behind this may be attributed to research finding the difference between projects and programmes is difficult to characterise (Martinsuo & Lehtonen, 2007, p. 341). These themes could point one toward assuming there is a lack of distinction between projects and programmes, this has been addressed in the literature. Practitioners label their initiatives either project or programmes according to their perception of what either disciplines are, which has caused a 'blurring distinction' between both disciplines (Pellegrinelli, et al., 2015, p. 155). Others state programmes can be seen as extension of projects (Pellegrinelli, 2011, p. 233). Again, this may create some confusion between both disciplines, which is apparent in certain sectors like construction (Pellegrinelli, 2011, p. 234; Shehu & Akintoye, 2009, p. 704). The danger of perceiving a programme as a scaled up project has been discussed. It is stated that by using programmes as an extension to projects, it can lead to poorer performance, missed opportunities, some compromises, and a poor existence between both (Pellegrinelli, 2011, p. 238).

Other research has moved away from the confusion between projects and programmes, and has stated they are in fact different disciplines, and that a number of studies have confirmed this (Miterev, et al., 2016, p. 545; Artto, K., et al., 2009, p. 1; Lycett, et al., 2004, p. 289; Thiry, 2004, p. 245; Pellegrinelli, 1997, p. 141). Further support of this comes from others stating programmes require a different approach to projects (Rijke, et al., 2014, p. 1198; Partington, et al., 2005, p. 88), and should not be treated or considered as scaled up projects (Pollack, 2012, p. 880; Artto, K., et al., 2009, p. 9; Lycett, et al., 2004, p. 289; Martinsuo & Lehtonen, 2007, p. 338). Finally, the literature progresses by discussing the differences between projects and programmes. Table 2.1 outlines the differences, with respective references.

Difference Between Projects & Programmes		
Project	Programme	Reference
'...process-oriented approaches to bounded change offering focus, control and effectiveness of delivery...'	'... programmes are conceptualized as coordinating frameworks offering flexibility, accommodation and staged benefits realization.'	(Pellegrinelli, et al., 2015, p. 154; Pellegrinelli, et al., 2011)
'...focus, control, efficiency and effectiveness of delivery...'	'...flexibility, accommodation and staged benefit realization...'	(Pellegrinelli, et al., 2015, p. 154; Pellegrinelli, et al., 2011)
'...efficient delivery...'	'...direction and nature of future transformational steps and how best to make use of the “options” created by project outputs...'	(Pellegrinelli, et al., 2015, p. 161)
'...delivery efficiencies and the exploitation of existing knowledge...'	'Innovation, flexibility and experimentation should occur at the program level in defining and aligning component projects...'	(Pellegrinelli, et al., 2015, p. 161)
'...autonomously controlling the user interfaces and other application functions.'	'...controlling data standards in order to achieve collective programme objectives...'	(Yu & Kittler, 2012, p. 741)

'... simple and clear deliverables, a linear lifecycle, or a finite duration ...' '...uncertainty-reduction, performance oriented tools...'	'...unlike most projects, programmes may not have simple and clear deliverables, a linear lifecycle, or a finite duration...'	(Pollack, 2012, p. 880; Pellegrinelli, 1997, p. 145)
'...focus, control, efficiency of delivery...'	'...flexibility, accommodation and staged benefits realisation...'	(Pellegrinelli, 2011, p. 235)
'...projects relate dominantly to the product development theme...'	'... programs relate to a wide variety of management themes, such as manufacturing, quality, organizational change, change in work and industry, and product development.'	(Artto, K., et al., 2009, p. 9)
'...it has been widespread practice for projects to be closed out when a product or service has been handed over to a user...'	'...cannot be considered complete until the benefits from the product or service have been realised.'	(Maylor, et al., 2006, p. 670)
'...integrated solutions work is considered to be projects...'	'...embraces both delivery and beneficial use or application.'	(Maylor, et al., 2006, p. 670)
'...involves the management of individual projects...'	'...refers to a collection of projects with a common objective...'	(Murray-Webster & Thiry, 2000, p. 671)
'...subjected to a performance paradigm, based in short-term tactical deliverables...'	'...need to take into account a learning paradigm that comes from strategic management and value.' '...requires a different rhetoric than that of project management in order to convey this different approach to all stakeholders, especially members of management.'	(Thiry, 2004, p. 252)
Straight forward and clear	Complex and ambiguous	(Thiry, 2002, p. 226)

Table 2.1 – The Difference between Projects and Programmes

The literature is divided on whether or not there is a clear difference between projects and programme, it has created both confusion and clarity on the difference between both processes.

This represents a significant gap in the literature and warrants investigation into maturity for further development of this topic. This study will perform research on this topic with a view to enhancing maturity and bringing better clarity by using the guiding principle:

'Is there a lack of distinction between projects and programmes?'

With this guiding principle emanating from a particular gap in the literature, this study will use the gap to carry out a maturity assessment of programme management practice around this specific topic. To set the analysis criteria to measure the level of maturity in the field, this study must determine what the current level of maturity for this particular guiding principle is based on the literature. **This study sees the current level of maturity for the guiding principle being low as earlier in this section it was outlined how some see programmes as large projects and similarities between both disciplines, while others state how difficult it is to characterise the difference between both.** These statements support the inference of there being a lack of distinction between both disciplines, and thus a low level of maturity. To further support this study's assertion of a low level of maturity for this guiding principle, it has been outlined how programmes are seen as an extension of projects, causing a blurring distinction between both disciplines. While other research has outlined how programmes and projects are different disciplines, and require different approaches. It still does not provide any evidence of the distinction between both disciplines being clear, therefore this study still infers a low level of maturity with respect to this particular guiding principle. The level of maturity which this study infers from the literature is also significant in that it will set the maturity level as the basis against which the maturity in practice will be assessed, the analysis of the guiding principle maturity is outlined in section 3.13.3.3 of the methodology chapter. Furthermore, the interview questions that will be used to investigate the level of maturity for this particular guiding principle will have their maturity criteria developed based on the themes from the literature pertinent to the question, this can be seen in section 3.13.3.2 of the methodology chapter.

From an institutional perspective, the lack of distinction between projects and programmes could benefit from institutional guidance, particularly from the trait of emphasis and conformity to a pattern, as outlined by Greenwood and Hinings (Greenwood & Hinings, 1996, p. 1026) referencing of DiMaggio and Powell (DiMaggio & Powell, 1983, p. 150). The justification for this statement is explained by both project and programme management having distinct patterns, which may allow a greater distinction between both disciplines.

To summarise, in the differences between projects and programmes, it can be said the initial literature saw programmes as an extension of projects, which led to confusion between both fields. Later views progressed to stating that they are in fact different disciplines, however division and confusion still persists around this. This study recognises a significant gap in this topic which warrants research, and intends to pursue this steered by a guiding principle. This study, based on the literature finding, infers a low level of maturity for the guiding principle, which will form the basis by which maturity in practice will be measured against. Support of the institutional trait of emphasising conformity to a pattern may help to create a better distinction. With the various sections to this point looking at project management, and it being a possible origin of programmes, coupled with the lack of distinction between both, next the definition of a programme is addressed.

2.2.7 The Definition of a Programme

The programme literature uproots a large and varied number of definitions for a programme, and what they deliver. Table 2.2 has been developed to outline the volume and variance in definitions. Early definitions in the literature describes programmes as the management of multiple projects to bring about change, where these projects were not necessarily inter-linked. Definitions then developed into the management of inter-linked projects, with an additional link to delivering strategic goals, this roughly coincided with the description of project typologies and classifications. The literature goes on to outline the link from projects to programmes, and the link between both to organisation strategy and long term change. This is progressed further by stating programmes are used as a means to develop and manage a group of related projects, all with one common end goal. Some definitions have mentioned programmes as a management structure for creating and setting the context of a number of items and initiatives, and making them coherent and grouped. Finally, the dimension of performance is brought into definitions, specific to projects, but also to the organisation impacted by the change.

Programme Definition/Quotation	Reference
'Programs and program management are being promoted as ways of developing new capabilities and infrastructure incrementally, achieving strategic goals and aspirations, and bringing about societal change and organizational transformations'	(Pellegrinelli, et al., 2015, p. 154), (OGC, 2007)
'...programs are conceptualized as coordinating frameworks offering flexibility, accommodation and staged benefits realization.'	(Pellegrinelli, et al., 2015, p. 154) (Pellegrinelli, 2011, p. 235)
'...the program is probably a nice umbrella to put all the things that are happening into a context, and making them coherent, putting them in a frame, instead of having them presented as all kinds of initiatives... allowing for evolution, or a step approach...'	(Pellegrinelli, et al., 2015, p. 160)
'Program management is about managing future performance as a delta to current performance.... which naturally includes business as usual changes...'	(Pellegrinelli, et al., 2015, p. 160)
'Where a program is not just a coordinating mechanism for relatively independent projects but an organizing mechanism for achieving a major strategic goal or change (Pellegrinelli, 1997), its component projects should be managed as far as possible with a view to achieving delivery efficiencies and the exploitation of existing knowledge.'	(Pellegrinelli, et al., 2015, p. 161) (Pellegrinelli, 1997)
'the 'program' acts as the organizing framework or structure for shaping and governing the implementation of strategy, simultaneously managing and synchronizing concurrent streams of change realized through projects and operational improvements and adaptations.'	(Pellegrinelli, et al., 2015, p. 161)
'Programme management is a mechanism to coordinate the performance of a group of related projects (Ferns, 1991; Gray, 1997).'	(Rijke, et al., 2014, p. 1198) (Gray, 1997), (Ferns, 1991)
'Overall, programme management is used to create portfolios of projects (Gray, 1997; Turner, 2000), implement strategies (Partington, 2000; Partington et al., 2005) and generate change in products,	(Rijke, et al., 2014, p. 1198) (Gray, 1997) (Turner, 2000) (Partington, 2000)

<p>business or ways of working (Pellegrinelli, 1997; Ribbers and Schoo, 2002; Thiry, 2004)'</p>	<p>(Partington, et al., 2005, p. 87) (Pellegrinelli, 1997, p. 146) (Ribbers & Shoo, 2002) (Thiry, 2004)</p>
<p>'Program management is a systems and industrial-engineering-related process for organizing and managing an organization's projects.'</p>	<p>(Hulbert, et al., 2014, p. 66)</p>
<p>'A commonly accepted definition of programme is that it is a group of related projects managed in a coordinated way to obtain benefits not available from managing them individually (Ferns, 1991; PMI, 2006).'</p>	<p>(Yu & Kittler, 2012, p. 740) (Ferns, 1991) (PMI, 2004, p. 368)</p>
<p>'Program, as an effective project governance mechanism, provides a bridge between projects and organizational strategy.'</p>	<p>(Shao & Muller, 2011, p. 947)</p>
<p>'Programme management has been seen as a mechanism for coordinating and directing related projects (Ferns, 1991; Gray, 1997).'</p>	<p>(Pellegrinelli, 2011, p. 233) (Gray, 1997, p. 5) (Ferns, 1991)</p>
<p>'Maylor et al. (2006) suggest that programmes and portfolios facilitate managerial sense-making and control in complex organisations where projects are the principal units of work'</p>	<p>(Pellegrinelli, 2011, p. 233) (Maylor, et al., 2006, p. 668)</p>
<p>'P2M, the foremost Japanese text on programme management, says that programme and programme management is a "practical capability" to respond to external changes, which allows flexibility and copes with ambiguity, complexity, uncertainty and expandability (P2M, 2008).'</p>	<p>(Pellegrinelli, 2011, p. 233) (P2M, 2001)</p>
<p>'Some commentators attribute to programmes a broader role and meaning encompassing the initiation and shaping of projects (Pellegrinelli, 1997) and a process for the realisation of broader strategic or tactical benefits (Murray-Webster and Thiry, 2000).'</p>	<p>(Pellegrinelli, 2011, p. 233) (Pellegrinelli, 1997, p. 141) (Murray-Webster & Thiry, 2000)</p>
<p>'The PMI Body of Knowledge defines programmes as: "a group of related projects managed in a coordinated way to obtain benefits and</p>	<p>(Pellegrinelli, 2011, p. 233) (PMI, 2008, p. 16)</p>

control not available from managing them individually" (PMI, 2008a, p. 16).'	
'A programme is an organisational construct brought into existence to become a nexus of sense-making, evaluative and political processes and resource allocation decisions associated with the realisation of a change that may be vaguely defined, ambiguous and/or contested. A programme is essentially emergent in nature, inspired by a vision or outcome, yet sustained and shaped through on-going interaction and negotiation within its community of interest.'	(Pellegrinelli, 2011, p. 236)
'A programme has a duality of structure, simultaneously separate from and embedded within organisational norms, processes and routines, and acts as a counter-structure Beyond its formal organisational form, a programme acts as a visible symbolic representation of (a desire for) change.'	(Pellegrinelli, 2011, p. 236)
"a long- term undertaking that includes two or more projects that require close cooperation"	(Artto, K., et al., 2009, p. 1)
'Pellegrinelli [19], defines a program as a framework for grouping existing projects or defining new projects, and for focusing all the activities required to achieve a set of major benefit...'	(Artto, K., et al., 2009, p. 1) (Pellegrinelli, 1997, p. 142)
"OGC ... defines program management as the coordinated organization, direction and implementation of a portfolio of projects and activities that together achieve outcomes and realize benefits that are of strategic importance."	(Artto, K., et al., 2009, p. 1) (OGC, 2007)
'PMI defines program management as the centralized coordinated management of a program to achieve the program's strategic objectives and benefits, and emphasizes the programs' long-term benefit orientation, strategic nature, and challenge to integrate and coordinate a complex network of resources.'	(Artto, K., et al., 2009, p. 1) (PMI, 2008)
'In this paper, program is defined as a set of projects and actions purposefully grouped to complete a transformation process and, thereby, realize strategic benefits.'	(Martinsuo & Lehtonen, 2007, p. 338)

<p>‘...”the management of organisational change through projects that bring about change”, rather than “the management of multiple projects” ...’</p>	<p>(Vereecke, et al., 2003, p. 1279)</p>
<p>‘...“A collection of change actions (projects and operational activities) purposefully grouped together to realise strategic and/or tactical benefits” ...’</p>	<p>(Thiry, 2002, p. 221)</p>
<p>‘Platform programmes (see Figure 2) are those designed to improve the organisation's infrastructure. They are enabling rather than directly revenue-enhancing. Typical (but again not definitive) of such programmes would be the building or equipping of new production facilities, new factories or production lines, or major organisational change activities ...’</p>	<p>(Gray & Bamford, 1999, p. 363)</p>
<p>‘Goal-oriented programmes are those which enable the management of initiatives or developments outside the existing infrastructure or routine.’</p>	<p>(Pellegrinelli, 1997, p. 143)</p>
<p>‘Heartbeat programmes are those which enable the regular improvement of existing systems, infrastructure or even business processes, via increments to functionality or occasionally an overhaul of the system or facility itself.’</p>	<p>(Pellegrinelli, 1997, p. 143)</p>
<p>‘Portfolio programmes are those which enable the grouping of projects which are relatively independent of one another but have a common theme.’</p>	<p>(Pellegrinelli, 1997, p. 143)</p>

Table 2.2 – Programme Definitions and Quotations from the Literature

With the broad range of definitions attributed to programmes, this research study recognises a significant gap around the lack of an agreed definition, it also sees this as an opportunity to add to the current body of work. Further research may create additions to the current number of definitions, or consolidation and more agreement toward a generic definition. This study will pursue the research within a maturity framework. Significant findings from this research will be added to the current body of literature. The study will use the guiding principle:

'There is no agreed definition of a programme'

With the stated intention of this study to carry out a maturity assessment of the guiding principle outlined in this chapter, it is imperative that the current level of maturity is determined in order to act as a platform by which to assess the level of maturity in the field. **This study infers a low level of maturity to this guiding principle due to no previous research being specifically conducted to assess if there is agreement on the definition of a programme.** To further support this low maturity assessment, the variance in definitions is evident when one gleans the relevant information from the literature, as demonstrated in table 2.2. This study's inference from the literature of a low level of maturity for the guiding principle is a key part of the analysis of the information and data collected from the research study, as it will be used to develop the maturity scoring criteria for the interview questions aligned to the guiding principle. Section 3.13.3.3 of the methodology chapter outlines the maturity scoring criteria for the twelve maturity guiding principles being investigated, table 3.3 outlines the maturity scoring criteria, the questions aligned to the guiding principle, and the current level of maturity as inferred from the literature. Furthermore, section 3.13.3.2 of the methodology chapter outlines, in table 3.2, the scoring criteria for all of the interview questions, all of which feed into at least one if not more of the guiding principles. Here, the maturity scoring criteria of the interview questions are based on referencing back to the literature's assessment of current maturity of the subject being referenced in the question.

The institutional perspective on programmes has already been outlined in sections 2.2.3 and 2.2.5, the institutional traits in these sections can be applied to the varying definitions of programme management. One further institutional trait which can be applied to programmes is where institutionalism can promote a transition from a changed to settled environment (Covaleski & Dirsmith, 1988, p. 564; Rowan, 1982, p. 263; Kostova, et al., 2008, p. 995). The use of programme's strategy achievement (Shao & Muller, 2011, p. 948) can be construed as taking an organisation from a changed to settled situation. The following programme definition (Pellegrinelli, et al., 2015, p. 154), can be aligned with this specific institutional trait, it states:

'Programs and program management are being promoted as ways of developing new capabilities and infrastructure incrementally, achieving strategic goals and aspirations, and bringing about societal change and organizational transformations'

The rationale for an alignment here is the fact that a programme can bring an organisation from an environment of flux, enable the implementation of change, and bring an organisation to a settled environment by the implementation of that change.

In brief, one can see that many definitions for programme management exist. The definitions have evolved from stating a programme was the management of a number of projects, to linking them to the delivery of longer term strategic goals. A significant gap has been identified in the lack of an agreed definition, this presents a research opportunity, which will be pursued. Research will be conducted as part of a maturity framework, and under a specific guiding principle for this area of investigation. This study infers a low level of maturity for the guiding principle based on a review of the literature, this assessment of maturity will be used by the study to determine the maturity scoring criteria for responses to the research questions and the guiding principles. The varying definitions of a programme can be described from an institutional perspective, the traits outlined in sections 2.2.3 and 2.2.5 apply, along with that of promoting a transition from a changed to settled environment.

2.3 What is being delivered?

2.3.1 Introduction

Section 2.2 has outlined the possible origins of programme management from project management, its numerous definitions, and how there can be a lack of distinction between both disciplines. In this section, a review is conducted to outline what is being delivered by both projects and programmes, and any links between both. It also assesses how both of these fields link to business needs. In order to complete a comprehensive review, the project management literature is reviewed to ascertain if the items delivered by programmes have evolved from those that are delivered by projects. An institutional lens is used as an impartial analysis of the significant themes from the review.

2.3.2 Project Management – The Delivery of Value

As a structure for managing activities to deliver a unique scope of work (outlined in section 2.2.2), one would assume projects bring greater value than if this structure were not in place. With this in mind, some findings from the literature point toward the delivery of value. As a measure of value; and estimation of project success; the delivery of projects on time, to budget and to specification are the three most cited (White, 2002, p. 10). Based on this, one expects focus on tools and initiatives to ensure these three objectives of a project delivery are in a value derived framework. Stretton (Stretton, 2007, p. 3) states from the mid nineteen fifties, project management looked at the aspect of value analysis in the design phase of a project. Up to that point value analysis or design efficiency had not been in place for a project design process (Stretton, 2007, p. 3). The implementation of earned value introduced the analysis of value of work completed per the budget allocation (PMI, 2004, p. 359). This is used as a method of analysis and project performance management (Kwak & Anbari, 2009, p. 441). One could interpret these tools as a value delivery mechanism. Focus is applied to the specific elements of resource, cost, time, quality and risk management (Crawford, et al., 2006, p. 183) (Stretton, 2007, p. 13). Elsewhere, emphasis has been placed on the introduction of management

standards for the execution and running of projects (Crawford, et al., 2006, p. 176; Stretton, 2007, p. 12). The development of these analysis tools, along with standards for execution could be viewed as a value delivery proposition. Virtual projects can be seen as bringing additional value to a delivery process. This is perceived with the advent of ICT and communications technology, which has allowed the running of projects across geographical locations and cooperation on an international scale according to Evaristo and Fenema's (Evaristo & Fenema, 1999, p. 275) referencing of Adams and Adams (Adams & Adams, 1997). Finally, the concept of projects delivering broader stakeholder value has been more recently uncovered (Kwak & Anbari, 2009, p. 436). This again could be interpreted as value delivery, as it demonstrates a more strategic focus of projects to help achieve organisational needs. With the view of an institutional descriptor, the aspect of project management delivery of value is aligned to DiMaggio and Powell (DiMaggio & Powell, 1983, p. 148) and Scott's (Scott, 1987, p. 497) both referencing Selznick (Selznick, 1957, p. 17). They outline how institutionalism is a means of instilling value and intrinsic worth.

In summary, a common trend can be interpreted from some key features of project management. One can infer the tools, structures and evolutions in project management are focused on the delivery of value, as are projects themselves by way of their monitoring, analysis and control techniques. These tools are aligned to the institutional trait of instilling value and worth. Next, the question of what programmes deliver is investigated and outlined.

2.3.3 What do Programmes Deliver?

A key delivery of projects has been outlined as the delivery of value. To follow this, the aspect of what programmes deliver is investigated. This feature of programme management can be assessed with the view of a definition of success, but also, how programmes align to the needs of a business or organisation.

2.3.3.1 Programme Success

The traditional measure of programme success was time; cost and performance; and sometimes, with occasional satisfaction of stakeholders and the programme management team (Rijke, et al., 2014, p. 1199). Some descriptions of programme outcomes and success refer to broader and far reaching outcomes and effects with longer term impacts (Artto, K., et al., 2009, p. 10). Support of this can be found where it is stated that programmes are a long term process, and therefore ongoing evaluation of benefits and objectives is required, and may change over time (Thiry, 2002, p. 225). Yu and Kittler define a simple and broad definition of programme success by stating, '**organizational effectiveness is how well a programme achieves its objectives, i.e. how successful a programme is.**' (Yu & Kittler, 2012, p. 743). A more detailed definition of success could be put as '**... focus on long term business results and are concerned with benefits realisation, strategy achievement and value creation**' (Shao & Muller, 2011, p. 948). However, others are of the opinion that programme success criteria are still at a conceptual level (Shao & Muller, 2011, p. 949). Table 2.3 demonstrates some varying statements on programme success which Shao et al review (Shao, et al., 2009), these include:

Programme Success Criteria Statements	
'Programs Deliver benefits to organisations by enhancing current capabilities or developing new capabilities for the organisation to use.'	(PMI, 2008, p. 5)
'... the Office of Government Commerce (OGC, 2007) defined program success as benefits realization.'	(Shao & Muller, 2011, p. 949) (OGC, 2007)
'...actions purposefully grouped to complete a transformation process and, thereby, realize strategic benefits'	(Martinsuo & Lehtonen, 2007, p. 337)
'...an enabling framework for the realisation of strategic change and the ongoing alignment of strategy in response to a changing business environment'	(Lycett, et al., 2004, p. 290; Pellegrinelli, 1997, p. 141)

Table 2.3 – Programme Success Criteria

Programme success criteria has been expanded to include their capability to 'change organisations, to increase organisations' market share and to innovate, as the focus of programme management literature shifted to a more strategic orientation' according to Rijke et al (Rijke, et al., 2014, p. 1199) in their referencing of Shao et al (Shao, et al., 2012). Research has gone further to identify models for programme success, for example the six dimensions of programme success (programme efficiency, impact on programme team, stakeholder satisfaction, business success, preparation for the future, and social effects) (Shao & Muller, 2011, p. 955). A theme has emerged of further work/research being required on the subject of programme success (Pellegrinelli & Murray-Webster, 2011, p. 17). Some work has pointed toward programme success being a matter of 'interpretation rather than objectivity' (Partington, et al., 2005, p. 94). One significant area for investigation is that of benefits analysis. It has been stated that 'irrespective of the type of programme, we have encountered very few aspects of benefit management' (Vereecke, et al., 2003, p. 1285). When a holistic view is taken of the literature related to the definition of programme success, it is clear that it is high level and non-descript. One may attribute this to programmes having to deal with ambiguity (P2M, 2001, pp. 43,48-49). With the level of attention programme management has received over the past twenty five years, one would think it beneficial to practitioners and organisations to see a clearer statement describing programme success. A significant gap has been identified where programme success criteria is still at a conceptual level, is high level and non-descript, and requires further attention. Due to the significance of the gap, this study will investigate with the view of using findings to enhance programme management maturity in this area. This research will investigate the area of programme success using a guiding principle stating:

'There is a poorly developed definition of programme success'

To effectively assess and investigate this maturity guiding principle in practice, this study must ascertain the current level of maturity attributed to it, which can be done by referring to the literature and extracting what it states is the current level. The literature reviewed in this section has stated how programme success is defined as how well programmes deliver their objectives when related to organisational effectiveness. It goes on to give a more detailed definition of success where programmes focus on long term business results, are concerned with benefits realisation and achieving strategy and value creation. While these two broad definitions could be seen as the start of defining programme success, they are still not very prescriptive of what is deemed programme success. **With this in mind, this study considers the guiding principle of 'there is a poorly developed definition of programme success' being at a low level of maturity**

when one refers to the current body of literature. Further support of this study's assessment of the maturity can be seen from the literature's stating programme success criteria are still at a conceptual level and non-descript, as outlined earlier in this section, plus the lack of reference to programme success criteria as demonstrated in table 2.3. The literature goes on to state how further work is required in this area of programme management, with a specific mention of benefits analysis being a particular area in need of focus. This study will use the current level of maturity as inferred from the literature to develop maturity scoring principles used to score the maturity emanating from responses to interview question's pertaining to this particular guiding principle. Section 3.13.3.3 of the methodology chapter describes maturity scoring criteria for the guiding principles being used in this research, table 3.3 gives an overview of maturity scoring criteria, the questions aligned to this guiding principle, and the current level of maturity as inferred from the literature. Also, section 3.13.3.2 of the methodology chapter outlines, through table 3.2, the scoring criteria for all of the interview questions, which feed into at least one if not more of the guiding principles. The maturity scoring criteria of the interview questions are based on the literature's assessment of current maturity of the subject being referenced in the question, table 3.3 clearly demonstrates this link.

When one takes an institutional perspective to look at programme success, it aligns to the descriptors used for project's delivery of value, which can be described as a means of instilling value and intrinsic worth (DiMaggio & Powell, 1983, p. 148; Scott, 1987, p. 494; Selznick, 1957, p. 17). However, with the evolution of measures and meanings of success, the institutional trait of change focus as outlined by Phillips and Tracey's referencing (Phillips & Tracey, 2009, p. 169) Greenwood and Hinings (Greenwood & Hinings, 1996) would also be an appropriate institutional descriptor.

As a summary, one can view programme success as evolving from the traditional measures of time, cost and performance, to wider ranging and longer term organisational changes and benefits. Programme success has been described as high level and non-descript, and requires further investigation. This is a significant finding, and justifies further research, which this study intends to pursue using the guiding principle 'there is a poorly developed definition of programme success'. One can infer from the literature that a low level of maturity exists for this particular guiding principle. This study intends to describe any significant findings, and add to current programme management literature. With the aspect of defining programme success being investigated, attention next turns to the linking of project management to organisational needs, and that of programme management to business needs.

2.3.4 Project Management – Link to Organisational Needs

A theme that could be interpreted from the evolution of projects is their changing as a result of their link to organisational needs. The earlier section 2.2.4 on the expansion of the role of projects has already outlined their application in a number of areas, and where the discipline has evolved. It has outlined project's proliferation into different areas, their link to organisational change and strategy, and their classifications. It has discussed the management of multiple projects, the link to programme management, and the attention from mainstream management disciplines. All of these could be interpreted as projects being linked to organisational needs. One could infer that the evolution of projects has occurred in tandem with the needs of organisations.

As with the project management theme on expansion of the role and application, the reference to programme management in the project management literature is significant for this research study. Here again, one can see a relationship between both disciplines, and an explanation for assuming programme management has emerged/evolved from project management. The description of a programme, and the relationship to projects by Hedley Smith, shows this close link particularly in the area of meeting organisational goals. He states (Smith, 2009, p. 97):

'In both the public and private sectors, management is choosing more and more often to organise diverse and non-routinised activities as projects and programmes, where programmes can be considered to be clusters of projects aimed at meeting diverse goals for organisations and diverse societal policies.'

Further to support this, has been the increased focus from project management on 'external factors' with the aim of meeting numerous stakeholder needs (Stretton, 2007, p. 15). One could deduce that this is driving project management toward meeting the organisation's needs.

The linking of project management to organisational needs can be described and explained under a number of institutional descriptors. Di Maggio and Powell (DiMaggio & Powell, 1983, p. 150) and Zucker (Zucker, 1987, p. 451) have outlined the institutional trait of conformity to receive support and legitimacy. With the driving of project management as a delivery mechanism for more varying organisational needs, one could infer this as ensuring organisational conformity for support and legitimacy purposes. The linking of projects to delivering organisational needs can also be aligned to the institutional traits of conformity for

survival as outlined by Phillips and Treacy's (Phillips & Tracey, 2009, p. 169) referencing of Kostova et al (Kostova, et al., 2008, p. 997). Here, one could reason projects can deliver organisational conformity for survival purposes. One could infer even further by aligning organisational changes delivered by projects to the institutional trait of placing emphasis on conformity to a pattern (DiMaggio & Powell, 1983, p. 150). Here, this inference can be explained by an organisation changing to conform to a sectoral pattern.

In summary, the position that projects are linked to organisational needs is evident. This can be seen when one looks at the evolution of project management, its use in delivering strategy and change, and the attention it receives from broader academic management circles. A link to programme management and its origins has been demonstrated, and could be described as significant. This development could also be interpreted as projects being linked to operational and an organisation's needs. The linking of projects to achieving and delivering organisational needs can be aligned to the institutional traits of conformity to receive support and legitimacy, conformity for survival, and conformity to a pattern. Next, a review is conducted to look at the link between programme and business needs, and whether there is alignment.

2.3.5 Programme Link to Business Needs

Various definitions of programme success have emerged, these have already been outlined in section 2.2.3.1. However, the alignment of programmes to business needs has not been seen in this review of definitions of success. There has been an indirect notion that programmes are not aligned to business needs (Pellegrinelli, 2002, pp. 229,230). This, coupled with programme management being described as being at a conceptual level (Shao & Muller, 2011, p. 949) pushes this research toward asking if programmes are truly aligned to business needs. Some research suggests that organisations need to clarify what their meaning of a programme is, and what their value proposition is (Martinsuo & Lehtonen, 2007, p. 344). One can speculate, if organisations do not understand programmes or what they can achieve, then a misalignment to business needs is very plausible.

This speculation raises a possibly weighty gap in programme management i.e. are programmes aligned to business needs? This study deems it a pertinent question related to programme management maturity, and therefore intends to pursue research in this area. The investigation

to be carried out in this area as part of a maturity framework, and under the following guiding principle asking:

'Are programmes aligned to business needs?'

In support of this study's pursuing a maturity assessment for this particular guiding principle and programme management practice in general, it must determine what the current level of maturity for the guiding principle is. The assessment of maturity must be done by interrogating the literature to ascertain or infer what the current level of maturity is. Earlier in this section it has been outlined how there is a notion of programmes not being aligned to business needs. This, coupled with the conceptual aspect of programme management and a required clarification of their value proposition, points one further toward asking if they are truly aligned to business needs. **This study infers from the above points that the level of maturity for the guiding principle 'are programme aligned to business needs?' is low based on the relevant themes from the literature.** The level of maturity as inferred earlier in this paragraph will be used to develop the scoring principles used to score the responses to interview questions related to the guiding principle developed in this section. The methodology chapter, through section 3.13.3.3, describes maturity scoring criteria for the guiding principles being used in this research, table 3.3 highlights the maturity scoring criteria, the questions used to assess the guiding principle maturity, and the current level of maturity as inferred from the literature. Also described in the methodology chapter, in section 3.13.3.2, are the scoring criteria for the interview questions, table 3.2 gives the complete listing and the respective scoring criteria. The maturity scoring criteria of the interview question responses are based on this study's assessment of current maturity through relevant themes in the literature.

From an institutional perspective, the linking of business needs to programmes could be interpreted as being the same as those describing projects links to organisational needs. The justification for this interpretation lies with both projects and programmes creating organisational change to receive support and legitimacy, for survival, and for placing emphasis on a pattern.

As a summary, one can see very little has been researched in linking what programmes deliver, what business' need, and if there is a true alignment, a possibly significant gap has been raised. This research intends to investigate this gap under a guiding principle, with the view to narrowing this gap and enhancing programme management maturity with any significant empirical findings. This study, through its interrogation of the literature, deems the current level

of maturity for the guiding principle as low. The alignment of programmes to business needs are similar to the institutional descriptors for project management's link to organisational needs.

2.4 How is it Delivered?

2.4.1 Introduction

Section 2.3 has outlined what projects and programmes deliver, the definition of programme success, and how this is poorly defined. It assesses the link from project management to organisational needs, but also programme management's link to business needs, and questions if they are, in fact, aligned to business needs. Section 2.3 attempts to describe its key themes from the project and programme management literature using an institutional explanation. In this section, the review looks at the 'how' of delivery, a review is conducted into how projects and programmes deliver, their structures and process, and what are the key themes from the literature around this. It also looks for any links between the various 'delivery' themes from both disciplines. As has been used in the previous sections of this review, an institutional view is applied to the themes as a way of analysing themes.

2.4.2 Project Management – Emphasis on Process Definition

Up to this point, it has been outlined how project management can also be interpreted as placing a focus on processes and value in sections 2.2.2 and 2.3.2. This could be taken further by stating that project management also focuses on the definition of processes. The use of the term 'project management' and the initiation of the role of project manager both first came into being from the nineteen fifties (Stretton, 2007, p. 10) (Bechtel, 1989). One can see from the literature that this term and the role have been used ever since. The formalisation of these terms could be construed as the commencement of process definition in project management. The more formal definition of processes within project management can be seen in the publication of the PMI bodies of knowledge, where good practice project management tools are outlined (PMI, 2004, p. 3). These serve to guide project managers in the execution of projects, and can be interpreted as placing emphasis on the definition of good practice processes. It can be seen that the path set by the bodies of knowledge has been followed by the literature in its research and definition of project management processes, this has been demonstrated in project's

management of time, cost, scope, quality and risk. These points could also be aligned to project management's emphasis on process definition, as the literature has shown definition of these processes through its reference earlier in this literature review, in section 2.2.2. It could be argued that process definition has also extended to human resource management through the attention it has received. Some have placed emphasis on human resource management in projects according to Kwak and Anbari's (Kwak & Anbari, 2009, p. 436) referencing of Kloppenberg and Opfer (Kloppenberg & Opfer, 2002), while others have stated that the human factor in project is one of the more frequently discussed subjects in papers (Betts & Lansley, 1995, p. 211). However, others feel too little attention has been paid to this area (Evaristo & Fenema, 1999, p. 276).

Consideration is also given to communications management, front end design and project management standards. Communications management is seen as being a significant component of project management, but it is believed little has been done in the development of the tools to support this (Stretton, 2007, p. 13). The PMI PMBOK guide could be seen to contradict this as it provides an entire section on communications management (PMI, 2004, pp. 221-235), signalling the importance in which this is held. Front end design is seen as a key aspect of de-risking, but also assessing the project's needs before it commences (Stretton, 2007, p. 13; Barnes & Wearne, 1993; Crawford, et al., 2006, p. 176). The process of front end is covered in project initiation by the PMI (PMI, 2004, p. VII), providing further support of its importance and definition.

The establishment of project management standards was in tandem with the development of some risk management tools (Crawford, et al., 2006, p. 176; Stretton, 2007, p. 13). The creation of standards by project bodies, and their development, has not been followed by the literature (Stretton, 2007, p. 13). Therefore, one can conclude the formation of defined standards has come more from the empirical and professional fields than the academic, however it provides further evidence of process definition. The theme of definition in project management points not only to the tools used to manage projects, but also those around the setting of performance goals. This topic is covered with the focus on project success criteria. This has taken some time to surface based on this literature research, it emerges in an article by Pinto and Slevin in nineteen eighty eight (Pinto & Slevin, 1988). Nevertheless, success criteria is seen as one of the most cited (Themistocleous & Wearne, 2000, p. 8), therefore one could assume it is one of the more important aspects of project research. In support of this point, success has been seen as one of nine schools of thought in the literature as outlined by Kwak and Anbari's (Kwak & Anbari,

2009, p. 436) referencing of Anbari et al (Anbari , et al., 2008). Other research has outlined criteria for providing success and the factors for judging success (White, 2002, pp. 6, 10), this research also provided data on actual success rates, and also with findings on the emergence of 'side effects' (White, 2002, p. 10).

Finally, in an effort to develop further defined project management tools and structures, the use of action learning has been outlined (Walker, et al., 2008, p. 21; Coghlan, 2001). This could be interpreted as project management not only seeking to put further definition on tools and techniques, but to also test these techniques. When one reviews the emphasis projects place on process and definition through institutional descriptors, a number of themes are apparent. Scott's (Scott, 1987, p. 49) making reference to Selznick's (Selznick, 1957) original statement that institutionalism is a means of instilling intrinsic value and worth can be aligned to project management's focus on processes. One can infer that project's focus on process is with the view to instilling value and worth. Scott (Scott, 1987, p. 494) further makes reference in the same article to Selznick's stating institutionalism promoting stability and structure over time (Selznick, 1957). One can quite easily see the parallel between project management's focus on structure and process with institutional theory's promotion of stability and structures. These parallels can be further supported from an institutional perspective where Greenwood and Hinings (Greenwood & Hinings, 1996) reference DiMaggio and Powell's (DiMaggio & Powell, 1983, p. 150) stating institutionalism emphasises conformity to a pattern. The focus of project management on processes can easily be interpreted as conformity to a certain pattern. Finally Zucker (Zucker, 1987, p. 445) references Scott Meyer and Scott's (Meyer & Scott, 1983) stating institutionalism emphasises conformity to rules and requirements. Here, once more, one can infer that the focus projects place on process and structure aligns with, and can be described by institutionalism's placing emphasis on conformity to rules and requirements.

In brief, it has been outlined where project management has specific structures, tools and practices in place, all of which are supported by specific guidance. Research has demonstrated this management area develops and tests tools and techniques with the view to building on the defined processes currently in use. The above review lends support to there being a broad theme of project management placing emphasis on process definition. The focus of projects on process and structure can be described by, and have parallels with a number of institutional descriptors. The institutional descriptors aligned to this aspect of project management include the promotion of stability and structure, conformity to a pattern; and rules and requirement, and the means on instilling value.

2.4.3 Lack of Established Programme Management Techniques

Where project management has demonstrated clear structure and definition of delivery, this review has deduced the literature gives some insight into programme typologies and approaches. However, it has found little written on programme management techniques and practices. It has been stated that the varying practices of programme management are not consistently applied (Martinsuo & Lehtonen, 2007, p. 21; Pellegrinelli , et al., 2007, p. 41). This can be coupled with the contrast between strategic management perspective and the project perspective of programme management (Martinsuo & Lehtonen, 2007, p. 22). Also, there is the lack of agreed definition for a programme; and; as some would attest, lack of distinction between projects and programmes as demonstrated for both in section 2.2.4. These sets of points could be interpreted as supporting its statement that the 'techniques and approaches' at the centre of this discipline are not well documented or established (Pellegrinelli, 1997, p. 149). However, some work has been carried out in this area around the proposal of programme management activities such as planning, monitoring and control, configuration and change control, risk and issue management, benefits and stakeholder management (Lycett, et al., 2004, p. 292). Further support of this assessment on the lack of established techniques could be derived from programmes having to deal with uncertainty and ambiguity (Martinsuo & Lehtonen, 2007, p. 337). One could hypothesise that this mind-set of dealing with ambiguity and uncertainty, plus ideation and learning paradigm (Thiry, 2004, p. 251; Martinsuo & Lehtonen, 2007, p. 337), drifts into its techniques, leading to a lack of definition and establishment. It has been claimed the techniques which have been developed for managing programmes are more qualitative than quantitative (similar to projects) (Pellegrinelli, 1997, p. 147). Is the lack of a quantitative nature in programme management leading to a lack of established and defined techniques?

This review has found little to support evidence of established techniques for managing programme. It sees this as a significant deficit in the research which supports exploration to confirm any progression or maturity in this area. This research will form part of a maturity framework, and a guiding principle will be used to direct this aspect of the research, which asks:

'Is there a lack of established programme management techniques?'

In this study's carrying out a maturity assessment of the guiding principle developed in this section, it is imperative the study first determines the current level of maturity for the guiding

principle. This assessment of maturity can only be carried out by probing the literature to establish the current level of maturity. This section of the literature review has described how the varying practices of programme management are not applied consistently, and how when this is coupled with the contrast of the strategic versus project perspectives of programmes one can infer a lack of established techniques. A further point has been raised where the lack of an agreed programme definition and distinction between projects and programmes could lead to one inferring a lack of established techniques. **With the themes from the literature supporting this guiding principle being assessed, it deems the level of maturity for the guiding principle 'is there a lack of established programme management techniques?' as low.** Further inference to this level of maturity is made by this study where the literature has stated how the lack of a quantitative nature of programmes may have led to a perceived (by this study) lack of established and defined techniques. The level of maturity as inferred for the guiding principle developed in this section will be used to develop principles to score the responses to interview questions related to this guiding principle. The methodology chapter, in section 3.13.3.3, will describe the maturity scoring criteria for the guiding principles being used in this research. Table 3.3 highlights the guiding principle maturity scoring criteria, the questions used to assess the guiding principle maturity, and the current level of maturity as inferred from the literature. The methodology chapter, in section 3.13.3.2, also describes the scoring criteria for the interview questions, where table 3.2 gives the complete questions listing and the respective scoring criteria. The maturity scoring criteria of the interview question responses are based on this study's assessment of current maturity as is inferred and/or evident from the literature.

If one were to apply an institutional perspective to this aspect of programme management, a number of institutional descriptors could be used to possibly enhance programme management. Greenwood and Hinings' (Greenwood & Hinings, 1996) referencing DiMaggio and Powell's (DiMaggio & Powell, 1983, p. 150) stating institutionalism places emphasis on conformity to a pattern could enhance programme management's deficiency in this area. Guidance from institutional theory may help establish programme management techniques. This statement, one could infer, could be supported by institutional theory's stating institutionalism promotes stability and persistence of structure over time as outlined in Scott's (Scott, 1987, p. 494) referencing of Selznick (Selznick, 1957, p. 17).

To summarise, little research has been conducted in the area of programme management techniques and practices, various reasons and hypotheses are given as to why this the case. A clear gap in programme management research is apparent in this area of programme

management, which this study intends to investigate using a maturity guiding principle. This study, through an interrogation of the literature, has inferred a low level of maturity for the guiding principle developed. A number of institutional descriptors could be used to help close the gap identified, these include institutionalism's placing emphasis on conformity to a pattern and its promotion of stability and persistence of structure.

2.4.4 There is no Standard Approach to Programme Management

Similar to programme management techniques, the subject of approaches and methodologies has received a limited coverage, in terms of lifecycles and activities. The literature tells us that there has been a low degree of formalisation in programme management methodologies, even though this is seen as a key success factor, and deemed a requirement in programmes (Vereecke, et al., 2003, pp. 1286-7). It has been noted that a standard approach to programme management has started to emerge, but is similar to those of project management (Lycett, et al., 2004, p. 291), and differ only in terms of scale (Gray & Bamford, 1999, p. 362). However, this research has found little since as to the formalisation and standardisation of these approaches. Where formalisation has been identified, variation has been significant and systematic it seems, in the application of these approaches, (Pellegrinelli, 1997, p. 143). A programme lifecycle has been proposed with four specific stages of identification, definition, execution and closure, again, they are closely related to project management (Lycett, et al., 2004, p. 291). It seems that there is still a link between projects and programmes, and one could infer this may impact the development and design of approaches. Where approaches have been identified for programme management, these have come in for some criticism (Lycett, et al., 2004, p. 293). This is specific to the management of the relationships between project and programme management, the programme and constituent projects, the wider business context, and the relationship between the individual project managers (Lycett, et al., 2004, p. 293). The relationship between programme and project management is criticised due to high levels of bureaucracy and control, whereas that between the programme, project and the business context is criticised due to programme lifecycle and a restricted flexibility (Lycett, et al., 2004, pp. 293-4). The relationship between the individual project managers is criticised due to inter-project competition and an apparent failure to harness learnings (Lycett, et al., 2004, p. 294).

The literature has dealt with approaches to programme management as demonstrated in this section, however, little or no activity has been exercised to formalise a standard approach. This represents a significant gap, and an opportunity to conduct research is evident. This research will be carried out in the form of an empirical study to confirm if a standard approach to programme management is emerging with practitioners. It will be conducted as part of a maturity framework, of which a guiding principle and its associated research will form an integral part. The guiding principle the study will use asks:

'Is there is a standard approach to programme management?'

With the intention of this study to carry out a maturity assessment for the guiding principle outlined in this section, there is a need to determine the current level of maturity, which will act as a platform from which to assess the level of maturity in the field. This section has stated how there has been a low level of formalisation in programme management methodologies. It goes on to state where formalisation has been present, it has seen much variation in the application of approaches. A final theme present in the literature is that little has been done to formalise a standard approach to date. **When one takes the themes related to the guiding principle into account, this study infers a low level of maturity for this guiding principle due to the variance in approaches and their application, and the fact that no formal research has been carried out to develop a standard approach to programme management.** This study's inference from the literature of a low level of maturity for the guiding principle is a key part of the structure of analysis for the information and data collected for this research study. It will be used to develop the maturity scoring criteria for the interview questions aligned to the guiding principle. Furthermore, section 3.13.3.3 of the methodology chapter provides a description of the maturity scoring criteria for the twelve maturity guiding principles being considered. The methodology chapter, through table 3.3, describes the maturity scoring criteria, the questions aligned to the guiding principle, and the current level of maturity as inferred from the literature. Also, section 3.13.3.2 of the methodology chapter outlines, through table 3.1, the scoring criteria for all of the interview questions, which feed into at least one if not more of the guiding principles. Here, the maturity scoring criteria of the interview questions are based on the literature's assessment of current maturity of the subject being referenced in the question.

The institutional view of this gap in programme management reveals a number of descriptors which could be used to describe and narrow the gap. DiMaggio and Powell's (DiMaggio & Powell, 1983, p. 150) reference to Selznick's (Selznick, 1957, p. 17) stating institutionalism is a process of instilling value and worth could be used to support closing this gap. With institutionalism's

focus on instilling value, this could have an impression on efforts to create a standard approach to programme management. It also looks to promoting stability and persistence to a structure according to Scott's (Scott, 1987, p. 494) referencing of Selznick (Selznick, 1957, p. 17). With the seeming lack of a standard approach to programme management, this trait of institutionalism may be useful in supporting any efforts to create a standard approach to programme management. The institutional trait of conformity to a pattern as outlined by Greenwood and Hinings's (Greenwood & Hinings, 1996) referencing of DiMaggio and Powell (DiMaggio & Powell, 1983, p. 150) could also support narrowing the gap identified. Furthermore, Zucker's (Zucker, 1987, p. 445) referencing of Meyer and Scott's (Meyer & Scott, 1983, p. 141) stating institutionalism places emphasis on conformity to rules and requirements could support efforts in implementing a standard approach to programme management. Finally, the institutional trait of placing emphasis on meaningful and appropriate behaviour, as outlined by Scott's (Scott, 1987, p. 497) referencing of Zucker (Zucker, 1977, p. 5) could also support the standardisation of a programme management approach. One could infer that this trait of institutionalism can support the use of a standard approach to programme management, once it has been developed and established.

A summary of the literature on standard approaches to programme management shows little research has been conducted in this area. There is a low degree of formalisation in programme management approaches, even though this is seen as a key factor in programme success. Where approaches have been investigated, they have been susceptible to criticism. A significant gap has been identified where there is little evidence of a standard approach to programme management. This study, as part of a larger maturity framework, will investigate if any further maturity is evident in this area, with significant findings outlined. The research to be conducted will be directed by a guiding principle, which this study, through inference from themes in the literature, has deemed a low level of maturity. Where this gap is evident, a number of institutional traits could be used in any efforts to instil a standard approach to programme management. These traits include the instilling of value and worth, conformity to a pattern and rules, the promotion of stability and structure, and placing emphasis on meaningful and appropriate behaviour.

2.4.5 A Generic Model of Programme Management

It's stated there is no generic model of programme management in use, in fact, there is a large amount of variance in programme management (Pellegrinelli, 1997, p. 149), and it is consistency is questioned (Blomquist & Muller, 2006, p. 52). Further research suggests programme management '**is yet to be consistently practiced, especially compared to more mature fields such as project management**' (Pollack, 2012, p. 880; Pellegrinelli, et al., 2007, p. 49). It has been found that differences between programmes and numerous typologies exist (Mitrev, et al., 2016, p. 546). People's meaning of a programme varies between organisations, within organisations, between people and in context (Partington, et al., 2005, p. 94). It is difficult to 'pin down' a homogenous notion of programme management (Partington, et al., 2005, p. 94), and much effort has been expended on the topic of programme models and typologies (Martinsuo & Lehtonen, 2007, p. 338) . The level of coverage given to the numerous typologies and models of programme management is apparent from table 2.4, there is a wide variance in methodologies and typologies of programme management, as outlined in the table. This demonstrates no agreed or formalised methodology for managing programmes. This lack of formalisations may be attributed to lack of experience of managing programmes (Vereecke, et al., 2003, p. 1288).

The variance in models of programme management, and the lack of agreement on a formalised method of executing programmes, represents a noteworthy gap. This warrants research, which will be included in this study, where any significant findings made during this aspect of the study will be added to the current body of literature, specifically around a generic model beginning to emerge. The investigation into this area will be part of a programme maturity assessment framework and will be directed using a guiding principle which asks:

'Is there a generic model of programme management?'

This research study has a goal to effectively assess and investigate this maturity guiding principle in practice, but must first ascertain the current level of maturity attributed to it, which can only be done by referring to the literature and extracting what it states is the current level. The section has stated how, through interpretation of the literature, no generic model of programme management is in use, and how there is a large variance in the practice of managing programmes. It goes on to support this by stating how numerous typologies exist through people and organisations, and how much effort has been put into the topic of programme models and

typologies. A list of the various typologies and models is outlined in table 2.4 leading one to infer there is no formalised or agreed model for managing programmes. **This research study has taken these themes from the literature into account in assessing the current level of maturity attributed to this guiding principle, leading to it considering the guiding principle being of a low level of maturity.** The current level of maturity as inferred from the literature for this guiding principle will enable the development of maturity scoring principles used to assess the maturity emanating from responses to research interview questions. Section 3.13.3.3 of the methodology chapter describes the scoring criteria for the guiding principles maturity, table 3.3 is used to give an overview of maturity scoring criteria, the questions aligned to this guiding principle, and the current level of maturity as inferred from the literature. Section 3.13.3.2 of the methodology chapter outlines, in table 3.2, the scoring criteria for all of the interview questions, which feed into at least one if not more of the guiding principles used in this research. The maturity scoring criteria of the interview questions are based on this section's assessment of current maturity for the subject being referenced in the question, table 3.2 clearly demonstrates this link.

Programme Management Models & Typologies	
Model / Typology	Reference
Loose Model – Where the '...programme is, at most, a convenient heading for aggregate reporting or very high-level over-view purposes and is more meaningful to the observer than to the participants. This structure may be termed a 'loose' programme model...'	(Gray, 1997, p. 5)
Strong Model – '...A group of projects that are managed in a coordinated way to gain benefits that would not be possible were the projects to be managed independently This programme structure may be defined as a 'strong' model'...'	(Gray, 1997, p. 5)
Open Model – 'The possibility exists of enhancing the loose model by providing the project managers with easy access to information about the objectives, progress and deliverables of other projects. In this way they are effectively empowered to make sound decisions about their	(Gray, 1997, p. 5)

own projects even without explicit direction from the centre. Thus 'loose' becomes 'open'...'	
Delivery Programmes – ‘...are those whose output results directly in an inflow of funds to the organisation. Typical (but not definitive) of such programmes would be product development and introduction activity, work done under contract for clients, or the construction of facilities for the use of which fees or charges can be obtained from sources outside the organisation.’	(Gray & Bamford, 1999, p. 362)
Platform Programmes – ‘are those designed to improve the organisation's infrastructure. They are enabling rather than directly revenue-enhancing. Typical (but again not definitive) of such programmes would be the building or equipping of new production facilities, new factories or production lines, or major organisational change activities such as business process re-engineering or quality initiatives.	(Gray & Bamford, 1999, p. 363)
Classification of programmes based on two dimensions: 1) existence to which projects exist at launch & 2) Degree of change in the expected outcome of the programme	(Vereecke, et al., 2003, p. 1281)
Programme lifecycle consisting of five phases – 1) Formulation 2) Organisation 3) Deployment 4) Appraisal 5) Dissolution	(Thiry, 2004, p. 252)
Portfolio Programme Configuration – ‘Portfolio programmes are those which enable the grouping of projects which are relatively independent of one another but have a common theme. The existence of this theme means that the performance of the projects can be improved through coordination.’	(Pellegrinelli, 1997, p. 143)
Goal Oriented Programme Configuration – ‘Goal-oriented programmes are those which enable the management of initiatives or developments outside the existing infrastructure or routine. Goal oriented programmes can be used as a means of translating usually vague, incomplete and evolving business strategies into tangible actions and new developments	(Pellegrinelli, 1997, p. 143)

Heartbeat Programme Configuration – ‘Heartbeat programmes are those which enable the regular improvement of existing systems, infrastructure or even business processes, via increments to functionality or occasionally an overhaul of the system or facility itself.’	(Pellegrinelli, 1997, p. 144)
Integrated Programme Management Cycle Model – ‘...integrates a learning/value loop with a performance/project loop to form a full programme management framework.’	(Thiry, 2002, pp. 223,226)
Matching of Programme Structure to Environment – ‘a combination of four programme environmental scenarios according to the level of programme authority and the level of homogeneity of the participating organizations.’	(Yu & Kittler, 2012, p. 743)

Table 2.4 – Programme Management Models and Typologies

Support, from an institutional perspective, could be used to narrow this particular gap identified, and a number of institutional traits come to mind for this. As has already been outlined, DiMaggio and Powell’s (DiMaggio & Powell, 1983, p. 150) referencing of Selznick stating that institutionalism’s instilling value and intrinsic worth comes to mind. Any efforts to find and generate a generic model of programme management would benefit from the focus of instilling value and worth. However, the possible need for a generic model of programme management does align with other perspectives of programme management. One could infer that the possible need of a generic model of programme management could be a response to uncertainty, as described by the institutional trait according to DiMaggio and Powell (DiMaggio & Powell, 1983, p. 150). One could further speculate that if a generic model of programme management were required, this could be described through an institutional lens, as conforming to receive support and legitimacy as Zucker (Zucker, 1987, p. 443) has outlined in her referencing of Dowling and Pfeffer (Dowling & Pfeffer, 1975) and Pfeffer and Salancik (Pfeffer & Salancik, 1978). With the possible need for a generic model of programme management, a change process may be required to instil such a model. Institutionalism can support such a change, as it has been stated that it has a focus on change according to Phillips and Treacy’s (Phillips & Tracey, 2009, p. 169) referencing of Greenwood and Hinings (Greenwood & Hinings, 1996), this view is also supported by Dowling and Pfeffer (Dowling & Pfeffer, 1975, p. 126) and their point that

legitimacy is dynamic constraint that changes which organisations need to adapt to. Finally, from an institutional perspective, further support can be given to any initiatives to bring about a standard approach to programme management. Institutionalism, it has been stated, displays actions that support the transition from the changed to settled environment (Kostova, et al., 2008, p. 995). Any efforts in a change process to bring about a generic model of programme management, one could speculate, could benefit from an institutional support in bringing a change initiative to a settled state.

As a summary, the literature related to models of programme management shows no alignment or traces of a generic model arising. The selection and variance in models may be put down to people's perception of what programmes are, along with the variance in techniques and approaches. The research highlights a significant gap, which requires research, which this study will pursue and hopes to address under the direction of a guiding principle. This study has assessed the current level of maturity attributed to the guiding principle through a review of the literature, and sees it being of a low level of maturity. A number of institutional descriptors can be used to both describe this gap, but also to support its closing. These institutional descriptors include a response to uncertainty, conformity to receive support and legitimacy, a focus on change, and the focus of a transition from a settled to a changed environment.

2.4.6 Project Management – Emphasis on Control

Project management portrays a consistent theme of control. From its outset, there is evidence of focus on mechanisms for control processes, demonstrated with the earliest planning techniques (Stretton, 2007, p. 3; Cleland & King, 1968). This theme has been a consistent topic, but with varying focus on planning and control (Themistocleous & Wearne, 2000, p. 8). There is emphasis on control across a number of aspects to the management of projects, as will be demonstrated. Significant focus has also been put on the scheduling aspect of project control (Crawford, et al., 2006, pp. 176,178; White, 2002, p. 10; Themistocleous & Wearne, 2000, p. 8; Stretton, 2007, p. 7). Where project costs are involved, here again one can see a consistent level of focus from research on this aspect of control (Crawford, et al., 2006, pp. 176, 183; Themistocleous & Wearne, 2000, pp. 8,9; Stretton, 2007, pp. 7,12,14; Turner, 1993; PMI, 2004, pp. 157-171). The more detailed elements of projects and their control are dealt with through the topic of work breakdown structures (Stretton, 2007, p. 10), which have been derived from

systems management within project management (Kerzner, 1992). A higher level of project control has emerged with the advent of the project lifecycle. The first mention of lifecycles in project terms was actually referring to a product lifecycle (Stretton, 2007; Ireland, 1991). However, further attention was paid to the project lifecycle (Van Der Merwe, 1997, p. 228; Cleland & King, 1988, p. 91), where an outline of its stages is demonstrated. Although the topics of managing time, cost, scope, risk and quality have been raised in the area of delivering value, these could also be applied to the theme of project control.

An institutional perspective shows alignment to project management's emphasis on control. The institutional trait of promoting stability and persistence of structure, according to Scott's (Scott, 1987, p. 494) referencing of Selznick (Selznick, 1957), comes to mind. This institutional trait could be viewed as consistent with, and could describe project management's focus on control. This alignment, one could view, as being supported by the institutional trait of the emphasis on conformity to rules and requirements in Greenwoods and Hinings (Greenwood & Hinings, 1996) referencing of Selznick (Selznick, 1957, p. 17). In short, the above features of projects can be seen from a holistic view, that emphasis is placed on control, and this can be seen across a number of dimensions and aspects of projects. The institutional traits of promoting stability and persistence of structure, coupled with emphasis being placed conformity to rules and requirements could be viewed as aligning with this aspect of project management.

2.4.7 Definition of Governance, Roles and Responsibilities in Programmes

It has been stated that governance, roles and responsibilities in programme management are poorly defined (Blomquist & Muller, 2006, pp. 53,55). During the course of this review it is apparent the area of governance, roles and responsibilities in programmes has received limited research attention. However, with the message of poorly defined governance, roles and responsibilities, comes much information through the literature in this area. Table 2.5 outlines the various roles and responsibilities of programme managers, where seems to be mainly on that of the programme manager, and not team members, or stakeholders. With respect to the roles and responsibilities of programme managers, the list is varied, they can include lobbying, negotiating, and co-opting, as well as the identification and fulfilment and realisation of business opportunities. Further aspects to the role include the understanding of client objectives, project and programme organisation management, and being an intermediary between higher

management and operations. The variance here could be interpreted as there being no agreement on the roles and responsibilities of programme managers, identifying a gap in programme management, which could benefit from further research.

Programme governance is defined as 'the process of aligning internal programme stakeholders and anticipating external stakeholders so that the programme strategy is executed efficiently and value is added to the individual projects and programme as a whole' (Rijke, et al., 2014, p. 1199) (Beringer, et al., 2013). This research discovered programme governance receives little attention from research. Of that which is carried out, it states governance is a factor in (Rijke, et al., 2014, p. 1200) and has been identified as one of six attributes for programme success (Rijke, et al., 2014, p. 1207). With the low level of research in this area, it is not surprising that no clear governance models can be found in the research, yet, in the practitioner literature, a model can be found (PMI, 2008, p. 244).

Programme Manager Roles & Responsibilities	
Roles & Responsibilities	Reference
'Program managers are the intermediaries between higher management and operations personnel, implementing an organization's strategy. They do this by setting the context for projects and project managers to operate...'	(Blomquist & Muller, 2006, p. 55) (Pellegrinelli, 2002, p. 232)
'...focus on the interdependencies of projects, the program manager's level of intervention in assessing major deliverables, and the output-input relationship of projects in the program, as well as audit and gateway control. Control activities during execution comprise the need for plan reviews and changes, considering key performance indicators against deliverables, and making decisions to continue, realign, or stop projects.'	(Blomquist & Muller, 2006, p. 55)
'...tolerant of uncertainty, more embracing of change, and more aware of the wider business influences.'	(Blomquist & Muller, 2006, p. 55)
'...improvement of delivery of a group of projects...'	(Blomquist & Muller, 2006, p. 62)
'...focus on the identification and fulfilment of business opportunities through projects.'	(Blomquist & Muller, 2006, p. 64)
'...‘achievement of benefits’, ‘stakeholders management’, ‘communications’ and ‘configuration management...’'	(Thiry, 2002, p. 221)
'... understanding clients objectives ... Project/programme organisation and management ... Approach and strategy for the project/programme ... Scope management ... risk management ... people & resource management ... managing the client interface ... commercial awareness ...'	(Pellegrinelli, 2002, p. 231)
'...lobbying...negotiating...co-opting...realise lasting organisational change...'	(Pellegrinelli, 2002, p. 233)

‘...overall responsibility for realising the anticipated benefits from the programme...’	(Pellegrinelli, 1997, p. 143)
The programme manager ... interacts with each project manager to provide support...responsible for ensuring the overall program structure and program management processes enable component teams to successfully complete their work...ensure projects are executed in a consistent manner...’	(PMI, 2008, p. 12)

Table 2.5 – Programme Manager Roles and Responsibilities

There is an evident gap related to governance, roles and responsibilities in that a low level of research has been conducted in this area, even though its importance has been highlighted. This gap is significant and justifies further investigation, which will be carried out as part of this research, where the following guiding principle will be used to direct the investigation:

‘Do programmes have clearly defined governance, roles and responsibilities?’

The research will be part of a programme maturity framework, and significant findings will be outlined and added to the current literature.

For this study to effectively investigate this maturity guiding principle in practice, it must determine the current level of maturity attributed to it, and must be done by referring to the literature and examining what it states is the current level. This section has stated how, according to the literature, governance, roles and responsibilities are poorly defined and have received little attention, and is biased more toward the programme manager and not the overall programme team. This section also outlines the list of various roles and responsibilities evident from the literature through table 2.5, which this study infers as a demonstration of both variance plus a lack of agreement and clarity on roles and responsibilities. The section also outlines how programme governance does not have a clear models in place, however some practitioner literature has contradicted this. **This research takes the themes and messages inferred from the literature into account when assessing this guiding principle’s level of maturity, and considers it to be at a low level.** Section 3.13.3.3 of the methodology chapter lists the maturity scoring criteria for the guiding principles in this research. Table 3.3 in this section of the methodology outlines the maturity scoring criteria, questions aligned to this guiding principle,

and current level of maturity as inferred from the literature. Section 3.13.3.2 of the methodology chapter outlines in table 3.2 the scoring criteria for all of the interview questions, which feed into at least one of the guiding principles. The scoring criteria of the research interview questions are based on this study's assessment, through the literature, of current maturity of the subject being referenced in the question, table 3.2 demonstrates this link.

The institutional view of this aspect of the research could be used to enhance programme management. The gap in this area could be narrowed with the help of institutional traits, firstly, that of institutionalism promoting stability and persistence of a structure (Selznick, 1957, p. 17). This institutional trait may help with the defining of clear roles and responsibilities, plus a governance structure. This could also be supported by the institutional trait of placing emphasis on conformity to a pattern (Greenwood & Hinings, 1996; DiMaggio & Powell, 1983, p. 150). Finally, and changes and development in the definition of roles, responsibilities and a governance structure may benefit from the institutional trait of promoting transition from a settled to changed environment (Kostova, et al., 2008, p. 995).

To recap, one can state that the area of programme manager roles and responsibilities has received limited attention. Where attention is given, a wide and varying range of roles and responsibilities is evident, and mostly focused on programme managers. The area of programme governance receives some attention from the literature, however, it is far from prescriptive, and could be described as lacking. A deficit has been uncovered, which requires further investigation to address it, this study will carry out such an investigation, will be conducted under the direction of a guiding principle, and will be part of an overall maturity framework study. This study infers a low level of maturity for the guiding principle in question emanating from its review of the literature. An institutional view can be put to this gap to aid its narrowing with the possible use of a number of institutional traits. These include the promotion of stability and persistence of structure over time, plus the placing of emphasis on conformity to a pattern, and promoting a transition from the changed to settled environment.

2.4.8 The Leadership Competencies of Successful Programme Managers

The importance of programme manager competence in achieving programme goals has been stated (Shao & Muller, 2011, p. 948), therefore this topic requires consideration. Before the

programme manager competency is addressed, it is important to understand its meaning. Competence is described as '**...a broad concept. It constitutes of people's knowledge, skills, core personality characteristics and demonstrable performance...**' according to Shao and Muller's (Shao & Muller, 2011, p. 948) referencing of Crawford (Crawford, 2005). Some authors, i.e. Partington et al (Partington, et al., 2005) and Turner and Muller (Turner & Muller, 2005), have outlined varying models of competence and leadership. However, it has been stated that poor competencies for programme managers are in place as a result of poor programme management methodologies (Blomquist & Muller, 2006, p. 54). It seems the literature has not helped this predicament, as it has fallen short on programme management competence (Partington, et al., 2005, p. 94). With a picture given of where programme management competency sits in literature terms, it is worth supporting this by outlining the competencies described in the literature, these are listed in table 2.6.

Programme Manager Competencies	
Competencies	Reference
'Program managers focus on long-term business results and are concerned with benefits realization, strategy achievement and value creation.'	(Shao & Muller, 2011, p. 948)
'...require "a subtle blend of interpersonal skills and personal credibility, a deep understanding of the political dynamics of the formal and informal networks that form the organizational context, and a great knowledge of the broader strategic context" '	(Shao & Muller, 2011, p. 947) (Partington, et al., 2005, p. 87)
'...attention and efforts, causing them to compromise and re-shape their programs...'	(Shao & Muller, 2011, p. 949) (Pellegrinelli, et al., 2007, p. 49)
'...program directors and managers should take the responsibility of shaping a context for program and projects. In the context they shape, they embed and align the program to the evolving needs of the organization and shelter projects from the external turbulent and uncertain environment...'	(Shao & Muller, 2011, p. 949) (Pellegrinelli, 2002, p. 229)

‘...should more focus on business results and stakeholder satisfaction in their programs as both are the most often mentioned program success criteria...’	(Shao & Muller, 2011, p. 956)
‘...program managers should develop skills in applying the norms and procedures of the parent organization creatively to provide legitimacy and sustainability for the change program.’	(Lehtonen & Martinsuo, 2008, p. 28)
‘Identification of bad projects for increased efficiency, participation in steering groups, coordination and prioritization of projects, and collection and aggregation of reports for coordination of projects.’	(Blomquist & Muller, 2006, p. 57)
‘Project reviews, coaching, issue handling, and improvement of corporate processes for increased efficiency in execution.’	(Blomquist & Muller, 2006, p. 58)
‘Program management roles, which aim for improvement of delivery of a group of projects, start with identification of business opportunities.’	(Blomquist & Muller, 2006, p. 62)
‘...program management roles focus on the identification and fulfilment of business opportunities through projects.’	(Blomquist & Muller, 2006, p. 64)
‘The program management role in the present study resembles much of the broker’s role.’	(Blomquist & Muller, 2006, p. 64) (Turner & Keegan, 2001)
‘...programme management competence is not simply an extension of project management competence. It seems to require a subtle blend of interpersonal skills and personal credibility, a deep understanding of the political dynamics of the formal and informal networks that form the organizational context, and a great knowledge of the broader strategic context.’	(Partington, et al., 2005, pp. 87-88)
‘...many respondents explicitly equated programme management competence with general management skills and generic leadership qualities.’	(Partington, et al., 2005, p. 94)

<p>'...most organisations still consider 'organisation', 'issues and risk', 'planning' and 'accounts and finance' as key to the success of programmes, whereas 'achievement of benefits', 'stakeholders management', 'communications' and 'configuration management' seem less important.'</p>	<p>(Thiry, 2002, p. 221) (Reiss & Rayner, 2001)</p>
<p>'...change agents, in this instance programme managers, need to develop their analytical, judgmental and implementation skills, and their ability to handle complexity, their sensitivity and their self-awareness.'</p>	<p>(Pellegrinelli, 2002, p. 232)</p>
<p>'...the consolidation of financials and the coordination resources across multiple projects.'</p>	<p>(Pellegrinelli, 2002, p. 232)</p>
<p>'For experienced programme managers influencing, lobbying, negotiating, manipulating, co-opting, leveraging diverse sources of power and applying pressure are part of their daily life on a programme.'</p>	<p>(Pellegrinelli, 2002, p. 233)</p>

Table 2.6 – Programme Manager Competencies

A high level review of the programme manager competencies listed in table 2.6 tells of a diverse and complex role. It shows that programme managers need to focus on business results; value creation; stakeholder satisfaction; success criteria; legitimacy and sustainability; to mention but a few. The table tells a story of programme managers needing to understand; amongst other things; political dynamics in organisations, organisational context, and the broad strategic context. Some of the key skills outlined in table 2.6 include stakeholder management; issue and risk management; communications and configuration management; influencing and lobbying, and the coordination of resources. It has already been stated this aspect of programme management is considered important (Shao & Muller, 2011, p. 948), however there is variance in the list of competencies, and it has been assessed that the literature has fallen short in this area (Partington, et al., 2005, p. 94). The combination of these factors highlight a deficiency in research that could benefit from further investigation, which this study intends to pursue. The intended research will form part of a maturity model, and will use a guiding principle to lead the research, this principle states:

'There is a Need to Understand the Leadership Competencies of Successful Programme Managers?'

It is hoped the outcome of this investigation will result in more clarity around the competencies of successful programme managers, and where applicable, indicate further maturity in this area. In order to support this goal and pursuing a maturity assessment of this particular guiding principle, it must be determined what the current level of maturity is for the guiding principle. This assessment of maturity must be done by interrogating the literature to ascertain the current level of maturity. Previously in this section it was stated how the literature has fallen short in its investigation of programme management competence. Where the literature has addressed programme management competence, there is a diverse and complex picture, this is evident from table 2.6. **With the lack of research and diversity evident in this area of programme management, this study infers a low level of maturity for the guiding principle 'there is a need to understand the leadership competencies of successful programme managers'.** This level of maturity as inferred from the literature will enable the development of scoring principles used to assess the responses to interview questions related to this guiding principle developed. In the methodology chapter, through section 3.13.3.3, a maturity scoring criteria is described for the guiding principles being used in this research. Table 3.3 lists the maturity scoring criteria, the questions used to assess the guiding principle maturity, and the current level of maturity announced in this section. Furthermore, the methodology chapter, in section 3.13.3.2, describes the scoring criteria for the interview questions, where table 3.1 gives a detailed outline. The maturity scoring criteria of the interview question responses are based on this study's assessment of current maturity through relevant themes and messages in the literature.

An institutional perspective may assist in the narrowing of this particular research gap. Di Maggio and Powell (DiMaggio & Powell, 1983) have stated how institutionalism as a process, is a means of instilling value and intrinsic worth. This aspect of institutionalism could possibly be used to guide what leadership competencies support a successful programme manager.

To recap, it's stated the literature has fallen short in the area of programme manager competence, even though this is considered important in achieving programme goals. It can be shown that the list of programme manager competencies is wide and varied. The importance of this area, coupled with the variance in competencies and shortcomings of the literature, leads to a significant area for investigation. This study intends to investigate this deficiency as part of a maturity framework under a guiding principle, with the hope of adding to the current body of literature. The current level of maturity of the guiding principle is considered low by the study

based on the themes and messages inferred from the literature. Institutionalism being seen as a means of instilling worth and value could possibly be used to develop what competencies would support a successful programme manager.

2.5 Further Research

2.5.1 Introduction

This review thus far has examined the origin and definition of programme management. This takes into account its possible progression from project management, and the sometimes lack of distinction between both disciplines. It goes on by examining what is being delivered, looks at what both projects and programmes deliver, and the link of both disciplines to business needs. The review then looks at the 'how' of delivery, where project's emphasis on process and control is reviewed, and the lack of techniques and standard approaches to programme management are made evident. The section closes by looking at programme's definition of governance, roles and responsibilities and the leadership competencies of successful programme managers. This final section of the review examines the current state of programme management as a discipline and research area, and determines if further research is required in this management area. The section also takes into account this research's view of the need for a maturity assessment, it examines the current maturity models in existence, and analyses their applicability to this study.

2.5.2 Further Research is Required in Programme Management

It has been stated that programme management is still an emerging area of management research (Mitrev, et al., 2016, p. 546), which points toward the need for investigation and studies in this field. Recommendations for further research have been proposed by a number of research papers. For example, the need has been raised for linking programme management competence models to programme characteristics (Mitrev, et al., 2016, p. 555). Other research requirements identified specific to programme management competence include the link between programme characteristics and programme types and the competence areas related to both of these areas (Mitrev, et al., 2016, p. 556). Following on from this requirement, the importance has been raised of investigating the '**differences in perspectives of various stakeholders regarding program management competence**' (Mitrev, et al., 2016, p. 556). Recommendations have also been made around the structure of programmes, especially on how

the nature of change influences the decision making, governance, and synchronisation in relation to the organisation (Pellegrinelli, et al., 2015, p. 162). Other requirements surround the change and programme management relationship have been highlighted, specifically a hypothesis test to understand 'the limitations and contextual factors related to their complementary use in processes of change.' (Pellegrinelli, et al., 2015, p. 162)

The examples listed in the literature advocating further research are but a few. A holistic view of this literature review points toward numerous areas and significant gaps justifying further research. The work to this point in the review of literature has outlined the numerous significant gaps and in essence, justifies this study. The broader investigation into the gaps could be executed under a guiding principle asking:

'Is future research required in the area of programme management?'

This research study's goal to effectively assess and investigate this maturity guiding principle in practice must commence with assessing the current level of maturity attributed to it, this must be done by referring to the literature and extracting what it infers is the current level. Earlier in this section it has been stated how programme management is still an emerging area of management, and how the literature has recommended further research. It has also been outlined in this section where the areas of research are recommended include the linking of programme management competence models to programme characteristics and programme types, plus the relationship between change and programme management. The subject of further research into this area of management has received little attention from the literature. **With these aspects of the current level of research into programmes and programme management exposed in the literature, this study considers the current level of maturity attributed to this guiding principle low, justifying further research.** This study's view of the current level of maturity for this guiding principle allows for the development of maturity scoring principles required to assess the maturity based on responses to research interview questions. Section 3.13.3.3 of the methodology chapter elaborates on the scoring criteria used for the guiding principles maturity, with table 3.3 giving an overview of scoring criteria, questions aligned to this guiding principle, and the current level of maturity as inferred from the literature. In section 3.13.3.2 of the methodology chapter the scoring criteria for all of the interview questions are listed via table 3.2, these feed into at least one if not more of the guiding principles used in the research. The scoring criteria for the interview questions are based on this section's assessment of current maturity for the subject being referenced in the question, this can be seen in table 3.2. This study intends to pursue research into the requirement for further research in

the area of programme management using the guiding principle outlined above and will form part of an overall programme management maturity framework. Any significant findings will be noted and added to the current body of literature.

Where one can use an institutional theory lens to examine the need for further research into the area of programme management, a number of institutional descriptors can describe the research requirement. DiMaggio and Powell (DiMaggio & Powell, 1983, p. 150) have outlined how institutionalism is a response to uncertainty. One could infer that the need for research in the area of programme management could be a response to uncertainty. The uncertainty in question could be that of a lack of maturity in the management area, and that further research is a response to this. Phillips and Tracey (Phillips & Tracey, 2009, p. 169) have made reference to Kostova et al (Kostova, et al., 2008, p. 997) who state institutionalism relates to conformity for survival. One could infer that the research to be undertaken in may produce findings which could recommend change to the practice of programme management, which in turn may have survival characteristics for this management discipline. Finally, the institutional theory literature makes reference to conformity to receive support and legitimacy, according to Zucker's (Zucker, 1987, p. 451) referencing of Pfeffer and Salancik (Pfeffer & Salancik, 1978). Here again, one could infer that findings from additional research into the area of programme management may outline recommendations leading to conformity to receive support from academics and practitioners alike.

One can encapsulate the gap from the literature listed in this section, coupled with those outlined in the other sections of this review, and surmise that a gap exists justifying further research. This study has decided to pursue this gap and will be directed by a guiding principle, which will form part of an overarching maturity framework study, where the current level of maturity for the guiding principle is considered low. A number of institutional descriptors can be used to speculate the purpose of, and what such research may lead to, these include conformity to receive legitimacy, and a response to uncertainty.

2.5.3 Programme Maturity

2.5.3.1 Maturity Models

The literature has outlined a number of areas in programme management where its maturity can be assessed, this takes the form of maturity guiding principles as has been demonstrated in numerous sections of the literature review. However, it is important that an analysis of existing maturity models be carried out to confirm if there is an alignment of existing maturity models to the guiding principles emanating from the programme management literature. Mettler (Mettler, 2011, p. 81) references Pault et al (Pault, et al., 1993) and Ahern et al (Ahern, et al., 2004) in stating maturity models are increasingly used in the information technology and management science fields with the view to continuous improvement. Mettler (Mettler, 2011, p. 81) further references Fraser et al (Fraser, et al., 2002) by noting maturity models can be used in third party assessments. The purpose of maturity models has been stated as the identification of a gap that can then be closed by identified actions as outlined in Mettler's (Mettler, 2011, p. 82) referencing of Pfeffer and Sutton (Pfeffer & Sutton, 1999), and can be described as consisting 'of a sequence of maturity levels for a class of objects' and 'represents an anticipated, desired, or typical evolution path of these objects shaped as discrete stages' (Becker, et al., 2009, p. 213). A number of broad maturity models have been developed, these include the EFQM excellence model, the capability maturity model (CMM), software process improvement and capability determination (SPICE) and BOOTLACE (Mettler, 2011, p. 82). Becker et al (Becker, et al., 2009, p. 213) go on to reference de Bruin et al (de Bruin, et al., 2005) by stating maturity assessment models for the development and support of information technology management range in the hundreds, this section will elaborate on the four maturity models mentioned in this paragraph.

The capability maturity model (CMM) was first developed in nineteen eighty seven based on a request from the Department of Defence in the United States to the Software Engineering Institute (SEI) for the purpose of assessing an organisation's software development process and to provide improvement practices (Biberoglu & Haddad, 2002, p. 143). The CMM is made up of five incremental maturity levels where an organisation establishes and improves its software development process, Biberoglu and Haddad (Biberoglu & Haddad, 2002, p. 145) reference

Hayes and Zubrow (Hayes & Zubrow, 1995), plus Mark et al (Paul & et al, 1991) in outlining the levels as listed below:

- The initial level (Level 1) – This level is representative of organisations where there is poor stability in software practices and management, all aspects of the process are unpredictable.
- The repeatable level (Level 2) – There is focus on project planning and management, plus the implementation of procedures and policies. The purpose of this level is to setup an effective project management process that facilitates an organisation to repeat successful practices and procedures used on previous projects.
- The defined level (Level 3) – There is focus on a defined and standard software process, this includes software engineering and management. Here there are standard and repeatable processes implemented in the organisation.
- The management level (Level 4) – Here quality and productivity are assessed, and measurements for a quantitative assessment of software products and processes are established. At this level the organisation is capable of predicting quality trends.
- The optimisation level (Level 5) – Here the focus is on continuous improvement, where the organisation has the ability to identify defects in products and weaknesses in processes, and has the ability to improve both.

It is quite evident from the overview of CMM that has been specifically designed for software development maturity assessment, and not broader process maturity assessment. Also, the origins of this maturity assessment model are evidently from a practitioner setting, not an academic one.

The International Organisation for Standards (ISO) has a set of guidelines for development, supply and maintenance of software systems through its ISO9000-3 standard, this shares commonalities with CMM in the areas of quality assurance and quality of the system (Biberoglu & Haddad, 2002, p. 146). A joint technical committee made up of ISO and the International Electrotechnical Committee (IEC) developed an international standard for software process assessment called the Software Process Improvement and Capability dEtermination (SPICE) (Biberoglu & Haddad, 2002, p. 146). SPICE brings together the quality management aspects of ISO9000, and the capability determination processes of CMM plus aspects of other models, and is made up of five parallel processes that ‘model the software processes: customer-supplier, engineering, project, support, and organization’ (Biberoglu & Haddad, 2002, p. 146). SPICE uses

a rating scale which it has adapted from CMM, software process activities from ISO and Trillium, and quality system management from ISO (Biberoglu & Haddad, 2002, p. 146).

The literature clearly sees SPICE emanating from CMM and other sources, and is therefore designed for the maturity assessment of software processes, therefore this author would question its suitability in its use for broader process maturity assessments.

The EFQM excellence model was created in 1991 by the European Foundation for Quality Management (EFQM) and is made up of nine elements grouped under five enabler criteria (leadership, policy and strategy, people, partnerships and resources and processes) and four results criteria (people results, customer results, society results and key performance results) (Bou-Llusar, et al., 2009, p. 6). An overview of the model as outlined by Bou-Llusar et al can be seen in figure 2.2 (Bou-Llusar, et al., 2009, p. 7) , where one can see that the enablers are seen as representing the way the organisation operates, and the results focus on achievement linked to organisation stakeholders.

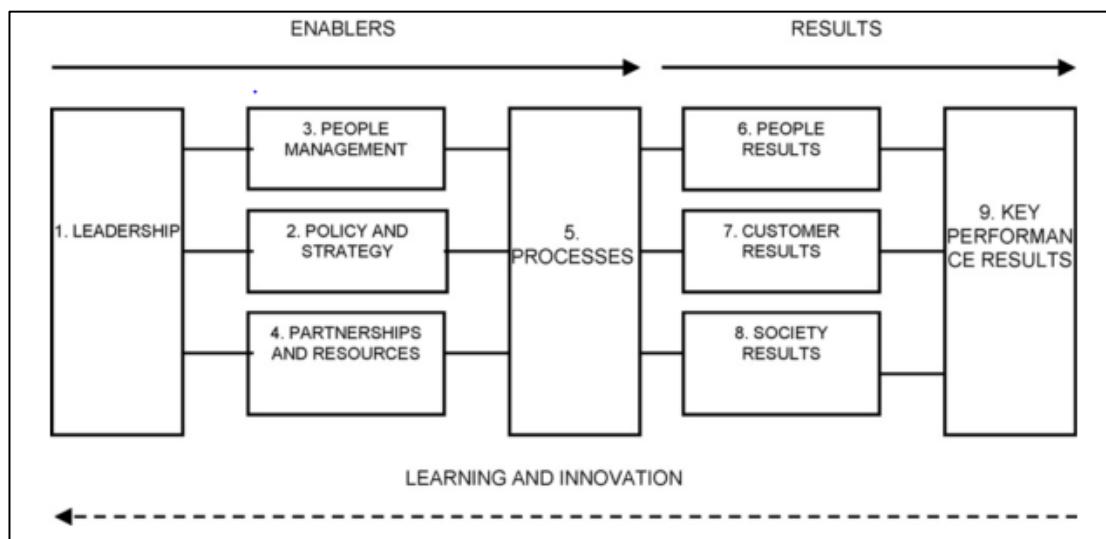


Figure 2.2 – EFQM Excellence Model

Further explanation of the various elements of the model state (Bou-Llusar, et al., 2009, p. 7):

- The leadership enabler outlines how excellent leaders develop and facilitate the achievement of a mission and vision.
- The policy and strategy enabler explains how excellent organisations install their mission by developing a focused strategy that takes into account the market and sector in which it operates.

- The people enabler outlines how excellent organisations realise the full potential of their people.
- The partnerships and resources enabler plan the management of their external partnerships and stakeholders to support the effective operation of processes.
- The processes enabler shows how excellent organisations design, manage and improve process in order to generate increasing value for customers and stakeholders.

When one views the results criteria of the model, the customer, people and society criteria all comprehensively measure and achieve outstanding results with respect to their respective stakeholders (Bou-Llusar, et al., 2009, p. 7). The key performance results criteria is defined as organisations measuring and achieving outstanding results related to the key elements of their strategy and policy (Bou-Llusar, et al., 2009, p. 7).

One observation this author has from reviewing the EFQM excellence model is that it does not claim to be a maturity assessment model, and that it likened to a performance improvement initiative. As is common to other maturity models reviewed, no reference to a theoretical basis for these models is evident, but more from a practitioner view.

The BOOTSTRAP maturity assessment model has its origins from a European Commission funded project (the Esprit project) whose purpose was to place the foundations for good software engineering practices in Europe (Kuvaga, 1999, p. 7). The BOOTSTRAP assessment model has a number of objectives, which include (Kuvaga, 1999, pp. 9-10):

- Support the evaluation of process capability against a set of software engineering best practices.
- support the evaluation of how the reference standards have been implemented in the assessed organisation
- identify the strengths and weaknesses of the organisation's processes
- provide results that form a suitable and reliable basis for improvement planning
- plan improvement actions that support achievement of the organisation's goals;
- Help increasing process effectiveness while implementing standard requirements in the organisation

The BOOTSTRAP maturity model has five main features, which are the assessment method, the underlying process model, the capability levels for evaluation, the scoring; rating and results presentation principles, and finally process improvement guidelines (Kuvaga, 1999, p. 10). The

assessment method has three main phases of preparation, execution and improvement planning. The underlying process model is structured in three dimensions of process, capability and technology support, this feature of the model also ties in the relevant internationally recognised standards (Kuvaga, 1999, p. 11). The process capability level looks at the ability of each process to achieve its goals in the context of the assessed organisation and is measured on five levels of capability ranging from incomplete process to optimising process (Kuvaga, 1999, p. 13). The scoring, rating and results feature of the model includes assessors collecting information about the current practices, problems and needs and then presenting this together with the capability results (Kuvaga, 1999, p. 14). Finally, the process improvement guidelines considers the organisations requirements, the capability of its processes, and industry benchmarks for process improvements, and provides guidelines to identify which processes will most likely lead to the organisation's goals, and priorities are assigned to these processes (Kuvaga, 1999, p. 15). Similar to the previous maturity assessment models outlined, this author sees the BOOTSTRAP maturity model as being focused on software process maturity, and not broader and generic process maturity, it is mainly practitioner based, with no reference to literature.

2.5.3.2 Existing Project and Programme Management Maturity Models

A number of project and programme management maturity models are available for practitioners to assess the maturity of the methodologies they use. Gartner's Programme and Portfolio Management Maturity Model (PPM) outlines five levels of maturity, which are reactive (level one), emerging discipline (level two), initial integration (level three), effective integration (level four), and effective innovation (level five) (Consulting, 2014, p. 2). The model states that within the levels there are five 'interdependent core dimensions' that are critical to the model, these are people (in terms of their availability, skills and contributions to the programme), programme and portfolio maturity practices and processes, value and financial management, technology and relationships (Consulting, 2014, p. 2). The literature clearly demonstrates this maturity model is strictly practitioner developed and utilised, does not make reference to academic literature in its origins, makes no reference to its effectiveness as a tool to comparing programme maturity across a number of organisations or sectors, and leans toward IT programme management.

The Office of Government Commerce's (OCG) Portfolio Programme and Project Management Maturity Model (P3M3) has several uses, including understanding the practices that are part of an effective programme and project management process and need to be embedded into the organisation, and to enable organisations understand their capability to manage projects and programmes effectively (OGC, 2006, p. 3). The OCG also states this maturity model can be used to develop accredited training and assessments, and for customers to develop an appreciation for risk associated with programmes being run by service providers (OGC, 2006, p. 4). The model outlines five generic levels of maturity across projects, programmes and portfolios, these include initial process (level one), repeatable process (level two), defined process (level three), managed process (level four) and optimised process (level five) (OGC, 2006, p. 7). Each of the maturity levels within this model describes the project or programme related activities in process areas, and each process area has a consistent structure with defined outcomes, these are the functional achievement, the approach, deployment, perception and performance measures (OGC, 2006, p. 8). As with the PPM maturity model, P3M3 has not developed from, or is linked to any academic work, but is purely practitioner based. The PPM model does not make reference to use in a multi-sector maturity assessment scenario. Also, this model provides little focus on the link between programmes delivering organisations strategy, it deals more with the 'how' of programme delivery.

Finally, Honeywell Federal Manufacturing and Technologies (FM&T) developed its own programme management maturity model with the view to developing and implementing 'outstanding programme management and best commercial practices' (Hartwig & Smith, 2008, p. 2). The purpose of the model was to communicate goals, identify gaps and demonstrate maturity within programme management, but also to identify steps for organisation improvement and serve as a communication tool (Hartwig & Smith, 2008, p. 3). The model is structured with five levels of maturity and six process areas. The five maturity levels are crisis management (level one), reactive management (level two), project management (level three), programme management (level four) and managing excellence (level five). The six process areas are scope management, budget and cost management, risk management, communication management, resource management and schedule management, all of which underpin each of the five maturity levels (Hartwig & Smith, 2008, pp. 4-5). This maturity assessment model was developed for one part of the Honeywell business, but it was intended to be tested and used in other parts of the Honeywell corporation (Hartwig & Smith, 2008, p. 7). This model has not been designed with other corporations in mind, and does not state if Honeywell intended to use it for different business sectors which some of its subsidiary's sit in. The model was developed based

on Honeywell's needs and does not make any reference to academic research in the model's development or purpose. One could argue that the model is aligned the FM&T sector and an internal process assessment specifically, but may not suit a programme management maturity assessment in alternative sectors, or in a multi-sector setting.

2.5.3.3 Relevance of Existing Maturity Models to this Research

Section 1.5.2 has outlined how the overall objective of this research is to determine the current level of maturity for the practice of programme management, this need for a maturity assessment is based on the gaps that have been identified from a theoretical perspective. With the research objective determined, the study was faced with determining what type of maturity assessment would be most appropriate. The purpose of maturity assessment models has already been stated as identifying a gap which can be closed by improvement actions (Pfeffer & Sutton, 1999), consisting of a series of maturity levels of a process with a desired progression through these levels (Becker, et al., 2009, p. 213). Examples of maturity assessment include the EFQM excellence model, the capability maturity model (CMM), software process improvement and capability determination (SPICE) and BOOTLACE (Mettler, 2011, p. 82). Becker et al (Becker, et al., 2009, p. 213) go on to reference de Bruin et al (de Bruin, et al., 2005) by stating maturity assessment models for the development and support of information technology management range in the hundreds. They follow this by outlining how the lack of empirical work in this area will most likely lead those needing maturity assessment models to the criteria set out by Hervner et al (Hervner, et al., 2004), therefore one could assume this is a very narrow criteria for a broad need. This narrow focus of maturity models is somewhat supported by Mettler (Mettler, 2011, p. 81) who states there is still a lack of knowledge on how to design 'theoretically sound and widely accepted maturity assessment models'. Further criticism of maturity models state that they do not describe how to perform improvement actions (Mettler, 2011, pp. 81,82), and they are mainly centred on information technology and management (Becker, et al., 2009, p. 213). More criticism has been made where it is stated by Mettler's (Mettler, 2011, p. 82) referencing Biberoglu and Haddad (Biberoglu & Haddad, 2002) that maturity models have a poor theoretical basis, and that following a maturity model does not necessarily guarantee success for an organisation (Mettler, 2011, p. 82). A review of the literature on maturity assessment models supports the view of them having a poor theoretical basis. Further research uncovers a number

of maturity models, Gartner's (Consulting, 2014) Program and Portfolio Management Maturity Model (PPM) and the OCG's (OGC, 2006) Portfolio Programme and Project Management Maturity Model (P3M3), all aimed at assessing both project and programme management maturity. While these maturity models pertaining to project and programme management are quite detailed and prescriptive, one could possibly justify use of these to test programme management maturity. These maturity models were considered as a structure to ascertain the level of programme management maturity in a multi-sectoral assessment, however it was decided against this due to the following deficiencies this study considered with the models:

- The models in question have no theoretical underpinnings, and are purely from a practitioner standpoint.
- They are not directly aligned to the programme management maturity guiding principles emanating from the project and programme management literature
- They make no reference to use or suitability in a multi-sectoral setting
- They are more related to competency and operations rather than both the execution, use and perception of programmes by organisations.

When one views the more generic maturity models, it is evident they are not developed or derived from any academic basis in general terms, nor to project or programme management, but from a practitioner setting. Furthermore, generic maturity models are aligned to information technology and software engineering applications, and not those of project or programme management.

With the deficiencies of the available maturity assessment models considered, the author decided on developing their own model directly based on the gaps identified on the literature. The justification for this study pursuing its own maturity assessment model is to ensure the study adds to the current theoretical perspective directly and address the gaps identified. Also, a research objective of this research, outlined in section 1.5.2, is to confirm the current level of maturity in practice, and to confirm if these gaps have narrowed. The use of existing models, rather than the one designed for this study, would fail that objective by not directly addressing the gaps in the literature.

2.6 Summary

This literature review has looked at programme management in four sections. Firstly, it has assessed the origins of programme management from project management, the links between both, and where there is a lack of distinction between both disciplines. This has been carried out through examining how project management is linked to programme management through its definition, and the expansion of its role and application. This was supported by demonstrating how one could infer that programmes have emerged from projects, and where there is that lack of distinction between both disciplines. Finally, an outline of the wide variance in programme definitions is given. A number of institutional descriptors can be used to describe the key themes in the literature related to this aspect of projects and programmes.

Next the subject of what is being delivered by both projects and programmes is assessed. The rationale for attempting to broadly explain what both disciplines deliver is also to ascertain if there is a clear link between them, and of any evolution between projects and programmes. It has been outlined how projects focus on the delivery of value, how this value can be measured, and how it can be analysed. The subject of what programmes deliver is also investigated, and examines the definition programme success. Further research yields how projects have evolved to meet organisational needs. Inference is made to programmes emerging from projects through the latter's evolution of being used to meet organisational needs, this is seen as a significant link. Finally, the research turned to the link between programmes and business needs. It is outlined how some quarters believe programmes are not truly aligned to business needs, and that this may be as a result of organisations not truly understanding the value proposition of programmes. The area of what is being delivered by projects and programme can be explained through a number of institutional descriptors.

The review progresses by looking at how projects and programmes deliver, and the links between both disciplines. This is divided into a number of sections looking at project's emphasis on process definition and control, and examines programme management techniques, approaches and models. Finally it examines programme management by looking at the definition of governance, roles and responsibilities, and the leadership competencies of successful programme managers. This section has shown that projects place much emphasis on process definition, where it extends throughout many facets of projects and project management. Project management's emphasis on control is also demonstrated through its

focus on processes in monitoring and controlling lifecycle stages. Consideration is given to programme management techniques, or more specifically, the lack of, where little research has been exercised, and that there is variance in the ways programmes are executed. Further focus is given to there being no standard approach to programme management. The literature states programme management approaches had started to emerge from those of projects, however, little evidence is seen as to the formalisation of these approaches. Where approaches are evident, they have seen criticism for the management of the relationship between the programme and the constituent projects, and the relationship between individual project managers. The lack of a generic model of programme management is addressed, with a list of the large number programme models and typologies demonstrating the variance in models. The section follows on by looking at definitions of governance and roles and responsibilities within programmes. It outlines the numerous roles and responsibilities within programmes, which demonstrates the variance around this topic. Attention is also given to the fact that little research has been conducted into the governance of programmes. A number of institutional descriptors can be used to describe and enhance the various constituents of project and programme delivery. Also, attention turns to the leadership competencies of successful programme managers. A list of these competencies, as evident in the literature, is presented. It shows the breath of leadership competencies required of programme managers, plus the diversity and complexity of the role. This section of the review has also outlined how a number of institutional descriptors can be used to enhance and describe the various constituents of project and programme delivery.

The final section of the literature review outlines how programme management is still an emerging area of management, and where suggestions for further research have emerged. This research goes further by outlining specific references to areas for research, related to the nature of change being implemented by programmes and stakeholder perspective. Furthermore, an overview of maturity assessment models is given, however a justification has been given for pursuing a maturity assessment model designed for this study in order to directly address the gaps in the literature.

The overarching output of the review is the realisation of gaps in the literature and themes surrounding programme management. These gaps have been described as maturity guiding principles, of which there are twelve, and are seen as opportunities for research which this study intends to pursue as part of a programme management maturity research framework. Table 2.7 lists the programme management maturity guiding principles that have emerged from the

literature review. The programme maturity framework model of analysis being testing in this research can be seen in figure 2.3. An examination of the current maturity models leads one to the conclusion that none are aligned to the maturity gaps evident from the literature, therefore this research will need to develop its own model to assess the guiding principles identified. Furthermore the author made the decision to pursue an overarching maturity assessment entailing all of the guiding principles, as no existing maturity is evident from the literature, or based on the gaps in the literature, and it was difficult to justify pursuing research in one or a number of guiding principles versus an overarching maturity assessment.

Maturity Guiding Principle	Section	Level of Maturity
Programme management is derived from project management	2.2.5	Medium
The conception of programme management is not universally agreed	2.2.5	Low
Is there a lack of distinction between projects and programmes?	2.2.6	Low
There is no agreed definition of a programme	2.2.7	Low
There is a poorly developed definition of programme success	2.3.3.1	Low
Are programmes aligned to business needs?	2.3.5	Low
Is there a lack of established programme management techniques?	2.4.3	Low
Is there is a standard approach to programme management?	2.4.4	Low
'Is there a generic model of programme management?	2.4.5	Low
'Do programmes have clearly defined governance, roles and responsibilities?	2.4.7	Low

There is a need to understand the leadership competencies of successful programme managers	2.4.8	Low
Is future research required in the area of programme management?	2.5.2	Low

Table 2.7 – Programme Management Maturity Guiding Principles

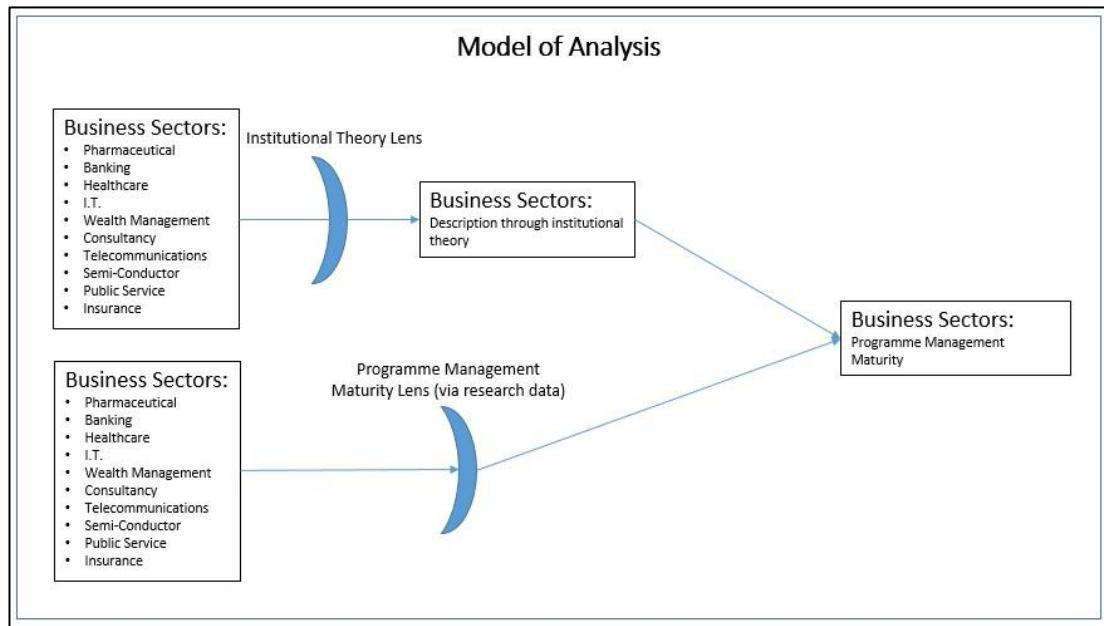


Figure 2.3 – Model of Analysis

The summation of this research has led the author to the research question:

What is the current level of maturity of the practice of programme management within the multinational sector in Ireland?

The following chapter of this dissertation investigates the philosophical core of the research methodology that was used in this study. The chapter will outline the maturity framework developed, and the method undertaken to test the proposed framework, whilst also outlining the survey design and analysis approach.

3 Research Methodology

3.1 Introduction

The literature review chapter of this dissertation has already outlined the key themes from the literature, where opportunities lie for research, and what research this study intends to pursue. The research methodology section outlines what research method has been undertaken to conduct the research in this study. This section first addresses the researcher's perspective, and outlines what the options for ontological, epistemological and axiological views are. Next a recap of the literature findings are given in order to put the paradigms for research into perspective. Then, the options for the analytical approach are outlined, and based on the paradigms for research and the analytical approach options, the research approach is chosen. From this point, an outline of the disciplinary traditions is given, after which, one is chosen and the justification to pursue that chosen discipline. This then leads to describing the conceptual research framework.

A description of the data collection method is outlined, and then moves onto how the data will be analysed. An overarching summary of the research methodology model is then outlined to give a broad perspective of the research execution. From this point onward, an overview of interview design and execution process is given, the population for selection of interview candidates is outlined and justified, and a review of the ethics approval process is given. Finally, the process of how the interview data was collected, reviewed and analysed is outlined. This includes how the interview question responses were scored from a maturity standpoint, and how this scoring translated across the guiding principles and the business sectors.

3.2 Paradigms for Research

3.2.1 Researcher Standpoint

Olson has stated the importance of the researcher taking time in advance of conducting a study to think about how they became interested in their particular topic (Olson, 2011, p. 13). Importance is also given to when the topic became of interest to the researcher, and why is it important (Olson, 2011, p. 13). From this researcher's point of view, interest emanated from their experience as a project and programme manager within a number of business sectors. During their experience in these roles, one shortfall of programme management which became apparent to them was the lack of definition in team member's roles and responsibilities. The impact of this was seen in the lack of accountability and ownership of activities, and a general inefficiency in the execution of programmes. With an interest in better understanding this phenomenon and furthering their education, the researcher conducted some initial investigations into programme management literature, which supported what was being seen in practice. The combined experiences of the researcher, coupled with the initial literature investigation, led to this study's research commencing. Olson (Olson, 2011, p. 13) goes further by putting weight to the researcher's standpoint of what can they bring to this field of research, and why is it important to them. The proceeding sections of this methodology chapter details an assessment of programme management maturity within multinational corporations in Ireland, using an institutional theory lens to qualify this the maturity assessment. Based on the programme management literature, the researcher believes this has not been carried out previously and will serve to outline key areas of development within the programme management discipline.

Olson (Olson, 2011, p. 13) underscores the importance of the researcher standpoint by making reference to Frank (Frank, 2000, p. 365) who states that standpoint "requires self-consciousness about how fate and choices in your life have positioned you in the world and with whom you have been positioned". This researcher's experiences and initial investigations into programme management roles and responsibilities are aligned to both Olson's and Frank's guidance. The initial work carried out by the researcher has been developed through a thorough literature assessment to result in a research question, which will be outlined in the following sections. Upon the development of a research question, the next item to be addressed is the most suitable

research design, where assumptions and perspective must be built into the research design (Olson, 2011, p. 15).

3.2.2 Perspective

The researcher needs to assess if they would like to conduct the study from the perspective of an 'insider' (emic), or an outsider (etic). The decision on which perspective to take will impact who the study participants will be, and how the data will be collected (Olson, 2011, p. 15). Where an emic perspective is taken, it normally lends itself to qualitative research, as it has an objective to learn about experience directly from a person who had the experience and can describe it (Fetterman, 2008). This perspective lends itself to interviews as a method of gathering data. Where an etic perspective is considered, the research will normally use quantitative methods to obtain data under validated instruments or other similar approaches (Olson, 2011, p. 15). The researcher must also take into account, when designing the research question, that both etic and emic perspectives may be required, and therefore a mixed methodology design would be called for (Morse, 2003).

3.2.3 Ontological View

Ontology refers to how a researcher considers the nature of existence and being (Noonan, 2008), or reality and truth (Hogan, et al., 2009, p. 60). Essentially, Ontology is asking the question 'What is the nature of reality?' (Polit & Tanato Beck, 2008, p. 13), where one can look at it from a positivist, naturalistic or even pragmatic paradigm. Positivism is 'a reflection of a broader cultural phenomenon that, in the humanities, is referred to as modernism, which emphasises the rational and the scientific' (Polit & Tanato Beck, 2008, p. 14). Positivism research activity focuses on understanding the underlying causes of natural phenomena, and uses 'orderly, disciplined procedures with tight controls over the research situation' (Polit & Tanato Beck, 2008, p. 15).

Naturalism has a view that reality is 'multiple and subjective, and mentally constructed by individuals (Polit & Tanato Beck, 2008, p. 14). The naturalist viewpoint is a 'position of relativism:

if there are always multiple interpretations of reality that exist in people's minds, then there is no process by which the ultimate truth or falsity of the constructions can be determined' (Polit & Tanato Beck, 2008, p. 15). The naturalistic paradigm uses enquiries where there is an interaction between the enquirer and the participants.

An alternative view to positivism and naturalism is pragmatism. Morgan (Morgan, 2014, p. 1046) references Denzin by stating pragmatism is not a 'methodology per se, It is a doctrine of meaning and a theory of truth' (Denzin, 2012, p. 81). Creswell (Creswell, 2007, p. 23) supports this by stating 'Pragmatism is not committed to any one system of philosophy and reality', and that research 'always occurs in social, historical, political, and other contexts'. Morgan's (Morgan, 2014, p. 1046) further referencing of Denzin states pragmatism:

'... rests on the argument that the meaning of an event cannot be given in advance of experience. The focus is on the consequences and meanings of an action or event in a social situation. This concern goes beyond any given methodology or any problem-solving activity.' (Denzin, 2012, p. 86).

Researcher's holding a pragmatist view focus on the outcomes of the research i.e. the actions, situations and consequences of inquiry, rather than antecedent conditions (Creswell, 2007, p. 23). Creswell (Creswell, 2007, p. 23) goes further by stating that where a pragmatist view is held, individual researchers are 'free to choose the methods, techniques, and procedures of research that best meet their needs and purposes'. Pragmatism is a deconstructive paradigm that advocates the use of mixed methods in research, it "sidesteps the contentious issues of truth and reality" (Feilzer, 2010, p. 8) and "focuses instead on 'what works' as the truth regarding the research questions under investigation" (Tashakkori & Teddlie, 2003, p. 713).

3.2.4 Epistemological View

At a holistic level, epistemology is 'the relationship between the inquirer and that being studied (Polit & Tanato Beck, 2008, p. 13). Olson (Olson, 2011, p. 16) refers to Stone by stating 'Epistemology is the study of knowledge and, more precisely, how one can know what exists' (Stone, 2008). Epistemology in the context of the researcher 'refers to how the researcher considers knowledge, or how a researcher can know reality or truth' (Hogan, et al., 2009, p. 61). Similar to ontology, the epistemological view can follow either a positivist, naturalistic or

pragmatist paradigm. From a positivist viewpoint, the ‘enquirer is independent from those being researched; findings are not influenced by the researcher’, and positivists see ‘objectivity as a goal and strive to be as neutral as possible’ (Polit & Tanato Beck, 2008, pp. 14,15). However, from a naturalistic view point, the inquirer ‘interacts with those being researched; findings are the creation of the interactive process’ (Polit & Tanato Beck, 2008, p. 14). The naturalistic enquiry is normally a ‘construction of the individuals participating in the research, reality exists within a context, and many constructions are possible’ (Polit & Tanato Beck, 2008, p. 15). The pragmatist view, according to Morgan’s (Morgan, 2014, p. 1048) referencing of Dewey (Dewey, 2008) states ‘pragmatism as a philosophy addresses the central question: What is the nature of human experience?’. The inquirer and the object of inquiry interact to influence one another; knower and known are inseparable (Morgan, 2014, p. 1048), this is common to both a naturalistic and pragmatic epistemological view.

3.2.5 Axiological View

The axiological paradigm refers to ‘what is the role of values in the enquiry’ (Polit & Tanato Beck, 2008, p. 13). Hesse-Beber and Leavy (Hesse-Biber & Leavy, 2008, p. 878) describe axiology as:

“being cognizant of our values, attitudes, and biases and acknowledging how these might play out in research praxis in terms of (a) what questions are asked or not asked in our research, (b) what type of data are or are not collected, and (c) the type of methods, measurement, analysis, and interpretation that shape our understanding of the research process.”

As with the ontological and epistemological paradigms, the axiologic paradigm can be described in positivist and naturalistic viewpoints. From the positivist standpoint, in an axiological assumption, ‘values and biases are to be held in check; objectivity is sought’ (Polit & Tanato Beck, 2008, p. 14). Whereas the axiologic assumption from the naturalist viewpoint states ‘subjectivity and values are inevitable and desirable’ (Polit & Tanato Beck, 2008, p. 14). Inquiries, in the naturalistic sense, are influenced by inquirer values as expressed in a choice of problem, and in the framing, bounding, and focusing of that problem (Lincoln & Guba, 1985, p. 38). In a pragmatist view, its core assumptions about the nature of inquiry can proceed without any need to add axiology as a separate element (Morgan, 2014, p. 1051).

3.3 Literature Review Findings

The literature review carried out to support this research has stated this area of management has received a low level of interest from the academic community since it first came to light in the nineteen nineties. A high level view of the literature can be seen which states there is a low level of maturity in programme management, as a distinct management discipline. Twelve key concepts emerge from the literature in the form of programme management maturity guiding principles. The assessment of the literature shows these concepts can be directly related to measuring programme management maturity. The review of the literature did not unearth any specific hypothesis related to programme management maturity. The observation on programme management maturity was based solely on the key themes from the literature, all of which collectively led to the conclusion that programme management maturity has not been addressed up to this point. The researcher decided an independent 'lens' should be used to qualify and interpret results from data collected. An institutional lens was viewed as being appropriate for this purpose, and will be used to qualify and interpret findings from the study. A research objective has been developed from the assessment of the literature, and the gaps identified, the objective intends to carry out:

'A multi-sectoral maturity assessment of programme management within the multinational corporation sectors in the republic of Ireland.'

With the research objective identified, the next stage is to determine and justify an appropriate research method.

3.4 Analytical Approach

3.4.1 Quantitative vs. Qualitative

Research methods can follow a qualitative, quantitative approach, or a combination of both. Section 3.2 outlined the various paradigms and assumptions associated with research methods. This study now comes to a juncture where a research method must be chosen based on the paradigms, assumptions and the research objective.

Quantitative research, on the one hand, is normally conducted based on previous knowledge, or an already known research question (Polit & Tanato Beck, 2008, p. 65). Therefore the problem already exists, however, the researcher is looking for new evidence on the research area. Quantitative research develops a hypothesis (based on previous knowledge and evidence of a problem) to test (Polit & Tanato Beck, 2008, p. 65), and is normally associated with the positivist tradition, this refers to a set of 'orderly, disciplined procedures used to acquire information' (Polit & Tanato Beck, 2008, p. 16). It tends to concentrate on large samples (Hogan, et al., 2009, p. 5), with controls being put in place to minimise bias and maximise validity (Polit & Tanato Beck, 2008, p. 16).

Qualitative research, on the other hand, is normally aligned to the naturalistic tradition, and places emphasis on 'understanding the human experience and how it is lived' (Polit & Tanato Beck, 2008, p. 17). Qualitative research normally focuses on an area where there is little knowledge or which is poorly understood, a hypothesis may not be developed, and researchers normally proceed with research based on a broad question (Polit & Tanato Beck, 2008, p. 69). The qualitative method tends to focus on small samples, and the subjects chosen for examination are chosen due to an interest to the researcher or research topic (Hogan, et al., 2009, p. 5). The researcher tends to play a key role in the research process, and are 'intimately involved', they examine the data in a manner that requires their own interpretation of the results based on experience and understanding (Hogan, et al., 2009, p. 5).

It must be stated that where a pragmatist tradition is used, there is freedom to choose the analytical approach the researcher deems most suitable to the study. Rosenberg and Yates

(Rosenberg & Yates, 2007, p. 449) reference Morse et al (Morse, et al., 2005) who infer that the pragmatist approach can be one of quantitative, qualitative, or a mixed methodology.

3.4.2 Chosen Approach

The literature review has identified the area of maturity in programme management requiring further research based on twelve concepts (guiding principles). The level of research and knowledge in this area is low, with no hypothesis evident or previous research being carried out in this area, and where the research objective outlines a broad question. These outputs from the literature review guide the research method toward a pragmatist paradigm where engagement with subjects is required to bring insight to the current level of programme management maturity. The twelve guiding principles outlined in the literature review serve as the basis to engage directly with subjects to gain their insight and experience related to the guiding principles.

Based on the research objective, and it's guiding the research toward a pragmatist paradigm, a qualitative assessment was seen as the most appropriate research method.

With the research method being confirmed, the next stage in the methodological process was to determine the most appropriate qualitative instrument.

3.5 Disciplinary Traditions

3.5.1 Introduction

There is a variety of qualitative research designs available to use in studies, these traditions that have provided a theoretical underpinning for qualitative studies come primarily from the disciplines of anthropology, psychology and sociology (Polit & Tanato Beck, 2008, p. 222). Among the most common traditions are those of grounded theory, phenomenology and ethnography. This section will give an outline of the key traditions and justify the tradition to be used for the qualitative method employed in this study.

3.5.2 Grounded Theory

Grounded theory can be described as 'a research method that generates theory from data and is useful for understanding how people resolve problems that are of concern to them' (Adolph, et al., 2011, p. 487). According to Polit and Tanato Beck (Polit & Tanato Beck, 2008, p. 230), grounded theory 'tries to account for actions in a substantive area from the perspective of those involved'. They (Polit & Tanato Beck, 2008, p. 230) go further by referencing Glaser (Glaser, 1998) and state that grounded theory researchers 'seek to understand the actions by focusing on the main concern or problem that the individuals behaviour is designed to resolve'. Polit and Tanato Beck (Polit & Tanato Beck, 2008, p. 230) make further reference to Glaser by stating 'conceptualisation is essential for grounded theory' (Glaser, 2003). They proceed by stating, through a conceptualisation process, the theory that is developed 'represents an abstraction based on the participants' actions and their meanings. The data generated from grounded theory studies are normally from in-depth interviews and observation (Polit & Tanato Beck, 2008, p. 230).

3.5.3 Phenomenology

Phenomenology looks to investigating and understanding the everyday experiences of people, and is where the researcher asks, ‘What is the essence of this phenomenon as experienced by these people and what does it mean?’ (Polit & Tanato Beck, 2008, p. 227). It is essentially a ‘methodological perspective aimed at generating knowledge about how people experience’ (Nagy Hesse-Biber & Leavy, 2011, p. 19). Its goal is to fully understand the lived experience and the perceptions to which it gives rise (Polit & Tanato Beck, 2008, p. 227). This discipline of data collection uses a variety of methods such as observations, in-depth interviews, and written accounts of experiences such as those in diaries (Nagy Hesse-Biber & Leavy, 2011, p. 19).

3.5.4 Ethnography

Ethnography lends itself to a qualitative inquiry involving the description of interpretation of cultural behaviour, and is concerned with broadly defined cultures (Polit & Tanato Beck, 2008, p. 224). Ethnographers normally take on extensive field work to learn about a cultural group, which is usually labour intensive and requires long periods in the field (Polit & Tanato Beck, 2008, p. 225). Three types of information are sought by ethnographers, these are cultural behaviour, cultural artefacts, and cultural speech, therefore this research implies a wide range of data source, from in-depth interviews to physical evidence (diaries, photographs etc.) (Polit & Tanato Beck, 2008, p. 225).

3.5.5 Case Study

Case studies have been described as thorough examinations of a single entity or a small number of entities (Polit & Tanato Beck, 2008, p. 235). According to Yin (Yin, 2014, p. 2), case study research is the preferred method where the main research questions are a ‘how’ or ‘why’; where the researcher has little or no control over events of a behavioural nature; and where the focus of the study is of a contemporary phenomenon as opposed to an entirely historical one. Yin (Yin,

2014, p. 16) provides a further criteria for pursuing a case study approach, referring back to some of his earlier work, by stating "...you want to do case study research because you want to understand the real-world case and assume that such an understanding is likely to involve important contextual conditions pertinent to your case" (Yin & Davis, 2007). As with other research methods, case studies can be used for exploratory, descriptive and explanatory purposes, and can include both single and multiple types (Yin, 2014, pp. 8,18). Multiple and single type case studies have two variant designs, embedded and holistic (Yin, 2014, p. 55). An embedded multiple and/or single case study type is employed where it involves more than one unit of analysis, whereas the holistic type is used where there is a global nature to the case i.e. involving as individual, program or organisation for example (Polit & Tanato Beck, 2008, p. 235).

Yin (Yin, 2014, p. 57) has stated, from a sample size perspective, it is a case of replication as opposed to sampling logic that is used for multiple case studies. He supports this by stating it is similar to the replication logic that is used in multiple experiments as proposed by Hersen and Barlow (Hersen & Barlow, 1976). In a research setting, where using the replication logic, the cases are selected carefully to predict similar (literal) results, or predict contrasting results (theoretical replication) (Yin, 2014, p. 56). The conducting of six to ten case studies is on a par with that of six to ten experiments, and if cases turn out as predicted, this has a compelling case to support the initial proposition (Yin, 2014, p. 56).

With the various traditions outlined, the next section states what tradition was employed, and the justification for pursuing this path.

3.5.6 Justification for Chosen Tradition

This research study has chosen to employ a multiple case study approach. There are a number of justifications for this approach which include:

- Firstly, referring back to the research perspective, a pragmatic approach is being adopted. It has already been outlined in section 3.2.3 (ontological view), how this approach gives a 'freedom' of methodology. However, case studies are seen as being pragmatically driven (Rosenberg & Yates, 2007, p. 448), which lends weight to this study taking a multiple case study approach in its disciplinary tradition.

- The research objective can be classed as a contemporary phenomenon as it is not of a historical nature. It has been noted in section 3.3 how the research objective has not been addressed in programme management research to date, therefore, it is current and can be classed as contemporary.
- Yin (Yin, 2014, p. 57) has stated, through referencing Herriot and Firestone, that evidence from multiple case studies is 'often considered more compelling, and the overall study is therefore regarded more robust (Herriot & Firestone, 1983)'. The purpose of this research is to execute as robust a study as possible, therefore, a multiple case study approach fits that purpose.
- Multiple case studies should follow a logic (Yin, 2014, p. 63). The purpose of this research is to understand the level of programme management maturity in a multi sectoral setting to gauge a holistic level of maturity. Where each sector can be considered an independent case, the replication of the study across the sectors is required. This is consistent with multiple case studies requiring replication (Yin, 2014, p. 63).
- Ethical consideration needs to be given to all research involving human 'subjects (Yin, 2014, p. 77), a number of point of guidance are given by the National Research Council (National Research Council, 2003, pp. 23-28):
 - Gaining informed consent from all persons who may be part of your case study
 - Protecting those who participate in your study from harm, including deception in your study
 - Protecting privacy and confidentiality of those who participate
 - Selecting participants equitably

The ethics approval process used for this study will be outlined in a specific section later in this chapter.

3.5.7 Case Study Structure

The case study structure adopted firstly delivers a description of the business sector involved in the research, and what they do and deliver. The sector descriptions have been referenced from the likes of government statistics offices, universities and other relevant government agencies. Next the sector is described using an institutional lens where institutional descriptors that are most applicable and best describe the sector are outlined, the reasons why the respective institutional descriptors are used to describe the sector are also given. The purpose of the institutional descriptors is also to act as an independent lens to explain the level of programme management maturity and if this is the expected maturity based on these institutional descriptors. Next, the programme management maturity score for the sector is outlined in tabular form, also, each of twelve maturity guiding principle scores used to determine the sector maturity are outlined. This is followed by an outline of any significant scores and information resulting from the research. Finally, keys conclusions and a summary of the case study results are given.

With the choice of tradition being justified and completed, the next aspect of the research design is to determine the most appropriate method of data collection.

3.6 Conceptual Framework

Before proceeding with an outline of the data collection and analysis methods, an overview of the conceptual research framework puts into perspective the flow of activities from the outline of the research topic to the intended research outputs. Figure 3.1 describes, at a high level, the series of activities contained in this research. As has already been outlined to this point, the research topic of this study centres on programme management maturity. The objective of the research was to determine the level of programme management maturity across a number of business sector, this was be directed by twelve maturity guiding principles as described in the review of literature. This chapter of the thesis will proceed by describing the method to be used in collecting data and information for this study. Qualitative interviews were chosen as the most appropriate method, this decision will be justified in section 3.7. As has been outlined in section 3.5, a multiple case study approach was chosen as the disciplinary tradition to execute and analyse this research. This approach had the intended outcome of outlining a programme management maturity score for each of the ten business sectors involved and used an institutional theory lens to explain and qualify these findings.

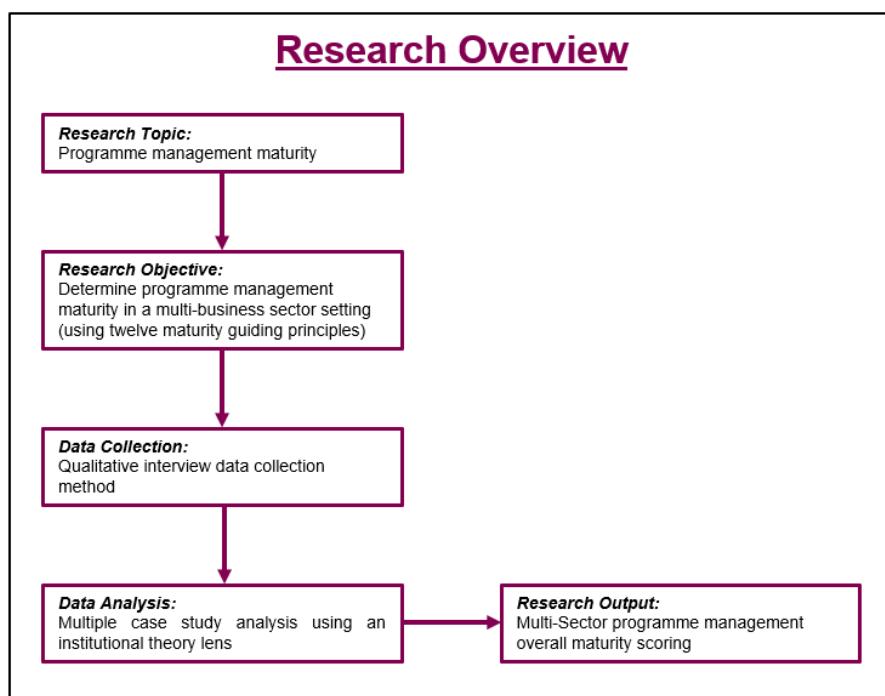


Figure 3.1 – Research Overview

From this point, an outline is given on the data collection and analysis methods used in this research. An overview is also provided on the actual activities which took place in the collection and analysis of data in this study.

3.7 Data Collection Method

With the selection of multiple case study approach for this research, a method of collecting data needed to be chosen. Creswell (Creswell, 2007, p. 75) states data collection in case study research is 'typically extensive, drawing on multiple sources of information, such as observations, interviews, documents, and audio-visual materials'. Creswell (Creswell, 2007, p. 75) supports this statement by referencing Yin's (Yin, 2003) recommending six ways of collecting information, these being documents, archival records, interviews, direct observations, participant observations and physical artefacts. Interviews have been commonly found in case study research, are seen as an essential source of case study evidence, and are normally guided conversations as opposed to structured questions (Yin, 2014, pp. 110,112). Although the researcher will be following a consistent line of inquiry, the line of questions in case study interviews are normally fluid rather than rigid (Weiss, 1994). Interviews can be categorised as prolonged case study interviews, shorter case study interviews and survey interviews in a case study, these can be described as follows (Yin, 2014, pp. 110-114):

- Prolonged Case Study Interviews – Take place over two or more hours and either in a single or multiple sitting. Interviewees can be asked about their interpretations and opinions about people and events. Propositions can be used for further inquiry, and the interviewee can suggest further people to interview. Interviewees can be considered 'informants, and key informants are often key to the success of a case study. The researcher needs to be cautious about becoming too dependent on a key informant.
- Shorter Case Study Interviews – Many of these type case study interviews may be more focused and take about one hour to conduct. These interviews remain open ended and conversational, but will be following a case study protocol. This type of interview may be used to corroborate certain findings, but not to ask about broader topics. As with the prolonged case study interviews, the shorter case study type has the risk of becoming too dependent on key interview candidates.

- Survey Interviews in a Case Study – This is considered the typical interview, where a structured questionnaire is used. This type of interview is suitable for embedded type case studies

The researcher decided on employing survey type qualitative interviews to gather data for this study.

The reasoning behind this decision lies with the researcher's access to suitable interview candidates from his own professional network, and that of his supervisor. Coupled with this, the researcher understood the candidates being suggested for requesting interviews had sufficient knowledge and experience of strategy implementation and or programme management. Interviews with such candidates was seen as the most efficient way to collect data. An embedded type of multi case study was employed, as the multiple case studies centred around the individual business sectors where programme management maturity was being measured, essentially, the embedded study called for the conducting of a 'survey' at each case study site (Yin, 2014, p. 62). Another reason to conduct a survey type interview was repeated access to the candidates in questions was unlikely due to their senior roles within their organisations, therefore the interview was a 'one chance' to gather valuable data.

3.7.1 Qualitative Interviews

Kvale (Kvale, 1996, p. 3) sees two contrasting views of the interviewer, that of a miner and a traveller. The miner analogy refers to knowledge being a buried metal (valuable data) which the interviewer unearths and is uncontaminated by the miner (researcher). Whereas the traveller analogy refers to the interviewer being on a journey that leads to a tale upon their returning home, but this journey may also change the traveller (researcher).

Qualitative interviews have been challenged in the past about their scientific value, as a result of the interview not being considered a scientific method, with certain texts, for example (Marshall & Rossman, 1995), dedicating an entire chapter to defending the logic and value of qualitative interviews (Kvale, 1996, p. 59). However, as mentioned in section 3.4.1, the

naturalistic research paradigm veers toward the use of qualitative interview methods as it places emphasis on ‘understanding the human experience as it is lived’ (Polit & Tanato Beck, 2008, p. 17), which is directly applicable to this research. To support this, interviews are seen as ideally suited to experience-type research questions (Braun & Clarke, 2013, p. 81). Kvale (Kvale, 1996, p. 81) details seven stages of qualitative interviews, these being thematising, designing, interviewing, transcribing, analysing, verifying and reporting. He (Kvale, 1996, p. 89) goes further and describes thematising as ‘a conceptual clarification and a theoretical analyses of the theme investigated, and the formulation of research questions. The literature review conducted has outlined a research objective, plus twelve concepts to be assessed as part of the research model.

The design aspect of qualitative interviewing basically covers the remaining five stages of the process from the design of the interviews themselves through transcription, analysis, verification and reporting (Kvale, 1996, p. 99). Items that should be taken into consideration when designing a qualitative interview include:

- The brainstorming of interview questions related to the area of interest (Smith, 1995).
- The ‘sequencing of questions so that they flow logically and cluster into topic based sections’ (Braun & Clarke, 2013, p. 84).
- The drafting and redrafting of interview questions as first drafts can be too direct, closed and leading (Smith, 1995).
- Make considerations for the interviewing of people which the interviewer does know (which is acceptable) or does not (Braun & Clarke, 2013, pp. 85-86). Where the interviewee is known to the interviewer, acquaintance interview (Garton & Copland, 2010), the interviewer must be careful not to put pressure on a person to participate, or disclose information in the interview (Braun & Clarke, 2013, p. 87).
- Prepare for the face to face interview by testing on a trusted friend or colleague (Braun & Clarke, 2013, p. 90). This preparation can include practicing the multi-tasking required for

the interview, keeping check on the recording equipment, and practicing the opening and closing statements (Braun & Clarke, 2013, p. 90).

- Prepare the supporting documents for the interview i.e. interview request email with the supporting documents where applicable (Braun & Clarke, 2013, p. 90).
- It is advised not to conduct more than one interview per day as the researcher needs to take time to reflect on the interviews conducted, plus more than one a day may lead to issues like missing questions, or following up on points (Rubin & Rubin, 1995). Added to this, interviewing can be emotionally draining (Hallowell, et al., 2005), so it is advised to avoid scheduling many interviews in a close time sequence (Braun & Clarke, 2013, p. 91).
- The location of the interview is advised as a neutral location where the interviewee feels comfortable, with as few background distractions (Braun & Clarke, 2013, p. 91).
- Qualitative interviewers are interested in the details of participants experience's and perspectives, it is seen as key to have a precise recording of the interview (Braun & Clarke, 2013, p. 92). Aspects of recording interviews to be aware of include the quality of the recorder, if a microphone is required with the recording device, battery life of the recorder, how close the device should be to the participant without it being intrusive, and knowing how to confirm the device is still recording (Braun & Clarke, 2013, p. 92).

Once the execution of the interviews has been completed, the next item which needs to be addressed is that of data and information management. Emphasis has been placed on the importance of having a systematic approach employed before the collection of data begins to ensure it is safely stored and managed (Olson, 2011).

The focus of the study method now turns to that of data and information analysis, this will be viewed from both multiple case study and qualitative interview perspectives.

3.8 Data Analysis

The research methodology being employed for this study uses a multiple case study approach, with the data collection being provided via qualitative interviews. From an analytical standpoint, this section outlines the appropriate analysis method for both aspects of the research. Data from a case study perspective can be said to consist of examining, categorising, tabulating and testing information to produce empirically based findings (Yin, 2014, p. 132). From a qualitative study and interview perspective, data analysis involves the 'clustering together related types of narrative information into a coherent scheme', through analysis and interpretation, the researcher begins to identify themes and categories that are used to build a description of the phenomenon (Polit & Tanato Beck, 2008, p. 70).

3.8.1 Multiple Case Study Analysis

A case study analysis strategy has the key purpose of linking the case data to the concepts of interest, and then to have those concepts of interest give the researcher a sense of direction in analysing the data (Yin, 2014, p. 142). Case study analysis allows the researcher to develop their own strategy, or consider pre-existing strategies, which include relying on theoretical propositions, working ones data from the ground up, developing a case description and examining plausible rival explanations (Yin, 2014, pp. 136-142). The strategy of relying on theoretical propositions means the following of theoretical propositions that led to the case study, set the design of the method, and in turn have led to a new hypothesis or proposition (Yin, 2014, p. 136). Where there is a strategy of working ones data from the ground up, it is considered an inductive approach, where the data is 'played with' to yield a useful concept, and with further analysis can lead to suggesting additional relationships (Yin, 2014, pp. 138,139). Guidance has come from the originators of grounded theory (Corbin & Strauss, 2007) in an inductive approach to data analysis. One additional feature of inductive analysis is it offers support of a quantitative analysis if your study call for this (Yin, 2014, p. 138).

If the strategy is one of developing a case description, the researcher uses an analytical strategy to organise the case study according a descriptive framework (Yin, 2014, p. 139). This strategy is used where the researcher has difficulty in applying strategies relying on theoretical

propositions and working data from the ground up. It can be used in situations where data has been collected, but an initial set of research questions or propositions have not been fully developed (Yin, 2014, p. 139). A fourth general analytical method is that of examining plausible rival explanations. This is a strategy which works in combination with the above three strategies, and essentially may involve an alternative description of other strategies (Yin, 2014, p. 141).

Whatever the analysis strategy, it is recommended to use one of five analytical techniques in executing the analysis strategy, these are pattern matching, explanation building, time-series analysis, logic models and cross case synthesis.

Pattern matching is one of the most popular techniques (Yin, 2014, p. 143), and compares a pattern identified through empirical data with a pattern predicted before the data was collected (Trochim, 1989). This type of analysis is broken into 'non-equivalent dependent variables as a pattern', 'rival independent variables as a pattern', and 'precision of pattern matching' (Yin, 2014, pp. 143-147). The explanatory building analysis technique is also a pattern matching type of analysis with the goal of analysing case study data and building an explanation about the case (Yin, 2014, p. 147). This analysis technique is iterative in nature, has not been well documented in operational terms, and is considered risky due to researchers possibly drifting away from the original topic of interest as a result of the iterative nature of this technique (Yin, 2014, p. 150). The time series analytical technique essentially conducts time-series analysis on a single dependent or independent variable (Yin, 2014, p. 151). This type of analysis is a 'match between the observed (empirical) trend and either a) a theoretically significant trend specified before the onset of the investigation or b) some rival trend' (Yin, 2014, p. 151). Time series analysis can also consist of complex time series designs, and chronological sequences.

According to Yin (Yin, 2014, p. 155), the logic model of analysis is seen as useful in doing case study evaluations (Mulroy & Lauber, 2004), but also for studying theories of change (Funnell & Rogers, 2011). The logic model outlines and operationalises a chain of events over a period of time, it matches empirically observed events to theoretically predicted events (Yin, 2014, p. 155). Logic models can be broken into individual level logic models, organisational level logic models and program level logic models, they can use quantitative or qualitative data, depending on the case being studies (Yin, 2014, pp. 157-163). Cross case synthesis, as the name suggests, only applies to multiple cases, whereas the other three techniques can be used on single or multiple cases (Yin, 2014, p. 164). Each case is treated as a separate study, but may be designed to extend to a higher level beyond the cross-case analysis (Yin, 2014, pp. 164,167).

With the options for case study analysis outlined, next the analysis of qualitative interviews must be addressed to complete a holistic analysis options overview.

3.8.2 Qualitative Interview Analysis

Kvale (Kvale, 1996) has outlined five approaches to interview analysis, these are listed as condensation, categorisation, narrative, interpretation and ad hoc. Condensation refers to compressing long statements into briefer statements allowing what has been said to be rephrased into a few words (Kvale, 1996, p. 192). Categorisation refers to the interview being coded into categories indicating the occurrence or non-occurrence of phenomenon (Kvale, 1996, p. 192). Narrative structuring attempts to 'create a coherent story out of many happenings reported throughout an interview' (Kvale, 1996, p. 192). Interpretation goes to a deeper and less speculative interpretation of the text from the interview and can be based on the researcher's view of that text (Kvale, 1996). The ad hoc approach is a wide ranging one, based not only on those mentioned in this section, but also other common-sense approaches, and can be used to bring out meanings from the material.

3.9 Research Execution

To this point in the methodology, all previous sections have outlined the options available and suitable for this research study. Figure 3.2 below gives an overview of the study method in terms of the options and path the study decided to take. From this point in the methodology, focus now turns to activates carried out to undertake this research.

To summarise the research methodology, it can be described as a pragmatic and emic qualitative method using a multi-case study tradition where qualitative interviews will be employed to gather data.

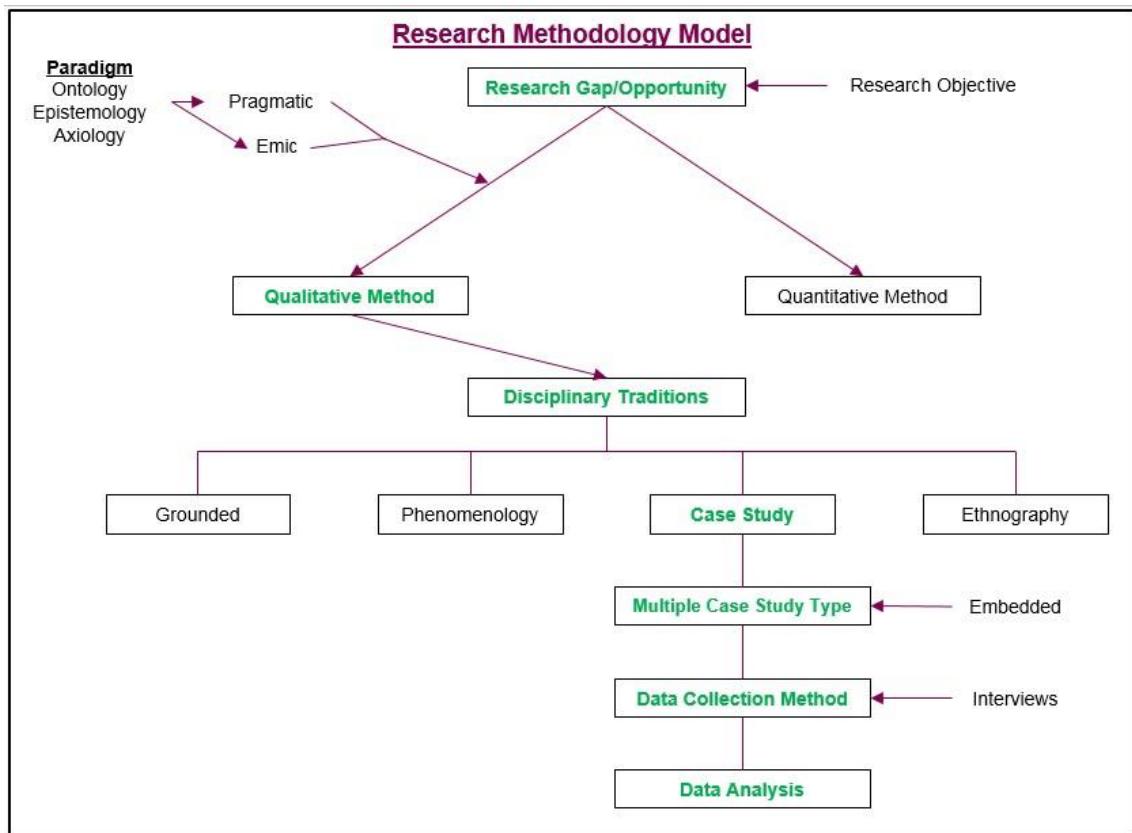


Figure 3.2 – Research Methodology Model

The proceeding sections of this methodology describe the activities carried out to perform the research method. The sections outline activities contained in the design and execution of interviews and gives an overarching view of interview process. A further outline is given on the ethics approval process, interview transcription and data analysis.

3.10 Interview Design

3.10.1 Initial Design Process

The first stage of the interview process design looked at breaking the face to face interview process into three stages, the interviewer's perspective, the interviewee's perspective, and the list of interview questions.

From the interviewer's perspective, the interviewees were engaged in this study to support research into programme management maturity. The interview candidates engaged for this study came from the areas of programme management and strategy implementation, where their roles included being programme managers, practitioners, sponsors or directors. It was important that they had a knowledge of the implementation of strategy using programme and project management methodologies. The interviewee's perspective was to conduct interviews in which the participants would engage in and would be based on a discrete list of questions, but would be of a semi-structured nature. The duration of the interview was targeted to be one hour, and all information and data collected in the interview would be deemed confidential. Appendix A outlines the list of questions designed for the interview process. Initially, eighteen interview questions were developed, and loosely linked to the twelve maturity guiding principles outlined in the literature review.

3.10.2 Initial Interview Questions Design

The initial interview design focused on the development of a list of question related to programme management understanding, and its link to strategy implementation. Less focus was given to the direct link to the maturity guiding principles, and to programme management's origins from project management. In the listing of the original questions, it can be seen that they did not show any format or direct link to the maturity guiding principles. Essentially a list of interview questions was drafted based on investigating programme management maturity against guiding principles. At this stage in the research process, no data was available to anticipate what the duration of the interview would be, therefore a pilot interview process was

considered researcher. The pilot interview process had the purpose of refining the logistical process of securing, scheduling, and conducting an interview. It would also allow for refinement of content of the questions, and the order of the questions in the interview. The pilot interview also served to allow the interviewer become acclimatised to conducting face to face interviews, coupled with using a recording device and taking field notes.

3.10.3 Pilot Interview Process

A total of three pilot interviews were conducted with colleagues whom the researcher was confident had an understanding of strategy implementation, plus project and programme management experience. The data from these interviews was deemed inadmissible, as it was not the finalised list of interview questions for the study. Additionally, the pilot interviews were conducted as part of a study refinement process, and the relationship of the interviewer to the interviewees could lead to skewed results.

The key learnings that emanated from the pilot interviews were:

- The flow and sequence of the interview questions needed to be refined to demonstrate more alignment to the twelve maturity guiding principles. While conducting the pilot interview, the lack of a logical flow was evident, and was identified as an area requiring improvement.
- The wording of interview questions required more modification and enhancement to lead the interviewee to the key point of the question, essentially a more efficient wording of questions.
- Some issues with the recording device (a smart phone) related to its setting up and the downloading of the recorded interview were identified. One specific example of this was where the phone was not set to flight mode, it would allow a phone call to be delivered during the interview and led to the recording function being shut off.

- The interviewer learned much about the pace of the interview, how to control time through guiding the interviewee to close answers. It also helped the interviewer learn to request clarifications and summations, particularly where long answers were given.
- The interviewer learned that the recording device could 'pickup' all verbal answers, allowing time for commentary notes to be taken. This also allowed the interviewee the opportunity of being able to regulate the timing of the interviews with ease, without the added role of taking detailed notes.
- One important item the pilot interview highlighted was that the interviews were commenced in a cold manner. This is where the interview commenced with an initial introduction, but then it delved immediately into the key interview questions. There was no period in the interview where the interviewee could become comfortable before engaging in the response to the questions. In order to resolve this issue, the final list of interview questions commenced with asking the candidates to draw where the programme management organisation sat within the overall organisation. This allowed the interview candidate to think about where the programme management organisation sat within the overall organisation. It also let candidates become more comfortable with the interview process by describing an aspect of their organisation they were comfortable with.
- The importance of ethics and confidentiality in such a process required a level of discipline in such interviews. The pilot interviews allowed the interviewer time to build and refine the discipline of informing the interviewee of the ethical approval that had been granted for study, plus the discipline of seeking permission to record the interview on a device.

The learnings from the pilot interview process were used to refine the list of interview questions, their sequence and clear link to the maturity guiding principles, but also the way in which interviews were conducted.

3.10.4 Finalised Interview Question Design

The interview questions were redesigned to create a clearer link to the programme management maturity guiding principles. The finalised list of interview questions was developed to link directly into and measure the maturity of guiding principles. The question design was done in such a way as to enquire into the maturity across one or more guiding principle, and multiple relevant questions could be used to gain an understand of guiding principle maturity, Table 3.3 describes this. Question 1 was intended an 'ice-breaker' to make the interviewee feel comfortable at the start of the interview. The link to the guiding principles was broken into six broad interview stages of project management, strategy, programme management, Programme structure, success criteria and the programme manager. Appendix E demonstrates this through the interview notes template which outlines this structure. The order and sequence of the interview questions was redesigned to flow logically through the broad interview stages and was designed for ease of use during the interview process. The programme maturity guiding principles, which are the central theme of the research, are examined by the interview questions. The guiding principles are directly linked to the interview questions, these links can be seen in Appendix G. The pilot interview process also allowed the researcher gauge and adjust the timing of the interview and the questions being put to the interviewees. The final plan of the interview in terms of sequence and timing can be seen in Appendix H. With the final interview question design being completed, this allowed the interview process to proceed.

3.10.5 Finalised Interview Process

The learnings from the pilot interview process led to the refinement and completion of an interview process flow, which is outlined in figure 3.3. This outlines the entire process from requesting an interview through to forwarding a thank you email to the interviewees subsequent to the interview being completed. Figure 3.3 also outlines target timelines for completing the individual steps, which allow the researcher to plan how long the data gathering process would take. The interview process flow also allowed the researcher plan and track the individual steps with each of the prospective and confirmed candidates, this can be seen in the

interview tracker in Appendix D. All of the interviews were planned, conducted and tracked to this process.

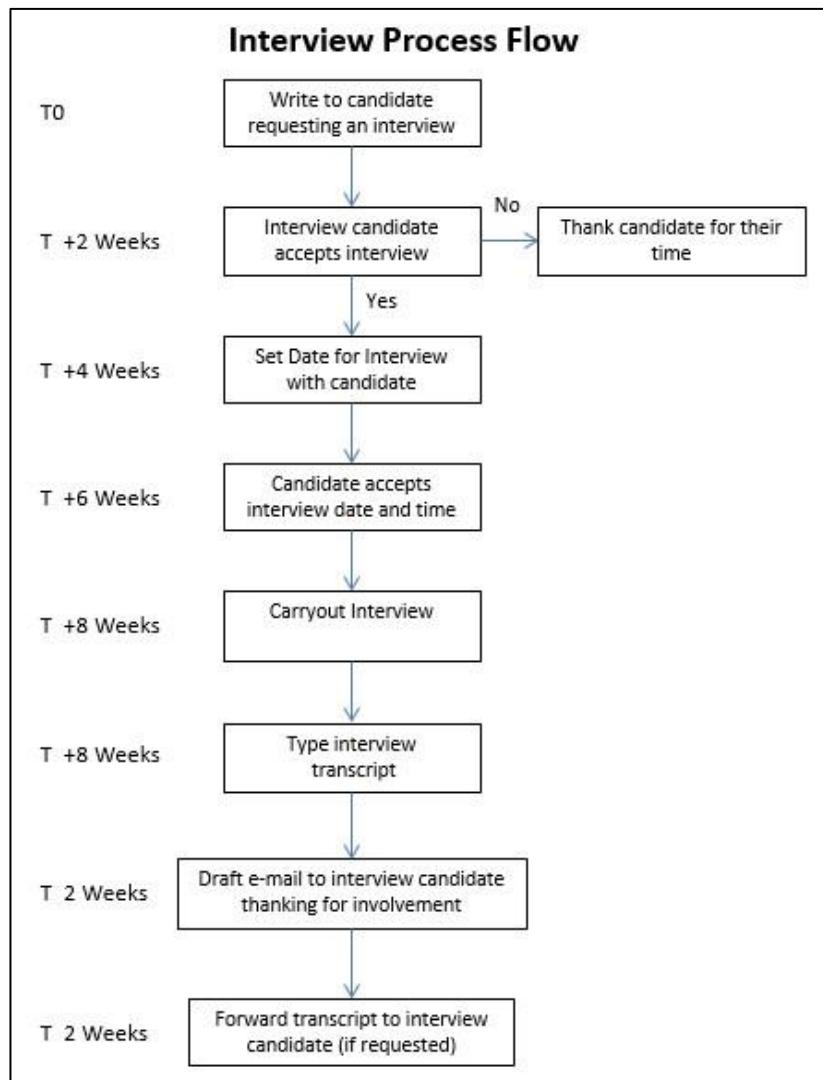


Figure 3.3 – Interview Process Flow

3.10.6 Interview Population

3.10.6.1 Sample Population

It has been outlined in section 3.4 how this study has chosen a qualitative analytical approach and a multiple case study methodology due to the lack of research, limited knowledge and no

evidence of a hypothesis in the area of programme management maturity. In order to pursue an effective and focused data gathering process, the researcher deemed it essential to secure the correct candidates who were knowledgeable in the research area and could deliver specific information for the study. This study's sampling needs were aligned to that of purposive sampling, where the aim is to 'sample a group of people or settings with a particular characteristic and is usually in a qualitative research design' (Bowling, 2009, p. 208). In purposive sampling the researcher can decide to select individuals who can purposefully 'inform an understanding of the research problem' (Creswell, 2007, p. 125) and who are judged, by the researcher, to be knowledgeable about the issues being investigated in the study (Polit & Tanato Beck, 2008, p. 343). Several strategies are available to purposive sampling, these include maximum variation, homogeneous, extreme case, intensity, typical case and critical case to mention some as highlighted by Polit and Tanato Beck's (Polit & Tanato Beck, 2008, pp. 355-356) referencing Patton (Patton, 2002). The disadvantages of purposive sampling are that it may provide too much focus on a certain data, while missing a broader range of data (MacNee & McCabe, 2008, p. 122), this may also lead to some to believe incorrectly that the purposive sample is from a larger population, particularly in a case multiple study situation (Yin, 2014, p. 44).

This research pursued a purposive sample type using a homogenous sampling strategy due to the benefit it brings in reduced variation and allowance for a more focused inquiry, this allows the researcher to understand a particular group especially well (Polit & Tanato Beck, 2008, p. 355). The research intent was to access a population of cases who had specific experience of the programme management discipline, and its use in the implementation of strategy. The author also wanted to ensure the participant cases were equally contributing to the research objective. The research was conducted using a multi-sectoral approach where ten business sectors were used to gather data, under the twelve programme management maturity guiding principles, to deliver an assessment of programme management maturity in practice. Figure 3.4 illustrates the business sectors that participated in the research, and its aim to have all of the business sectors involved contribute in a non-biased way to develop a programme management maturity assessment.



Figure 3.4 Multi-Business Sector Contribution to Maturity Assessment

3.10.6.2 Multi Sector versus Single Sector Population

In advance of the multi-sector population being used in the sampling approach was selected, the study examined the advantages and disadvantages of multi and single sector populations, sections 3.10.6.3.1 and 3.10.6.3.2 outline the considerations for both.

3.10.6.2.1 Single Business Sector Sample Population

When the single sector sample population is assessed, it may be logically easier to execute. The reason for this may lie with the fact that the researcher works in the Pharmaceutical business sector, and therefore would have a good network of candidates to approach, or could use industry bodies to gain contact details. This would lead to easier access to candidates making the research logistics and preparation much easier than trying to engage with candidates in a different sector with little or no network. Added to this, if one were to assume the researcher is gathering data and information from a business sector in which they work and have a comprehensive network of contacts, then access to interviews with that network, one would assume, would be easier. Were one to conduct interviews in one business sector, this may limit the number of candidates, and essentially the amount of data that can be gathered. Therefore, a smaller data set may result from pursuing data collection from one business sectors as opposed to multiple sectors. A smaller data set may make the data analysis and findings easier to analyse and generate, this could also be interpreted as leading to a shorter and more focused study than that of a larger data set from a multi sector data collection approach.

However, when one looks at the single sector approach, a number of disadvantages come to mind. If one considers taking data and information from a single business sector, this could be considered narrow and skewed because one is taking data from one source, where a number of other sectors exist with possibly rich and varied data and information. It could also be considered skewed as sectors may have their own interpretation of various aspects of programme management, and therefore is not a balanced view. Finally, the aim of this research is to investigate programme management maturity in the broad sense, and not to a specific sector, therefore a single business sector would not match the research criteria. Were the research to pursue information and data collection from one business sector to investigate programme management maturity, what, or how would one determine the best sector to meet the data collection needs. There is difficulty in determining and justifying the pursuit of data collection for a generic maturity model in one business sector, where other business sectors exist to collect data. The various disadvantages outlined in this section for pursuing research in one business sector could be interpreted as having a limited impact from academic and professional standpoints. This can be justified by the fact that a wide range of data exists across a number of business sectors, which would not be included in a single sector study, therefore would not carry weight for a generic programme management maturity assessment.

3.10.6.2.2 Multi Business Sector Sample Population

The disadvantage of pursuing data collection using a single sector approach has been outlined with respect to a small data set has already been highlighted. The converse of this would be the assumption that using a larger data set from a multi sector data collection approach would provide a significant population of data. From a statistical standpoint, the amount of data available from a multiple sector population versus that of a single sector study could and most likely would be larger. The larger and wider ranging data set from a multi-sector study would, from a statistical standpoint, be considered more significant. The selection of a multi sector approach to this research means the insights and views of candidates from multiple sectors would be available as opposed to those from one sector. Hence the result of this should be a broader range of insights as a result of a wider range of candidates with a greater variance in experience. As can be seen outlined in section 3.10.6.3.1, there are a number of points which support the stance that a multi-sector study would lead to a more comprehensive study. These points include a multi-sector study generating a wider set of data, from a larger and experienced population of participants. It has been outlined how a multi-sector population would lead to a more impactful study in an academic and professional setting. Also, the use of a multi-sector study would remove any bias attributed to the research being conducted in one particular business sector. The sum of all of these points leads one to deduce that a multi-sector research study would lead to a more comprehensive study than that of a single sector.

However, with the researcher in this case having worked predominantly in the pharmaceutical sector, their primary network of contacts is mainly based in this sector. This creates difficulty in identifying, selecting, and accessing candidates in multiple business sectors to support this research study. A multi-sector research study could be considered more difficult to from a number of points of view. Firstly one needs to take into account the varying perspectives of multiple sectors rather one perspective from a single sector. This may create more effort required to design the research study. Also, with the possible difficulty of identifying, and accessing candidates from multiple sectors where the researcher has a limited cross sectoral network of contacts, this creates a larger workload logically. Earlier statements in this section have stated how a multi-sector research approach will most likely lead to a larger and more varied data set requiring analysis, due to the multiple and varying sources of data. The generation of data from a multi-sector study may be large, varied and complex to analyse.

3.10.6.2.3 Decision to Select a Multi-Sector Approach

The researcher decided a multi sector population of data would lead to a more comprehensive and balanced study based on a collection of data from a variance of candidates and sectors. It was felt a decision to pursue a single sector population of data would lead to a skewing of results, and a lost opportunity to execute a comprehensive study in this area. Finally, it was also felt that there was ample access to a broad range of sectors to meet the data needs of this research. With the decision made to pursue a multi sector population of data, the next stage was to gain ethical approval to commence research interviews.

3.10.6.3 Interview Sources

The sources of interviews emerged from the researcher's own professional network, and that of the research supervisor. Interview candidates were deemed suitable based on, amongst other things, their level of seniority in the organisation, their years of experience, and their experience of managing programmes and being a senior manager involved in the strategic change initiative within their organisation. The list of selection criteria for interview candidates can be seen in table 3.1 and gives the selection criteria of the candidates per business sector. The range of interview sources came from multiple business sectors in Ireland, the list of these sectors, coupled with the candidate's job roles/titles can be seen in the interview tracking spreadsheet in Appendix D.

The list of candidates emerged from two broad sources, one was from the researcher's professional network, while the second was from the research supervisor's professional network. Where members of the research supervisor's professional network were contacted with respect to participating in this research, it was considered that the researcher had no relationship with these candidates. A total of thirty-four candidates were identified where they were deemed to have the relevant experience and knowledge the researcher viewed applicable to the research.

Interview Candidate Selection Criteria						
Sector	Job Title	Available for Interview	Agreed with Ethics Criteria	Permission to Record	Years' Experience	Experience as Programme Manager
Semi-Conductor	Director Global Logistics	Yes	Yes	Yes	Over twenty	No
Consultancy	Senior Consultant & Senior Programme Manager	Yes	Yes	Yes	Over twenty five	Yes
Pharmaceutical	CEO / Programme Manager / Vice President	Yes	Yes	Yes	Over twenty five	Yes
Telecommunications	Senior Programme Manager	Yes	Yes	Yes	Over Twenty	Yes
Hospital (Healthcare)	Assistant Executive Director	Yes	Yes	Yes	Over twenty five	No
Public Sector	Senior Programme Manager	Yes	Yes	Yes	Over Twenty	Yes
Insurance	Senior Programme Manager	Yes	Yes	Yes	Over twenty five	Yes
Wealth Management	Senior Programme Manager	Yes	Yes	Yes	Over twenty five	Yes
Information Technology	Non Executive Director Programme Director	Yes	Yes	Yes	Over twenty five	Yes
Banking	Head of Strategic Change	Yes	Yes	Yes	Over twenty five	Yes

Table 3.1 - Interviewee Selection Criteria

3.11 Ethics Approval

The subject of ethics approval has been mentioned earlier in section 3.9 with respect to supporting documentation to the interview requests issued to potential candidates. The ethics approval process commenced in March 2015, with the submission of the ethics review submission pack to the Dublin City University Research Ethics Committee on March 9th 2015. A copy of this submission can be seen in Appendix I. The ethical approval form sought, amongst other items, confirmation of:

- The nature of questioning being put to candidates – this was stipulated as ‘questioning participants regarding their opinion on products and services’ and ‘questioning professionals in their professional capacity regarding their professional activities’.
- Justification why the research was considered low risk.
- A description on how candidates would be recruited.
- A plain language statement was attached to the ethics form submission (this can be seen in Appendix K).

The ethics approval for this research was communicated on 02 June 2015 by the research ethics committee, a copy of this communication can be seen in appendix J. This communication also included the research ethics committee’s approval letter, which is contained in Appendix C. With the ethics approval confirmed, this paved the way for the interviewing of candidates to commence.

3.12 Interview Execution

3.12.1 Introduction

This section outlines the process engaged to conduct and manage the interview process during this research study, and includes sourcing of candidates, interview communications and execution

3.12.2 Interview Request Communication

Prior to the interview process described in figure 3.3 commencing, potential candidates were contacted using social media (LinkedIn) where there was no relationship with the candidates. Alternatively, where the researcher's supervisor had a relationship with potential candidates, an introductory email was provided by the supervisor, leading to the researcher issuing an interview request email. Furthermore, where the researcher had a network of individuals who were considered potentially suitable candidates, contact was made via email or telephone to informally request an interview. Upon agreement by the researcher's own contacts to partake in an interview, the formal email request as part of the interview process flow was issued to these candidates.

The interview request email gave an introduction to the researcher, and a brief outline on the research being conducted, the supervisor of the research, a statement that all interview details would be kept confidential, and the request for a response to agree or disagree to participating in the research. A copy of the wording from the interview request email can be seen in Appendix B. The email also served as a formal introduction, and essentially explained the research being conducted. It outlined that ethical approval had been received from Dublin City University to pursue this research as a reassurance of the statement to keep all information confidential in the study. The email provided a copy of the approval letter from the ethics committee dated March 2015, which can be seen in Appendix C. The email requested the candidate to confirm if they would participate in the interview, or if they declined the opportunity. Once confirmation to participate was confirmed, a face to face interview meeting was arranged, or alternatively, a conference call was scheduled.

3.12.3 Interview Execution

A total of thirty-four potential candidates were contacted to request face to face or phone interviews to support this research. Of the thirty-four requests, fifteen interviews transpired for this research. As stated in section 3.10.5, due to the level of logistics required to administer thirty-four potential interview candidates, a spreadsheet was developed to track the varying stages of the interview process with the population of potential candidates from the initial email contact to the completion of interview transcription. A copy of this interview process tracking spreadsheet tab can be seen in Appendix D. However, due to the commitment to confidentiality made by the researcher to interview candidates, the interviewee names, their organisation names and addresses, and their respective contact details are not shared in this document. An interview notes template page was developed to record notes against the various answers given by the interviewees, a copy of this template can be seen in Appendix E. Here again the confidentiality commitments of this research prevent a scanned copy of an actual interview notes page being included in this thesis as they contain interviewee names.

The series of fifteen interview were conducted from the end of June 2015 to the middle of October 2015. In total, ten of the interviews were conducted face to face with the interview candidates, while the remaining five were conducted via telephone. All of the candidates agreed to having the interviews recorded, where each of the interviews yielded a sound recording. Upon the completion and recording of an interview, the interview recording file was downloaded. Next, each of the interview recordings were fully transcribed by the researcher. With the full interview process defined, and then executed, the next stage of the research was to analyse the interview transcripts and note to extract the key themes, messages and learnings.

3.12.4 Post Interview Communication

None of the interview candidates who took part in this research requested a copy of the interview sound recording, or a copy of the transcribed interview. An email was issued to all of the candidates thanking them for their time and participation into the research and offered them an opportunity to discuss the research findings at a later stage once all analysis has been completed and findings were outlined.

3.13 Interview Analysis

3.13.1 Introduction

This section outlines the process of scoring the information and data harvested in the interview process. It gives an overview of the transcription process, the interview analysis model, and how the information and data collected is scored.

3.13.2 Interview Transcription

As outlined in section 3.12.4, once interviews were completed, the sound recording was downloaded, and the interview was fully transcribed by the researcher. A sample of a transcription can be seen in Appendix F. The transcription page outlines each of the questions asked, the respective answer, and the time from when the question was asked to when the answer was completed based on the interview recording. To protect the confidentiality of the interviewee, the sample page of a transcription provided in Appendix F has had the interviewee name removed. The data from the interviews was now available to transfer to a spreadsheet to review and for analysis to commence.

3.13.3 Interview Analysis

The analysis of interviews carried out in this research can be segmented into three components. Firstly, an overarching model of how interview data analysis was conducted is outlined. This is followed by a description of how the data and information harvested from interviews was scored using a low, medium and high maturity scoring. Finally, an outline of how the data analysis is represented in a multiple case study format is given.

3.13.3.1 Interview Analysis

Figure 3.4 gives a picture of the broad analysis structure employed to analyse the information gleaned from the research interviews.

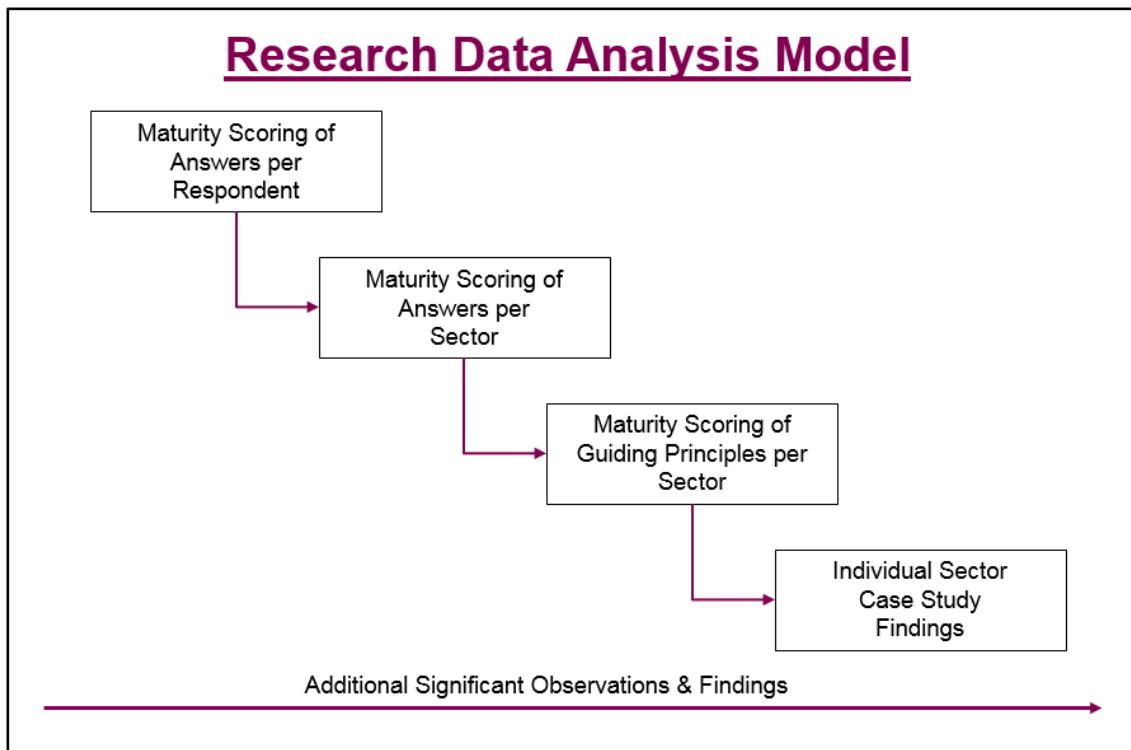


Figure 3.5 – Research Data Analysis Model

The analysis of information from the interview answers began with taking each of the individual questions and listing the answers per candidate. Each of the answers was scored as high, medium or low based on a scoring criterion outlined in section 3.13.3.2. A commentary was drafted based on the collective scoring for each question and broad interpretation of the collective answers against the literature findings was also provided. This aspect of the interview answers analysis allowed the analysis progress to assessing the scoring per industry sector and per the guiding principle. Next the analysis turned to how the maturity scoring of the interview question answers reflected against the twelve maturity guiding principles. This analysis considered the link from the programme management maturity guiding principle to the research questions, and on to the maturity scoring emanating from the answers. The output from this analysis was not only the maturity scoring per answer, but also the programme management guiding principle maturity score per question across all ten business sectors. This analysis was

supported by relevant quotations from the interviews. The scoring criteria for this analysis is outlined in sections 3.13.3.3 to 3.13.3.5. Finally, there was an underlying theme of picking out significant observations from the data. Among these items were the use of the data to develop a generic programme management lifecycle and definition. Additionally, the data from the research highlighted significant observations in the relationship between programme success and benefits realisation, and an analysis of the key programme manager competencies outlined in the literature versus those outlined in the research. The results chapter will give a detailed outline of what the analysis has yielded and its key findings in the form of multiple case studies.

3.13.3.2 Interview Answer Maturity Scoring Criteria

In this section, an overview of how the individual interview questions were scored is outlined. The criteria for scoring questions to a high, medium or low maturity are detailed in Table 3.2, it outlines the criteria by which each of the interview questions were scored. The scoring for each section is put into perspective by the 'literature link', this link outlines the key themes from the literature related to the maturity factor and puts into perspective a maturity score. The results chapter will outline the maturity scoring for each interview question within the ten industry sectors which took part in this research.

Question No.	Question	Scoring Level	Scoring Criteria
Research Q2	Can you describe what methodologies are used to execute	Literature Link	The literature states projects place emphasis on process definition (PMI, 2004, p. 3), therefore a high score one would expect a formalised methodology being used in practice
		High	A project management structure and methodology i.e. PMBOK, PRINCE II etc is used
		Medium	A project management structure is used, but no formal methodology i.e. PMBOK or PRINCEII is used

	projects in your organisation?	Low	No project management structure is used or in place, and no methodology i.e. PMBOK or PRINCE II is used
Research Q3	Do you consider there to be a clear link between project interdependencies, and if so, what are they?	Literature Link	The literature has outlined how there is poor distinction between programmes and projects (Martinsuo & Lehtonen, 2007, p. 341). Therefore, a low score would demonstrate the interviewee sees no link between the disciplines or interaction between both within a programme
		High	A 'yes' answer, plus an explanation of what the interdependencies are, or why there is a link
		Medium	A 'yes' answer, but no explanation of what the interdependencies are, or why there is a link
		Low	A 'no' answer
Research Q4	Can you describe if and how projects are used to implement strategy and change in your organisation?	Literature Link	Project management has seen an expansion of its uses in its link to organisational strategy and change (Urli & Urli, 2000, p. 176; Kwak & Anbari, 2009, p. 436). For a high score, one would expect an answer where projects are used for organisational strategy and change, and an explanation of this.
		High	A 'yes' answer, plus an explanation/example of how programmes are linked to strategy and change
		Medium	A 'yes' answer, however no clear explanation of how programmes are linked to strategy and change
		Low	A 'no' answer
		Literature Link	Based on the large variance in the definition of a programme outlined in table 2.2, key words such as

Research Q5	Different definitions of programmes exist, can you outline how your organisation defines a programme?		delivery of organisational strategy, change should be included in the answer.
		High	Interviewee describes what a programme is and what it delivers to the organisations. They should demonstrate a direct link to strategy and change
		Medium	Interviewee may describe what a programme is or that it is linked to strategy and/or change within the organisation
		Low	Interviewee can describe what a programme is, or differentiate from a project
Research Q6	Do you believe there is a link from projects to programmes, and can you please explain how?	Literature Link	The literature speaks of a lack of distinction between projects and programmes (Martinsuo & Lehtonen, 2007, p. 341), and a blurring of the disciplines (Pellegrinelli, et al., 2015, p. 155). With this in mind, a answer demonstrating a high level of maturity would explain the clear links between both disciplines.
			A 'yes' answer, plus an explanation of what the links between both items are
			A 'yes' answer, however no explanation of what the link between both items is
			A 'no' answer
	Programmes are sometimes used as a	Literature Link	The literature states how programmes are an 'enabling framework for the realisation of strategic change and the ongoing alignment of strategy (Lycett, et al., 2004, p. 290). Therefore, a high maturity answer should demonstrate how programmes are used to implement strategy and strategic initiatives

Research Q7	vehicle/enabler to implement strategic initiatives. What is your opinion?	High	A 'yes' answer, plus a clear explanation of how or why programmes are used as a vehicle/enabler to implement strategic initiatives
		Medium	A 'yes' answer, but no clear explanation of how or why programmes are used as a vehicle/enabler to implement strategic initiatives
		Low	A 'no' answer
Research Q8	What is the range of strategic initiatives which programmes are used to implement?	Literature Link	The literature states how programmes are an 'enabling framework for the realisation of strategic change and the ongoing alignment of strategy (Lycett, et al., 2004, p. 290). Therefore, a high maturity answer should outline a broad range of strategic initiatives where programme have been used.
		High	Interviewee outlines a broad range (5 to 7) of initiatives, and how they link to strategy
		Medium	Interviewee outlines a narrow range (1 to 4) of initiatives, but does not demonstrate and how they link to strategy
		Low	Interviewee does not outline any initiatives
		Literature Link	The literature has outlined how programme management has yet to be consistently practiced (Pollack, 2012, p. 880; Pellegrinelli , et al., 2007, p. 49). However, with the linking of programmes to strategy (Lycett, et al., 2004, p. 290), one would expect a long term iterative process, therefore, this would be expected from a high maturity answer.
	How would the programme process be seen in your organisation related	High	Interviewee acknowledges programmes are long term and iterative, plus explains how

Research Q9	to their duration and linking to strategic needs?	Medium	Interviewee acknowledges programmes are either long term or iterative or both, but does not explain how
		Low	Interviewee does not acknowledge programmes are long term or iterative
Research Q10	What does your organisation see as the difference between projects & programmes?	Literature Link	The literature speaks of a lack of distinction between projects and programmes (Martinsuo & Lehtonen, 2007, p. 341), and a blurring of the disciplines (Pellegrinelli, et al., 2015, p. 155). With this in mind, an answer outlining how an organisation differentiates in terms of scope, scale and timeline, plus the relationship and link between both disciplines would demonstrate a high maturity answer.
		High	Interviewee acknowledges a differences and explains how both disciplines differ i.e. a project has a set scope and time, whereas a programme's scope can change to meet organisational needs. Also, the difference in scale
		Medium	Interviewee acknowledges a difference, but does not explain how both disciplines differ
		Low	Interviewee does not demonstrate how both disciplines differ
		Literature Link	The literature references projects delivering short term tactical (Thiry, 2004, p. 252), whereas programmes take account of 'direction and nature of future transformational steps and how best to make use of options created by project outputs' (Pellegrinelli, et al., 2015, p. 161). A high maturity answer would elaborate the links between project outputs and programme outcomes

Research Q11	<p>It is stated there is a link between project outputs and programme outcomes. Can you outline what these links are for projects and programmes in your organisation?</p>	High	Interviewee acknowledges the differences, and can explain and give examples
		Medium	Interviewee acknowledges the differences, but does not explain or give examples
		Low	Interviewee does not acknowledge or cannot see a link
Research Q12	<p>Can you outline how your organisation manages programmes, does this include as a portfolio, or toward a common goal?</p>	Literature Link	The literature states a number of programme typologies, amongst which are those managed as a portfolio of separate programmes that enable a group of projects that are relatively independent of each other to have a common theme (Pellegrinelli, 1997, p. 143). Another type, and one that would show more maturity, is where a set of vague and evolving business strategies into tangible actions and new developments (Pellegrinelli, 1997, p. 143).
		High	Interviewee states programmes are managed as a programme of activities toward a common goal
		Medium	Interviewee states programmes are managed as a portfolio of activities or as a common goal, but does not demonstrate how they are
		Low	Interviewee does not state or demonstrate activities are managed as a portfolio or collectively toward a common goal
		Literature Link	The literature has shown a wide variance in models and typologies as outlined in table 2.4, where no apparent lifecycle is evident. A high maturity answer would demonstrate clear lifecycle stages from commencement to handover to business as usual.

Research Q13	Can you outline the lifecycle stages on your organisation's programmes?	High	A clear list of lifecycle stages from commencement to completion of a programme are outlined
		Medium	A list of lifecycle stages is outlined, but does not cover the complete programme lifecycle
		Low	No stages are outlined
Research Q14	Can you describe the programme management methodology and governance structures your organisation uses?	Literature Link	The literature has clearly stated how programme governance is poorly defined (Blomquist & Muller, 2006, pp. 53,55). A high maturity answer would outline that there is a clear management methodology in use and outline the governance structure.
		High	Interviewee acknowledges there is a management methodology and governance structure, and outlines what these are
		Medium	Interviewee acknowledges there is a management methodology and/or governance structure, but does not outline what they are
		Low	Interviewee does not acknowledge that there is a programme management methodology or governance structure
Research Q15	Can you describe how the programme management methodology in your organisation matured over time and has it	Literature Link	The literature has stated that a standard method of programme management has yet to be practiced (Pollack, 2012, p. 880) (Pellegrinelli , et al., 2007, p. 338). Therefore, a high maturity answer would acknowledge that a methodology is used and has changed and matured over time.
		High	Interviewee acknowledges it has matured over time, it has responded well to change and explains how

	responded well to change?	Medium	Interviewee acknowledges it has matured over time, it has not responded well to change, and does not explain how
		Low	Interviewee states the programme management methodology has not matured over time or responded well to change
Research Q16	Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?	Literature Link	The literature has outlined how roles and responsibilities in programme are poorly defined (Blomquist & Muller, 2006, pp. 53,55). A high maturity answer would state that roles and responsibilities are clearly defined and communicated. The respondent would demonstrate how this is achieved
		High	Interviewee states that roles and responsibilities are clearly defined and communicated within programmes, and explains how
		Medium	Interviewee states that roles and responsibilities are clearly defined and/or communicated within programmes, but does not explain how
		Low	Interviewee states roles and responsibilities are not clearly defined and communicated within programmes
Research Q17	How does your organisation define programme success	Literature Link	Some of the literature is of the opinion that programme success criteria is at a conceptual level (Shao & Muller, 2011, p. 949). Therefore, a high maturity answer would outline what is determined as success and how is this measured.
		High	Interviewee states there is a clear definition of success and critical success factors, and outlines how these are measured

	and critical success factors, how are they measured?	Medium	Interviewee states there is a clear definition of success and critical success factors, but does not outline how these are measured
		Low	There is not a clear definition of programme success and critical success factors
Research Q18	How is the definition of programme success and critical success factors are communicated within and outside the programme team in your organisation?	Literature Link	This maturity related question relates back to the researcher's experience of being engaged in and running programme. The researcher experienced programmes where success criteria were not clearly communicated to the team. Therefore, a good indication of programme management maturity would be if success factors are criteria are communicated inside and outside the programme team.
		High	Interviewee states they are communicated inside and outside the programme team, and demonstrates how this is achieved
		Medium	Interviewee states they are communicated inside and/or outside the programme team, but does not demonstrate how this is achieved
		Low	Interviewee states critical success and success factors are not communicated inside or outside the programme team
Research Q19		Literature Link	It has been outlined how aspects of benefits management have been few and far between (Vereecke, et al., 2003, p. 1285). There is little evident in the literature to demonstrate the link between programme success criteria and benefits realisation. Therefore, a high maturity answer would demonstrate a clear link between programme success and benefits realisation

	Can you explain how benefits realisation linked to programme success in your organisation?	High Medium Low	Interviewee states it is clearly linked, and demonstrates how Interviewee states it is clearly linked, but does not demonstrate how Interviewee states benefits realisation is not clearly linked to programme success
Research Q20	What would be seen as the key programme manager competencies?	Literature Link	The vast array of programme manager competencies is evident from table 2.6. However, the literature has stated that the literature falls short in this area (Partington, et al., 2005, p. 94). Therefore, a high maturity answer would outline a broad number (5 to 7) of key competencies for successful programme managers.
		High	Interviewee lists 5 to 7 competencies
		Medium	Interviewee lists 1 to 4 competencies
		Low	Interviewee does not list any competencies
Research Q21	How are these competencies used to select and develop programme managers?	Literature Link	It has been acknowledged that the literature has fallen short on programme management competence (Partington, et al., 2005, p. 94). This is coupled with this author's view that none of the literature addresses the use of competencies in the selection and development of programme managers. A high maturity answer would therefore state that the competencies they have listed are used to select and develop programme managers.
		High	Interviewee acknowledges these competencies are used to select and develop programme managers

		Medium	Interviewee acknowledges these competencies are used to either select or develop programme managers
		Low	Interviewee states that these competencies are not used to select or develop programme managers
Research Q22	Can you provide an example of what training is used to develop programme managers in your organisation?	Literature Link	Referring back to the acknowledgement that the literature has fallen short on programme management competence (Partington, et al., 2005, p. 94), the literature review has also failed to find reference to the training of programme managers using key competencies. With this in mind, a high maturity answer would confirm that training is provided to programme managers and outline clearly what that strategy is.
		High	Interviewee states training is provided, and outlines clear training strategy for programme managers
		Medium	Interviewee states training is provided to programme managers, but does not elaborate or give details of the training
		Low	Interviewee states that training is not provided to programme managers

Table 3.2 – Interview Questions Scoring Criteria

3.13.3.3 Guiding Principle Maturity Scoring Criteria

Upon completion of the scoring of the individual interview questions across the ten business sectors involved in this research, next the programme management maturity score against each business sector was carried out. Here, similar to the responses to the interview questions, the twelve-programme maturity guiding principles were scored for each business sector. Each of the

maturity guiding principles were scored by assessing the maturity scores of the interview question related to the respective guiding principles. Table 3.3 below outlines the criteria for scoring a guiding principle either high, medium or low, and also the current level of maturity as inferred from the literature. The maturity scoring described in table 3.3 is a subjective one, based on the authors view of maturity criteria inferred and arising from the literature as outlined in chapter 2. The author has applied their 'extrapolated' view of maturity based on literature interpretation and personal experience as a project and programme manager across the respective maturity factors.

Guiding Principle	Current Maturity	Maturity Factor Questions	Scoring Criteria
Programme Management is Derived from Project Management	Medium level of maturity based on criteria outlined in section 2.2.5 of the literature review chapter	Research Q2: Are projects executed using a defined project management methodology?	High Maturity - At least two questions score 'high' maturity
		Research Q3: Is there a clear link between project interdependencies?	Medium Maturity - one high and two medium scores, or two medium and one low score, or two high and one low
		Research Q4: Are projects used as a means to implement strategy and change?	Low - At least two low and one medium, or three low, or two low and one high
The conception of programme management is not universally agreed	Low level of maturity based on criteria outlined in section 2.2.5 of the literature review chapter	Research Q6: Is there a link from projects to programmes? If so, what is that link?	High Maturity - question scores a high maturity
			Medium Maturity - question scores a medium maturity
			Low Maturity - question scores a low maturity

<p>Is there a lack of distinction between projects & programmes?</p>	<p>Low level of maturity based on criteria outlined in section 2.6 of the literature review chapter</p>	<p>Research Q5: How would your organisation define a programme?</p>	<p>High Maturity - At least three of four questions score a high maturity and the remaining a low or medium score</p>
<p>Is there a lack of established programme management techniques?</p>	<p>Low level of maturity based on criteria outlined in section 2.4.3 of the literature review chapter</p>	<p>Research Q9: Are programme seen as a long-term iterative process (subject to ambiguity & change) that flex to strategic needs?</p>	<p>Medium Maturity - One high, one medium and two low, at least three medium and one high or low, or two low and two high</p>
		<p>Research Q10: What does your organisation see as the difference between projects and programmes?</p>	<p>Medium Maturity - One high, one medium and two low, at least three medium and one high or low, or two low and two high</p>
		<p>Research Q11: Is there a clear link between projects outputs and programme outcomes?</p>	<p>Low Maturity - At least two low and two medium. Three low and one high, or one medium</p>
<p>Is there a lack of established programme management techniques?</p>	<p>Low level of maturity based on criteria outlined in section 2.4.3 of the literature review chapter</p>	<p>Research Q14: Is there a defined programme management methodology and governance structure?</p>	<p>High Maturity - At least two questions score 'high' maturity</p>
		<p>Research Q15: Has the programme management methodology matured over time, does this respond well to change?</p>	<p>Medium Maturity - one high and two medium scores, or two medium and one low score, or two high and one low</p>
		<p>Research Q16: Are roles and responsibilities clearly defined and communicated within programmes?</p>	<p>Low - At least two low and one medium, or three low, or two low and one high</p>

<p>Is there a generic model of programme management?</p>	<p>Low level of maturity based on criteria outlined in section 2.4.5 of the literature review chapter</p>	<p>Research Q12: Are programmes managed as a portfolio or a programme of activities toward a common goal?</p>	<p>High Maturity - At least two questions score 'high' maturity</p>
<p>There is no agreed definition of a programme</p>	<p>Low level of maturity based on criteria outlined in section 2.6 of the literature review chapter</p>	<p>Research Q13: Can you outline the lifecycle stages on your organisation's programmes?</p>	<p>Medium Maturity - one high and two medium scores, or two medium and one low score, or two high and one low</p>
		<p>Research Q14: Is there a defined programme management methodology and governance structure?</p>	<p>Low - At least two low and one medium, or three low, or two low and one high</p>
		<p>Research Q5: How would your organisation define a programme?</p>	<p>High Score - At least four high and one low, or three high and two medium</p>
		<p>Research Q10: What does your organisation see as the difference between projects and programmes?</p>	<p>Medium Score - At least two high and three medium scores, or two high and three low, or two medium two high and one low, or two medium, two low and one high</p>
		<p>Research Q11: Is there a clear link between projects outputs and programme outcomes?</p>	
		<p>Research Q12: Are programmes managed as a portfolio or a programme of activities toward a common goal?</p>	<p>Low Maturity - At least two high and three low scores, or four low and one high score</p>
		<p>Research Q13: Can you outline the lifecycle stages</p>	

		on your organisation's programmes?	
Are programmes aligned to business needs?	Low level of maturity based on criteria outlined in section 2.3.5 of the literature review chapter	Research Q7: Are programmes used as a vehicle/enabler to implement strategic initiatives?	
		Research Q8: What is the range of strategic initiatives that programme are used to implement?	High Score - At least five high and four medium, or seven high and two low
		Research Q15: Has the programme management methodology matured over time, does this respond well to change?	
		Research Q17: Is there a clear definition of programme success and critical success factors, how is this measured?	Medium Score - At least five high three medium and one low, or six high, two low and one medium, or three medium three low and three high, or two high three medium and one low, or five low three high and one medium
		Research Q18: Is this (critical success and success factors) communicated within and outside the programme team?	
		Research Q19: Is benefits realisation clearly linked to programme success?	
		Research Q20: What would be seen as the key	

		<p>programme manager competencies?</p> <p>Research Q21: Are these competencies (Programme Manager) used to select and develop programme managers?</p> <p>Research Q22: What training is used to develop programme managers in your organisation?</p>	<p>Low Score - At least five high and four low, or six medium and three low</p>
<p>Is there a standard approach to programme management?</p>	<p>Low level of maturity based on criteria outlined in section 2.4.4 of the literature review chapter</p>	<p>Research Q12: Are programmes managed as a portfolio or a programme of activities toward a common goal?</p>	<p>High Score - At least four high and two medium, or five high and one low</p>
		<p>Research Q13: Can you outline the lifecycle stages on your organisation's programmes?</p>	
		<p>Research Q14: Is there a defined programme management methodology and governance structure?</p>	<p>Medium Score - At least four high and two low, or three high and three medium, or four medium and two low, or three high and three low</p>
		<p>Research Q15: Has the programme management methodology matured over time, does this respond well to change?</p>	
		<p>Research Q16: Are roles and responsibilities clearly</p>	

		defined and communicated within programmes?	Low Score - At least two high and four low, or three medium and three low
		Research Q18: Is this (critical success and success factors) communicated within and outside the programme team?	
Do Programmes have clearly defined governance, and roles and responsibilities?	Low level of maturity based on criteria outlined in section 2.4.7 of the literature review chapter	Research Q14: Is there a defined programme management methodology and governance structure?	High Maturity - At least three of four questions score a high maturity and the remaining a low or medium score
		Research Q15: Has the programme management methodology matured over time, does this respond well to change?	
		Research Q16: Are roles and responsibilities clearly defined and communicated within programmes?	Medium Maturity - One high, one medium and two low, at least three medium and one high or low, or two low and two high
		Research Q18: Is this (critical success and success factors) communicated within and outside the programme team?	Low Maturity - At least two low and two medium. Three low and one high, or one medium
Is Future research required in the area of	Low level of maturity based on criteria outlined in	Research Q15: Has the programme management methodology matured over time, does this respond well to change?	High Maturity - Two high scores to questions
			Medium - One high and one medium, or two medium, or one high and one low

programme management?	section 2.5.2 of the literature review chapter	Research Q17: Is there a clear definition of programme success and critical success factors, how is this measured?	Low - One low and one medium, or two low scores to questions
What are the leadership competencies of successful PM's?	Low level of maturity based on criteria outlined in section 2.4.8 of the literature review chapter	Research Q20: What would be seen as the key programme manager competencies?	High Maturity - At least two questions score 'high' maturity
		Research Q21: Are these competencies (Programme Manager) used to select and develop programme managers?	Medium Maturity - one high and two medium scores, or two medium and one low score, or two high and one low
		Research Q22: What training is used to develop programme managers in your organisation?	Low - At least two low and one medium, or three low, or two low and one high
There is a poorly developed definition of programme success	Low level of maturity based on criteria outlined in section 2.3.3.1 of the literature review chapter	Research Q17: Is there a clear definition of programme success and critical success factors, how is this measured?	High Maturity - Two high scores to questions
		Research Q19: Is benefits realisation clearly linked to programme success?	Medium - One high and one medium, or two medium, or one high and one low
		Research Q19: Is benefits realisation clearly linked to programme success?	Low - One low and one medium, or two low scores to questions

Table 3.3 – Guiding Principles Maturity Scoring Criteria

3.13.3.4 Individual Business Sector Programme Management Maturity Scoring

This piece of analysis carried out was to score programme management maturity for each of the ten business sectors. Table 3.4 outlines the criteria for scoring each of the maturity factors to either a high, medium or low maturity.

Guiding Principle Maturity Scoring per Sector	
Guiding Principle	Maturity Scoring Criteria
Programme Management is Derived from Project Management	At least ten high and two low, or eight high and four medium
The conception of programme management is not universally agreed	
There is a Lack of distinction between projects & programmes	
There is a lack of programme management techniques	
There is no generic model of programme management	Medium Maturity Score: At least four low, two high and five medium, or eight medium and four low
There is no definition of what a programme is?	
Programmes are not aligned to business needs	
There is no standard approach to programme management	
Programme Management has poorly defined governance, and roles and responsibilities	
Further research is required in the area of programme management	

There is a need to understand leadership competencies of successful PM's	At least five high and seven low, or two high, four medium and six low
There is a poorly developed definition of programme success	

Table 3.4 – Programme Management Maturity Scoring per Business Sector

3.13.3.5 Cross Sectional Guiding Principles Maturity Scoring

The final piece of analysis work carried out was to score each of the twelve maturity factors within the individual business sectors. Table 3.5 outlines the criteria for scoring each of the maturity factors to either a high, medium for low maturity.

Business Sector Guiding Principle Maturity Scoring Criteria	
Business Sector	Maturity Scoring Criteria
Semi-Conductor	High Maturity: At least seven high and three low, or six high and four medium, or six high three medium and one low
Consultancy	
Pharmaceutical	
Telecommunications	
Healthcare	Medium Maturity: At least two high three low and five medium, or four low and six medium
Public Sector	
Insurance	
Finance & Wealth Management	Low Maturity: At least six high and four low, or six medium and four low
Information Technology	
Banking	

Table 3.5 – Individual Maturity Factor Scoring per Business Sector

3.14 Case Study Analysis

This research has justified pursuing a multiple case study type research in section 3.5.6. The case study analysis used for this research was performed by business sector. Each case study gave a description of the business sector in question, outlining broadly what activities the sector is engaged in, the types of products and services it provides, and any regulatory constraints under which the sectors operate. Next, the business sector is described in terms of the institutional theory traits which are applicable to it. The purpose of this was to use an independent 'lens' to describe the various sectors. This would be used to provide a rationale for programme management guiding principle maturity scoring against the respective sectors. Then, the maturity score for each of the twelve-programme management maturity guiding principles is presented in a tabular form, this also includes an overall score for programme management maturity across the specific sector. Next, the case studies outline the significant findings with respect to the guiding principles maturity scoring for the individual business sectors, also outlined is what message these scores are stating about programme maturity in the sector.

Finally, a cross sector programme management maturity assessment was carried out. Here, the analysis was performed on the individual guiding principle maturity across all of the business sectors, and what are the key messages from these findings. An overview is also given as to the comparison of the overall programme management maturity per sector, how this varies between sectors, and key comments and statements around what is observed here.

3.15 Summary

This chapter begins by stating the research is being conducted through an emic perspective and how this normally lends itself to qualitative research. A number of perspectives are investigated, viewed in the context of the literature review findings and analytical approaches to conclude that a pragmatist approach to the research is most suitable. A variety of research designs were assessed with respect to the research being conducted and a pragmatist approach, multiple case study analysis was seen as the most appropriate for this research, a conceptual research framework was then constructed. With the approach and design confirmed, survey type qualitative interviews were seen as the most appropriate method of data collection. The chapter progresses by outlining the design of the data collection process from interview process design, ethics approval to the selection of candidates and transcription of recorded interviews. Finally, the method of interview data analysis is described including the scoring criteria.

The next chapter of this dissertation outlines the results of the research data collection and analysis, this is carried out in the form of twelve sectoral case studies and one overall maturity assessment.

4 Results

4.1 Introduction

The section of the dissertation outlines the results emanating from the research conducted, as described in the methodology chapter. The results will be presented in a multiple case study format, where each business sector will be described as a separate case. Each of the case studies will outline a description of the business sector in question. It will then use institutional descriptors as an independent lens to create an alternative description of the sectors. Next, a table will outline the maturity scoring for each of the twelve programme management maturity guiding principles under which the business sectors were examined. The study gives an overall maturity scoring of low, medium or high based on the scoring of twenty two interview questions answers linked to the twelve guiding principles. The study highlights key conflicts and consistencies with the programme management literature, and key findings. Figure 4.1 outlines the model of analysis for the case study analysis. The results of a cross sectoral analysis will be outlined, where the maturity guiding principle for each sector is compared, and finally an overall programme management maturity rating is described. This section will also describe a cross sectoral analysis of the maturity guiding principles and list the key messages from this analysis.

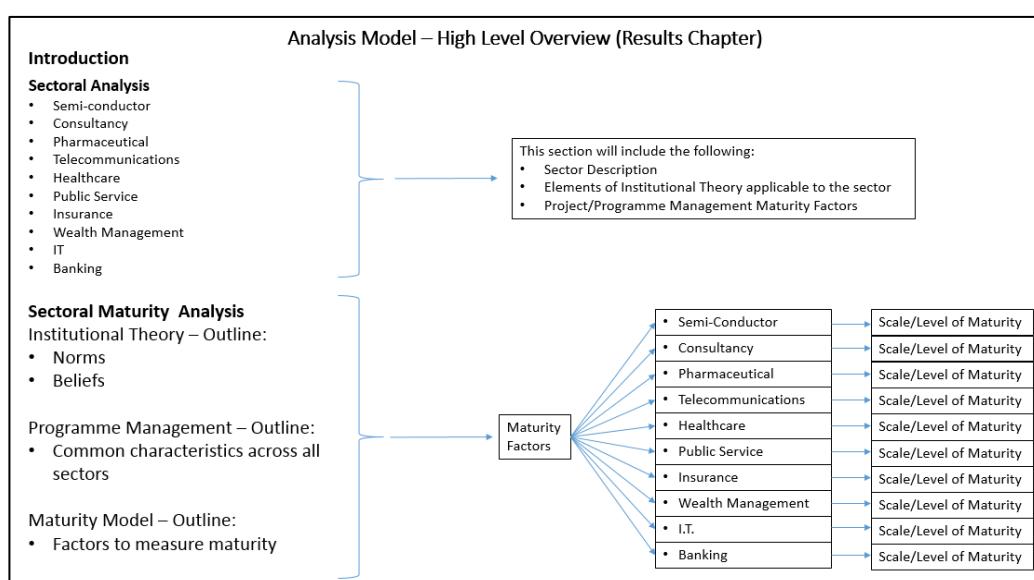


Figure 4.1 – Analysis Model

4.2 Case Study Number One – Semi Conductor Sector

4.2.1 Sector Description

The North American Industry Classification System (NAICS) describes the semiconductor sector, under its code 334413 (United States Census Bureau, 2016), as “establishments primarily engaged in manufacturing semiconductors and related solid state devices. Examples of products made by these establishments are integrated circuits, memory chips, microprocessors, diodes, transistors, solar cells and other optoelectronic devices.”

The PWC report “Faster, greener, smarter – reaching beyond the horizon in the world of semiconductors” (PWC, 2012) gives additional oversight of the sector. It states “the semiconductor industry has been growing virtually nonstop for 40 years, with global sales increasing at an average compound annual growth rate (CAGR) of about 9% p.a. Apart from its high market growth, the semiconductor industry has been characterised by rapid technological innovation. The third characteristic of the semiconductor industry is its need for huge amounts of capital to support both growth and technological progress.”

The organisation representing the semi-conductor sector is a leading provider of highly integrated semiconductor products that enable intelligent processing for networking, communication, and the digital home. Its products are used by the leading networking, wireless, storage, and security vendors. In two thousand and sixteen it had a turnover of over six hundred million dollars US, generating a gross profit of over two hundred and eighty million dollars, and is headquartered in the United States of America. The company uses third-party foundries and assembly and test contractors to manufacture, assemble and test their semiconductor products. The outsourced manufacturing approach allows the company to focus resources on the design, sales and marketing of products. It employs over one thousand full time employees, with multiples of that number employed on a contract basis. The representative from this organisation is a director of global logistics, and has oversight of key strategic product development and operations initiatives, and is a regular programme sponsor and stakeholder within the company.

4.2.2 Elements of Institutional Theory Applicable to the Semi-Conductor Sector

When one assesses the description of the semiconductor sector, the institutional theory descriptors that best describe this sector would be:

It responds to uncertainty (DiMaggio & Powell, 1983, p. 150) – Due to constant technological progress and competition between rivals, there is a focus in the sector on responding to change. This can be interpreted as a response to uncertainty and aligns to this institutional descriptor.

Emphasis is placed on conformity to a pattern (Greenwood & Hinings, 1996, p. 1026; DiMaggio & Powell, 1983, p. 150) – In order to keep pace with competitors, companies in this sector need to conform to a pattern of industry standards and technologies. This focus of the semi-conductor sector can be interpreted as aligning to the institutional trait of placing emphasis on the conformity to a pattern.

Emphasis on rules and requirements (Zucker, 1987, p. 450; Meyer & Scott, 1983) – The semiconductor sector is aligned to this institutional descriptor through its products needing to meet technical specifications, but also requirements of customers and markets.

Agency and change focused (Dacin, et al., 2008, p. 997; Phillips & Tracey, 2009, p. 169; Greenwood & Hinings, 1996, p. 1023) – The sector is more change focused due to the fast pace of technological innovation in the sector, and how this drives competitive advantage, but also the short product lifecycles. These aspects of the sector can be interpreted as aligning to this institutional trait.

Legitimacy within the external environment (Scott, 1987, p. 502; Covaleski & Dirsmith, 1988, p. 563; Oliver, 1997, p. 700) – companies are required to meet both customer needs and but also must keep pace with competitors technological advancements. The constant requirement to keep pace with competitors and customer expectations can be interpreted as seeking legitimacy within the external environment.

Transition from a changed to settled environment (Kostova, et al., 2008, p. 995) – due to the amount of change and innovation around product design and supply, companies need to have move from the flux of new product design to the stability of mass production and supply. One can interpret the constant process of product design through to mass production and market

supply as a transition from a changed to settled environment and aligning to this particular institutional descriptor.

4.2.3 Programme Management Maturity Scoring

Semi-Conductor Sector		
Maturity Guiding Principle	Score	Overall Score
Programme Management is Derived from Project Management	High	Medium
The conception of programme management is not universally agreed	Medium	
Is there a lack of distinction between projects and programmes?	Low	
Is there a lack of established programme management techniques?	Medium	
Is there a generic model of programme management?	High	
There is no agreed definition of a programme	Medium	
Are programmes aligned to business needs?	Medium	
Is there a standard approach to programme management?	Medium	
Do programmes have clearly defined governance, roles and responsibilities?	Medium	
Is future research required in the area of programme management?	High	
What are the leadership competencies of successful programme managers?	Medium	
There is a poorly developed definition of programme success	Medium	

Table 4.1 – Semi Conductor Sector Programme Management Maturity

Table 4.1 outlines the scoring against the twelve programme management maturity guiding principles, but also gives an overall sector maturity score. Three of the twelve guiding principles scored high for the semi-conductor sector, these factors were:

1. Programme management is derived from project management
2. Is there a generic model of programme management?
3. Is future research required in the area of programme management?

All of the other nine guiding principles scored medium maturity, and what this research output states is, where the maturity guiding principles scored high it means:

1. Programme management methodologies used in the semi-conductor sector are derived from project management methods and practices.
2. The model of programme management used in this sectors is moving toward a more generic model. This assumption can be made as a result of programmes having a defined lifecycle, methodology and governance models.
3. This area of management, specifically for the semi-conductor sector, does not require as much research as the literature would suggest.

This research suggests that programme management in the semi-conductor sector, overall, has a medium level of maturity, as described in Table 4.1.

4.2.3.1 Low levels of Maturity

The empirical findings from this research uncovered a number of areas where there were low levels maturity within the twelve guiding principles. The next sections outline the significant findings where low levels of maturity were uncovered. Although this business sector, from an empirical standpoint, has a medium level of maturity, it showed a low level of maturity when the candidate was asked, in question five, how their organisation would defined a programme. As the candidate did not answer this question directly or completely, it indicated a low level of maturity. This point is further supported by the evidence that there is a lack of distinction between projects and programmes when asked in the question ten, what does your organisation see as the difference between projects and programmes?. Here, the sector scored a low level of maturity when the candidate stated:

“The company is not good in defining the difference between projects and programmes, it’s an area that requires improvement”

Interview question sixteen asked ‘Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?’ The answer resulted in a low level of maturity when the candidate stated:

“... At times we would not be good at clear definition of some roles, because sometimes there isn't an exact role to fit the task ...”

Question nineteen asked ‘Can you explain how benefits realisation linked to programme success in your organisation?’, the corresponding answer was:

“It would not be very clearly connected, "...To a narrow band of people, yes, to a larger group they may see or interpret it, but don't get that connectivity sometimes...”

This resulted in a low maturity score as the candidate clearly stated that many in the programme do not see the link from benefits realisation to programme success.

Question twenty two asked ‘Can you provide an example of what training is used to develop programme managers in your organisation?’ The interviewee stated no formal training and development was in place, demonstrating a low level of maturity in this area.

4.2.3.2 High Levels of Maturity

The following outputs from the research show significant empirical findings related to high levels of maturity in programme management from this sector. Question fourteen asked ‘Can you describe the programme management methodology and governance structures your organisation uses?’ The sector maturity scored high in this area when the candidate answered:

“... there is a defined methodology ...”, “Yes, there is a governance structure, very much so, this works through the hierarchy of the organisation ...”

Question thirteen asked the candidates if they could outline the lifecycle stages in their organisation’s programmes. The candidate from the semi-conductor sector scored a high level of maturity by outlining the full series of lifecycle stages for their organisation’s programmes.

The maturity guiding principle 'is there a generic model of programme management?' revealed a high level of maturity within the semi-conductor sector as a result of the high maturity scores in the responses to questions thirteen and fourteen.

Question seventeen asked How does your organisation define programme success and critical success factors, how are they measured?' The answer demonstrates a high level of maturity when the interviewee stated

"... key success factors are set, this is done at the top level of the organisation through set goals..."

Question fifteen asked if the programme management methodology had matured over time and did it respond well to change. The interviewee stated it had matured over time and did respond well to change. Finally, interview question twenty asked 'what would be seen as the key programme manager competencies?' This sector shows a high level of maturity in this area through the detail of the answer given. The maturity guiding principle 'is future research required in the area of programme management?' scored a high level of maturity as a result of the high maturity scores in the responses to questions fifteen and seventeen.

4.2.4 Conclusion

The semiconductor sector, by nature, is very innovative and progressive, the institutional norms aligned to the sector demonstrate this. However, from the programme management maturity scoring outlined in this study, which is deemed medium, one can infer this culture of innovation does not extend to the discipline of programme management. One can describe this as 'out of character' with the progressive nature of the sector, where one would expect a high level of maturity as an overall score. This shows varying alignment and conflict with the programme management literature, but also conflicts with the institutional theory descriptors of such a sector. The areas of distinguishing between projects and programmes, programme definition, alignment to business needs, and definition of success are among those requiring further research.

4.3 Case Study Number Two – Consultancy Sector

The North American Industry Classification System (NAICS) describes the consultancy sector, under its code 54161 (Census Bureau Consultancy, 2016), and states: “This industry comprises establishments primarily engaged in providing advice and assistance to businesses and other organizations on management issues, such as strategic and organizational planning; financial planning and budgeting; marketing objectives and policies; human resource policies, practices, and planning; production scheduling; and control planning.”

The University of Buffalo’s school of management (Buffalo, 2016) outlines that consultants “tackle a wide variety of business problems and provide solutions for their clients. Depending on the size and chosen strategy of the firm, these problems can be as straightforward as researching a new market, as technically challenging as designing and coding a large manufacturing control system, as sensitive as providing outplacement services for the HR department, or as sophisticated as totally rethinking the client’s organization and strategy.”

One of the two interview candidates representing the consultancy sector was from a company which had a turnover of thirty-four billion dollars in twenty sixteen, and a market capitalisation of just under seventy-five billion dollars (US). It is headquartered in Ireland but has almost three hundred and fifty thousand employees in total globally. It is engaged in providing consulting, technology and contract services across a wide and varied range of sectors, including automotive, banking, chemicals, life sciences, software, electronics and consumer goods. Its consultancy activities include implementing efficiencies to businesses which enhance performance in distribution, sales and marketing, and across internal business functions. The company also provides services to enable clients develop and implement new business strategies, improve operations, manage complex change initiatives, and integrate digital technologies. The representative was a senior consultant within the company and was engaged at a senior level in initiatives such as mergers and acquisitions of banking institutions as a programme manager.

4.3.1 Elements of Institutional Theory Applicable to the Consultancy Sector

Upon review the consultancy sector through an Institutional Theory lens, the theory descriptors that are most aligned to the sector are:

A means of instilling value, supplying intrinsic worth to a structure or process (Scott, 1987, p. 494; DiMaggio & Powell, 1983, p. 150; Selznick, 1957, p. 17) – the business of consultancy, by nature, looks at existing and new processes and business' with the view to improving. In essence, this brings value and worth to a process.

Institutionalization promotes stability: persistence of the structure over time (Scott, 1987, p. 494; Selznick, 1957, p. 17) – Much of what consultancy practitioners perform is the development and implementation of structures and systems into client organisations.

Responds to uncertainty (DiMaggio & Powell, 1983, p. 150) – Much of first point interaction between the client and consultant centres around response to a change and the associated uncertainty. From there the consultant's work is to help develop and implement responses to that uncertainty and change.

Emphasis is placed on conformity to a pattern (Greenwood & Hinings, 1996, p. 1026; DiMaggio & Powell, 1983, p. 150) – This Institutional trait is associated with the consultancy sector because some of the practitioners core work is implementing structures and processes into organisations. These can be described as conforming to a pattern.

Emphasis on rules and requirements (Zucker, 1987, p. 450; Meyer & Scott, 1983) – Consultancy practitioners activities in implementing systems, processes and change are essentially the implementation of rules and requirements. By implementing these systems and processes, they are ensuring emphasis being placed on rules and requirements.

Conformity to rules to receive support and legitimacy (Dowling & Pfeffer, 1975; Pfeffer & Salancik, 1978; Zucker, 1987, p. 451) – Much of a client's requirements for a consultant stem from external and internal environment pressures and alignment. The work and services the consultant provides enables an organisation to conform to rules and receive support and legitimacy from inside and outside the organisation.

Agency and change focused (Dacin, et al., 2008, p. 997; Phillips & Tracey, 2009, p. 169; Greenwood & Hinings, 1996, p. 1023) – At the core of what consultant's bring to their client

organisations is agency focused in that its services can be used to implement strategies as instructed by the shareholders to the company executive. This in turn can result in a focus of change to bring about changes required by the shareholders and enabled by consultants.

Legitimacy within the external environment (Scott, 1987, p. 502; Covaleski & Dirsmith, 1988, p. 563; Oliver, 1997, p. 700) – As has been eluded to in some of the above paragraphs, much of the work of consultants' centres around the implementation of structures and processes aligned with a strategic change. This change may be sourced from a client's pressures in the external environment, which may have to be adhered to for gaining legitimacy within that environment.

Transition from a changed to settled environment (Kostova, et al., 2008, p. 995) – As has been described in this section, much of the consultant's work centres around the implementation of new systems and processes, and the programmes of work required to manage this. A further key aspect of this can be to bring a new change or system from a project to a business as usual environment, essentially bringing it from a changed to settled environment.

4.3.2 Programme Management Maturity Scoring – Consultancy Sector

Consultancy Sector		
Maturity Factor	Score	Overall Score
Programme Management is Derived from Project Management	High	Medium
The conception of programme management is not universally agreed	High	
Is there a lack of distinction between projects and programmes?	High	
Is there a lack of established programme management techniques?	Medium	
Is there a generic model of programme management?	Medium	
There is no agreed definition of a programme	Medium	
Are programmes aligned to business needs?	Medium	
Is there a standard approach to programme management?	Medium	
Do programmes have clearly defined governance, roles and responsibilities?	Medium	
Is future research required in the area of programme management?	Medium	
What are the leadership competencies of successful programme managers?	Medium	
There is a poorly developed definition of programme success	Medium	

Table 4.2 – Consultancy Sector programme Management Maturity

Table 4.2 outlines the scoring against the twelve maturity factors, but also gives an overall sector maturity score. Three of the twelve programme management maturity guiding principles scored high for the management consultancy sector, these were:

1. Programme management is derived from project management
2. The conception of programme management is not universally agreed
3. Is there is a lack of distinction between projects and programmes?

All of the other nine maturity guiding principles scored medium for programme management maturity. What this research output states is, where the maturity factors scored high:

1. Programme management methodologies used in the Consultancy sector are derived from project management methods and practices.
2. The origination and conception of programmes and programme management is agreed, and can be linked to projects.
3. There is a distinction between projects and programmes, what their individual purposes are, and what they respectively deliver.

This research suggests that programme management in the management consultancy sector, overall, has a medium level of maturity, as described in Table 4.2.

4.3.2.1 Low Levels of Maturity

The empirical findings from this research uncovered a number of areas where there were low levels maturity within the twelve maturity guiding principles. The next sections outline the significant findings where these low levels of maturity were uncovered.

The empirical view shows this business sector has a medium level of maturity, however, it showed a low level of maturity when the candidate was asked, in question sixteen, 'Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?'. Two of the three candidates interviewed in the consultancy sector clearly stated that roles and responsibilities are not clearly defined within programmes. One of the candidates answered:

"No, I have not. As a generalisation, that communication can be quite poor."

As a result of the empirical data associated with answers to this question, it scored a low level of maturity.

Question sixteen is linked to the maturity guiding principles:

- Is there is a lack of established programme management techniques?
- Is there is a standard approach to programme management?
- Do programmes have clearly defined governance, roles and responsibilities?

All of these maturity guiding principles scored a medium level of maturity, the scoring of the answer to question sixteen did not have a significant impact on the scoring of these maturity factors.

4.3.2.2 High Levels of Maturity

The following outputs from the research show significant empirical findings related to high levels of maturity in programme management from this sector. Questions two, three and four are linked to the programme maturity guiding principle stating programme management is derived from project management. Question two asked 'Can you describe what methodologies are used to execute projects in your organisation?' The sector scored high maturity for this question, as all candidates stated that projects are executed using a defied management methodology. An example of answers from the candidates was:

"We are seeing that more and more. I would say it is not 100% consistent, but within the last 5 years we are seeing that most companies we work with have a methodology in place." "When we look at methodologies, it's normally all gates, they tend to put in a gating type of methodology similar to what is used in PRINCEII. Very few people are using one methodology i.e. PRINCEII or CPM ..."

Question three asked 'Do you consider there to be a clear link between project interdependencies, and if so, what are they?'. Here again, the candidates from this sector scored a high level of maturity by all claiming there is a clear link. An example of this is shown in the following response from an interview candidate:

“There has to be a very clear link, there has to be clarity around the network of commitments, if there is not that connection and synergy, then what is the sum of the parts?”

Question four asked ‘Can you describe if and how projects are used to implement strategy and change in your organisation?’. Here the candidates show a high level of maturity in their answers by stating that projects are used to implement strategy and change. The linking of all three question above shows a high level of programme management maturity by recognising and demonstrating that programmes are derived from projects.

Question six asked ‘Do you believe there is a link from projects to programmes, and can you please explain how?’ The answers from all three interviewees in the sector show a clear link, this is best described in one of the responses show below:

“... they are typically linked via a programme governance/steering, where they have the project reporting into an overarching programme governance, and that is how they create the links. So it is at that level rather than any lower level where the links are seen.”

This question is directly linked to the programme management maturity guiding principle ‘The conception of programme is not universally agreed’. From an empirical standpoint, one can infer that programme management originates from project management.

Questions seven and eight are aligned to the maturity guiding principle ‘Are programmes aligned to business needs?’ Question seven asked ‘Programmes are sometimes used as an vehicle/enabler to implement strategic initiatives. What is your opinion?’. All candidates demonstrated clearly that they are.

Question eight asked ‘What is the range of strategic initiatives that programmes are used to implement?’. The answers resulted in a very wide range of examples, hence showing a high maturity in this area.

Questions five and ten are aligned to the maturity guiding principle ‘There is no agreed definition of a programme’. Question five asked ‘Different definitions of programmes exist; can you outline how your organisation defines a programme?’. All candidates gave clear definitions of what a programme is, an example of this can be seen below:

“I would define a programme as there being an overall objective and commitment that you want to achieve, and that the programme is a body of work steps, commitments and outputs that you

want produced in order to achieve that overall objective." "... you are introducing a new capability into the organisation, and you are organising yourself to go about doing it"

Question ten asked 'What does your organisation see as the difference between projects and programmes?'. Here, again, all candidates demonstrated a clear difference between both disciplines, the answer below from a candidate demonstrates this:

"Well, scale and multiple work streams ..." "... we wouldn't put on a long term, as you were highlighting earlier, a long term year on year thing, that stuff doesn't tend to come into the classification...." "Whereas companies do tend to think about a programme being a more complex project as a one shot bang deliverable."

Finally, questions five, nine and ten are directly linked to the maturity guiding principle 'Is there a lack of distinction between projects and programmes?' The above paragraphs examine the outputs from questions five and ten, which show a high level of maturity. Question nine asked 'How would the programme process be seen in your organisation related to their duration and linking to strategic needs?'. The candidates show a high level of maturity in their responses to this question, in that they deviate from the literature's assessment per the maturity guiding principle. An example of this can be seen in the following answer:

"Most programmes need a beginning, middle and end, if they are seen as the never ending story, I think things get lost. A strategic programme needs to be there for a finite period of time to achieve a strategic objective, and then it basically needs to be declared a success or failure and then shutdown." "If these strategic programme run and run and run, they are not strategic programmes, but a new line of business..."

4.3.3 Conclusion

The consultancy sector is one where programme management is used for varying change and strategic initiatives across a wide range of sectors. From an institutional standpoint, it responds to uncertainty and gains or maintains legitimacy within its internal and external environments, all on its client's behalf. The assessment of programme management maturity carried out in this study shows a sector which understands the origins of programmes. It also shows that programme management is well structured in the sector, and can clearly distinguish between projects and programme, and the respective outputs from both processes. This assessment would be expected from a sector with a core competency of providing professional services across a range of sectors and disciplines for a wide and varying range of client needs. The overall level of programme management maturity within the sector is medium. One would have expected a higher level of maturity, or more examples of high levels of maturity against more of the twelve maturity factors for a sector which uses programmes on regular basis to implement solutions.

Key maturity guiding principles which have scored less than high and require further research are:

- Is there a standard approach to programme management?
- Are programmes aligned to business needs?
- Do programmes have clearly defined governance, roles and responsibilities?
- There is a poorly developed definition of programme success

One final point that must be made is that some of the answers and observations of the interviewees were made in the context of what they have seen in client organisations. With this in mind, one could take the view of this particular study giving a true view of programme management maturity.

4.4 Case Study Number Three – Pharmaceutical Manufacturing Sector

4.4.1 Pharmaceutical manufacturing Sector Overview

The North American Industry Classification System (NAICS) describes the Pharmaceutical manufacturing sector, under its code 32541 (Census Bureau Pharmaceutical, 2016), by stating: *“This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing biological and medicinal products; (2) processing (i.e., grading, grinding, and milling) botanical drugs and herbs; (3) isolating active medicinal principals from botanical drugs and herbs; and (4) manufacturing pharmaceutical products intended for internal and external consumption in such forms as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.”*

Pharmaceutical manufacturing is a regulated activity, in Ireland this regulation is provided by the Health Products Regulatory Authority (HPRA). The HPRA states its role is to *“... protect and enhance public and animal health by regulating medicines, medical devices and other health products.”* (Health Products Regulatory Authority, 2016)

With respect to what the HPRA does, it states:

“We grant licenses to companies to make, distribute and market medicines after a review of their safety, quality and effectiveness.”

“We continuously monitor medicines, medical devices and other health products, responding quickly to any safety or quality concerns.”

“We produce safety and quality information to support the safe use of health products.”

“We inspect companies and facilities which test, make or distribute health products to ensure that they comply with relevant standards and legislation.”

In terms of what the HPRA regulates, it states:

“We are responsible for regulating a wide range of health products available in Ireland. This includes human and veterinary medicines, medical devices, blood components and human tissues and cells.”

“We regulate manufacturing, wholesale and distribution companies, medical device notified bodies as well as other health product facilities.”

“Our role involves regulating other related areas including clinical trials and human organs for transplantation.”

One typical representative from the Pharmaceutical sector in this study (one of three) represented an organisation with over twenty-eight thousand employees in over seventy countries and is headquartered in the United States of America. In two thousand and sixteen it had a turnover of over twenty-five and a half billion dollars US, generating a gross profit of just under twenty billion dollars, and a market capitalisation of just over one hundred and four billion dollars. The company discovers, develops, manufactures, and sells pharmaceutical products worldwide in the therapeutic areas of immunology, oncology, neuroscience, virology and general medicines through its twenty-one research and manufacturing facilities and an annual research and development spend of over four point three billion dollars in twenty sixteen. The representative from this company was a vice president of operations and supply chain and also worked directly on executive strategic initiatives as a programme sponsor and stakeholder. This individual has also worked as a programme manager within the pharmaceutical sector and has a wide and varied range of experience of programmes from managing capital infrastructural programmes, as well as strategic change programmes.

4.4.2 Elements of Institutional Theory Applicable to the Pharmaceutical Manufacturing Sector

Upon review the pharmaceutical manufacturing sector through an Institutional Theory lens, the theory descriptors that are most aligned to this sector are:

A means of instilling value, supplying intrinsic worth to a structure or process (Scott, 1987, p. 494; DiMaggio & Powell, 1983, p. 150; Selznick, 1957, p. 17) – The nature of the pharmaceutical manufacturing business is the transforming of materials from one state to another. This also brings further value to a material or compound, and essentially means that there are processes of instilling value within the sector and supplying worth to a structure or process.

Institutionalization promotes stability: persistence of the structure over time (Scott, 1987, p. 494; Selznick, 1957, p. 17) – Due to the regulatory rules and constraints imposed on this sector, this aligns with institutionalisations promotion of stability, but also the persistence of structure over time.

Emphasis is placed on conformity to a pattern (Greenwood & Hinings, 1996, p. 1026; DiMaggio & Powell, 1983, p. 150) – Here, as with the above paragraph, the regulatory guidance and rules imposed on Pharmaceutical manufacturer's places emphasis on conformity to a pattern. Hence, there is alignment to this element of institutional theory.

Emphasis on rules and requirements (Zucker, 1987, p. 450; Meyer & Scott, 1983) – Similar to the above elements of institutional theory, the heavily regulated environment of the Pharmaceutical manufacturing sector places an emphasis on rules and requirements for this sector. Again, this shows a direct alignment with this element of Institutional Theory.

Conformity to rules to receive support and legitimacy (Dowling & Pfeffer, 1975; Pfeffer & Salancik, 1978; Zucker, 1987, p. 451) – There is a strong link between this element of Institutional Theory and the Pharmaceutical manufacturing sector. Rules imposed by the regulatory authorities, coupled with strict quality rules drives this sector toward legitimacy with it's sector peers and its customers.

Legitimacy within the external environment (Scott, 1987, p. 502; Covaleski & Dirsmith, 1988, p. 563; Oliver, 1997, p. 700) – Similar to many sectors, many Pharmaceutical manufacturers would follow trends and patterns of their industry peers to seek legitimacy with that external environment.

4.4.3 Programme Management Maturity Scoring – Pharmaceutical Manufacturing Sector

Pharmaceutical Manufacturing Sector		
Maturity Guiding Principle	Score	Overall Score
Programme Management is Derived from Project Management	High	Medium
The conception of programme management is not universally agreed	High	
Is there a lack of distinction between projects and programmes?	High	
Is there a lack of established programme management techniques?	Medium	
Is there a generic model of programme management?	High	
There is no agreed definition of a programme	Medium	
Are programmes aligned to business needs?	Medium	
Is there is a standard approach to programme management?	Medium	
Do programmes have clearly defined governance, roles and responsibilities?	Medium	
Is future research required in the area of programme management?	Medium	
What are the leadership competencies of successful programme managers?	Medium	
There is a poorly developed definition of programme success	Medium	

Table 4.3 – Pharmaceutical Manufacturing Sector Programme Management Maturity

Table 4.3 outlines the scoring against the twelve maturity guiding principles, but also gives an overall sector maturity score. Four of the twelve maturity guiding principles scored high for the pharmaceutical manufacturing sector, these factors were:

1. Programme management is derived from project management
2. The conception of programme management is not universally agreed
3. Is there is a lack of distinction between projects and programmes?
4. Is there generic model of programme management?

All of the other nine maturity factors scored medium for programme management maturity.

What this research output states is, where the maturity guiding principles scored high maturity, it means:

1. Programme management methodologies used in the Pharmaceutical manufacturing sector are derived from project management methods and practices
2. The conception of programme management is clear
3. There is a clear distinction between projects and programmes
4. There is a generic model of programme management in practice

This research suggests that programme management in the pharmaceutical manufacturing sector, overall, has a medium level of maturity, as demonstrated in Table 4.3.

4.4.4 Key Findings from the Case Study

This section deals with a number of key findings from the research conducted in the pharmaceutical manufacturing sector, and relates these to the current theoretical statements.

4.4.4.1 Low Levels of Maturity

The empirical findings from this research shows areas where there were low levels maturity within the twelve guiding principles. The following paragraphs chart the significant findings where low levels of maturity were uncovered. The evidence suggests this sector has a medium level of maturity overall. However, it has shown a low level of maturity when the candidates were asked, in question sixteen, 'Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?'. A response from one of the interviewees supports this when they answered the question with:

"I don't think they are defined clearly enough and is an area the company could articulate or define roles & responsibilities some more."

Question sixteen is linked to the programme management maturity guiding principles:

- Is there a lack of established programme management techniques?
- Is there a standard approach to programme management?
- Do programmes have clearly defined governance, roles and responsibilities?

All of these maturity guiding principles scored a medium level of maturity, the low score to the answers to question sixteen did not have a significant impact on these maturity scores.

Question nineteen asked 'Can you explain how benefits realisation linked to programme success in your organisation?'. A low level of maturity was evidenced from the sector's response to this question, with one candidate answering a simple 'no' to this question, and another stating:

"This is an area that the organisation is becoming more aware of that are benefits going to continue to be realised over time after the programme has ceased..."

Finally, question twenty-two asked 'Can you provide an example of what training is used to develop programme managers in your organisation?'. Here, a low level of maturity resulted from the answers received from candidates from this sector. Most candidates did answer that training was provided, but did not state it was specifically in programme management, the answer below demonstrates this:

"Every one of the management team are at least at master's level (funded by the company), so whether it's an MBA, masters in supply chain, quality masters etc. This drives the managers toward the strategic as well as the tactical level, but also to get them to look outside of their own function to see how they fit into the overall organisation."

Questions sixteen and nineteen were linked to the programme management maturity guiding principle 'are programmes aligned to business needs?' The scoring of the answer to these questions did not have a significant impact on the maturity scoring of the two maturity factors. Finally, question twenty two was linked to the maturity guiding principle 'what are the leadership competencies of successful programme managers?' The scoring of the answer to this question did not have a significant impact on the maturity factor score.

4.4.4.2 High Levels of Maturity

The following outputs from the research show significant empirical findings related to high levels of maturity in programme management from this sector. Questions two, three and four are linked to the programme maturity guiding principle stating programmes are derived from projects. Question two asked 'Can you describe what methodologies are used to execute projects in your organisation?' The sector scored high maturity for this question, with the following quote as an example of an answer:

"... if it (a project) was being initiated and supported by the senior leadership team it would be executed using a defined project management methodology ..."

Question three asked 'Do you consider there to be a clear link between project interdependencies, and if so, what are they?'. The answers to this question resulted in a high level of maturity, as all candidates clearly stated the links. Question four put the question to candidates 'Can you describe if and how projects are used to implement strategy and change in your organisation?' All candidates answered that they are, with one of the candidates stating:

"...there would be 'run the business' projects that would be very much around process robustness (essentially to de-risk the current processes in the business), technology transfers, and then there would be other more strategic C.I. (Cost Improvement) projects and programmes"

Questions nine and ten are linked to the maturity guiding principle 'Is there a lack of distinction between projects and programmes?', both of these questions scored a high level of maturity within the Pharmaceutical sector.

Question nine asked 'How would the programme process be seen in your organisation related to their duration and linking to strategic needs?' The sector demonstrated a high level of maturity due to candidates recognising that they can be long term and do flex to meet the company's strategic needs.

Question ten asked 'What does your organisation see as the difference between projects and programmes?'. All candidates demonstrated a clear understanding of the difference between both disciplines, with one candidate stating:

"... projects are very specific, R&D is probably the best example of that as they have individual project codes and they use a standard project management methodology sitting underneath"

that..." "...The company would use more of a goal oriented approach to programme management. That is how we would distil down from the business planning every year, where we would have a series of company goals set at a relatively high level, and then cascade that down through the organisation and then right down to the individual level."

Questions twelve and fourteen are linked directly to the programme management maturity guiding principles 'Is there a generic model of programme management?' Both questions scored a high level of maturity, and led to this maturity factor having a high level of maturity.

Question twelve asked 'Can you outline how your organisation manages programmes, does this include as a portfolio, or toward a common goal?' The general consensus was that it can be one, or the other, or a mixture of both. This shows a high level of maturity by the candidates demonstrating that the programme methodology used depends on the purpose for which it is being used. Question fourteen asked 'Can you describe the programme management methodology and governance structures your organisation uses?'. Three of the four candidates stated that a defined methodology was used in their organisation, with one stating:

"... This would be the principle in the company that have leaned on the traditional approaches, but it would look and feel like the company's own model ...", "It is a set structure within the organisation to run programmes."

Finally, question seventeen asked 'how does your organisation define programme success and critical success factors, how are they measured?' The answers to this question scored a high level of maturity and deviates from the literature as a result of all candidates demonstrating that their organisations have clear definitions of programme success, and outlined what those measures were. This is demonstrated in the follow candidate answer:

"You cannot have 'woolly' outcomes from any of the programmes or the projects, and as is typical in a smaller organisation, it is clearly linked to revenue lines and cash flow."

4.4.5 Conclusion

The pharmaceutical manufacturing sector is one that operates under a heavily regulated environment, but also one of regular innovation to meet customer needs. There are a number institutional elements outlined in this study to describe the sector including emphasis on rules,

conforming to a pattern, and legitimacy within the external environment . The assessment of programme management maturity carried out in this study shows a sector which understands the origins of programmes and has standard models of managing programmes. This standard model of management would be expected from a sector with a high level of regulatory scrutiny to ensure consumer safety. This sector also demonstrated a clear distinction between projects and programmes. The overall level of programme management maturity within the sector is medium. This level of maturity could be expected from a sector where there is a large focus on stability and conformity.

However, with the progressive nature of product development within the pharmaceutical sector, one would also expect a higher level of programme maturity across a number of the maturity factors to support and deliver innovation. The guiding principles that come to mind here would be alignment to business needs, the definition of programme success and defined governance structures. A number of low levels of programme management maturity were found in answers to interview questions, particularly in the areas of roles and responsibilities, benefits realisation, and programme manager training and development, and the communication of critical success factors. These are all areas where future research and focus is suggested.

4.5 Case Study Number Four – Telecommunications Sector

4.5.1 Telecommunications Sector Overview

The North American Industry Classification System (NAICS) describes the telecommunications sector, under its code 517 (Census Bureau Telecommunications, 2016) as “Industries in the Telecommunications subsector include establishments providing telecommunications and the services related to that activity. The Telecommunications subsector is primarily engaged in operating, maintaining, and/or providing access to facilities for the transmission of voice, data, text, sound, and video. A transmission facility may be based on a single technology or a combination of technologies ...”.

A PWC communications report from 2015 (PWC Telecommunications, 2015) states that “the telecommunications industry continues its shift to a digital business model, organisations are recasting themselves as technology companies that offer a broad array of digital communications, connectivity, and content services.”

The telecommunications sector is also a regulated sector under which rules operators must provide their services. The Irish communications regulator, ComReg, states such regulators are “responsible for promoting competition, for protecting consumers and for encouraging innovation.” The regulator’s job involves “dealing with complex issues of law, economics and technology, and ensuring that our decisions are taken fairly and are clearly explained.” (Comreg, 2016).

The company represented in this study from the telecommunications sector is the provider of a range of advanced voice, data, broadband and TV services to the residential, small business, enterprise and government markets. It had a turnover in twenty-sixteen of one point three billion euros, serving over two million customers. It has the largest telecommunications infrastructure in Ireland with respect to capacity and coverage, employs over three thousand four hundred employees, and is headquartered in Ireland. The representative from this organisation who participated in this study was a senior programme manager with the company, who ran a number of new product development and introduction programmes for the company. They were responsible for chartering, developing, and executing strategic product development programmes, and dealt with all levels from the senior executive management of the company to the project teams in executing these programmes.

4.5.2 Elements of Institutional Theory Applicable to the Telecommunications Sector

Upon a review of the telecommunications sector through an Institutional Theory lens, the theory descriptors that are most aligned to the sector are:

A means of instilling value, supplying intrinsic worth to a structure or process (Scott, 1987, p. 494; DiMaggio & Powell, 1983, p. 150; Selznick, 1957, p. 17) – This sector is subject to a large level of change in order to keep pace with competitors. In order to fund this change, the sector is forced to instil value and supply worth to its processes in order to fund ongoing change and investment.

Institutionalization promotes stability: persistence of the structure over time (Scott, 1987, p. 494; Selznick, 1957, p. 17) – The sector is bound by regulatory rules imposed on it, but also the delivery of new robust solutions to customers. The sector must promote stability and structure over time to meet the needs of these boundaries. This shows alignment with institutionalisation's promotion of stability, but also the persistence of structure over time.

Responds to uncertainty (DiMaggio & Powell, 1983, p. 150) – the nature of change and technical innovations in this sector to meet customer expectations and needs forces companies in this sector to create innovative solutions, services and technologies. This aligns with the element of institutionalism's response to uncertainty.

Emphasis is placed on conformity to a pattern (Greenwood & Hinings, 1996, p. 1026; DiMaggio & Powell, 1983, p. 150) – Due to regulation enforced on this sector to protect customers, one can infer that emphasis is placed on conformity to a pattern. The fact that this sector is also forced to follow technological and service expectation trends supports the argument that this sector is aligned to this element of Institutional Theory.

Emphasis on rules and requirements (Zucker, 1987, p. 450; Meyer & Scott, 1983) and conformity to rules to receive support and legitimacy (Dowling & Pfeffer, 1975; Pfeffer & Salancik, 1978; Zucker, 1987, p. 451) – The level of regulation imposed on the telecommunications sector clearly aligns it to this element of Institutionalism.

Agency and change focused (Dacin, et al., 2008, p. 997; Phillips & Tracey, 2009, p. 169; Greenwood & Hinings, 1996, p. 1023) – This element of Institutional theory is applicable to the

telecommunications sector for a number of reasons. Firstly, the level of technological and service development required to maintain and or exceed competitive advantage aligns it to this element. Secondly, the strategic direction given from a higher executive level down to the operational level, and the execution of the strategy at the operational level requires an agency focused organisation.

Legitimacy within the external environment (Scott, 1987, p. 502; Covaleski & Dirsmith, 1988, p. 563; Oliver, 1997, p. 700) – The regulated nature of the sector, and organisation's requirement to adhere to regulatory rules brings with it legitimacy within the external environment. The need to supply latest technology and services also brings this type of legitimacy and aligns the sector to this element of Institutionalism.

Transition from a changed to settled environment (Kostova, et al., 2008, p. 995) – With the level of change required to keep pace with competitors, and meet customer expectations, there needs to be a transition from a changed to settled environment in order to provide robust solutions. This demonstrates alignment with this element of Institutional Theory.

4.5.3 Programme Management Maturity Scoring – Telecommunications Sector

Telecommunications Sector		
Maturity Guiding Principle	Score	Overall Score
Programme Management is Derived from Project Management	High	High
The conception of programme management is not universally agreed	High	
Is there a lack of distinction between projects and programmes?	High	
Is there a lack of established programme management techniques?	High	
Is there a generic model of programme management?	Medium	
There is no agreed definition of a programme	Medium	
Are programmes aligned to business needs?	High	
Is there a standard approach to programme management?	High	
Do programmes have clearly defined governance, roles and responsibilities?	High	
Is future research required in the area of programme management?	High	
What are the leadership competencies of successful programme managers?	Medium	
There is a poorly developed definition of programme success	High	

Table 4.4 – Telecommunications Sector Programme Management Maturity

Table 4.4 outlines the scoring against the twelve maturity guiding principles, but also gives an overall sector maturity score. Nine of the twelve maturity guiding principles scored high for the telecommunications sector, there were no low maturity scores, and there were two medium maturity factors, which were:

1. Is there a generic model of programme management?
2. There is no agree definition of a programme
3. What are the leadership competencies of successful programme managers?

What this research output states is, where the maturity guiding principle scored high, it means in the telecommunications sector:

1. Programme management methodologies used are derived from project management methods and practices.
2. The origination and conception of programmes and programme management is agreed, and can be linked to projects.
3. There is a clear distinction between projects and programmes, what their individual purposes are, and what they respectively deliver.
4. There are ample programme management practices.
5. Programmes are aligned to business needs.
6. There is a standard approach to programme management.
7. Programme Management has well defined governance, and roles and responsibilities.
8. Not as much research is required in the area of programme management as the literature would suggest.
9. There is a good definition of programme success.

This research suggests that programme management in the telecommunications sector, overall, has a high level of maturity, as outlined in Table 4.4 above.

4.5.4 Medium Levels of Maturity

The empirical findings from this research shows areas where no low levels maturity within the twelve guiding principles, and three medium levels exist. The following paragraphs outline the significant findings where medium levels of maturity were uncovered. Questions twelve and thirteen are linked to the maturity guiding principle 'is there a generic model of programme management?' Question twelve asked 'Can you outline how your organisation manages programmes, does this include as a portfolio, or toward a common goal?'. The interviewee stated that they are only managed toward a common goal, and that a portfolio is not used. This was scored as a medium level of maturity. Question thirteen asked "Can you outline the lifecycle stages on your organisation's programmes?". The interview candidate outlined four broad stages in the programme lifecycle by stating:

"The lifecycle stages would be commencement, execution, completion, review/auditing"

Due to the low number level of stages outlined and too broad an answer, this was scored as a medium maturity. The result of questions twelve and thirteen having medium maturity scores

meant the maturity guiding principle 'is there a generic model of programme management?' being scored a medium level of maturity.

The maturity guiding principle 'There is no agreed definition of a programme' also had questions twelve and thirteen linked to its maturity scoring. Additionally, question eleven was tied to its maturity scoring, and asked 'It is stated there is a link between project outputs and programme outcomes. Can you outline what these links are for projects and programmes in your organisation?' The interviewee stated that the main link was people (resources). This was scored as a medium as a result of only one item being identified as a link. The impact of questions eleven, twelve and thirteen scoring medium in programme management maturity was that the guiding principle scored a medium level of maturity.

Questions twelve and thirteen are also linked to the maturity guiding principle 'is there a standard approach to programme management?' However, this maturity factor still scored medium even though all other interview questions linked to this factor scoring a high level of maturity.

Questions twenty-one and twenty two were linked to the scoring of the maturity guiding principle 'What are the leadership competencies of successful PM's?' Question twenty-one asked 'Are these competencies (Programme Manager) used to select and develop programme managers?', the interviewee answered:

"This is fairly adhoc."

Due to the lack of detail in this answer, it was deemed to demonstrate a medium level of maturity. Question twenty-two asked 'Can you provide an example of what training is used to develop programme managers in your organisation?'. The candidate stated:

"PMP mainly, although PDMA (Product Development and Management Association) Guidelines are used for product development projects and programmes."

The answer was deemed to demonstrate a medium level of maturity because it indicated project and product development training, not programme management. Questions twenty-one and twenty two were linked to the scoring of the maturity guiding principle 'what are the leadership competencies of successful programme managers?' This guiding principle scored medium as a result of the answer to the other question linked to this maturity factor resulting in a high maturity response from the candidate.

4.5.5 Conclusion

The telecommunications sector, is one of both a regulated environment, but also one of change and technical progression to meet customer expectations. A large number of institutional elements are aligned to and describe this sector, these include response to uncertainty, emphasis on rules and requirements, transition from a changed to settled environment and promotion of stability. The programme management maturity scoring outlined in this study supports and aligns to a sector which is exposed to constant change and innovation. One would expect and does uncover a high level of maturity as an overall score, and in a large number of the maturity guiding principles, ten out of twelve, to be exact.

The key alignments to the literature, and the factors which this study would recommend investment in are:

- There being no generic model of programme management
- There is no agreed definition of a programme
- The need to understand leadership competencies of successful PM's.

4.6 Case Study Number Five - Hospital (Healthcare) Sector

4.6.1 Hospital (Healthcare) Sector Overview

The North American Industry Classification System (NAICS) describes the Hospital sector, under its code 622, which is a sub-sector of Healthcare and Social Assistance sector (code 62), as “*the subsector provides medical, diagnostic, and treatment services that include physician, nursing, and other health services to inpatients and the specialized accommodation services required by inpatients. Hospitals may also provide outpatient services as a secondary activity. Establishments in the Hospitals subsector provide inpatient health services, many of which can only be provided using the specialized facilities and equipment that form a significant and integral part of the production process.*” (Census Bureau Hospitals, 2016)

The hospital sector is one under regulatory supervision, typically these regulatory bodies monitor the quality of hospital services, but also implement national strategies and policies. In Ireland, the department of health states its role is “*to provide strategic leadership for the health service and to ensure that Government policies are translated into actions and implemented effectively. We support the Minister and Ministers of State in their implementation of Government policy and in discharging their governmental, parliamentary and Departmental duties.*” (Department of Health Ireland, 2016)

It also states “it seeks to improve the health and wellbeing of people by:

- *Keeping people healthy;*
- *Providing the healthcare people need;*
- *Delivering high quality services;*
- *Getting best value from health system resources.*”

The organisation representing the hospital sector is a provider of secondary and tertiary healthcare and is a leading hospital provider for more than three decades, with an annual operations budget of one point five billion euros approximately. The company manages six specialist and three community hospitals, as well as an ambulance service, plus home and residential care services, and employs over twenty-three thousand employees. It is the first healthcare system across the globe to have all its hospitals accredited by Joint Commission

International under the Academic Medical Centre accreditation program and has a strategic goal of adding three new hospitals to its network by 2030. The representative from the company who took part in this research study is the assistant executive director of finance for the company. This person is involved at an executive level in the management of the company, but also in the strategic direction and has oversight of all strategic infrastructural, change and enterprise business systems programmes.

4.6.2 Elements of Institutional Theory Applicable to the Hospital Sector

When one reviews the hospital sector through an Institutional Theory lens, the theory descriptors that are most aligned to the sector are:

A means of instilling value, supplying intrinsic worth to a structure or process (Scott, 1987, p. 494; DiMaggio & Powell, 1983, p. 150; Selznick, 1957, p. 17) – The hospital sector has a key objective of providing quality services to patients. The ‘worth’ institutionalism speaks of relevant to the hospital sector is and should be the quality of services. One of the sectors core objectives is the creation and supply of quality services, which aligns it to this Institutional Theory descriptor.

Institutionalization promotes stability: persistence of the structure over time (Scott, 1987, p. 494; Selznick, 1957, p. 17) – Due to the critical nature of hospital services, and the stable structures required to provide a consistent level and quality of care, the hospital sector should, and has some focus on implementing stable structures to deliver its services. This shows a direct alignment to the institutional theory descriptor of promoting stability and the persistence of structure over time.

Responds to uncertainty (DiMaggio & Powell, 1983, p. 150) – The hospital and healthcare sectors are exposed to, among other things, changes in government, legislation, patient demand plus new and improved therapies and practices. A level of uncertainty comes with these and other events impacting the sector, and with this the need to respond to these changes and update systems, structures and practices. This shows a direct alignment with this particular Institutional Theory descriptor.

Emphasis is placed on conformity to a pattern (Greenwood & Hinings, 1996, p. 1026; DiMaggio & Powell, 1983, p. 150) – The regulatory and legislative requirements placed on hospitals and health care providers can be described as conformity to a pattern, showing allies it this this Institutionalism descriptor.

Agency and change focused (Dacin, et al., 2008, p. 997; Phillips & Tracey, 2009, p. 169; Greenwood & Hinings, 1996, p. 1023) – As described in the above paragraphs, this sector must have some focus on change due to external pressures and influences. From an agency standpoint, there is a process of issuing directives from the executive and political levels down to the operational level, which is consistent with an agency approach. Both of these points show the nature of agency and change focus within this sector.

Legitimacy within the external environment (Scott, 1987, p. 502; Covaleski & Dirsmith, 1988, p. 563; Oliver, 1997, p. 700) – One can describe the external environment in the context of hospitals as being impacted by the political and regulatory systems. These are two key external ‘customers’ which the sector must have legitimacy with for support.

Transition from a changed to settled environment (Kostova, et al., 2008, p. 995) – with the level of change outlined in the above paragraphs, it is imperative that this unsettled environment is transitioned to a stable environment in order to maintain the quality of services.

4.6.3 Programme Management Maturity Scoring – Hospital Sector

Hospital Sector		
Maturity Factor	Score	Overall Score
Programme Management is Derived from Project Management	Medium	Medium
The conception of programme management is not universally agreed	High	
Is there a lack of distinction between projects and programmes?	Medium	
Is there a lack of established programme management techniques?	Low	
Is there a generic model of programme management?	Low	
There is no agreed definition of a programme	Medium	
Are programmes aligned to business needs?	Medium	
Is there a standard approach to programme management?	Medium	
Do programmes have clearly defined governance, roles and responsibilities?	Medium	
Is future research required in the area of programme management?	High	
What are the leadership competencies of successful programme managers?	Low	
There is a poorly developed definition of programme success	Medium	

Table 4.5 – Hospital Sector Programme Management Maturity

Table 4.5 outlines the scoring against the twelve maturity factors, but also gives an overall sector maturity score. Two of the twelve programme management maturity guiding principles scored high for the Hospital sector, there were seven medium maturity scores, and three low maturity scores, which were:

1. Is there a lack of established programme management techniques?
2. Is there a generic model of programme management?
3. What are the leadership competencies of successful programme managers?

What this research output states is, where the maturity factors scored high in the hospital sector:

1. There is agreement on the origins of programme management
2. Not as much research is required into the area of programme management.

This research states that programme management in the Hospital sector has a medium level of maturity overall, as outlined in Table 4.5.

4.6.4 Low Levels of Maturity

The empirical findings from this research shows areas where there are low levels maturity within the twelve maturity guiding principles. The following paragraphs outline the significant findings where low levels of maturity were demonstrated. Question two asked 'Can you describe what methodologies are used to execute projects in your organisation?'. This scored a low level of maturity as a result of the interviewee stating there was a lack of "*structure and definition of the projects*". This had no significant bearing on the programme maturity guiding principle 'programme management is derived from project management', which resulted in a medium level of maturity within this sector.

Questions thirteen and fourteen are linked to the maturity guiding principle 'Is there a generic model of programme management?'.

Question thirteen asked 'Can you outline the lifecycle stages on your organisation's programmes?'. The interview candidate stated that there was not a set of stages in programmes run within their organisation. This resulted in a low maturity score. Question fourteen asked 'Can you describe the programme management methodology and governance structures your organisation uses?', the candidate stated:

"No, not in programmes run in our organisation, there are supposed to be, but in reality there aren't."

Both of the answers to these questions demonstrated there is no generic model of programme management within the hospital sector. Question fourteen was also linked to the maturity guiding principle 'Is there a lack of established programme management techniques'. The low score demonstrated in the answer to question fourteen contributed to the programme maturity factor have a medium level of maturity. Question thirteen is linked to the programme maturity

guiding principle ‘There is no agreed definition of a programme?’. The low scoring from question thirteen did have a significant bearing on the guiding principle having a medium score.

Questions nineteen, twenty-one and twenty-two are all linked to the programme maturity guiding principle ‘are programmes aligned to business needs?’. The low maturity scores in all of these questions resulted in this programme management maturity guiding principle having a medium level of maturity. Question nineteen asked ‘Can you explain how benefits realisation linked to programme success in your organisation?’. The candidate demonstrated the sector had a low level of maturity by answering:

“... some of our programmes are as a result of government policy, so, whether there is a benefit from them or not doesn't really matter, i.e. this is what the government wants us to do, and this is what we then do, it may not be of benefit though.”

Question twenty-one asked ‘Are these competencies (Programme Manager) used to select and develop programme managers?’. The candidate demonstrated a low level of maturity within the sector by answering ‘no’ to this question. Question twenty-two asked ‘Can you provide an example of what training is used to develop programme managers in your organisation?’. Here, again, the simple answer of “none” demonstrated a low level of maturity within the sector. Questions twenty one and twenty two were linked to the programme maturity factor ‘What are the leadership competencies of successful programme managers?’ The low scores in both of these questions directly contributed to this guiding principle having a low maturity for this sector. Question nineteen was linked to the maturity factor ‘There is a poorly developed definition of programme success’. The low score for question nineteen resulted in this maturity factor having a medium level of maturity.

Questions thirteen, fourteen and sixteen were all linked to the programme management maturity guiding principle ‘Is there is a standard approach to programme management?’ Question sixteen asked ‘Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?’ The interviewee gave an answer which demonstrated the sector has a low level of maturity in this area by stating:

“I would have to say no, based on my own experience of the programmes I have been involved in.”

This answer, coupled with the low scores for the answers to question thirteen and fourteen, resulted in the guiding principle having a medium level of maturity.

Questions fourteen and sixteen are linked to the programme management maturity guiding principle ‘Do programmes have clearly defined governance, roles and responsibilities?’ With both questions having low scores, they directly impacted the guiding principle having a medium level of maturity.

4.6.5 Conclusion

The hospital sector is one under regulatory supervision and exposed to change and constant therapeutic progression to benefit patient needs. Seven institutional elements can be used to describe this sector. The institutional traits which best describe this sector include promotion of stability, response to uncertainty, and legitimacy within the external environment. The programme management maturity scoring outlined in this study does not align to a sector which is exposed to change, innovation and regulatory scrutiny. However, based on the overall medium maturity score, and the number of questions resulting in a low maturity score, one can argue that programme management, within this sector, does require further research. The key areas in which one could recommend investment are those of there being no generic model of programme management, that there is a need to understand leadership competencies of successful programme managers, and the lack of programme management techniques.

4.7 Case Study Number Six – The Public Sector

4.7.1 Public Sector Overview

The Irish Central Statistics Office (CSO) 2014 register of public sector bodies (Central Statistics Office Ireland, 2014) offers classifications of public sector bodies, and discrete listings. It states

“General Government is one of five mutually exclusive institutional sectors within the economy. These are (a) non-financial corporations (S11); (b) financial corporations (S12); (c) general government (S13); (d) households (S14); and (e) non-profit institutions serving households (S15). Commercial public sector bodies are classified as ‘public’ subsectors of S11 and S12.”

The register report goes on to say that:

“Central Government is defined to include all bodies established through political processes and for whose activities a Minister of Government or other responsible person is accountable to the people through the (National Parliament). This responsibility extends to the presentation of detailed audited annual accounts to the Oireachtas. Central Government includes legislative, judicial and executive bodies established in this manner. The sector does not include public corporations or enterprises engaged in the production of market services or goods.”

This register report goes further by listing the various government and public sector agencies and bodies under the following government departments:

- Agriculture, Food and the Marine
- Arts, Heritage and the Gaeltacht
- Children and Youth Affairs
- Communications, Energy and Natural Resources
- Defence
- Education and Skills
- Environment, Community and Local Government
- Finance
- Health
- Jobs, Enterprise and Innovation

- Justice and Equality
- Social Protection
- Transport, Tourism and Sport

The interviewee from the public sector was a representative from the government department responsible for the management of the national roads programme and for the allocation of grants to specific projects on the national roads network. This government department has responsibility for the planning and supervision of works for the construction and maintenance of national roads, plus the responsibility for the provision of funding to carry out improvement work on national road projects. This department was responsible for a capital spend of over seven hundred and fifty million euros in twenty sixteen, which is part of a seven-year capital plan of seven billion euros related to new national and local road programmes coupled with a maintenance plan. This department is engaged in the programme management of infrastructural projects as part of the budgetary spend. The representative in question is a senior programme manager with the department involved in executing large scale infrastructural programmes.

4.7.2 Elements of Institutional Theory Applicable to the Public Sector

When one reviews the Public sector through an Institutional Theory lens, the theory descriptors that are most aligned to the sector are:

A means of instilling value, supplying intrinsic worth to a structure or process (Scott, 1987, p. 494; DiMaggio & Powell, 1983, p. 150; Selznick, 1957, p. 17) – The level of services and supports the public service provides means numerous structures and processes are in place to enable such services. Public services also have an obligation of instilling value in such structures and processes for the public benefit, hence aligning to this element of Institutional Theory.

Institutionalization promotes stability: persistence of the structure over time (Scott, 1987, p. 494; Selznick, 1957, p. 17) – Many of the systems and structures in place within the public services have been in place for long periods of time. This shows a persistence of structures over time and a promotion of stability.

Responds to uncertainty (DiMaggio & Powell, 1983, p. 150) – The public service is exposed to uncertainty through for example, political change. The departments and functions need to and are sometimes forced to respond to such change which may impact their ways of operations and scope of services.

Emphasis is placed on conformity to a pattern (Greenwood & Hinings, 1996, p. 1026; DiMaggio & Powell, 1983, p. 150) – The numerous system and processes in place, coupled with patterns put in place by governments, clear shows that the public sector must place emphasis on conforming to a pattern.

Emphasis on rules and requirements (Zucker, 1987, p. 450; Meyer & Scott, 1983) – The public sector must put a strong emphasis on rules and requirements set down by the political system, as these essentially give direction to many of the public service departments.

Legitimacy within the external environment (Scott, 1987, p. 502; Covaleski & Dirsmith, 1988, p. 563; Oliver, 1997, p. 700) – The legitimacy outlined here is that of the public sector adhering to governmental directives. If these directives are not adhered to, public sector departments may be at risk of losing legitimacy in the eyes of the public and the government.

4.7.3 Programme Management Maturity Scoring – Public Sector

Public Sector		
Maturity Factor	Score	Overall Score
Programme Management is Derived from Project Management	High	High
The conception of programme management is not universally agreed	High	
Is there a lack of distinction between projects and programmes?	High	
Is there a lack of established programme management techniques?	High	
Is there a generic model of programme management?	High	
There is no agreed definition of a programme	High	
Are programmes aligned to business needs?	High	
Is there is a standard approach to programme management?	High	
Do programmes have clearly defined governance, roles and responsibilities?	High	
Is future research required in the area of programme management?	High	
What are the leadership competencies of successful programme managers?	Medium	
There is a poorly developed definition of programme success	High	

Table 4.6 – Public Sector Programme Management Maturity

Table 4.6 outlines the scoring against the twelve maturity factors, and an overall sector maturity score. Eleven of the twelve programme management guiding principles in the public sector scored high maturity, one had a medium maturity score, and there were no low maturity scores. The output from this research states, where the guiding principles scored high maturity in the Public sector:

1. Project management is derived from programme management
2. The conception of programme management is agreed
3. There is a clear distinction between projects and programmes
4. There are established programme management techniques
5. There is a generic model of programme management

6. There is a clear definition of what a programme management is
7. Programmes are aligned to business needs
8. There is a standard approach to programme management
9. Programme management has defined governance structures, and roles and responsibilities
10. There is less of a need for future research into the area of programme management
11. The definition of programme success is well defined

This research states that programme management in the Public sector has a high level of maturity overall as a management discipline.

4.7.3.1 Medium Levels of Maturity

The findings from this research shows areas where there are medium levels maturity within the twelve maturity guiding principles. The following paragraphs outline the significant findings where medium levels of maturity were demonstrated. Question three asked 'Do you consider there to be a clear link between project interdependencies, and if so, what are they?'. The respondent's reply was deemed of medium maturity as it acknowledged there was a clear link between project interdependencies, however they did not elaborate as to what the interdependencies were. Question three was linked to one maturity guiding principle 'programme management is derived from project management'. This maturity factor scored a high level of maturity within the public sector, and therefore was not hugely impacted by the medium maturity score to the response to question three. Question nine asked 'How would the programme process be seen in your organisation related to their duration and linking to strategic needs?'. The answer to this question scored a medium level of maturity as a result of the interview candidate stating that programmes were not subject to ambiguity. The candidate answered:

"... I would not say subject to ambiguity and change, but they are definitely seen as a long term initiative..."

This interview question was linked to the guiding principle 'Is there a lack of distinction between projects and programmes?' The medium maturity scoring of this answer did not have a large impact on the overall maturity score of high for this maturity guiding principle.

Questions twenty one and twenty two are linked to the programme management maturity guiding principles ‘Are programmes aligned to business needs?’ and ‘What are the leadership competencies of successful programme managers?’ Question twenty one asked ‘How are these competencies used to select and develop programme managers?’. The answer to this question scored a medium level of maturity, as the interviewee stated that the competencies were used “*more to select*” programme managers, than to develop. Question twenty two asked ‘Can you provide an example of what training is used to develop programme managers in your organisation?’. The answer to this question scored a medium level of maturity due to the candidate stating that its more for people to decide to develop themselves, rather than a system of development being in place within the organisation to develop programme managers. The interviewee stated:

“... a lot of that is down to individuals personal development, that individuals decide to go and do additional third level courses or if people want to get competencies developed, they can make a case for this, and may receive funding to support this.”

The medium maturity scoring of the answers to questions twenty one and twenty two had a direct impact on the programme management maturity guiding principle ‘What are the leadership competencies of successful programme managers?’ having a medium level of maturity. The high maturity scoring of the guiding principle ‘are programmes aligned to business needs?’ was not impacted by the scoring of the answers to questions twenty one and twenty two.

4.7.4 Conclusion

The Public sector is made of multiple services and sectors, exposed to governmental change, and is one under constant government supervision. Six institutional elements are be used to describe this sector including emphasis on rules are requirements, promotion of stability and legitimacy within the external environment. The programme management maturity scoring outlined in this study aligns to a sector which is exposed to the impacts of governmental change every number of years. Nineteen of the twenty two questions had a high maturity score, this had an impact on the overall maturity score, with only one of the programme management maturity guiding principles demonstrating a medium level of maturity. It is recommended that

future focus be put into understanding the leadership competencies of successful programme managers

4.7.5 Summary

The Public sector is one exposed to the impact of governmental change every number of years, but also under governmental scrutiny, an institutional lens has been used to describe this. The outputs from this study have shown that there is a high level of programme management maturity within the sector. There is a recommendation for future focus in understanding the leadership competencies of successful programme managers.

4.8 Case Study Number Seven – Insurance Sector

4.8.1 Insurance Sector Overview

The North American Industry Classification System (NAICS) describes the Insurance sector, under its code 524, as “Industries in the Insurance Carriers and Related Activities subsector group establishments that are primarily engaged in one of the following: (1) underwriting (assuming the risk, assigning premiums, and so forth) annuities and insurance policies or (2) facilitating such underwriting by selling insurance policies, and by providing other insurance and employee-benefit related services.” (Census Bureau Insurance Carriers, 2016)

Insurance companies, and the sector itself, are normally regulated for the protection of consumers. In Ireland, the central bank is charged with the regulation of the insurance sector. The central bank of Ireland (Central Bank of Ireland, 2016) states its roles is:

“.... for the prudential supervision of insurance and reinsurance undertakings authorised in Ireland. In carrying out this role, the Insurance Directorate monitors the risks posed by undertakings along with issuing standards, policies and guidance which undertakings are expected to meet.”

The representative company in this study from the insurance sector is a global provider of insurance products and services with a total income of over six point three billion euros in twenty fifteen. It has a presence in over sixty countries, with over one hundred and fifty thousand employees serving over one hundred million clients. The core activities of this company include providing products and services for both individuals and business' in the areas of personal property and liability. It also engages in providing life insurance, health and personal protection products, as well as an assets management division to invest and manage assets for the company, and its retail and institutional clients. The representative from this organisation who participated in this research is a senior level programme manager who manages and executes IT projects and programmes within the Irish headquarters of this group. The programmes managed by this individual include the implementation of a new digital strategy for organisation, infrastructural upgrades and IT transformation.

4.8.2 Elements of Institutional Theory Applicable to the Insurance Sector

When one reviews the Insurance sector through an Institutional Theory lens, the theory descriptors that are most aligned to the sector are:

A means of instilling value, supplying intrinsic worth to a structure or process (Scott, 1987, p. 494; DiMaggio & Powell, 1983, p. 150; Selznick, 1957, p. 17) – As with most other sectors, the insurance sector has an objective of providing relevant and quality services of value to its customers. This requires the appropriate systems and processes in place to achieve this goal and aligns to this aspect of institutionalism.

Institutionalization promotes stability: persistence of the structure over time (Scott, 1987, p. 494; Selznick, 1957, p. 17) – The nature of the insurance business, in terms of transactions and data, requires it to have stable operations and systems, and is in direct alignment with this particular element of institutional theory.

Responds to uncertainty (DiMaggio & Powell, 1983, p. 150) – Insurance companies are exposed to and impacted by regulatory rules and changes, coupled with changes in the market place and competitive pressures. The sector, and the companies are obliged to respond to these changes, hence aligning them to this element of institutionalism.

Emphasis on rules and requirements (Zucker, 1987, p. 450; Meyer & Scott, 1983) – The regulatory rules imposed on this sector drives the sector and its companies to put emphasis on rules and requirements.

Conformity to rules to receive support and legitimacy (Dowling & Pfeffer, 1975; Pfeffer & Salancik, 1978; Zucker, 1987, p. 451) – As a result of the regulators imposing rules on the sector and its companies, it drives the companies to conforming to these rules and receiving support and legitimacy within the sector.

Agency and change focused (Dacin, et al., 2008, p. 997; Phillips & Tracey, 2009, p. 169; Greenwood & Hinings, 1996, p. 1023) – The impact of regulatory and market changes, coupled with changing customer needs means this sector is change focused. In terms of how these changes are implemented, like most companies, it would be a top down agency approach.

Legitimacy within the external environment (Scott, 1987, p. 502; Covaleski & Dirsmith, 1988, p. 563; Oliver, 1997, p. 700) – The level of regulation across the insurance sector, and insurance

companies' requirement to adhere to these means that they require and seek legitimacy within the external environment.

4.8.3 Programme Management Maturity Scoring – Insurance Sector

Insurance Sector		
Maturity Factor	Score	Overall Score
Programme Management is Derived from Project Management	High	Medium
The conception of programme management is not universally agreed	High	
Is there a lack of distinction between projects and programmes?	Medium	
Is there a lack of established programme management techniques?	Low	
Is there a generic model of programme management?	Medium	
There is no agreed definition of a programme	Medium	
Are programmes aligned to business needs?	Medium	
Is there a standard approach to programme management?	Medium	
Do programmes have clearly defined governance, roles and responsibilities?	Low	
Is future research required in the area of programme management?	Low	
What are the leadership competencies of successful programme managers?	Low	
There is a poorly developed definition of programme success	Low	

Table 4.7 – Insurance Sector Programme Management Maturity

Table 4.7 gives an overview of the scoring against the twelve maturity guiding principles, and an overall sector maturity score. Two of the twelve maturity guiding principles scored high for the Insurance sector, five had a medium maturity score, and five low maturity scores, which were:

1. Is there a lack of established programme management techniques?
2. Do programmes have clearly defined governance, roles and responsibilities?
3. Is future research required in the area of programme management?

4. What are the leadership competencies of successful programme managers?
5. There is a poorly developed definition of programme success

What this research output states is, where the guiding principles scored high maturity, it means that in the Insurance sector:

1. Project management is derived from programme management
2. The conception of programme management is universally agreed

This research states that programme management in the Insurance sector has a medium level of maturity overall, as demonstrated in Table 4.7.

4.8.3.1 Low Levels of Maturity

The findings from this research shows areas where there are low level of maturity within the twelve guiding principles. The following paragraphs outline the significant findings where low levels of maturity were demonstrated. Question eleven asked 'It is stated there is a link between project outputs and programme outcomes. Can you outline what these links are for projects and programmes in your organisation?'. The interview candidate answered 'no' to this question, which resulted in a low score. Question eleven is directly linked to two programme management maturity guiding principles, those being 'Is there a lack of distinction between projects and programmes?' and 'There is no agreed definition of a programme? Both maturity guiding principles scored a medium level of maturity, to which the scoring from question eleven would have had a significant contribution.

Questions fourteen, fifteen and sixteen are linked to three programme management maturity guiding principles:

- Is there a lack of established programme management techniques?
- Is there a standard approach to programme management?
- Do programmes have clearly defined governance, roles and responsibilities?

Question fourteen asked 'Can you describe the programme management methodology and governance structures your organisation uses?'. The interviewee answered simply "no" to this question, resulting in a low maturity score. Question fifteen asked 'Can you describe how the

programme management methodology in your organisation matured over time and has it responded well to change?' As the interview candidate answered in a previous question that there is no formal methodology, it means one is not in place to mature, therefore, this resulted in a low maturity score. Question sixteen asked 'Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?', the maturity scoring for this question was low as a result of the interview candidate stating:

"From my past experience, they don't tend to be. At project level they tend to be, but not always."

The impact of the low scoring in questions fourteen, fifteen and sixteen was:

- The maturity guiding principle 'is there a lack of established programme management techniques?' has a low level of maturity in the Insurance sector.
- The guiding principle 'is there a standard approach to programme management' shows a medium level of maturity in the Insurance sector
- The guiding principle 'do programmes have clearly defined governance, and roles and responsibilities?' has a low level of maturity in the Insurance sector.

Question fourteen was also directly linked to the maturity guiding principle 'is there is a generic model of programme management'. This had a significant impact on this maturity factor scoring a medium level of maturity. Questions fifteen and seventeen are linked to the maturity guiding principle 'is future research is required in the area of programme management'. Question seventeen asked 'How does your organisation define programme success and critical success factors, how are they measured?'. The response to the question from the interview candidate suggested a low maturity score, where they stated:

"...I haven't in the past seen a huge amount of evidence in projects or programmes of benefits realisation being formally measured."

The low scoring of the answer to this question coupled with the low score to the answer to question fifteen resulted in the maturity guiding principle being scored with a low level of maturity. The maturity guiding principle 'There is a poorly developed definition of programme success' was scored based on answers from questions seventeen and nineteen. Question nineteen asked 'Can you explain how benefits realisation linked to programme success in your organisation?'. The answer from the candidate revealed a low level of maturity within the sector, with them stating:

"Have I seen evidence of clear benefits realisation, probably not."

The scoring of this answer, coupled with that from question seventeen resulted in the guiding principle having a low level of maturity within the Insurance sector.

Questions twenty one and twenty two are linked to the maturity guiding principle 'what are the leadership competencies of successful PM's'. Question twenty one asked 'Are these competencies (Programme Manager) used to select and develop programme managers?. The interviewees answer resulted in a low maturity score by stating:

"I would say it isn't necessarily from what I have seen."

Question twenty two asked 'Can you provide an example of what training is used to develop programme managers in your organisation?'. The candidate answered that they had not seen any formal in-house training, and that experienced managers are normally brought in from external. This answer scored a low level of maturity. The impact of answers to questions twenty one and twenty two on the maturity guiding principle was they directly resulted in it having a low maturity. The maturity guiding principle 'are programmes aligned to business needs?' was scored using the answers from questions fifteen, seventeen, nineteen, twenty one and twenty two. The answers and scorings of all of these questions is outlined above in this section. The scoring of answers to these questions had a direct influence on the maturity guiding principle having a medium level of maturity for the Insurance sector.

4.8.4 Conclusion

The Insurance sector is one under regulatory supervision and one exposed to constant risk as a result of the type and level of business companies take on. Seven institutional elements can be used to describe this sector which include supplying intrinsic worth, promotion of stability, and legitimacy within the external environment. The programme management maturity scoring outlined in this study does not align to a sector which is exposed to such levels of risk and regulatory scrutiny. With eight of the twenty two questions scoring a low, this had an impact on the overall medium maturity score, five of the programme management maturity guiding principles demonstrated low levels of maturity.

The factors which one could recommend investment in are:

- Is there is a lack of established programme management techniques?

- Do programmes have clearly defined governance, and roles and responsibilities?
- What are the leadership competencies of successful programme managers?
- There is a poorly developed definition of programme success
- Is future research required in the area of programme management?

4.9 Case Study Number Eight – The Wealth Management Sector

4.9.1 Wealth Management Sector Overview

The North American Industry Classification System (NAICS) describes this sector, “under its code 523, Industries in the Securities, Commodity Contracts, and Other Financial Investments and Related Activities subsector group establishments that are primarily engaged in one of the following: (1) underwriting securities issues and/or making markets for securities and commodities; (2) acting as agents (i.e., brokers) between buyers and sellers of securities and commodities; (3) providing securities and commodity exchange services; and (4) providing other services, such as managing portfolios of assets; providing investment advice; and trust, fiduciary, and custody services.” (Census Bureau Securities, Commodity Contracts etc, 2016)

This is a sector which is normally regulated for the protection of consumers. In Ireland, the central bank is charged with the regulation of the Wealth Management sector, and in its roles it is responsible for (Central Bank of Ireland Financial Regulation, 2016):

- The prudential regulation and supervision of Investment firms authorised in Ireland
- The regulation and supervision of the conduct of business of firms authorised in Ireland
- The regulation and supervision of those provisions relevant to the financial services market in Ireland

The wealth management company in question has its headquarters in Ireland but is part of a parent organisation which employs eighty thousand employees across four hundred and fifty companies with presences in over sixty countries. The Irish division of this company manages just under ten billion euros of assets and is primarily engaged in asset and wealth management. The interview candidate from this organisation representing the sector is a programme manager, and has managed programmes related to regulatory obligations i.e. Solvency II, automation programmes to reduce manual operations, and business growth programmes. This individual is responsible for the development and execution of programmes, plus the engaging with the executive leadership in this organisation on all aspects related to the programmes they manage, and their impact on strategic direction of the company.

4.9.2 Elements of Institutional Theory Applicable to the Wealth Management Sector

When one reviews the Wealth Management sector through an Institutional Theory lens, the theory descriptors that are most aligned to the sector are:

A means of instilling value, supplying intrinsic worth to a structure or process (Scott, 1987, p. 494; Selznick, 1957, p. 17; DiMaggio & Powell, 1983, p. 150) – this business sector has a key focus on instilling value to its customer's investments, and also supplying intrinsic worth to these investments. For this reason, one can see alignment between the sector and this element of Institutional theory.

Operates to produce common understandings about what is appropriate and, fundamentally, meaningful behaviour (Zucker, 1983, p. 5; Scott, 1987, p. 497) – The regulated nature of this sector ensures that companies understand what is appropriate and meaningful behaviour and that these are applied within the sector.

Emphasis on rules and requirements (Zucker, 1987, p. 5; Meyer & Scott, 1983, p. 497) – Here, the regulated nature of the sector ensures that companies place emphasis on rules and requirements.

Conformity to rules to receive support and legitimacy (Dowling & Pfeffer, 1975; Pfeffer & Salancik, 1978; Zucker, 1987, p. 451) – The regulatory pressure on this sector ensures that companies conform to rules, and in turn, this brings legitimacy to the activities of companies in the sector.

Legitimacy within the external environment (Scott, 1987, p. 502; Covaleski & Dirsmith, 1988, p. 563; Oliver, 1997, p. 700) – The conformity to rules and regulations outlined and policed by the regulator bring legitimacy to the companies with the sector and to the external environment and its customers.

4.9.3 Programme Management Maturity Scoring – Wealth Management Sector

Wealth Management Sector		
Maturity Factor	Score	Overall Score
Programme Management is Derived from Project Management	Medium	Medium
The conception of programme management is not universally agreed	Medium	
Is there a lack of distinction between projects and programmes?	High	
Is there a lack of established programme management techniques?	Medium	
Is there a generic model of programme management?	Medium	
There is no agreed definition of a programme	High	
Are programmes aligned to business needs?	Medium	
Is there a standard approach to programme management?	Medium	
Do programmes have clearly defined governance, roles and responsibilities?	Medium	
Is future research required in the area of programme management?	Low	
What are the leadership competencies of successful programme managers?	Low	
There is a poorly developed definition of programme success	Low	

Table 4.8 – Wealth Management Sector Programme Management Maturity

Table 4.8 gives an overview of the scoring against the twelve maturity factors, and an overall sector maturity score within the wealth management sector. Two of the twelve programme management maturity guiding principles factors scored high for the Wealth Management sector, seven had a medium maturity score, and three low maturity scores, which were:

1. Is future research is required in the area of programme management?
2. What are the leadership competencies of successful programme managers?
3. There is a poorly developed definition of programme success

What this research output states is, where the maturity guiding principles scored high, it means that in the Wealth Management sector:

1. There is a clear distinction between projects and programmes
2. There is an agreed definition of a programme

This research states the programme management discipline in the Wealth Management sector has a medium level of maturity overall, as outlined in Table 4.9.

4.9.3.1 Low Levels of Maturity

The findings from this research shows areas where there are low levels of maturity within the twelve maturity guiding principles. The following paragraphs outline the significant findings where low levels of maturity were demonstrated. The programme management maturity guiding principle 'is future research required in the area of programme management?' is directly linked to question seventeen. This question asked, 'How does your organisation define programme success and critical success factors, how are they measured?'. The answer to the question scored a low level of maturity, with the interview candidate stating:

"If it's a programme that has a clear outcome, it's a lot easier, but where the programme is made up of a portfolio of projects, then no it is not clearly defined with my current organisation. Whereas it's much easier to define success factors when you have a clear outcome from a programme"

This low maturity score directly led to the guiding principle also having a low maturity within this sector.

The maturity guiding principle 'There is a poorly developed definition of programme success' is linked to questions seventeen and nineteen. Question nineteen asked 'Can you explain how benefits realisation linked to programme success in your organisation?'. The candidate stated that benefits realisation is not followed through during the programme, and audits are not carried out after the programme has been completed. This resulted in a low level of maturity for question nineteen. With the responses to questions seventeen and nineteen resulting in low scores, both had a direct impact on the maturity guiding principle also having a low maturity.

Questions twenty-one and twenty two are both linked to the maturity guiding principle 'What are the leadership competencies of successful PM's? Question twenty-one asked 'How are these competencies used to select and develop programme managers?'. The answer to this

question resulted in a low score as the answer demonstrated that competencies are not used to select programme managers where the interviewee stated:

“... its normally a case of who is available and who is the most experienced, not necessarily who is the best person for the job. Sometimes the selection of a programme manager might go on business knowledge versus project delivery, and that might not be the right decision.”

Question twenty-two asked ‘Can you provide an example of what training is used to develop programme managers in your organisation?’. The interviewee stated programme managers are hired with qualifications, and not developed or trained internally. This resulted in a low maturity score for the answer to the question. The resulting low score answers to questions twenty-one and twenty-two resulted in the maturity guiding principle having a low level of maturity.

The maturity guiding principle ‘are programmes aligned to business needs?’ was linked to interview questions seventeen, nineteen, twenty-one and twenty-two. The paragraphs above clearly show that the answers to all the questions result in low maturity scores. The impact on the maturity guiding principle was that these answers led to it having a medium maturity score.

4.9.4 Conclusion

The Wealth Management sector, is one under constant regulatory supervision, five institutional elements can be used to describe this sector which include conformity to rules, to receive support and legitimacy, and a means of instilling value. One could say the programme management maturity scoring outlined in this study does align to a sector which is under such regulatory scrutiny. The study results in an overall maturity score of medium for the sector. Four of the twenty two questions scored low maturity, with this having a direct impact on the overall maturity score, and three of the programme management maturity factors demonstrating low levels of maturity.

Key findings related to high levels of maturity are:

- There is a clear distinction between projects and programmes
- There is an agreed definition of a programme

This study recommends future research in the area of programme management, specific areas where investment in research is recommended are:

- The developing a definition of programme success
- The leadership competencies of successful programme managers

4.10 Case Study Number Nine – Information Technology

4.10.1 Information Technology Sector Overview

According to the North Dakota Information Technology Department (North Dakota Information Technology Department, 2016), Information Technology means “the use of hardware, software, services, and supporting infrastructure to manage and deliver information using voice, data, and video.

Included in Information Technology are:

- All computers with a human interface
- All computer peripherals which will not operate unless connected to a computer or network
- All voice, video and data networks and the equipment, staff and purchased services necessary to operate them
- All salary and benefits for staff whose job descriptions specifically includes technology functions, i.e. network services, applications development, systems administration
- All technology services provided by vendors or contractors
- Operating costs associated with providing information technology
- All costs associated with developing, purchasing, licensing or maintaining software

The interviewee who represented the information technology sector was from an organisation seen as a leading provider of IT managed services, IT project delivery and business outsourcing solutions. It is over twenty years in business and has over five hundred employees predominantly across the island of Ireland and the UK with a turnover of over eighty million euro per year. Its primary services to some of the leading information technology, technology and service providers include project and programme management, service management, consultancy, I.T. service outsourcing, test and risk mitigation and cloud services. The representative from this organisation is a non-executive director and leads the company's project and programme management organisation. This person is seen as a leading figure in project and programme management within Ireland, has lectured extensively on project and

programme management across a number of universities, and is published in numerous practitioner and academic journals on project and programme management topics. They have worked as an international project and programme manager in sectors including information technology and public healthcare.

4.10.2 Elements of Institutional Theory Applicable to the Information Technology Sector

Upon a review of the Information Technology sector through an Institutional Theory lens, the theory descriptors that are most aligned to the sector are:

A means of instilling value, supplying intrinsic worth to a structure or process (Scott, 1987, p. 494; Selznick, 1957, p. 17; DiMaggio & Powell, 1983, p. 150) – A key output from IT companies is the delivery of a product to meet customer expectations and needs. Structures and processes need to be put in place to produce such products. A key function of some companies within the sector is to bring worth to such structures and processes to deliver customer solutions.

Institutionalization promotes stability: persistence of the structure over time (Scott, 1987, p. 494; Selznick, 1957, p. 17) – The need to deliver robust customer solutions puts emphasis on companies moving from the uncertainty of a research and development environment to the stable structure of finished product delivery to the market. This demonstrates alignment to this particular element of Institutional Theory.

Responds to uncertainty (DiMaggio & Powell, 1983, p. 150) – The information technology sector is exposed to constant technical advancement, fierce competition within the sector, and ever changing customer expectations and needs. There is a constant focus on responding to these challenges and changes, which aligns the sector to this particular descriptor.

Emphasis is placed on conformity to a pattern (Greenwood & Hinings, 1996, p. 1026; DiMaggio & Powell, 1983, p. 150) – The need for many IT companies to be seen as legitimate within the sector through meeting and matching technological advancements of peers' means emphasis is placed on conformity to a pattern.

Agency and change focused (Dacin, et al., 2008, p. 997; Phillips & Tracey, 2009, p. 169; Greenwood & Hinings, 1996, p. 1023) – The element of change within this sector has been

described in points above, which demonstrates the sector's change focus. The execution of this change would be of an agency focus within IT organisations, where the strategy and change is identified and initiated at an executive level, and passed to the operational level to execute the change. These points demonstrate how the sector is aligned to this element of Institutionalism.

Legitimacy within the external environment (Scott, 1987, p. 502; Covaleski & Dirsmith, 1988, p. 563; Oliver, 1997, p. 700) – Technological advancement, pressures from competitors, and rising customer expectations drive IT companies to meet the challenges of these changes. Companies gain legitimacy by way of meeting the needs of these changes from the external environment.

Transition from a changed to settled environment (Kostova, et al., 2008, p. 995) – The result of constant changes and advancements from within this sector and the external environment means there is an element of flux within the sector and within IT organisations. However, in order to provide robust solutions, the flux of creating new solutions and products needs to be brought to a settled environment.

4.10.3 Programme Management Maturity Scoring – Information Technology Sector

Information Technology Sector		
Maturity Factor	Score	Overall Score
Programme Management is Derived from Project Management	Medium	Medium
The conception of programme management is not universally agreed	High	
Is there a lack of distinction between projects and programmes?	Medium	
Is there a lack of established programme management techniques?	Medium	
Is there a generic model of programme management?	High	
There is no agreed definition of a programme	High	
Are programmes aligned to business needs?	Medium	
Is there a standard approach to programme management?	Medium	
Do programmes have clearly defined governance, roles and responsibilities?	Medium	
Is future research required in the area of programme management?	Low	
What are the leadership competencies of successful programme managers?	Medium	
There is a poorly developed definition of programme success	Low	

Table 4.9 – Information Technology Sector Programme Management Maturity

Table 4.9 gives an overview of the scoring against the twelve programme management maturity guiding principles, and an overall sector maturity score. Three of the twelve maturity guiding principles scored high for the Information Technology sector, six had a medium maturity score, and two low maturity scores, which were:

1. Is future research is required in the area of programme management
2. There is a poorly developed definition of programme success

The output from this research states, where the maturity factors scored high, that in the Information Technology sector:

1. The conception of programme management is not universally agreed
2. There is a generic model of programme management?
3. There is an agreed definition of a programme

Overall this research states that programme management in the Information Technology sector has a medium level of maturity, as described in Table 4.9.

4.10.3.1 Low Levels of Maturity

The findings from this research shows areas where there are low levels maturity within the twelve guiding principles. The following paragraphs outline the significant findings where low levels of maturity were demonstrated.

Question sixteen is linked to the following three maturity guiding principles:

- Is there is a lack of established programme management techniques?
- Is there a standard approach to programme management?
- Do programmes have clearly defined governance, roles and responsibilities?

The question asked, 'Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?' The interview candidate's answer to this question is consistent with a low level of maturity within the sector by stating:

"The answer is no" "The maturity is there for projects where they have steering committees, boards etc, and there is differentiation between what the various people do, but this is not clear in the programme and portfolio manager's role, and the programme and portfolio manager more often will step in to make a decision that is not really theirs to make, because of the absence in the structure they make it, and more of the time this works out, but occasionally when they blow it, the questions is asked 'how did this happen?'"

All of the listed programme management guiding principles above scored a medium level of maturity. The low maturity scoring as a result of the answer to question sixteen had a significant contribution to these guiding principles maturity scores.

Question seventeen, nineteen and twenty-one were all linked to the programme management maturity guiding principle ‘are programmes aligned to business needs?’ Question seventeen asked ‘How does your organisation define programme success and critical success factors, how are they measured?’ The interviewee stated the vast majority of organisations do not do this very well, resulting in a low maturity score for the answer. Question nineteen asked ‘Can you explain how benefits realisation linked to programme success in your organisation?’ The response to this question resulted in a low maturity score with the candidate stating:

“... its still immature because most projects and programmes will have a risk log, the lessons learned log, and the usual stuff, and the organisations that do this I say to them 'show me your benefits log', but they don't have a benefits log and are not tracking it.”

Question twenty-one asked ‘How are these competencies used to select and develop programme managers?’. The answer from the interviewee reflected a low level of maturity within the IT sector by stating:

“I don't think there are enough 'miles on the clock yet' to make that call, you know in the sense that I don't think organisations are developing programme managers, they are still developing capabilities around running projects, I don't think organisations have recognised programme management as a skill set in itself.”

The score for the maturity guiding principle ‘are programmes aligned to business needs?’ was medium within the Information Technology sector. The scoring for the answers to questions seventeen, nineteen and twenty-one had a direct impact on the medium maturity scoring for this maturity guiding principle. Questions seventeen and nineteen were linked to the programme management maturity guiding principles ‘there is a poorly developed definition of programme success’. The maturity score for this guiding principle within the Information Technology sector was low, and this was directly as a result of the low maturity scores for the responses to questions seventeen and nineteen.

Question seventeen was directly linked to the maturity guiding principle ‘is future research required in the area of programme management?’. The low maturity scoring resulting from the answer to the question directly impacted the maturity guiding principle score of a low level of maturity in this area. Finally, question twenty-one was directly linked to the programme management maturity guiding principle ‘what are the leadership competencies of successful programme managers?’ The low scoring to the answer to question seventeen had a direct input

to the maturity guiding principle receiving a medium maturity score within the Information Technology sector.

4.10.4 Conclusion

The Information Technology sector is one of constant technological advancement to keep up with competitors and meet consumer expectations. Seven institutional elements can be used to describe this sector which include promotion of stability, focus on agency and change and legitimacy within the external environment. One could say the programme management maturity scoring outlined in this study does not align to a sector which experiences regular change and technological advancement. The study results in an overall programme management maturity score of medium for the sector. Four of the twenty two questions scored low maturity, this had an impact on the overall maturity score for the sector, with two of the programme management maturity guiding principles scoring low levels of maturity.

Key findings related to high levels of maturity are:

- The conception of programme management is not universally agreed
- There is a generic model of programme management
- There is an agreed definition of a programme

The key findings related to low levels of maturity are:

- Future research is required in the area of programme management
- There is a poorly developed definition of programme success

One can recommend further research in the area of programme management within this sector, particularly in the area of the definition of programme success.

4.11 Case Study Number Ten – Banking Sector

4.11.1 Banking Sector Overview

The North American Industry Classification System (NAICS) (Census Bureau Commercial Banking, 2016) describes this sector, under the code 522110 by stating:

"This industry comprises establishments primarily engaged in accepting demand and other deposits and making commercial, industrial, and consumer loans. Commercial banks and branches of foreign banks are included in this industry."

This is a sector which is normally regulated for the protection of consumers. In Ireland, the Central Bank is charged with the regulation of the banking sector. The central bank of Ireland states (Central Bank of Ireland Commercial Banking, 2016) it has a role in:

"...ensuring that the best interests of consumers of financial services are protected."

Our objective is to have a financial services industry where consumers' interests are protected. This means that:

- *Consumers should be provided with clear, relevant and accurate information, including on cost, during the sales process;*
- *Consumers should be recommended a product/service appropriate to their needs and suitable for them; and*
- *Consumers should receive a high standard of follow-up services, e.g., making a claim, making a complaint, switching product, dealing with errors, policy renewals, follow-up advice on investments/pensions, etc. "*

"In relation to consumer protection we develop, introduce and monitor compliance with our statutory codes of conduct. We also monitor compliance with other consumer protection requirements applicable to financial services providers operating in Ireland, including various European directives. We also set minimum competency standards for firms."

The candidate representing the banking sector was from an organisation in Ireland which itself is part of a parent banking organisation headquartered in the United Kingdom. The parent

banking organisation has approximately ninety-four thousand employees and is engaged in providing finance plus consumer and corporate banking services to customers across Europe, America and Asia Pacific regions. It had a turnover of over twenty billion pounds sterling and an operating loss of over four billion pounds sterling in twenty sixteen. In the island of Ireland, it employs over three thousand employees across a corporate head office and a network of over two hundred branches. The representative from this organisation is a senior programme manager and is head of it's change organisation. They oversee programmes including the implementation of the digital banking strategy, internal change management and efficiencies programmes, and the implementation of a corporate programme management standard in the organisation.

4.11.2 Elements of Institutional Theory Applicable to the Banking Sector

When one uses Institutional Theory to analyse the Banking sector, the theory descriptors that are most aligned to the sector are:

A means of instilling value, supplying intrinsic worth to a structure or process (Scott, 1987, p. 494; Selznick, 1957, p. 17; DiMaggio & Powell, 1983, p. 150) – In order to deliver services and generate revenue and profit on those services, banking organisations must instil value and worth to their structures and processes. This shows a clear alignment to this element of Institutional Theory.

Institutionalization promotes stability: persistence of the structure over time (Scott, 1987, p. 494; Selznick, 1957, p. 17) – Organisations within the banking sector are susceptible to regulatory changes, but also customer expectations on services, and the delivery of services. However, with these changes, comes the need to bring stability to systems and structures impacted by change to ensure consistent and robust services are available to customers.

Operates to produce common understandings about what is appropriate and, fundamentally, meaningful behaviour (Zucker, 1983, p. 5; Scott, 1987, p. 497) – The rules and regulations imposed on and monitored by the regulatory authorities on banks, clearly outline what is appropriate and meaningful behaviour. Organisations in the banking sector have regulatory obligations related to appropriate behaviour, showing clear alignment to this element of Institutionalism.

Emphasis is placed on conformity to a pattern (Greenwood & Hinings, 1996, p. 1026; DiMaggio & Powell, 1983, p. 150) – The primary patterns in the banking would be those set by regulatory instructions, but also those from competitors to hold or gain new customers. There is an emphasis within the sector, by companies, to conform to certain patterns.

Emphasis on rules and requirements (Zucker, 1987, p. 5; Meyer & Scott, 1983, p. 497) – The regulation imposed on the banking sector to protect consumers and implement directives ensures that organisations operating in this sector place an emphasis on rules and requirements.

Conformity to rules to receive support and legitimacy (Dowling & Pfeffer, 1975; Pfeffer & Salancik, 1978; Zucker, 1987, p. 451) – The regulated nature of the sector creates a need for organisations within the sector to conform to rules. This conformity leads to organisations receiving legitimacy within the sector.

Legitimacy within the external environment (Scott, 1987, p. 502; Covaleski & Dirsmith, 1988, p. 563; Oliver, 1997, p. 700) – The regulation of the banking sector, with a primary purpose of consumer protection, gives banking organisations legitimacy within the external environment. This is a very important aspect of the banking sector, because without this legitimacy, impact on business and customer retention can be catastrophic.

4.11.3 Programme Management Maturity Scoring – Banking Sector

Banking Sector		
Maturity Factor	Score	Overall Score
Programme Management is Derived from Project Management	High	
The conception of programme management is not universally agreed	High	
Is there a lack of distinction between projects and programmes?	High	
Is there a lack of established programme management techniques?	High	
Is there a generic model of programme management?	High	
There is no agreed definition of a programme	High	
Are programmes aligned to business needs?	High	
Is there a standard approach to programme management?	High	
Do programmes have clearly defined governance, roles and responsibilities?	High	
Is future research required in the area of programme management?	Medium	
What are the leadership competencies of successful programme managers?	High	
There is a poorly developed definition of programme success	Medium	

Table 4.10 – Banking Sector Programme Management Maturity

Table 4.10 gives an overview of the scoring against the twelve maturity factors, and an overall sector maturity score. Ten of the twelve maturity guiding principles scored high maturity for the banking sector, two had a medium maturity score, and there were no low maturity scores. The output from this research states, where the maturity guiding principles scored high, that in the Banking sector:

1. Project management is derived from programme management
2. The conception of programme management is agreed
3. There is a clear distinction between projects and programmes
4. There are ample programme management techniques
5. There is a generic model of programme management

6. There is a clear definition of what a programme management is
7. Programmes are aligned to business needs
8. There is a standard approach to programme management
9. Programme management has defined governance structures, and roles and responsibilities
10. The competencies of successful programme managers are understood

This research states that programme management in the Banking sector has a high level of maturity overall, as described in Table 4.10.

4.11.3.1 Low and Medium Levels of Maturity

The findings from this research shows areas where there are low levels maturity within the twelve guiding principles. The following paragraphs outline the significant findings where low levels of maturity were demonstrated. Question ten, which asked 'What does your organisation see as the difference between projects & programmes?' was the only question, out of twenty-two, which scored a low level of maturity. The interview candidate answered this question by stating:

"The organisation outside of the practitioners do not see a difference."

This question was linked to the programme management maturity factors:

- Is there a Lack of distinction between projects & programmes?
- There is no agreed definition of a programme

Both of these maturity guiding principles demonstrated a high level of maturity within the Banking sector and were impacted by the low score attributed to the answer to question ten. Questions fifteen and nineteen were the only two questions out of twenty-two that yielded answers which resulted in medium maturity scores. Question fifteen asked 'Can you describe how the programme management methodology in your organisation matured over time and has it responded well to change?'. The interviewee answers below resulted in a medium maturity score:

"The initiative we are currently doing at the parent bank as outlined in question 14 is because the programme management methodology was not responding well to change. It was very rigid ..."

Question nineteen asked 'Can you explain how benefits realisation linked to programme success in your organisation?'. The interview candidate stated:

"It is yes, very much so. It's in terms of monetisation."

This answer yielded a medium maturity score due to the answer stating that benefits realisation was only linked to monetisation, and not any other attributes.

Questions fifteen and nineteen are directly related to the programme maturity factors below:

- Is there a lack of established programme management techniques?
- Are programmes aligned to business needs?
- Is there a standard approach to programme management?
- Is future research required in the area of programme management?
- There is a poorly developed definition of programme success

The maturity guiding principles 'is future research required in the area of programme management' and 'there is a poorly developed definition of programme success' each scored a medium level of maturity. The answers to questions fifteen and nineteen directly impacted these maturity scores. The remaining maturity guiding principles listed above yielded high maturity factors, hence the answers to question fifteen and nineteen did not have a negative impact on their maturity scoring.

4.11.4 Conclusion

The Banking sector, is one under strict and constant regulatory scrutiny for the protection of consumers. Seven institutional elements can be used to describe this sector including instilling value, emphasis being placed on conformity to a pattern and promotion of stability. The programme management maturity scoring outlined in this study does align to a sector which deals with a high level of transactions on a daily basis, has numerous systems and structures to operate to customers' needs and regulatory expectations. Two of the twenty two questions

scored low maturity, this had little impact on the overall high maturity score, with two out of twelve maturity guiding principles for programme management showing medium levels of maturity. Key findings related to high levels of programme management maturity are:

- Programmes are derived from project management
- The conception of programme management is agreed
- There is a clear distinction between projects and programmes
- There are ample programme management techniques
- There is a generic model of programme management
- There is a definition of what a programme is
- Programmes are aligned to business needs
- There is a standard approach to programme management
- Programmes have clearly defined governance, roles and responsibilities
- The competencies of successful programme managers are understood

This research suggests future research in the area of programme management, with particular focus on developing a definition of programme success.

4.12 Cross Sectoral Analysis

4.12.1 Introduction

This section of the results chapter gives a summary of the cross sector analysis carried out on each of the programme management maturity guiding principles across all of the business sectors involved in the study. It outlines the key themes and messages from this analysis. The final piece of analysis described in this chapter is that of the overall programme management maturity rating based on the study data.

4.12.2 Programme Management is Derived from Programme Management

Cross Sector Analysis Maturity Guiding Principle		
Programme Management is Derived from Project Management		
Sector	Sector Maturity Score	Overall Maturity Score
Semi-Conductor	High	High
Consultancy	High	
Pharmaceuticals	High	
Telecommunications	High	
Hospital	Medium	
Public Sector	High	
Insurance	High	
Finance & Wealth Management	Medium	
Information Technology	Medium	
Banking	High	

Table 4.11 – Cross Sector Analysis – Programme Management is Derived from Project Management

This maturity guiding principle scored an overall high level of maturity across all of the ten business sectors as can be seen in table 4.11. All business sectors scored a high level of maturity, with the exception of three, Healthcare, wealth management and information technology sector, all of which scored a medium level of maturity.

4.12.3 The Conception of Programme Management is not Universally Agreed

Cross Sector Analysis Maturity Guiding Principle		
The Conception of Programme Management is Not Universally Agreed		
Sector	Sector Maturity Score	Overall Maturity Score
Semi-Conductor	Medium	High
Consultancy	High	
Pharmaceuticals	Medium	
Telecommunications	High	
Hospital	High	
Public Sector	High	
Insurance	High	
Wealth Management	Medium	
Information Technology	High	
Banking	High	

Table 4.12 – Cross Sector Analysis – The Conception of Programme Management is not Universally Agreed

This particular maturity guiding principle scored a high level of maturity collectively across the business sectors as is outlined in table 4.12. Eight of the ten business sectors scored a high level of maturity. The remaining two sectors, those of the semi-conductor and wealth management all scored a medium level of maturity in this guiding principle of programme management maturity. The medium score from these three sectors did not impact the overall high maturity score.

4.12.4 Is There a Lack of Distinction between Projects & Programmes

Cross Sector Analysis Maturity Factor		
Is There a Lack of Distinction Between Projects & Programmes?		
Sector	Sector Maturity Score	Overall Maturity Score
Semi-Conductor	Low	Medium
Consultancy	High	
Pharmaceuticals	High	
Telecommunications	High	
Hospital	Medium	
Public Sector	High	
Insurance	Medium	
Wealth Management	High	
Information Technology	Medium	
Banking	High	

Table 4.13 – Cross Sector Analysis – Is there a Lack of Distinction between Projects and Programmes

The programme management maturity guiding principle outlined in this section scored a medium level of maturity across all of the business sectors, as seen in table 4.13. The sectors of consultancy, pharmaceutical, telecommunications, wealth management, banking and the public sector all scored a high level of maturity for the guiding principle. The hospital, insurance and information technology sectors all scored a medium level of maturity, whereas the semi-conductor sector scored a low maturity. The combination of the sectors scoring medium and low maturity led to an overall score of medium for the guiding principle.

4.12.5 Is there is a lack of Established Programme Management Techniques?

Cross Sector Analysis Maturity Factor		
Is There a lack of Established Programme Management Techniques?		
Sector	Sector Maturity Score	Overall Maturity Score
Semi-Conductor	Medium	Medium
Consultancy	Medium	
Pharmaceuticals	Medium	
Telecommunications	High	
Hospital	Low	
Public Sector	High	
Insurance	Low	
Wealth Management	Medium	
Information Technology	Medium	
Banking	High	

Table 4.14 – Cross Sector Analysis – Is there a Lack of Established Programme Management Techniques

The maturity guiding principle ‘is there is a lack of established programme management techniques?’ shows a medium level of maturity across the business sectors as is evident from table 4.14. Three of the ten sectors scored a high level of maturity, those of telecommunications, banking and the public sector. Two sectors, those of the hospital and insurance sectors scored a low level of maturity. The remaining sectors scored medium level of maturity, which led to an overall guiding principle maturity score of medium across all the sectors.

4.12.6 Is There a Generic Model of Programme Management?

Cross Sector Analysis Maturity Factor		
Is There a Generic Model of Programme Management?		
Sector	Sector Maturity Score	Overall Maturity Score
Semi-Conductor	High	Medium
Consultancy	Medium	
Pharmaceuticals	High	
Telecommunications	Medium	
Hospital	Low	
Public Sector	High	
Insurance	Medium	
Wealth Management	Medium	
Information Technology	High	
Banking	High	

Table 4.15 – Cross Sector Analysis – Is there a Generic Model of Programme Management

This particular maturity guiding principle shows an overall maturity of medium across the business sectors which were involved in the research, this can be observed in table 4.15. The consultancy, telecommunications, insurance and wealth management sectors all scored a medium level of maturity. However, the hospital sector score a low level of maturity, whereas all the remaining four sectors scored a high level of maturity. The combined individual maturity score resulted in medium level of maturity for this guiding principle across all of the sectors involved in the research.

4.12.7 There is no Agreed Definition of a Programme?

Cross Sector Analysis Maturity Factor		
There is no Agreed Definition of a Programme		
Sector	Sector Maturity Score	Overall Maturity Score
Semi-Conductor	Medium	Medium
Consultancy	Medium	
Pharmaceuticals	Medium	
Telecommunications	Medium	
Hospital	Medium	
Public Sector	High	
Insurance	Medium	
Wealth Management	High	
Information Technology	High	
Banking	High	

Table 4.16 – Cross Sector Analysis – There is no Agreed Definition of a Programme

The maturity guiding principle stating ‘there is no definition of what a programme is’ can be seen from table 4.16 to have an overall medium maturity score. The wealth management, information technology, banking and public sectors all scored a high level of maturity for this guiding principle. The remaining six sectors all scored a medium level of maturity, which directly contributed to the overall medium maturity score for the guiding principle.

4.12.8 Are programmes aligned to Business Needs?

Cross Sector Analysis Maturity Guiding Principle		
Programmes are not Aligned to Business Needs		
Sector	Sector Maturity Score	Overall Maturity Score
Semi-Conductor	Medium	Medium
Consultancy	Medium	
Pharmaceuticals	Medium	
Telecommunications	High	
Hospital	Medium	
Public Sector	High	
Insurance	Medium	
Wealth Management	Medium	
Information Technology	Medium	
Banking	High	

Table 4.17 – Cross Sector Analysis – Programmes are not aligned to Business Needs

Table 4.17 shows that an overall medium level of maturity for this particular guiding principle was achieved. The telecommunications, banking and public sectors all scored high levels of maturity, whereas the remaining sectors all scored a medium level of maturity. With the majority of sectors scoring a medium level of maturity, this directed an overall medium level of maturity across all of the sectors for the guiding principle.

4.12.9 Is There a Standard Approach to Programme Management?

Cross Sector Analysis Maturity Guiding Principle		
Is There a Standard Approach to Programme Management?		
Sector	Sector Maturity Score	Overall Maturity Score
Semi-Conductor	Medium	Medium
Consultancy	Medium	
Pharmaceuticals	Medium	
Telecommunications	High	
Hospital	Medium	
Public Sector	High	
Insurance	Medium	
Wealth Management	Medium	
Information Technology	Medium	
Banking	High	

Table 4.18 – Cross Sector Analysis – Is there a Standard Approach to Programme Management?

The overall maturity score for this guiding principle shows a medium level of maturity, as is outlined in table 4.18. Three of the ten business sectors, those of telecommunications, banking and the public sector all scored high levels of maturity. The remaining seven business sectors all scored medium levels of maturity. The individual maturity scores led to an overall medium maturity score for this guiding principle across all of the business sectors.

4.12.10 Do Programmes Have Clearly Defined Governance, & Roles and Responsibilities?

Cross Sector Analysis Maturity Factor		
Do Programmes have Clearly Defined Governance, & Roles and Responsibilities?		
Sector	Sector Maturity Score	Overall Maturity Score
Semi-Conductor	Medium	Medium
Consultancy	Medium	
Pharmaceuticals	Medium	
Telecommunications	High	
Hospital	Medium	
Public Sector	High	
Insurance	Low	
Wealth Management	Medium	
Information Technology	Medium	
Banking	High	

Table 4.19 – Cross Sector Analysis – Do Programmes Have Clearly Defined Governance, Roles and Responsibilities?

Table 4.19 illustrates the individual sectors and overall maturity score for this guiding principle. The telecommunications, banking and public sectors all scored a high level of maturity. The insurance sector was the only one that scored a low level of maturity, and the remaining six sectors scored medium levels of maturity. The combination of the various sector maturity scores results in an overall medium level of maturity for the guiding principle.

4.12.11 Is Future Research Required in the Area of Programme Management?

Cross Sector Analysis Maturity Guiding Principle		
Is Future Research Required in the Area of Programme Management?		
Sector	Sector Maturity Score	Overall Maturity Score
Semi-Conductor	High	Medium
Consultancy	Medium	
Pharmaceuticals	Medium	
Telecommunications	High	
Hospital	High	
Public Sector	High	
Insurance	Low	
Wealth Management	Low	
Information Technology	Low	
Banking	Medium	

Table 4.20 – Cross Sector Analysis – Is Future Research Required in the Area of Programme Management?

Three of the ten business sectors scored low levels of maturity for this programme management maturity guiding principle, those being the insurance, wealth management and information technology. The consultancy, pharmaceutical and banking sectors scored a medium level of maturity, the remaining four sectors scored high levels of maturity. Table 4.20 shows that these individual sector scores resulted in an overall medium level of maturity across all of the business sectors for this maturity guiding principle.

4.12.12 What are the Leadership Competencies of Successful Programme Managers?

Cross Sector Analysis Maturity Factor		
What are the Leadership Competencies of Successful Programme Managers?		
Sector	Sector Maturity Score	Overall Maturity Score
Semi-Conductor	Medium	Medium
Consultancy	Medium	
Pharmaceuticals	Medium	
Telecommunications	Medium	
Healthcare	Low	
Public Sector	Medium	
Insurance	Low	
Wealth Management	Low	
Information Technology	Medium	
Banking	High	

Table 4.21 – Cross Sector Analysis – What are the Leadership Competencies of Successful Programme Managers?

Table 4.21 outlines how this maturity guiding principle scored a medium level of maturity across all of the business sectors. Three of the sectors, healthcare, insurance and wealth management scored low, whereas the banking sector was the only one that scored a high level of maturity. The remaining six sectors scored a medium level of maturity. The predominance of medium maturity scores, and two low maturity scores across the sectors resulted in an overall medium level of maturity for the guiding principle.

4.12.13

There is a Poorly Developed Definition of Programme Success

Cross Sector Analysis Maturity Guiding Principle		
There is a Poorly Developed Definition of Programme Success		
Sector	Sector Maturity Score	Overall Maturity Score
Semi-Conductor	Medium	Medium
Consultancy	Medium	
Pharmaceuticals	Medium	
Telecommunications	High	
Hospital	Medium	
Public Sector	High	
Insurance	Low	
Wealth Management	Low	
Information Technology	Low	
Banking	Medium	

Table 4.22 – Cross Sector Analysis – There is a Poorly Developed Definition of Programme Success

The insurance, wealth management and information technology sectors all scored a low level of maturity for this programme management maturity guiding principle. The telecommunications and public sectors both scored high levels of maturity. The remaining five sectors all scored a medium level of maturity. The combination of the individual business sector maturity scores resulted in an overall medium level of maturity across all the business sectors for this guiding principle.

4.13 Overall Programme Management Maturity Level

This final section of the results chapter outlines the overall programme management level of maturity across the ten business sectors that participated in the research study.

Programme Management - Overall Maturity Level		
Programme Management Maturity Guiding Principle	Overall Sector Maturity	Programme Management Maturity
Programme Management is Derived from Project Management	High	Medium
The Conception of Programme Management is Not Universally Agreed	High	
Is There a Lack of Distinction Between Projects & Programmes?	Medium	
Is There is a lack of Established Programme Management Techniques?	Medium	
Is There a Generic Model of Programme Management?	Medium	
There is no Agreed Definition of a Programme	Medium	
Are Programmes Aligned to Business Needs?	Medium	
Is There a Standard Approach to Programme Management?	Medium	
Do Programmes Have Clearly Defined Governance, & Roles and Responsibilities?	Medium	
Is Future Research Required in the Area of Programme Management?	Medium	
What Are The Leadership Competencies of Successful Programme Managers?	Medium	
There is a Poorly Developed Definition of Programme Success	Medium	

Table 4.23 – Programme Management Overall Maturity

Table 4.23 illustrates the list of programme management maturity guiding principles, with the respective overall business sector maturity scores for each of the guiding principles. Two of the twelve maturity factors, ‘programme management is derived from project management’ and ‘the conception of programme management is not universally agreed’ scored a high level of maturity. The remaining ten maturity factors scored a medium level of maturity overall across

the business sectors. The net result from the individual maturity factor scores results in an overall medium level of maturity for programme management across all ten business sectors that participated in the research.

4.14 Summary

The results chapter begins by introducing the broad model of analysis for each case study per business sector. The case studies are presented by firstly giving a description of the business sector, and what institutional theory elements are applicable to, or can be used to describe the sector. The data analysis is next addressed in the case studies, where an outline in tabular form of the individual maturity factor scores is given, and the overall programme management maturity as derived from the maturity factors for the sector. A review of any significant low, medium or high guiding principle maturity scores are reviewed in further detail, followed by an overall conclusion and summary for each case study.

The chapter next presents individual cross sectoral analysis of the twelve programme maturity guiding principles, and outlines the maturity of each guiding principle. This is then followed by further analysis of the guiding principle maturity to provide an overall score of maturity for programme management across all business sectors. The research conducted as part of this study demonstrates a medium level of maturity is evident in practice for programme management across all business sectors. The next stage of this dissertation turns to the discussion of the results outlined in this chapter, which are compared and contrasted to the themes emanating from the literature review.

5 Discussion

5.1 Introduction

This chapter will provide an outline of how the results and findings from this research study, as outlined in the results chapter, both compare and contrast to the key themes and findings from the literature. It will carry out this compare and contrast exercise in highlighting significant empirical findings, but also significant theoretical contributions to the current body of work. Finally, the chapter will discuss the usefulness of and the implications of the research findings for both practitioners and academics.

The chapter will be structured in such a way that each of the twelve programme management maturity guiding principles will be examined to identify where it emerges from in the literature, and what contribution the research has made which may deviate from what the current body of literature is stating, plus the usefulness and implications of the research findings. This deviation from the literature will be in the form of significant empirical findings and theoretical contributions.

5.2 Programme Management is Derived from Project Management

Chapter two in section 2.2 has outlined, from the literature, how one could perceive that programmes have emerged from projects. It has been stated how project management has diverged into managing multiple projects (Urli & Urli, 2000, p. 38; Van Der Merwe, 1997, p. 225). This aligns with the view that programmes also manage multiple projects (Pellegrinelli, et al., 2007, p. 42; PMI, 2004, p. 368) . It has been stated that one could perceive this as the development of programme management from projects. This is also supported by the possible development of programmes from projects and comes with the use of the programme management term being brought into projects (Evaristo & Fenema, 1999, p. 276; Turner & Speiser, 1992). The literature supports its use of the programme management term by outlining the types of information systems required of programmes (Evaristo & Fenema, 1999, p. 276; Turner & Speiser, 1992). It goes on by defining programmes in specific terms and stating their link to organisational needs all the while differentiating them from projects.

Empirical findings from this guiding principle somewhat support the literature's assessment that projects have diverged to manage multiple projects, but also the development of programmes from projects. Question three asked 'Do you consider there to be a clear link between project interdependencies, and if so, what are they?'. The respondents scored either a medium or high level of maturity in their answers to this question. The rationale for stating that this supports the literature is the interdependencies between projects within a programme are consistent with a project managing multiple projects. This rationale could also be applied to interlinks between projects being part of the progression of a programme to managing multiple other projects.

Further support comes from the programme management literature with respect to its possible origins from project management. It states that the majority perspective is that programme management is project based and an extension of project management (Pellegrinelli, et al., 2007, p. 41). It goes on to state that programmes, projects and sub-projects have similar characteristics (Gray & Bamford, 1999, p. 362). Here again, one could infer that the empirical evidence supports the literature's position, with its clear assessment that there are links between projects within a programme. One could also infer that this is aligned to the concept of projects managing sub-projects. The project management literature further outlines how the

uses of projects expanded through their links to organisational strategy and change (Urli & Urli, 2000, p. 15; Kwak & Anbari, 2009, p. 436). This theme is seen as a possible link from project to programme management due to the latter's use in the implementation of strategy and change (Pellegrinelli, et al., 2007, p. 42). Also, the growth in the use of projects has prompted the development of the disciplines of programme and portfolio management (Pellegrinelli, et al., 2015, p. 154). It supports this by describing how programme management has filled the need by organisations of projects in developing capabilities and infrastructures toward strategic goals (Pellegrinelli, 2011).

When one compares the empirical findings with this literature statement, the information from interview question four supports the statement. It asked interviewees 'Can you describe if and how projects are used to implement strategy and change in your organisation?'. All respondents stated projects are used to implement strategy and change, they either scored a medium or high maturity for this answer related to their acknowledgement of this fact, and the examples they gave in their answers. This is a clear alignment and shows direct support of the literature. However the conversation comes back around to stating that programmes are an extension of projects rather than originating from them (Pollack, 2012, p. 880), and can be interpreted as a scaled up project (Pellegrinelli , et al., 2007, p. 43; Lycett, et al., 2004, p. 289). Upon a holistic review of the literature, there is no clear statement that programmes have developed or emerged from projects, with some even saying that its conception is not agreed or clear (Pellegrinelli, 1997, p. 141).

When one assesses the current theoretical perspective, it is not being clear as to the origin or development of programme management as a distinct discipline, where one can strongly infer and assume that it has emerged from projects. This has raised an important area of research where programme management maturity can be attributed to one's knowledge and experience of programmes emerging from projects. This has led to one of this study's maturity guiding principles 'programme management is derived from project management'. This current theoretical perspective, that there is no clear position of programme being derived from projects, is considered a low level of maturity for this study.

Table 4.11 in the results chapter outlines the overall maturity score for this guiding principle. It outlines that the empirical findings show a high level of maturity for this guiding principle when the data from the research is analysed and viewed holistically across all of the ten business sectors involved in the study. When one examines each of the business sector's maturity rating for this guiding principle, all but one of the sectors scored a high level of maturity. The one sector

that did not score a high level of maturity was the hospital sector, which scored a medium level of maturity. It is important to examine why one of the sectors out of all ten did not score a high level of maturity. This relates directly to the interviewee stating that projects were not executed using a defined methodology, and that the links between projects and programmes were not very clear. The interviewee did state that the links between interdepending projects are mostly clear, and that projects are used to implement strategy and change. However, there is not a programme methodology or structure used in the organisation. One could infer that if both programmes and projects do not have clear methodologies, and there is not a clear link between both, then this would align with a medium maturity score for this guiding principle. The key theme and message from the maturity score for this guiding principle can be interpreted as most business sectors seeing programmes as a process and structure that have developed or derived from project management. This can be viewed as a direct contrast from the literature, which currently does not make a clear statement on where the programme management process has its origins. This key finding from the research can be viewed as a significant addition to the literature, which narrows a gap that neither confirms nor rejects the statement that programme management has derived from project management. The other significant finding from the empirical work in this study shows that there is a high level of maturity for this guiding principle in practice. In direct contrast to this, is the level of maturity which could be attributed to this guiding principle in the literature, which is medium. This signals a significant contribution to the current body of literature.

In summary, the empirical research carried out as part of this study has resulted in a direct contrast with the literature. Empirically, there is a higher level of maturity for the programme management guiding principle 'programme management is derived from project management' than in theory. The significant additions to the current theory are that programmes are clearly derived from projects, and that there is a high level of maturity for this particular guiding principle, not a medium level as the current literature suggests.

5.3 The Conception of Programme Management is not Universally Agreed

Section 5.2 has already outlined where the literature has opined that programmes may have emerged from projects, but that there is disagreement about this opinion. It has outlined where the theory of programmes emerging from projects has come from, through project management evolving into managing multiple projects, but also, its use in the implementation of organisations strategy and change. It has also stated that not all of the literature is in agreement with this theory on the evolution of programme management from projects management. What is evident from section 2.2 is one could infer from the literature's varying themes on the origins of programme management that its conception is not universally agreed. This inference forms the basis of the second programme management maturity guiding principle which states 'the conception of programme management is not universally agreed. There is further support of this theme where it is stated that the concept of programme management is moving away from project management due to the benefits of managing project collectively as opposed to individually (PMI, 2008, p. 5). It is also stated that research has supported the move of programmes away from being a scaled up project (Artto, K., et al., 2009, p. 9).

The empirical study carried out as part of this research asked in question six 'Do you believe there is a link from projects to programmes, and can you please explain how?'. This was linked directly to the maturity factor 'the conception of programme management is not universally agreed'. This was purposely devised to directly address the shortcoming outlined by the literature. The results from the research conducted into this particular maturity guiding principle shows that overall, across all of the business sectors, there is a high level of maturity. Eight of the ten business sectors scored high level of maturity individually, whereas two sectors scored medium levels of maturity for the guiding principle. The two sectors that scored medium levels of maturity were the semi-conductor and wealth management sectors. With only one interview question linked to this guiding principle, the respondent from the semi-conductor sector stated:

..."at times Normally at a local level..." ..."Due to the confidentiality and IP sensitivity, only certain people selected who need to know the link due to paranoia..."

This was considered a medium maturity answer, as the respondent stated that only sometimes there is a clear link between projects and programmes. Where respondents from other sectors

scored high levels of maturity, there was always a clear link between the disciplines. The interviewee from the wealth management sector provided a similar type answer to that of the respondent from the semi-conductor sector, where they stated there are a number of projects within the programme, however, they did not state if there was a link between both disciplines, but more inferred this. They stated:

"I would use the example of the Solvency II programme at the moment, where there are number of sub-projects, and they are substantial amount of work on projects on their own, that is key to the achievement of the overall programme".

Here the expectation of a high maturity answer would have been a direct confirmation that there is a link between both disciplines and the respondent could have demonstrated this. The literature places further emphasis on the movement of programmes away from projects due to poor performance and missed opportunities (Pellegrinelli, 2011, p. 238; Pellegrinelli & Partington, 2006). One could infer that this movement of programme management away from project management may also move programme management evolution away from projects. This change in direction of programmes can add weight to the argument that the origins of programme management is led further into disagreement. There is direct support of this argument in the literature where it is stated that 'the conception of programme management is far from universal' (Pellegrinelli, 1997, p. 141). From assessing the literature, this study is judging that the literature has a demonstrated low level of related to the conception of programmes. The results from this part of the empirical work carried out shows a direct contrast to what the literature is stating, and its view of the level of maturity in programme management related to this particular guiding principle.

It has already been stated in this section that the empirical study shows a high level of maturity in practice related to the conception of programme management. One can combine the results from this piece of the research with that of the results outlined in section 5.2 and can clearly see that there is a contrast to the literature. This can be described as a significant development from a theoretical standpoint, where there has been a significant increase in maturity for this guiding principle, and where this gap in the literature has significantly narrowed. The results of this empirical research can be considered a significant contribution to the literature.

To summarise, the current body of research and literature clearly shows that there is not consensus on the conception of programme management. The current level of maturity surrounding this area of research can be considered low. However, the empirical findings from

the research carried out as part of this study shows a contrast to what the literature states in that there is a high level of maturity in programme management practice related to this guiding principle. This equates to a significant contribution to the currently body of literature and theory. This contribution can be interpreted as programmes emerging from project, which can clarify the ambiguity surrounding this topic in the literature.

5.4 There is a Lack of Distinction between Projects and Programmes

The subject of where programmes have emerged from and their conception has already been discussed in sections 5.2 and 5.3. The empirical research carried out as part of this study shows how programme have emerged or are seen to have emerged from projects. The literature has also raised the issue of differentiation or distinction between programmes and projects. It has already been outlined how some see programmes as emerging from project management through the expansion of the latter's uses and capabilities (Pellegrinelli, 2011, p. 233). In section 2.2.6, it has also been stated how some see programmes as large projects (Martinsuo & Lehtonen, 2007, p. 341; Yu & Kittler, 2012, p. 740). Further views from the current body of literature outlines the many similarities between both disciplines (Blomquist & Muller, 2006, p. 55; Lycett, et al., 2004, p. 294).

The empirical research conducted under this guiding principle investigated this item with one of four questions, by directly asking how organisations, in the various business sectors, differentiate between projects and programmes (interview question ten). Six of the ten business sectors clearly outlined how their organisations saw the difference between both disciplines through high maturity scores in their responses, those from the consultancy, pharmaceutical, telecommunications, public, wealth management, and information technology sectors. Those from the hospital and insurance sectors scored a medium maturity score, meaning they acknowledged the differentiation, but did not describe it very well. Finally, the semi-conductor and banking sectors stated that the difference would not be seen, with the response from the candidate from the banking sector stating:

‘The organisation outside of practitioners do not see the difference’.

When one views the responses received in the empirical study and compares to the theoretical statement that both disciplines are similar, there is a contrast where empirically a clear

differentiation is seen between project and programme management. This research study views the literature's view as a low level of maturity, whereas, a contrast is also seen between that and the high and medium level of responses to question ten.

Section 2.2.6 goes on to point out that there seems to be a difficulty in differentiating between projects and programmes (Martinsuo & Lehtonen, 2007, p. 341). The reason for this may be attributed to practitioners 'blurring distinction' between both projects and programmes (Pellegrinelli, et al., 2015, p. 155). This confusion between the disciplines has been apparent in sectors such as construction (Pellegrinelli, 2011, p. 234; Shehu & Akintoye, 2009, p. 704). The dangers of this lack of distinction between projects and programmes have been stated, where it can lead to poor performance, and missed opportunities and compromises (Pellegrinelli, 2011, p. 238).

Another question which was used to investigate the lack of distinction between both disciplines asked 'It is stated there is a link between project outputs and programme outcomes. Can you outline what these links are for projects and programmes in your organisation?' (interview question eleven). Three of the ten sectors, those of the pharmaceutical, public and banking sectors all stated there is a clear link, and demonstrated how in their answers, resulting in a high maturity score for these sectors. The insurance sector clearly stated that there is not a clear link, resulting in a low maturity score. The remaining six business sectors gave responses of a medium level of maturity, as they acknowledged the link, but did not clearly explain how there was a link.

If one assesses the empirical evidence that has emerged from the responses to questions ten and eleven, it mainly varies between a high and medium level of maturity with respect to the differentiation between projects and programmes. If one compares and contrasts this to the literature's stating there is a lack of distinction (which this study considers a low level of maturity), it can be stated the distinction is becoming clearer between both disciplines. The message this finding also gives is that, through the linking of projects to programmes, it means that they are distinctly different disciplines. If they were not distinct from each other, there would not be a link between them both.

It has also been stated how these are in fact two separate disciplines, and outlined where studies have confirmed this (Miterev, et al., 2016, p. 545; Artto, K., et al., 2009, p. 1; Lycett, et al., 2004, p. 289; Thiry, 2004, p. 245; Pellegrinelli, 1997, p. 141). This view is further supported by the literature stating projects and programmes require different approaches (Rijke, et al., 2014, p. 1198; Partington, et al., 2005, p. 88).

The research conducted by this study into this specific guiding principle asked two further questions to investigate the phenomenon. Question five asked respondents 'Different definitions of programmes exist, can you outline how your organisation defines a programme?', and question nine asked 'How would the programme process be seen in your organisation related to their duration and linking to strategic needs?'. The purpose of these questions being linked to the guiding principle was to see if the respondents could further demonstrate how programmes differ from projects, and to test if the differentiation exists. The responses to question nine yielded six high maturity, and four medium maturity responses. The high maturity responses from the semi-conductor, consultancy, pharmaceutical, telecommunications, wealth management and banking sectors all demonstrated that they see programmes as long term process that changes to meet an organisation's needs. Where a medium maturity answer was outlined, from the hospital, public, insurance, and information technology sectors, they either acknowledged that programmes are long term or change to strategic needs, but not both. The answers to question five, the definition of a programme, yielded eight high maturity responses, one low and one medium. The low maturity response came from the semi-conductor sector, where the response did not address the question in any manner. The medium maturity response came from the pharmaceutical sector where the definition of a programme was more aligned to what it delivers rather than how and what it delivers. The remaining high maturity answers demonstrated how programmes are linked to strategy delivery, how they use projects for delivery, how they are linked to change, and how they may change over time to meet strategic needs.

The results from the research specific to the guiding principle 'is there is a lack of distinction between projects and programmes?' has resulted in an overall medium maturity score across all of the business sectors, this is outlined in table 4.13 in the results chapter. If one delves down into the individual maturity scores from each of the sectors, there is a variance in maturity within these sectors. Four of the ten business sectors scored a high level of maturity, while a further five scored a medium level of maturity, and one of the ten sectors scored a low level of maturity. When one assesses the responses to the questions linked to this maturity guiding principle, six of the answers were of a high maturity, with one of the remaining four of a low maturity, and the remaining three of low maturity. These scores, based on the criteria set out by the study, result in a medium maturity score. This is in direct contrast with the literature's low maturity score for this guiding principle.

When one compares and contrasts the empirical findings with those of the current theoretical perspective, there is a clear contrast. The current practice in the field, related to this particular maturity guiding principle, is at a medium level of maturity, across all of the business sectors. This signals that the current theory and literature 'lags' behind that of current practice, and that this research has narrowed a gap in the literature and makes a significant contribution to the current literature.

5.5 There is no Agreed Definition of a Programme

The literature has uncovered a wide and varied array of definitions of programme management. In all, the literature review quotes thirty different variants to the definition of a programme as can be seen in table 2.2. One can view an evolution of the definition, it starts with programmes managing multiple projects to bring about a common theme; however; these projects may not be inter-linked (Pellegrinelli, 1997, p. 143).

This research has directly addressed the question of programmes emerging from projects through two of its interview questions. Research question ten asked 'what does your organisation see as the difference between projects and programmes?'. While research question eleven asked 'It is stated there is a link between project outputs and programme outcomes. Can you outline what these links are for projects and programmes in your organisation?' The outputs from the interview responses to question ten shows six of the business sectors, the consultancy, pharmaceutical, telecommunications, public, wealth management, and information technology sectors, clearly outline how their organisations saw the difference between both disciplines. These sectors demonstrated high maturity from their responses. The hospital and insurance sectors scored a medium maturity score, meaning they acknowledged the differentiation, but did not describe it very well. The semi-conductor and banking sectors stated that the difference would not be seen, hence both scored a low maturity score for their responses. Question eleven yielded seven sectors with medium maturity answers, those of the semi-conductor, consultancy, pharmaceutical, telecommunications, hospital, wealth management and information technology sectors. Where a medium maturity response was received, it acknowledged there is a clear link between programme outcomes and project outputs but did not elaborate how. The public and banking sectors demonstrated high maturity responses, where they acknowledged the link, and demonstrated it in their answers. Finally, one

sector yielded a low maturity response, that of the insurance sector. Here, the candidate stated there is no evident link in their programmes. The data from the responses to questions ten and eleven tells us that programmes may have evolved from projects, as there is still some lack of distinction between both disciplines.

Section 2.2.7 shows how definitions evolved again into the management of inter-linked projects, but with the added agenda of delivering strategic goals (Thiry, 2002, p. 221). There is a further progression to the direct link between projects and programmes, plus the link between both to organisational strategy and long term change (Pellegrinelli, et al., 2015, p. 161). Another progression of the definition is the use of programmes as a means to develop and create a group of related projects, all with one common goal (Gray, 1997; Turner, 2000). Also related to this definition is using programmes as a management structure for creating and setting the context of initiatives and making them coherent and grouped (Arto, K., et al., 2009, p. 1; Pellegrinelli, 1997, p. 142). The research looked to address the aspect of the management of a group of inter-related projects where it asked candidates in question twelve 'Can you outline how your organisation manages programmes, does this include as a portfolio, or toward a common goal?'. The responses to question twelve shows that six of the ten sectors demonstrated a medium level of maturity in their responses. The sectors of the semi-conductor, consultancy, telecommunications, hospital, public, and insurance had answers that demonstrated medium maturity as they stated programmes were managed as a portfolio of activates toward a common goal but did not clearly demonstrate how. The remaining four sectors yielded high levels of maturity in their responses, as they demonstrated how the portfolio of work was managed toward a common goal. The information and data from this question, in isolation, does not demonstrate an agreed definition of programme management. However, it does contribute to the guiding principle by building a generic programme management definition, as there is largely agreement that programmes are managed toward a common goal and aligns to certain elements of theory.

Section 2.2.7 outlines a further evolution, that of performance being embedded into definitions, this is related to projects within programmes, and also the organisation impacted by the change (Pellegrinelli, et al., 2015, p. 160). Interview questions five and thirteen investigated if a common definition and lifecycle of a programme is evident in practice. Question five asked candidates to outline how their organisation would define a programme, while question thirteen asked 'Please outline the lifecycle stages on your organisation's programmes?'. The answers to question five, yielded eight high maturity responses, one low and one medium. The low maturity answer came

from the semi-conductor sector, where the response did not address the question in any manner. The medium maturity response came from the pharmaceutical sector where the definition of a programme was more aligned to what it delivers rather than how and what it delivers. The remaining high maturity answers demonstrated how programmes are linked to strategy delivery, how they use projects for delivery, how they are linked to change, and how they may change over time to meet strategic needs. Broadly speaking, the research demonstrates that there is a mature understand of programmes and what they deliver. This shows alignment across sectors and deviates somewhat from the literature's assessment of a lack of agreement on a definition. In the responses to question thirteen, six sectors gave responses consistent with a high level of maturity, these included the semi-conductor, telecommunications, public, pharmaceutical, information technology and banking sectors. Clear lifecycle stages from start to finish of the programme were outlined in the high maturity responses. The pharmaceutical, telecommunications and wealth management sectors all yielded answers consistent with a medium level of maturity. Here, they listed a small number of stages and or did not cover the entire programme lifecycle in those stages. The hospital sector was the only one that scored a low level of maturity in its response, where it did not use a set number of lifecycle stages. While one can argue that the data yielded from question thirteen aligns to the literature's assessment on the lack of an agreed definition due to the variance in lifecycle stages given by candidates, it also shows some maturity in terms of the discipline being considered in a process or structure of activities. When one looks holistically at the range and evolution of the definition of a programme, there is not a broad agreement, hence the maturity guiding principle has been developed which states 'there is no agreed definition of a programme'. This research study sees the lack of an agreed definition consistent with a low level of maturity, and from a theoretical perspective a significant gap requiring further investigation. Table 4.16 in the results chapter outlines how this programme management guiding principle has scored a medium maturity across all of the business sectors. When one looks at the individual maturity scores for each of the sectors, four of the sectors, wealth management, information technology, banking and the public sector all scored high maturity scores. The remaining business sectors all scored a medium level of maturity for this guiding principle. This combination of the high and medium maturity scores across the sectors resulted in the overall medium maturity score, as based on the criteria outlined by this research study.

The data from the interview responses, when compared with the literature, does align with there being no agreed definition of a programme, and shows quite some variance for a programme definition. When compared to the literature, it aligns to the current theory.

However, a significant contribution resulting from the analysis of the answers given for the definition of a programme is where key words and terms can be used to develop a generic definition.

<u>Programme Management - Definition</u>
<ul style="list-style-type: none">• The programme is a body of work steps, commitments and outputs that you want produced in order to achieve that overall objective.• Introducing a new capability into the organisation, and you are organising yourself to go about doing it.• A programme would be the concept of multiple specific projects that are grouped together and all are needed in some shape or form to deliver on an outcome or an objective.• Out of that programme will drop a number of specific projects that would be made up of different people, different skill sets, all required over a defined period to deliver an outcome• programmes have a name (to signal an end goal is required), a tactical or strategic vision, and projects are built behind supporting that.• A programme is to establish a new, or a changed continuing operations.• A programme could be a collection of projects, or it could be a particular strategy.• Programmes are defined as multiple work streams being brought together as a programme.• when there is a CEO/COO level strategic initiative, that tends to be called a programme.• The programme is something that is linked to your strategy.• It would be a portfolio of inter-related projects.• For a programme, there has to be multiple projects involved, so if you don't have at least two clearly defined projects.• I would see programmes is where they would frame out a roadmap of strategic changes you want to make in a company.• they would implement operational components, so that would qualify as a reasonably alternative definition, which is a mix of driving efficiencies in the company.

Figure 5.1 – Programme Management Definitions Key Terms and Words

Figure 5.1 details the output of analysis carried out to develop a generic programme management definition. The result of this analysis has led to the following generic definition for a strategic programme:

“A strategic programme is a body of work originating from the executive level, with alignment to the organisational strategy. It identifies and executes multiple, inter-related projects to deliver an outcome of change or new capabilities in a defined period of time through an overarching management structure”

The generic definition outlined can be considered a contrast to the current body of knowledge which does not have alignment to the definition of a programme. This statement, of the empirical findings, adds to the current body of literature, and could be considered as narrowing this particular research gap, but should also be seen as a significant opportunity for the practitioner community to better put programmes into context and enhance their role.

To end, the literature has demonstrated that no generic or agreed definition of a programme currently exists and equates to a low level of maturity for this particular area. This has justified the pursuit of research to confirm the current level of maturity in practice, and if there is common understanding around the definition of a programme. The research conducted

demonstrates that no agreed definition exists in practice and aligns to the literature. However, analysis conducted on data collected has been used to develop a generic programme definition and can be interpreted as narrowing this gap in the theory.

5.6 There is a Poorly Developed Definition of Programme Success

Sections 5.2 and 5.3 have discussed how programme management is most likely derived from projects, and that there is also more consensus on the origins of programme management. These statements show a contrast from the literature as a result of the empirical evidence this study has yielded. The study also supports the stating of a distinction between project and programmes, and in section 5.5 that a generic definition of programme management can be outlined.

Next, attention is turned to the definition of programme success, where at a broad level in section 2.3.3.1, it has been demonstrated through the literature, that there is a poorly developed definition of programme success. The traditional measures of programme success were those of time, cost, performance and sometimes stakeholder satisfaction (Rijke, et al., 2014, p. 1199). Others mention success as programme outcomes having broader and far reaching effects with longer term impacts (Artto, K., et al., 2009, p. 10). However, with programmes being a long term process, they require ongoing evaluation of their benefits in order to properly evaluate them, as they may change over time (Thiry, 2002, p. 225). Table 2.3 in the literature review chapter has outlined a small number of success criteria statements. The empirical study carried out addressed this gap in the research by asking two questions related to programme success criteria. One of these questions was related directly to the definition of programme management success, question seventeen asked:

‘How does your organisation define programme success and critical success factors, how are they measured?’

The majority of business sectors responded with answers of a high maturity, those of the semiconductor, pharmaceutical, telecommunications, hospital, public and banking sectors. The respondents from these sectors gave answers where successful programmes enabled strategic outcomes and delivery, were aligned to performance indicators, on time delivery, and being within budget. The consultancy sector outlined an answer that demonstrated a medium level of

maturity in practice. The reason for this lies with the respondent stating critical success factors are clearly defined at the start of programmes, however, it is rarely the case where these factors are revisited at the end of the programme to determine if they have been achieved, the interviewee stated:

"I have seen consummate success to redefine success factors." "Generally the goals and outcomes are defined pretty clearly at the time of the constitution of the programme, there is usually a lot of time and effort put into a business case, often this is in the background and disappears, it has been seldom the case where the original business case has been put on the table at the end of the programme ..."

Finally, three sectors gave responses of low maturity related to question seventeen, those of the insurance, wealth management and information technology. Here, the respondent's answers exhibited low maturity for a number of reasons. These ranged from programmes not having clear outcomes, the lack of formal benefits realisation to determine if a programme has been successful, to companies failing to clearly define the project and programme of works required. Overall, the responses to this question demonstrated a medium level of maturity related to defining programme success and critical success factors and outlining how they are measured.

There has been a formal consensus of programme success criteria being measured by their ability to implement change into an organisation, and that success criteria has shifted more toward the strategic orientation according to Shao et al (Shao, et al., 2012, p. 46) referencing Thiry (Thiry, 2004). Further definition of programme success has branched into outlining specific dimensions of programme efficiency, the impact on the programme team, stakeholder satisfaction, business success, preparation for the future, and social effects (Shao & Muller, 2011, p. 995). Research conducted in this study surrounding this maturity factor looked at how programme success is linked to benefits realisation. Question nineteen asked interviewees 'Can you explain how benefits realisation linked to programme success in your organisation?'. Six of the sectors demonstrated a low level of maturity in this area, those of the semi-conductor, pharmaceutical, hospital, insurance, wealth management and information technology sectors. The responses from these sectors clearly stated that programme success was not linked to benefits realisation. The consultancy sector outlined a medium maturity answer by stating that this is in fact a large gap in programme management, which requires attention. Lastly, two sectors demonstrated answers of a high maturity related to question nineteen, those of the telecommunications and public sectors. Both respondents from these sectors stated that the

link is clear between programme success and benefits realisation. The respondent from the telecommunications sector stated:

"Yes, a clear link is set out from the start and communicated internally and externally to the programme team. A clear goal of the programme is set out from the start."

Finally, section 2.3.3.1 shows the literature has stated that the perception of programme success has been seen as a matter of interpretation rather than objectivity (Partington, et al., 2005, p. 94). It aligns with some of the research from this study calling for the need for further investigation into benefits realisation (Vereecke, et al., 2003, p. 1285). An overarching view of the literature shows that the definition of programmes success is high level non-descript, this has been attributed to the fact that programmes need to deal with ambiguity (P2M, 2001, pp. 43,48-49). This is an area, based on the literature, which can be interpreted as having a low level of maturity. The link between success criteria and benefits realisation, and the data yielded from this research makes for some interesting observations. When one looks at the data from question seventeen ('How does your organisation define programme success and critical success factors, how are they measured?'), most respondents state that the programme success criteria are clearly defined at the start of a programme, however this does not necessarily mean they are achieved once the programme has been delivered. The aspect of programme success is addressed in questions nineteen, as benefits realisation would be the true indication of a programme addressing an organisation's needs. Looking at both of these questions from a chronological standpoint, success criteria would normally be outlined before a programme begins, at a chartering stage for example, to allow a management team assess the reasons why a programme should be commissioned, i.e. it's benefits to the organisation and it's strategy. If a management team agrees that the stated success criteria of the programme are beneficial to the organisation, it may then decide to approve the programme's commencement and execution. Benefits realisation is a process toward the end or after the programme has been completed which examines if the success criteria outlined before or at the start of the programme have been realised. The research findings show that there is a lack of maturity in this area, and many organisations fail to revisit a programme after its completion to confirm if the intended outcomes have been achieved and that the intended benefits are being realised by the organisation as a result of the programme. Essentially, this means there is a poor link, or gap, from the intended success criteria to those success criteria being actually realised. When one assesses the outputs from the research carried out directed by the maturity guiding principle 'There is a poorly developed definition of programme success', it shows an overall

‘medium’ level of maturity across all the business sectors. When this is compared and contrasted with the theoretical perspective, it shows a higher level of maturity empirically. This is considered a significant development, and addition to the existing body of literature.

The gap that has been identified between success criteria and benefits realisation yields an opportunity for the use of learning cycles to feedback learnings from a programme, but also to possibly amend the required success criteria in situations where outcomes may not be relevant as a result of a strategy direction change. This could be interpreted as most organisations using single loop learning cycles, described as “learning that corrects errors by changing routine behaviour” (Argyris, 1993, p. 5), to connect a strategy for an action with a result. What this means is if one takes an action that yields results that are different to what was expected, through single loop learning, one would observe the results, automatically assess the feedback, and try a different approach to achieve the intended outcome/result. This may be an appropriate action where a programme has not met the intended expectation or yielded the intended results. However, there is also an opportunity to assess the results from a programme and consider if it’s appropriate to use a double loop learning, “learning that corrects errors by examining the underlying values and policies of the organisation” (Argyris, 1993, p. 5). This could be used to both assess the results/outcomes from a programme, but also to re-evaluate or reframe the goals, values, briefs and behaviours by processing the programme output information and reassessing the programme needs and decisions. There may also be an opportunity to use these learning cycles to remove some of the complexity out of benefits realisation which the research has identified.

This type of feedback analysis for programmes creates its own difficulties. For example, realisation of benefits from a programme can sometimes take months and years to be yielded for an organisation, therefore there may not be an opportunity to use learning cycles to assess programme benefits. One way of resolving this issue is to have a benefits log (as suggested by an interview candidate from the IT sector) in place throughout the programme, and to actively review when benefits can start to be realised.

To conclude, there is a poorly developed definition of programme success as outlined in the current literature and theory, this is deemed a low level of maturity by this study. The research conducted by this study shows a contrast in maturity of this guiding principle to that of the literature, where a medium level of maturity is evident. This is considered a significant contribution to the current theory and could be further enhanced through the use of learning

cycles as a feedback loop to amend or change success criteria as the programme progresses and its intended outcomes may need to change.

5.7 Is There a Lack of Established Programme Management Techniques?

The literature has outlined much by way of programme definitions as seen in section 2.2.7, but it seems it has not put the same attention to the typologies and approaches to programme management. In section 2.4.3 it has been outlined how there are varying practices in the management of programmes, and that they are not consistently applied (Martinsuo & Lehtonen, 2007, p. 21; Pellegrinelli, et al., 2007, p. 41). Some reasoning for this has been given to what is described as the contrast between the strategic management and project perspective of programme management (Martinsuo & Lehtonen, 2007, p. 22). One could speculate that the earlier discussions around the lack of an agreed definition and the lack of distinction between projects and programmes may add to the reason behind the lack of techniques. The above points can be interpreted as supporting the argument that the techniques and approaches at the centre of the programme management disciplines are not well established or documented (Pellegrinelli, 1997, p. 149)

The empirical investigation carried out as part of this research directly assessed if programme management typologies were used in practice. Question fourteen asked candidates 'Can you describe the programme management methodology and governance structures your organisation uses?'

Six of the ten sectors demonstrated a high maturity by essentially stating their organisations used a defined methodology and governance structure in the execution of programmes. The consultancy and wealth management sector responses equated to medium maturity responses, they both stated that methodologies and governance models are somewhat used. The hospital and insurance sectors showed a low level of maturity in this area by stating their organisations did not utilise programme management methodologies or governance structures. This empirical evidence shows programme management methodologies and governance models are used in practice, and somewhat deviates from the theoretical perspective, in that methodologies are

used; however, this particular piece of research does not demonstrate they use an aligned methodology.

Another train of thought that has emerged around the reason for the lack of programme management techniques is that this is derived from programmes having to deal with uncertainty and ambiguity (Martinsuo & Lehtonen, 2007, p. 337). The rationale supporting this theory from the researcher's perspective, is the mind set in programmes of dealing with ambiguity and uncertainty, and the learning and ideation paradigm (Thiry, 2004, p. 251; Martinsuo & Lehtonen, 2007, p. 337) may drift into its management techniques leading to a lack of definition and establishment. The research conducted in this study goes toward dealing with the change in programme management techniques in question fifteen, where candidates where asked 'Can you describe how the programme management methodology in your organisation matured over time and has it responded well to change?'. Three of the ten sectors, the semi-conductor, telecommunications, public, stated that their programme methodologies and governance models had matured over time and did respond well to change. These responses demonstrated high maturity responses. A further five sectors demonstrated medium maturity responses by stating their methodologies did mature over time but did not respond well to change. These responses came from the consultancy, pharmaceutical, wealth management, information technology and banking sectors. Finally, two sectors, hospital and insurance, did not have programme management methodologies in place, therefore, the question was irrelevant to them, hence they both scored low maturity scores.

The evidence from this particular part of the research could support the argument that programme management has evolved and matured over time, and in turn could counter the literature's argument that an ideation paradigm may drift into management techniques. An evolution and progression in programme management techniques demonstrates its dealing with changing needs. To further defend this study's argument that techniques have evolved to meet changing needs, but also to counter the argument that an ideation may creep into programme management methods, the aspect of roles and responsibilities was approached. Question sixteen asked 'Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?'. The responses to question sixteen shows most had a low level of maturity, meaning roles and responsibilities were not communicated inside and outside the programme team. Six of the ten sectors demonstrated low maturity responses, those from the semi-conductor, consultancy, pharmaceutical, hospital, insurance and IT sectors. The wealth management sector was the only one to demonstrate a

medium level of maturity, and stated they were communicated, but got 'grey' over time, meaning they become less clear over time. Only two sectors, the public and banking sectors, revealed high maturity responses as both stated roles and responsibilities are clearly communicated inside and outside the programme team. The results of this research would lead one to infer roles and responsibilities are not clearly communicated or defined and aligns with the literature.

The final possible rationale for the lack of established management techniques may lie with the claim that the techniques are more qualitative than quantitative (Pellegrinelli, 1997, p. 147). The question arises does the lack of a quantitative nature in programme management lead to a lack of defined and established techniques? The above observations have led to the guiding principle being developed to address this gap in the management practice, and theory for that matter. This study, based on the information outlined in the literature sees this programme management guiding principles currently at a low level of maturity. Upon review of the empirical data that has arisen from this part of the study, the overall assessment sees a medium level of maturity in practice for programme management techniques, across all of the business sectors. A summary of this can be seen in table 4.14 in chapter four. Five of the sectors, those of semiconductor, consultancy, pharmaceuticals, wealth management and information technology scored a medium level of maturity, three sectors scored a high level of maturity individually for this guiding principle. Two sectors, those of insurance and the hospital sectors, scored a low level of maturity. The combination of the individual maturity scored resulted in an overall medium maturity score based on the scoring criteria.

As has been stated earlier, the current theoretical position shows a low level of maturity for this guiding principle. However, in contrast, the empirical findings show that there has been a progression in maturity than what the literature shows. This is seen as a significant change, and contribution to the current body of literature. However, it must be noted that further maturity is warranted, which allows an opportunity for further research in this area, namely in the area of definition and communication of roles and responsibilities, where a low maturity in practice seems to exist.

In short, the literature has outlined how there is a lack of programme management techniques, this research sees this particular guiding principle having a low maturity, in the theoretical sense. This gap has been addressed by the research conducted, where three questions were put to candidates to gather relevant data and information to assess maturity in practice. The empirical results demonstrate that programme management practices are in use, and a medium level of

maturity for the guiding practice. These findings constitute a deviation in maturity from the theoretical perspective, which is a significant finding, and a significant contribution to the current body of literature.

5.8 Are Programmes Aligned to Business Needs?

Section 2.2.7 has outlined the how various definitions of programme success have emerged, however, the alignment of programmes to business needs has not been seen in the review of definitions of success. There has been an indirect notion that programmes are not aligned to business needs (Pellegrinelli, 2002, pp. 229,230). This research study conducted an investigation to pursue this theme from the literature across a number of the interview questions posed to candidates. Interview questions seven and eight looked at confirming if programmes are used to implement strategy and the range of strategic initiatives they are used for. Question seventeen looked at the definition of programme success and its link to the critical success factors, while question nineteen follows this by investigating the relationship between benefits realisation and programme success. Finally, question fifteen looked at programme management methodologies, their maturing over time and how well they responded to this change. This could be interpreted as an evolution and alignment to meet organisational needs.

When one looks at question seven, it asked candidates if programmes were used as a vehicle/enabler for strategic initiatives. Six of the ten business sectors demonstrated medium maturity responses to this question, meaning programmes are sometimes used to implement strategy, or they may be initiated at a senior level in the organisation. The medium maturity responses emanated from the semi-conductor, pharmaceutical, telecommunications, hospital, public, and wealth management sectors. The remaining four business sectors gave responses to question seven consistent with a high level of maturity. All of these sectors stated that programmes are used to implement strategic initiatives, and demonstrated how or why they were used for implementing strategic initiatives. Question eight followed question seven in that it asked candidates about the range of strategic initiatives which programme were used for. Eight of the ten business sectors demonstrated high maturity levels in their responses, due to the range of initiatives they saw programmes being used to implement, plus the strategic nature of the initiatives. The sectors of semi-conductor, consultancy, pharmaceutical, telecommunications, hospital, public, information technology and banking all demonstrated

high maturity responses. The remaining sectors demonstrated medium levels of maturity in their responses as a result of the number of initiatives they listed, and or the initiatives listed may not have been of a strategic nature. Figure 5.2 gives outline of the responses from the various business sectors.

When one reviews that responses to question fifteen, where candidates were asked 'Can you describe how the programme management methodology in your organisation matured over time and has it responded well to change?', two of the sectors demonstrated low maturity responses. The hospital and insurance sectors demonstrated low maturity in this area as both stated in their responses to question fourteen that they did not used programme management methodologies, therefore, they could not give an answer to question fifteen. Three high maturity responses emerging from the semi-conductor, telecommunications and public sector. These sectors stated the programme management methodology has matured and responded well to change. The remaining five sectors demonstrated medium maturity in their responses to question fifteen, those of the consultancy, pharmaceutical, wealth management and information technology sectors. These sectors stated the methodology did, or somewhat matured over time, but that the response to change varied. When this is likened to the literature, there is some alignment, as it shows formal methodologies are being used to manage programmes, but more development and maturity is needed to bring greater consensus on methodologies.

<u>Programme Management - Uses</u>	
<ul style="list-style-type: none"> • New product introduction – Semi-conductor • Process Improvement – Semi conductor • Business integration - Consultancy • Legislation implementation – Banking, Wealth Management and consultancy, Telecommunications • Business re-tooling – Consultancy • Implementation of new technologies and capabilities • Business change - Consultancy • Operational efficiency – Consultancy, banking • Strategy implementation – Consultancy, Pharmaceuticals • New business launches - Telecommunications • Implementing infrastructure changes - Telecommunications • Development of new expertise - Healthcare • Business transformation - Healthcare • Safety initiatives – Public sector 	<ul style="list-style-type: none"> • Company acquisitions - Consultancy • Cost reduction - Consultancy • Technology enhancement - Consultancy • Innovation - Consultancy • Research and development - Pharmaceutical • Capital expenditure • Operational excellence • Company growth initiatives – Consultancy and Pharmaceutical • Digital strategies – Insurance and Information Technology • Infrastructural upgrades - Insurance • IT transformation initiatives - Insurance • Regulatory requirements and initiatives – Banking and Wealth Management • Business process automation – Insurance and Banking • Business enablement - Banking

Figure 5.2 – Programme Management Uses

Question seventeen was put to candidates by asking 'How does your organisation define programme success and critical success factors, how are they measured?'. Most business sectors responded with answers of a high maturity, those of the semi-conductor, pharmaceutical, telecommunications, hospital, public and banking sectors. These respondents gave answers where successful programmes enabled strategic outcomes and delivery, were aligned to performance indicators, on time delivery, and within budget. The consultancy sector outlined an answer that shows a medium level of maturity in practice. The reason for this lies with the respondent stating critical success factors are clearly defined at the start of programmes, however, it is rarely the case where these factors are revisited at the end of the programme to see if they have been achieved. The final three sectors yielded responses of low maturity, those of the insurance, wealth management and information technology sectors. Here respondent's answers exhibited low maturity for a number of reasons ranging from programmes not having clear outcomes, the lack of formal benefits realisation to determine if a programme has been successful, to companies failing to clearly define the project and programme of works required.

Finally, question nineteen asked 'can you explain how benefits realisation linked to programme success in your organisation?'. The six sectors of the semi-conductor, pharmaceutical, hospital, insurance, wealth management and information technology demonstrated a low level of maturity. The responses from these sectors clearly stated that programme success was not linked to benefits realisation. The consultancy sector outlined a medium maturity answer by stating that this is in fact a large gap in programme management, which requires attention. The final two sectors demonstrated answers of a high maturity related to question nineteen where candidates stated that the link is clear between programme success and benefits realisation. When one looks holistically at the responses to questions seven, eight, fifteen, seventeen and nineteen, it can be seen how programmes are progressing toward meeting business needs, more so than what the literature suggests, however, more progression is required to bring this area to a high level of maturity,

Programme management has been described as being at a conceptual level (Shao & Muller, 2011, p. 949), which pushes this research toward asking if programmes are truly aligned to business needs. Some research suggests that organisations need to clarify what their meaning of a programme is, and what their value proposition is (Martinsuo & Lehtonen, 2007, p. 344). Question eighteen somewhat addresses the alignment of programmes to business needs in the area of communication by asking candidates how is the definition of programme success and success factors communicated within and outside the programme team? Six of the candidates,

from the semi-conductor, consultancy, pharmaceutical, wealth management, information technology and banking sectors demonstrated medium levels of maturity in their responses. These candidates gave answers where they stated that success criteria and critical success factors were either communicated in inside or outside the programme team, but not both. The remaining four candidate's responses were of a high maturity in that they stated that success criteria and critical success factors were communicated both inside and outside the programme team. The overall responses to question eighteen could be interpreted as bringing alignment to business needs through the communication of programme success factors.

Questions twenty, twenty-one and twenty-two looked at the alignment of programmes to business needs through the programme manager. Question twenty asked 'what would be seen as the key programme manager competencies?'. All candidates demonstrated a high level of maturity in their responses, where they listed between five and seven competencies, Figure 5.3 shows how the competencies outlined by the interview candidates compare with those from the literature.

Programme Management Literature – Programme Manager Roles & Responsibilities		Research Question 20 – Programme Manager Key Competencies	
Item	Description	Item	Description
1	Risk Analysis & Management	A	Definition of a project and programme
2	Improvisers & Implementers of Structural Approaches	B	Oversight of other strategic programmes and project which the team may not
3	Linking of programme to strategic direction	C	Good leadership skills in terms of laying out the battle plan
4	Major project changes & benefits appraisal	D	A mind-set of change
5	Ensuring a Person is Appointed to Manage the Critical Success Factors	E	Know and be experienced in the business/sector & business acumen
6	Identifying and Prioritising Projects and Operational Actions Required to Support it	F	Effective Communication – to stakeholders, the team, and wider community
7	Assessment and management the programme environment, particularly stakeholders	G	Experience of having delivered successful programmes
8	Manage the communications to and from project managers	H	Vision Setting (important for change programmes)
9	Act as a buffer to control senior management	I	People and team management, empathy, influencing, persuading and motivation
10	Propose or implement changes in projects and assess impact on critical success factors	J	Resource management – budget, people and capacity
11	Consider project deliverables against key performance indicators	K	Ability to keep the overall objective & outcome in mind and focus on this delivery
12	Analyse project outputs/resources, with view to resource reallocation/reprioritisation	L	Good at playing the political game
13	Make the decision to continue, realign or stop the individual projects	M	Meeting management & documentation
14	Concentrate on project interdependencies, rather than on project activities	N	Application of discipline & structure
15	The setting up and running of the programme	O	Credibility
16	Overall responsibility for realising the anticipated benefits from the programme	P	Overall view of where projects fit within the programme
17	Assess major deliverables & output-input relationship of projects within the programme	Q	Good emotional intelligence
18	Identification of Business Opportunities	R	Ability to see bigger strategic picture
19	Audit and Gateway Control	S	Maintains balance between strategic execution & operational execution
20	Assess Key Performance Indicators Against Deliverables	T	Stakeholder management
21	Make Decisions to continue, realign or stop projects	U	Risk management & assessment
22	Intermediary between high management & Operations personnel	V	Experienced project manager
23	Implementing Organisational Strategy & aware of wider business influences	W	Knows where the programme sits within the organisation, its context & link to strategy
24	Tolerant of uncertainty & embrace change	X	Comfortable with the abstract and conceptual with a framework that can amend
25		Y	

Figure 5.3 – Programme Manager Competencies Comparison between Theory and Practice

A comparison of the roles and responsibilities/competencies between the literature and the data yielded from question twenty yields roughly a 50% match rate as seen in the comparison table above. This shows that the maturity in this discipline of management still requires further development from what both the literature and research data say. But it also says that the maturity has progressed since the research shows additional requirements of programme managers to those identified by the literature. Both the literature and research data still reveals shortcomings in programme management in the areas of benefits realisation and measurement, people management, business acumen and awareness of the wider business environment, ability to see the wider and bigger strategic 'picture', creating the vision and tactical plans for the programme team and emotional intelligence. The comparison between the literature and research shows a large opportunity for further research in this area.

Question twenty-one asked if the competencies they outlined in their response to question twenty were used to select and develop programme managers. The semi-conductor, pharmaceutical and banking sectors scored high maturity for their responses, where they all stated the competencies they listed were used to select and develop programme managers. The consultancy, telecommunications and public sectors stated they may not necessarily use these competencies to select and develop programme managers. Finally, the remaining four sectors demonstrated low maturity in their responses in that they clearly stated the programme managers competencies they listed are not used to select or develop programme managers. Question twenty-two asked 'Can you provide an example of what training is used to develop programme managers in your organisation?'. Six of the ten sectors, those of the semi-conductor, consultancy, pharmaceutical, hospital, insurance, and wealth management all stated that no training is provided to develop programme managers, showing low maturity in this area. The telecommunications and public sectors demonstrated medium maturity in this area where one candidate stated a product development and not programme management training is used to develop programme managers, whereas the other candidate stated that training was down to the person's own development more so than the company providing this. Finally, only one sector demonstrated high maturity in their response to question twenty-two, by stating formal training is provided, and gave examples of this training.

When one looks at the data and information from the responses to questions eighteen and twenty through to twenty-two, and the alignment of programmes to business needs through programme managers, some items stand out. Firstly, further development is required in the area of training, and the selection and development of programme managers, plus how they

communicate success criteria and factors. The gaps in these areas leads one to believe that more needs to be done to bring greater alignment of programmes to business needs.

The literature's perspective is that there is poor alignment between programmes and business needs, this is considered low maturity for the purpose of this research. This study has investigated this gap, with the results of this work outlined in table 4.17 in chapter four. Overall, the maturity score emanating from this research is medium across all sectors, meaning programmes are somewhat aligned to business needs, however, more alignment is required. When compared to the literature, there is a contrast in maturity, where the empirical evidence suggests practice gives more alignment between programmes and business needs. This can be classed as a significant contribution to current theory and can be added to the current body of work in this area.

To end, the literature has outlined how programme alignment to business needs is questioned. This study has investigated the use of programmes for strategic initiatives, its methodological change and maturity, and success criteria to ascertain their alignment with business needs. Added to this, the role of the programme manager, their competencies and selection is also viewed with respect to programmes alignment to business needs. Overall, this piece of research shows a progression from the literature's demonstrating a low level of maturity in this area, where empirically there is evidence of a medium level of maturity. This constitutes a contrast to the current literature and theory, but also a significant contribution to the current body of work.

5.9 Is There a Standard Approach to Programme Management?

Sections 5.5 and 5.7 of this chapter have discussed definitions and techniques of programme management, both of which, from an empirical view, demonstrate greater maturity than what is outlined in the theoretical perspective. While there is still not agreement on the definition of a programme, greater consensus is beginning to emerge, this can also be said for the use of programme management techniques. In section 2.4.4 it has been stated that, similar to programme management approaches and methodologies, approaches to programme management have received little coverage, and that there has been a low degree of formalisation (Vereecke, et al., 2003, pp. 1286-7). However, it has also been noted that a standard approaches to programme management has started to emerge (Lycett, et al., 2004, p. 291), and that these approaches differ only in terms of scale (Gray & Bamford, 1999, p. 362). Under the direction of the guiding principle 'Is there a standard approach to programme management?' this study investigated a number of aspects of programme management to gain greater clarity on methodologies. Questions fourteen and fifteen investigated programme methodologies and governance structures, and asked:

Question fourteen: Can you describe the programme management methodology and governance structures your organisation uses?

Question fifteen: Can you describe how the programme management methodology in your organisation matured over time and has it responded well to change?

When one views the responses to question fourteen, six of the ten sectors demonstrated a high level of maturity in that their organisations all had defined programme management methodologies and governance structures. The hospital and insurance sectors demonstrated low maturity in this area, as they indicated neither had a programme management methodology, nor a governance structure. Finally, the consultancy and wealth management sectors responses were deemed of medium maturity, meaning their programme management methodologies were in place, albeit not as mature as other sectors, as there was no mention of a governance structure.

The responses to question fifteen yielded four high maturity responses from the semiconductor, telecommunications and public sector. Essentially, the responses from these sectors stated the programme management methodology has matured and responded well to change.

A further four sectors demonstrated medium maturity in their responses to question fifteen, those of the consultancy, pharmaceutical, wealth management and information technology sectors. These sectors stated the methodology did, or somewhat matured over time, however, the response to change varied. When this is compared to the literature, there is some alignment, in that formal methodologies are being used to manage programmes, however there is still further development and maturity to bring greater consensus on methodologies.

Further research has outlined how there is little investigation into the formalisation and standardisation of approaches, but where research has been carried out in this area, there has been significant variation in the application of these approaches (Pellegrinelli, 1997, p. 143). Questions twelve and thirteen of the research in this study had the purpose of investigating the emergence of standard approaches. These questions asked:

Question twelve: Can you outline how your organisation manages programmes, does this include as a portfolio, or toward a common goal?

Question thirteen: Please outline the lifecycle stages on your organisation's programmes?

The responses to question twelve yielded six of the ten sectors demonstrating a medium level of maturity in their responses, those of the semi-conductor, consultancy, telecommunications, hospital, public, and insurance sectors. Their answers were considered medium maturity as they stated programmes were managed as a portfolio of activates toward a common goal but did not clearly demonstrate how. The remaining four sectors yielded high levels of maturity in their responses, as they demonstrated how the portfolio of work was managed toward a common goal. As stated earlier in this chapter, the information and data from this question, in isolation, does not demonstrate a generic model of programme management, it does contribute to the guiding principle to build a holistic picture of models of programme management. When one views the responses to question thirteen, the majority of sectors, six in all, gave responses consistent with a high level of maturity, those from the semi-conductor, telecommunications, public, pharmaceutical, information technology and banking sectors. These sector's responses outlined clear lifecycle stages from start to finish of the programme. The pharmaceutical, telecommunications and wealth management sectors all demonstrated a medium level of maturity in their responses, meaning they gave a small number of stages and or did not cover the entire programme lifecycle in those stages. The hospital sector was the only one that scored a low level of maturity in its response, where it did not use a set number of lifecycle stages. As outlined previously in this chapter, while there were a number of medium maturity responses

to question thirteen, this in isolation did not demonstrate homogeneity in programme management lifecycles or methodologies.

Section 2.4.4 also outlines how approaches for programme management which have been identified have been criticised (Lycett, et al., 2004, p. 293). This criticism was specifically pointed at the management of relationships between programmes and their constituent projects, and the relationship between the respective project managers (Lycett, et al., 2004, p. 293). Question sixteen directly addressed the subject of relationships between projects and programmes, in the form of roles and responsibilities. It asked, 'Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?'. A review of the results from the research conducted under question sixteen shows most responses had a low level of maturity, meaning roles and responsibilities were not communicated inside and outside the programme team. The low maturity responses emanated from six of the ten sectors, those of the semi-conductor, consultancy, pharmaceutical, hospital, insurance and IT sectors. The wealth management sector was the only one to demonstrate a medium level of maturity, and stated they were communicated, but got 'grey' over time, meaning they become less clear over time. The public and banking sectors were the only two sectors which demonstrated high maturity responses as both stated roles and responsibilities are clearly communicated inside and outside the programme team. The results of this research would lead one to believe, for the most part, that roles and responsibilities are not clearly communicated, one could infer from this that they are also poorly defined.

The literature has broadly led to the maturity guiding principle 'is there a standard approach to programme management?'. Figure 4.18 in chapter four outlines the overall maturity score for this guiding principle. This shows that there is an overall medium level of maturity related to the standard approach to programme management. Empirically, this means there still is no standard approach to programme management in practice, however, the gap is closing, meaning that consensus is beginning to form.

5.10 Is There a Generic Model of Programme Management?

Section 5.9 of this chapter has already discussed the standard approaches to programme management, which, from an empirical perspective, are more mature than that outlined in the theoretical perspective. Also, in section 5.5 it has been discussed how the definition of programme management has matured beyond that outlined in the literature, and that a generic definition of a programme can be developed from the research conducted under this study. In this section of the discussion chapter, the guiding principle ‘is there a generic model of programme management?’ is reviewed based on the theoretical and empirical perspectives.

In section 2.4.5 it has stated that there is no generic model of programme management in use, and in fact, there is a wide variance in the consistency (Blomquist & Muller, 2006, p. 52), and the way they are managed (Pellegrinelli, 1997, p. 149). The literature progresses to suggest that programmes are yet to be consistently practiced when compared to projects (Pollack, 2012, p. 880; Pellegrinelli, et al., 2007, p. 49). The research this study conducted, while directed by the guiding principle in this section, asked respondents from the ten business sectors in question fourteen ‘can you describe the programme management methodology and governance structures your organisation uses?’. Six of the ten business sectors gave answers that resulted in high maturity scores, meaning that their organisations operated defined programme management methodology and governance structures. The consultancy and wealth management sectors demonstrated a medium level of maturity, meaning they had either a programme management methodology or governance structure, but not both. The remaining sectors, hospital and insurance, both scored low levels of maturity, meaning they had neither a methodology or governance structure. While this research does not mean there is a generic model of programme management, at least methodologies are in place and being used.

In section 2.4.5 it has been further stated how differences between programme typologies exist (Miterev, et al., 2016, p. 546), and people’s meaning of a programme varies between and within organisations, between people and in context, and it has been difficult to get to a homogenous notion of programme management (Partington, et al., 2005, p. 94). As a result, a large amount of effort has been expended on the topic of programme models and typologies (Martinsuo & Lehtonen, 2007, p. 338). The research conducted in this study attempted to close the gap outlined in the literature through question thirteen, which is linked directly to the guiding principle in this section. The question asked interviewees in the various business sectors ‘please

outline the lifecycle stages in your organisation's programmes?'. The majority of sectors, six in all, gave responses consistent with a high level of maturity, those from the semi-conductor, telecommunications, public, pharmaceutical, information technology and banking sectors. All of the responses from these sectors gave clear lifecycle stages from start to finish of the programme. Three sectors, the pharmaceutical, telecommunications and wealth management sectors, demonstrated a medium level of maturity in their responses, meaning they gave a small number of stages and or did not cover the entire programme lifecycle in those stages. Finally, the hospital sector was the only one that scored a low level of maturity in its response, where it did not use a set number of lifecycle stages. While there were a number of medium maturity responses to question thirteen, this in isolation did not demonstrate homogeneity in programme management lifecycles or methodologies. Table 2.4 in chapter two demonstrates the variance in programme management and that there is no formalised method for managing them. It has been argued that the lack of formalisations may be attributed to the lack of experience, generally, in managing programmes (Vereecke, et al., 2003, p. 1288). Question twelve is the last of the three questions put to interviewees that is attributed to the guiding principle discussed in this section. It contributes to the variance in the management of programmes and asked, 'can you outline how your organisation manages programmes, does this include as a portfolio, or toward a common goal?'. Six of the ten sectors demonstrated a medium level of maturity in their responses to question twelve, the sectors here were the semi-conductor, consultancy, telecommunications, hospital, public, and insurance sectors. Their answers were deemed of medium maturity as they stated programmes were managed as a portfolio of activities toward a common goal but did not clearly demonstrate how. The remaining four sectors demonstrated high levels of maturity in their responses, as they demonstrated how the portfolio of work was managed toward a common goal. While the information and data from this question, in isolation, does not demonstrate a generic model of programme management, it does contribute to the guiding principle to build a holistic picture of models of programme management.

This research has taken the view that the theoretical perspective of a common model of programme management is at a low level of maturity, as, according to the literature, varying models of programme management exist. The result of the research conducted to address this gap in the literature can be seen in table 4.15 in the results chapter. The table shows that, across all of the business sectors, there is a medium level of maturity related to the programme management guiding principle 'there is no generic model of programme management'. What this research tells one is that the gap is closing regarding the disparity between programme

management models. When one compares this to the theoretical perspective, there is a contrast with the empirical perspective, mean there is a greater maturity in practice than what is portrayed in the literature. This can be classed as a significant development and addition to the theory and literature. This study has gone further to look at the respective data collected from responses to question thirteen, with the view to developing a generic programme management lifecycle. This generic lifecycle could be interpreted and used as a generic model of programme management. Figure 5.4 shows the output from this analysis to develop a generic model of programme management in a twelve-step process. This analysis can be classed as a significant development where the literature has not attempted to develop a generic programme management model or process of lifecycle stages. This paves the way for further research into this specific topic with the view to enhancing programme management practices and improving maturity and understanding in this management area.

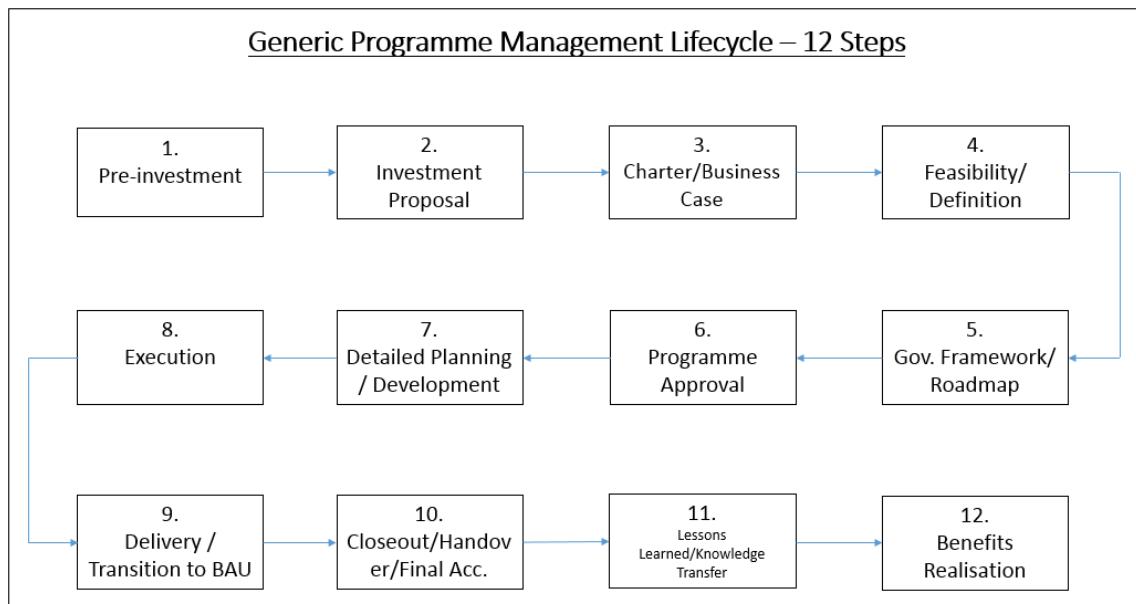


Figure 5.4 – Generic Programme Management Lifecycle

To surmise, the literature has outlined how there is no generic model of programme management in practice or theory, this is considered a low level of maturity by this study. The research conducted as part of this study to address this gap in the literature was directed by the maturity guiding principle ‘is there is a generic model of programme management?’. Interview questions twelve, thirteen and fourteen were used to address this gap and fed data into the maturity guiding principle. The outputs from the research demonstrate a medium level of maturity, where there is not a generic model of programme management, but that this gap is

closing. The data from this research has also allowed analysis to be conducted to develop generic programme lifecycle stages, which in turn could be classed as a generic model of programme management. These outputs from the research are considered significant, show a contrast to the current theory and literature, and can bring a significant contribution to the current literature and practice.

5.11 Do Programmes Have Clearly Defined Governance, Roles and Responsibilities?

Sections 5.7 and 5.9 have discussed models and techniques of programme management, each of these discussions demonstrated how the research conducted under this study resulted in a higher level of maturity in practice than was outlined in theory. The maturity factor outlined in this section looks specifically at confirming if there is a governance structure in place, and that roles and responsibilities are clearly defined in programmes. It does not set about listing what the roles and responsibilities are, this is outlined in the section titled 'there is a need to understand the leadership competencies of successful programme managers', also in this chapter (section 5.12). This was one of the first gaps noticed by this author before commencing their studies in this area, and was supported by a conference paper looking at commonalities in roles and responsibilities across the disciplines of project engineer, manager and programme manager (Hassett, et al., 2013).

The literature has clearly stated how the governance, roles and responsibilities in programmes are poorly defined (Blomquist & Muller, 2006, pp. 53,55). It has been outlined in chapter two (section 2.4.7) how this area of programme management has received limited attention from researchers. The topic of roles and responsibilities has received some attention, this is demonstrated in table 2.5 which lists the various roles and responsibilities of programme managers as harvested from the literature. The research conducted in this study addressed the topic of roles and responsibilities in programmes by asking respondents (in question sixteen) if they (roles and responsibilities) are communicated within and outside of the programme team? Results from the research demonstrated a low level of maturity, meaning roles and responsibilities were not communicated inside and outside the programme team. These low maturity responses emanated from six of the ten sectors, those being the semi-conductor, consultancy, pharmaceutical, hospital, insurance and IT sectors. The wealth management sector was the only one to demonstrate a medium level of maturity by stating they were communicated; however they get 'grey' over time, eluding to them becoming less clear over time. The public and banking sectors were the only two sectors which demonstrated high maturity responses as respondents stated roles and responsibilities are clearly communicated inside and outside the programme team. The results of this research would lead one to believe, for the most part, that roles and responsibilities are not clearly communicated, one could also infer from this research that they are also poorly defined.

The subject of programme management governance has received very little attention as can be gauged from the literature. Where there is a reference to programme governance, it only states that it is a factor in programme success, and has been identified as one of six attributes of programme success (Rijke, et al., 2014, pp. 1200,1207). The only literature that has made reference to programme governance is from practitioner literature i.e. the PMBOK Guide (PMI, 2008, p. 244).

With the significant lack of research in the programme governance arena, the research conducted in the study directly addressed this. Interview questions fourteen and fifteen tried to gather more information in this area and address the lack of research. Question fourteen asked interviewees to 'describe the programme management methodology and governance structures your organisation uses?'. Six of the ten sectors, those of the semi-conductor, pharmaceutical, telecommunications, public, IT and banking sections all acknowledged that their programmes have both, and therefore scored a high level of maturity. The consultancy and wealth management sectors both demonstrated medium levels of maturity as they stated they had one or the other, but not both. The consultancy sector specifically scored medium maturity as it stated clients tend to treat programmes like big projects, and therefore this questioned the maturity of the programme management methodology for this study. Finally, two sectors scored a low level of maturity for their response to this question. The insurance and hospital sectors stated clearly no programme management methodology or governance structure were in place or used. Question fifteen asked if the programme management methodology had matured over time, and did it respond well to change? Five of the ten sectors demonstrated medium maturity related for their responses to this question. The consultancy, pharmaceutical, wealth management and information technology and banking sectors all demonstrated medium maturity by essentially stating the methodology did changed but did not respond well to change, or somewhat changed, and its response to this change could not be described as responding well. Three sectors, those of the semi-conductor, telecommunications, and public sector all acknowledged that the programme management methodology did mature over time and did respond well to change, demonstrating high maturity. The hospital and insurance sectors both stated that they did not have programme management methodologies or governance structures, therefore they could not realistically comment on their programme management methodology maturing or responding well to change, both scored low maturity.

This study deemed the literature and theory being of a low maturity for programme management governance, roles and responsibilities due to the lack of research. The research

conducted under the guiding principle 'do programmes have clearly defined governance, roles and responsibilities?' attempted to close this research gap. The results from the research, as outlined in table 4.19 in chapter four, shows there is a medium level of maturity for this guiding principle across the ten business sectors. The theme from this research is programme governance, roles and responsibilities are somewhat defined. This research, when compared and contrasted to the literature, brings a significant addition, as it has directly addressed a significant lacking in the literature and theory. It shows that, empirically, there has been an increase in maturity from that outlined in the literature.

In short, the programme management literature has demonstrated lacking in the areas of programme governance, and the communication of roles and responsibilities within and outside of programmes. The literature and theory is deemed as having a low level of maturity related to programme governance, roles and responsibilities. This gap has been narrowed by the research conducted which, from an empirical standpoint, demonstrates greater maturity around this area of programme management, and can be considered a significant contribution to the current body of literature.

5.12 What are the Leadership Competencies of Successful Programme Managers?

In section 2.4.8 it has been stated how programme management competence is important in programmes achieving their goals (Shao & Muller, 2011, p. 948). This section has also outlined how poor programme manager competencies are in place as a result of poor programme management methodologies (Blomquist & Muller, 2006, p. 54). The literature has not helped this predicament with its falling short in this area (Partington, et al., 2005, p. 94), however it does outline a good deal of programme manager competencies as is demonstrated in table 2.6.

This study looked to address the lack of research in this area and put a number of questions to the interview candidates specific to this. Question twenty asked the interviewees 'What would be seen as the key programme manager competencies?'. The responses from all candidates showed that they knew what was required of programme managers, with all scoring high levels of maturity. When their responses were compared with the literature, it demonstrated a fifty percent match rate, meaning this research has further built on the literature's list of programme manager competencies. Question twenty-one asked how the competencies listed were used to select and develop programme managers? The three sectors of semi-conductor, pharmaceutical and banking all scored high maturity, where they all stated the competencies they listed were used to select and develop programme managers. The consultancy, telecommunications and public sectors stated they may not necessarily use these competencies to select and develop programme managers. The remaining four sectors yielded low maturity responses where they clearly stated the programme manager's competencies they listed are not used to select or develop programme managers. Finally, question twenty-two asked candidates what training was used to develop programme managers in their organisation? The semi-conductor, consultancy, pharmaceutical, hospital, insurance, and wealth management stated no training was provided to develop programme managers, demonstrating low maturity. Only the telecommunications and public sectors demonstrated medium maturity in this area. Here one of the candidates stated a product development, and not programme management training, is used to develop programme managers, whereas the other stated that training was down to the person's own development more so that the company providing this. Only one sector, that of banking, demonstrated high maturity in their response to question twenty-two, by stating formal training is provided, and gave examples of this training.

As has been outlined earlier in this section, the literature has stated the importance of programme manager competencies in the delivery of programmes. It has done little to further investigate this gap, and hence this area of programme management is considered of low maturity for this study where the literature is concerned. Upon completion of this study's research under the maturity guiding principle 'there is a need to understand the leadership competencies of successful programme managers?', table 4.21 in chapter four outlines the results. It can be seen that overall, there is a medium level of maturity related to this guiding principle, meaning the leadership competencies of successful programme managers are understood, however, further maturity is required in this area. When compared to the literature, it shows a progression in maturity than that demonstrated in the theory. This empirical finding constitutes a contribution to the current body of work with respect to the maturity surrounding programme managers competencies.

To surmise, the literature has outlined that programme manager competence is a subject of importance related to programme performance, however, little research has been carried out in this area. This research has investigated this gap under the guiding principle 'there is a need to understand the leadership competencies of successful programme managers', the theoretical perspective demonstrates low maturity in this area. The empirical findings have shown an increase in maturity surrounding this guiding principle, this is considered significant and deviates from the current theory.

5.13 Is Future Research Required in the Area of Programme Management

One can view all of the previous sections in this chapter and come to the conclusion quite easily that further research is required into programme management. However, the literature also supports this view where in section 2.5.2 it states that this is still an emerging area of management (Mitrev, et al., 2016, p. 546). The literature progresses by stating the need for research into the linking programme management competence models to programme characteristics (Mitrev, et al., 2016, p. 555). Other suggestions for research include the link between programme characteristics and types, and the competence areas related to both, plus the differences in perspectives of stakeholders regarding programme management competence (Mitrev, et al., 2016, p. 556).

This research study deemed programme success as a key area aligned to the lack of research, as it has been outlined how more work is required in this area (Pellegrinelli & Murray-Webster, 2011, p. 17), but also the importance that defining programme success has. To address this gap, this study asked respondents, through question seventeen, 'How does your organisation define programme success and critical success factors, how are they measured?'. Six of the business sectors involved in the research, those of semi-conductor, pharmaceutical, telecommunications, hospital, public and banking sector, demonstrated high maturity in their responses to this question. These respondents described how successful programmes enabled strategic outcomes and delivery, were aligned to performance indicators, on time delivery, and within being executed within budget. A consultancy sector representative outlined an answer that demonstrated a medium level of maturity in practice. The reason for this lies with the respondent stating critical success factors are clearly defined at the start of programmes, however, it is rarely the case where these factors are revisited at the end of the programme to outline if they have been achieved. The remaining three sectors gave responses associated with a low level of maturity related to question seventeen. Their answers exhibited low maturity for a number of reasons, ranging from programmes not having clear outcomes, the lack of formal benefits realisation to determine if a programme has been successful, to companies failing to clearly define the project and programme of works required. Overall, the responses to this question demonstrated a medium level of maturity related to defining programme success and critical success factors and outlining how they are measured.

Section 2.5.2 outlines how the literature progresses by stating recommendations have been made around the structure of programmes, and how change influences decision making, governance, and synchronisation related to the organisation (Pellegrinelli, et al., 2015, p. 162). It goes on to state there are other requirements aligned to change and the programme management relationship, specifically the limitations and contextual factors related to their complementary use in processes of change. The research conducted in this study addresses the lack of research in the structure of programmes by investigating programme management techniques, due to its lacking in the literature (Pellegrinelli, 1997, p. 149). The research asked, through question fifteen, 'Can you describe how the programme management methodology in your organisation matured over time and has it responded well to change?'. Five of the ten business sectors demonstrated medium maturity related to their responses to this question, those of consultancy, pharmaceutical, wealth management and information technology and banking sectors. All of these demonstrated medium maturity by essentially stating the methodology did change but did not respond well to change, or somewhat changed, and its response to this change could not be described as responding well to the change. The hospital and insurance sectors were the only two to demonstrate a low level of maturity where they stated they did not have programme management methodologies or governance structures, and therefore could not realistically comment on their programme management methodology maturing or responding well to change. Finally, the semi-conductor, telecommunications, and public sectors all acknowledged their programme management methodology did mature over time and did respond well to change, demonstrating a high level of maturity.

The literature described in this section has demonstrated a significant gap in the existing research which has led to the maturity guiding principle 'is further research required in the area of programme management?'. This particular area of research is considered at a low level of maturity due to the gap outlined by the literature. This study's research shows an overall medium level of maturity across all business sectors related to this guiding principle; this can be seen in table 4.20 in chapter four. What this maturity score means is that more research is required into programme management, however, the level of maturity is not as low as the literature would describe. When one compares the empirical findings with the theoretical view, it shows a contrast in maturity, meaning in practice, there is greater maturity in the management of programmes. This constitutes a significant development, and contribution to the current literature and theory.

To conclude, the literature has outlined directly how further research is required into the area of programme management, particularly the areas of competence in managing and the structures of programmes. This research has directly addressed this gap, with the result of demonstrating greater maturity in practice than described in the literature. This means that, theoretically, the description of programme management maturity lags behind what is being done in practice. This is considered a significant development and contribution to the current literature.

5.14 The Maturity of the Practice of Programme Management

Up to this point in the research, focus has been placed on various aspects of programme management, with their respective maturity being compared between the theoretical and empirical perspectives. This study felt it important to make an overall programme management maturity assessment, as there is no evidence in the literature of such an assessment to date. From here, this dissertation deviates from the format of the discussion chapter up to this point, where a review of the literature outlining the maturity of the various aspects of programme management is done and then compared to the empirical findings of this research. The literature has not carried out an overarching maturity assessment of programme management as a discipline, however, the research was structured in such a way as to allow such an assessment to be carried out, and for it to be based on the gaps in the literature.

Table 4.23 in chapter four charts the scores of the twelve-programme management maturity guiding principles, these are the maturity scores across all of the business sectors for each of the guiding principles. The first two maturity guiding principles, 'programme management is derived from project management' and 'the conception of programme management is not universally agreed' both scored a high level of maturity. From this one can infer programme management is derived from project management, from an empirical perspective. Therefore, the current theoretical perspective of the origins of programme management not being agreed could be updated to state that programmes and programme management are derived from project management. However, the next maturity guiding principle, 'there is a lack of distinction between projects and programmes' scored a medium level of maturity. This means that there could be some confusion between projects and programmes, how they are respectively managed and what they deliver, however, some sectors do differentiate and see the difference between both disciplines. Next the 'lack of established programme management techniques' as a maturity guiding principle is outlined and shows a medium level of maturity across all of the contributing business sectors. This can be interpreted as some organisations having programme management techniques, whereas others do not, but that there is still no consensus on programme management techniques, which has some alignment with the theoretical perspective. To follow on from the discussion about programme management techniques, the next guiding principle scored medium maturity for 'there is no generic model of programme management'. This medium maturity score can be interpreted as the discipline having methodologies in place, and there being some alignment in these methodologies, however, no

generic model is in place across the sectors. Here again, we see some alignment with the literature in that, strictly speaking, there is no generic model, however, consensus is building, which is a more mature state than what the theoretical perspective demonstrates.

The subject of programme definition is next addressed, where the maturity guiding principle states 'There is no agreed definition of a programme'. The literature is clear that many definitions exist, but no one agreed, the empirical data suggests a similar theme, however, the data does present an opportunity to generate a generic definition. With the development of this generic definition, which has not been attempted in the literature, this study deemed this a progression of maturity from a low level in the literature, to a medium level in the empirical setting. Programme management approaches were also investigated after the literature's assessment that there are not standard approaches to programme management. The empirical view is somewhat aligned to that of the theoretical, however it seems more consensus is building on approaches, and therefore there is a higher level of maturity in the practitioner setting than that of the theoretical. The research looks at roles and responsibilities using the guiding principle 'do programmes have clearly defined governance, roles and responsibilities?'. The literature perspective sees a low level of maturity in this area, however the empirical evidence shows governance, roles and responsibilities are better defined than the literature would suggest, but that further maturity is required. The next maturity guiding principle outlined is that of 'are programmes aligned to business needs?', where an overall medium level of maturity was demonstrated from this research. The literature questioned the level of alignment between programmes and business needs, the empirical evidence suggests that there is a higher level of alignment than from a theoretical perspective. To support the area of business needs, this study looked at programme success, and its definition. The literature demonstrates a low level of maturity related to programme success, meaning that there is a poor understanding or definition. The empirical evidence suggests there are definitions of programme success, that are somewhat developed, contradicting the theoretical view. Attention is also turned to the programme manager, where the theoretical view suggests a lack of understanding of the leadership competencies of programme managers. This research directly investigated this claim under the maturity guiding principle 'there is a need to understand the leadership competencies of successful programme managers'. The empirical evidence suggests there is an understanding of the leadership competencies of successful programme managers, however, more alignment is required, and therefore is in contrast to the theoretical view. Finally, the literature has suggested that further research is required in the area of programme management, the data from this research is broadly aligned to this view, however there is evidence of more maturity

in programme management, which infers programme maturity is ahead of that outlined by the literature.

When all of the maturity guiding principles scores are taken into account, it demonstrates that programme management is at a medium level of maturity, as a management discipline, when based on this research's criteria. This constitutes a significant contribution to the current body of work in this management area for a number of reasons. Firstly, this is the first time a maturity assessment has been carried out in the programme management discipline based on the theoretical setting, and secondly, it demonstrates a progression in the discipline which has not been outlined to date in the literature. These findings should be added to the currently literature and theoretical perspective as an update on research in general and should be seen as one of the main achievements of this research. It also allows for further research into this area to bring greater maturity to the discipline in the broad sense, but also further research into the various maturity constituents described in this study.

5.15 Usefulness and Implication of the Research

This research emanated from the author's experience of a programme managers and their observations made in that role prior commencing this research. The intent of the research was to understand more about the practice of programme management, and how it could be improved. Subsequent to the research findings, the author considers the study useful to practitioners in that items like the definition and generic model developed, definitions of programme success, and the linking of programmes to strategy delivery outlined can help to position programme management within organisations and clarify how programme are used. Also, the use of the maturity factors in this study could potentially be used in organisations to understand the maturity of programme management offices and managers. In the academic setting the authors sees this research being of potential source to commence further research across the respective maturity factors through quantitative studies to further challenge and quantify this work, and add to the current body of work.

The implications of this work from a theoretical and academic setting could potentially be that it could direct further research in this area to add to the existing work, plus to potentially close what this author sees as gaps between practice and theory. In the practical setting, it is hoped that the research can be seen by practitioners who may assess and use some of the research findings to enhance methods of programme management.

5.16 Summary

The discussion chapter has carried out a compare and contrast of the results of the research conducted in this study against the themes and findings from the literature review. The chapter has taken each of the twelve programme management maturity guiding principles and compares and contrasts their maturity as evident from the literature with that from this study's research. It also discusses the current level of programme management maturity evident from the study's research across all of the business sectors that took part in the research, and highlights where significant contributions have been made. Among the significant findings and developments evident in this research are the generation of a generic programme management lifecycle and definition, and that the current level of maturity for this practice is at a medium level, compared to a low level demonstrated in the literature. The usefulness and implications of this research for practitioners and academics have been outlined. Finally, the research does conclude that further research is required in the area of programme management, which aligns with the literature, and also opens an opportunity for further investigation into the respective maturity guiding principles.

6 Conclusion

6.1 Introduction

This chapter outlines the primary conclusions emanating from the research conducted in this study. It looks at each of the research questions outlined in the introduction chapter, and describes how the pertinent programme management maturity guiding principles that were developed from the literature review are used to 'answer' those research questions. Next, an outline of the limitations of this research are given, which is then followed by the recommendations for future research.

6.2 What is the Origin and Definition of Programme Management?

The review conducted of the programme management literature painted a picture of an area of management where there was conflict as to the origin of programmes, and a wide variance in definitions of programmes. This review formed the basis of the following research question developed by this study ‘what is the origin and definition of programme management?’. From this point, the research study’s interrogation of the literature inferred four maturity guiding principles related directly to this question, which it would pursue in an attempt to bring better clarity to this research gap. The following sections outline the conclusions from the research carried out under the direction of these four maturities guiding principles.

6.2.1 Programme Management is Derived from Project Management

This study has interpreted the literature as demonstrating the level of maturity for the guiding principle ‘programme management is derived from project management’ as medium. This can be interpreted as a section of people who believe programmes are derived from projects, whereas others do not believe so. The empirical evidence from this study demonstrates a high level of maturity for the guiding principle, meaning in practice there is a collective agreement that programme management has emerged or developed from project management. There are a number of conclusions that one can draw from the research. Firstly, the empirical position for this guiding principle has a higher level of maturity than that of the theoretical view and is in direct contrast. Secondly, one can conclude that those in a practical setting see programmes as developing from projects, and therefore this would have a direct effect on how programmes and their management are seen and executed.

The theoretical implications for the research are that the literature currently demonstrates a level of maturity below that of the practical setting, this should be seen as a significant development and therefore it should be updated to amend this view. The implications from a practical and empirical view would not be as significant as those from the theoretical viewpoint, with the seeming alignment on the origins of programme management there should be some continuity in how programmes are perceived and executed.

6.2.2 The Conception of Programme Management is Not Universally Agreed

This study's review of the literature infers the guiding principle 'the conception of programme management is not universally agreed' has a low level of maturity, meaning there is no consensus on how or where programmes were conceived. The empirical evidence from this study portrays a large contrast to that of the theoretical view, where the study demonstrates a high level of maturity related to this guiding principle, meaning there is agreement on where programmes have emerged from. Here, one can conclude that the theoretical setting is lagging far behind its view of maturity for this guiding principle compared to the empirical setting. Also, based on this evidence, one can conclude that in practice, there is a strong alignment on the conception of programmes, and that they were conceived from projects. Finally, a conclusion aligned to the guiding principle 'programme management is derived from project management' is that, in a practical setting, the management and view of programmes is directly influenced by project management.

The implications emerging from this piece of research are significant in that there is a large contrast in how the academic community views the maturity of this guiding principle compared to that of the practitioner. This research can be seen as an opportunity to amend the current theoretical view of maturity for this guiding principle and should be seen as a significant update to the literature. Similar to the guiding principle 'programme management is derived from project management', the alignment as to the conception and origin of programmes should bring some continuity for the management and execution of programmes in the practical setting.

6.2.3 There is a lack of Distinction between Projects and Programmes

The literature alludes to the maturity guiding principle 'there is a lack of distinction between projects and programmes' having a low level of maturity. The message from the level of maturity for this guiding principle is that, from a theoretical standpoint, there is difficulty in differentiating between projects and programmes. The research conducted under this maturity guiding principle demonstrated a medium level of maturity in the practical setting. The empirical findings signal that some organisations and sectors differentiate between projects and

programmes, while others do not differentiate clearly. One can conclude there is a disparity between the theoretical view and that of practice, and that this signals a significant development which is not reflected in the current literature. From a practical setting, it can be concluded that further maturity is required by some organisations to ensure a clear distinction between both disciplines, and one could infer the lack of distinction may have an impact on the efficiency and effectiveness of programmes.

The theoretical implication of this research is that there divide between the academic community and that of practitioners, however this provides an opportunity to build on the current literature to include these findings and draw a closer link between both communities. Furthermore, there are practical implications to be addressed, where in practice a lack of distinction exists which one could assert, has a negative effect on how projects and managed and perform, and therefore justifies some focus.

6.2.4 There is No Agreed Definition of a Programme

The subject of the definition of a programme has received considerable attention from the literature, however this study sees it demonstrating a low level of maturity for this guiding principle. The interpretation of this maturity is no agreed definition of a programme exists from a theoretical standpoint, irrespective of the level of attention it has received. The research conducted under this study has yielded a medium level of maturity across the business sectors that participated. One can view these results and see that there still being no agreed definition to a programme, but that some consensus is beginning to appear. The conclusions drawn from this research and the literature is that some commonality exists between both perspectives in that there is no alignment or agreement on a programme definition. However, one important piece of analysis conducted by this research has developed a generic programme definition based on key terms and words that emerged from the data collected. This serves as an important development for both the academic and practitioner communities as it should put into better context opportunities for the uses of programmes and should be seen as a significant achievement of this research and is unique compared to existing research conducted.

The practical and theoretical implications emerging from this research are significant. To date, no generic definition of programme management has been developed, or is evident from the

literature, therefore this research can contribute significantly to the current body of work and provides an opportunity for further research specifically in this area. From a practical view, the development of a generic programme definition can support bringing greater alignment in practice to understanding what programmes can be used for and their benefits.

6.2.5 The Answer to 'the Origin and Definition of Programme Management' Research Question

The conclusions drawn from this research point toward strong evidence of programmes having developed and emerged from project management, but that there is still some maturity to ensure a clear differentiation between both disciplines. However, there is still no full alignment on the definition of a programme, but that alignment is beginning to appear, and that this research has put forward a generic programme definition which can form the basis of future research and maturity.

6.3 What is Being Delivered by Programmes?

Further analysis of the literature by this study has determined that it is not clear, from the theoretical view, what is being delivered by programmes, which has led to the second research question 'what is being delivered by programmes?' This study, upon further review of the literature, developed two maturity guiding principles to examine this question, these principles looked at the definition of programme success and the alignment of programmes to business needs. The following two sections outline the primary conclusions from this investigation.

6.3.1 There is a Poorly Developed Definition of Programme Success

The literature has outlined how definitions of programme success have been poorly developed. This research has reviewed the literature, resulting in the development of the maturity guiding principle 'there is a poorly developed definition of programme success'. During the analysis of the literature it was assessed that this maturity guiding principle has a low level of maturity. One can infer from this level of maturity that programmes are not delivering their intended purposes. The empirical research conducted under this guiding principle demonstrated a medium level of maturity. The conclusion one can come to based on the empirical research is that, in practice, programmes are not delivering what they were setup to do by organisations. Also, when one looks at evidence from the research, it can be concluded that many programmes do not have structures in place to revise the purpose of the programme and what it is to deliver throughout its lifecycle. Finally, it is apparent that there is a gap in maturity between the theoretical and empirical settings, where the current level of maturity in the theoretical setting lags that of the empirical.

One practical implication of this research is an opportunity for programmes to have better targeted outcomes. Another implication is programmes may need to change their structures to allow for the review of targeted outcomes, through learning cycles, throughout the programme lifecycle to ensure they are delivering required and effective solutions and are truly aligned to organisational strategy and needs. The theoretical implications of this research are that a gap between the literature and practice currently exists, and that the literature needs to be revised to reflect the change in maturity of this guiding principle. Also, the fact that further maturity is

required in this area presents an opportunity for future focused research to enhance the literature, but also to enhance practice.

6.3.2 Are Programme Aligned to Business Needs?

The programme management literature has outlined how there is a poor alignment of programmes to business needs, leading to this maturity guiding principle being developed by the study. The research under this guiding principle has deemed the theoretical perspective to be of a low maturity. The research directed by this guiding principle has demonstrated a medium level of maturity in practice for programme management, meaning programmes are somewhat aligned to business needs. Here, one can conclude that in practice programme management requires further development and maturity to be directly aligned to the needs of business, and that similar to the guiding principle 'there is a poorly developed definition of programme success' programmes are not delivering their intended outcomes. Furthermore, there is an obvious conclusion that a gap in maturity exists in the literature when compared to the empirical setting.

The implications in a practical setting are programmes are not truly delivering to the needs of organisations, and that further research and maturity is required to rectify this issue. Furthermore, this aligns to the practical implications related to research conducted under the guiding principle 'there is a poorly developed definition of programme success'. From a theoretical perspective, the implications of this research are that a gap currently exists in the literature which would benefit from updating based on this research. Also, an opportunity for targeted research exists for this guiding principle to develop greater maturity for aligning programmes to business needs.

6.3.3 Answer to 'What is Being Delivered by Programmes?' Research Question

The conclusions drawn from the research conducted into this question are programmes are still not fully delivering to their original intended purposes, and are not fully aligned to business needs, but that alignment is beginning to appear. Therefore, one can conclude there are still

some question marks raised as to what programmes are delivering, but that there seems to be more focus on the organisations needs than what the literature would attest to.

6.4 How are Programmes being Delivered?

Earlier sections of this chapter have stated how the literature points out that the origin and definition of programmes are unclear, other literature places questions over how programmes are delivered? This has led to this study developing the research question 'how are programme being delivered?', and with further analysis of the literature has led to the development of four maturity guiding principles to help address this gap in theory. The four maturity guiding principles investigate the lack of established programme management techniques, standard approaches to programme management, generic models of programme management, and governance roles and responsibilities within programmes. The next four sections outline the main conclusions from these investigations.

6.4.1 Is There a Lack of Established Programme Management Techniques?

This study's review of the literature has led to the development of the maturity guiding principle 'is there a lack of established programme management techniques', it has deemed the current theoretical position of this guiding principle to be of low maturity. This interpretation of the literature stems from its directly confirming approaches for programme management are not well established or documented, that this may have emerged from programmes' need to have a mindset of dealing with ambiguity and change, and that this may drift into the establishment of its techniques.

The research carried out under this guiding principle by the study has yielded a medium level of maturity in practice. The primary conclusion from this research is that established programme management techniques are being used, however further maturity is required to bring better establishment. The other significant conclusion drawn from the research is that from a practical standpoint there is greater maturity than what is reflected in the theoretical setting.

Theoretically speaking, this research delivers a message that the current level of maturity outlined in the literature needs to be updated to reflect the empirical view and demonstrates a conflict in the level of maturity for the guiding principle. This difference in the interpretation of maturity for the guiding principle can be described as a significant research finding and justifies

an update of the current literature to reflect this, where programme management techniques are beginning to be established, but require further development.

6.4.2 Is There a Standard Approach to Programme Management?

The literature states approaches and methodologies to programme management have received little attention, but that a standard approach has started to emerge, and that these approaches differ in terms of scale. This study recognised the need to address the matter of programme management approaches through its review of the literature, which led to the development of this maturity guiding principle, and theoretically interpreted a low level of maturity.

The research aligned to this maturity guiding principle has yielded a medium level of maturity. A conclusion that can be drawn from this is that while no standard approach to programme management exists, one can interpret that it is beginning to emerge. Furthermore, it is evident that the practical setting is operating at a higher level of maturity than that reflected in the literature. This research delivers significant findings compared to the current theoretical perspective and justifies adding to the current body of research in this area. The significance in the findings lies with the fact that there is a direct conflict in maturity with that interpreted from the literature, and that the literature needs to be updated to reflect this development.

6.4.3 Is There a Generic Model of Programme Management?

The theoretical view has stated that no generic model of programme management exists, and that programmes have yet to be consistently practiced when compared to projects. It goes on to state that many models of programme typologies exist, that people's meaning of a programme differs within and between organisations, and that this has a direct influence on no homogenous notion of a programme existing. Based on these theoretical views, this particular maturity guiding principle has emerged through this study's review of the literature, and a low level of maturity is inferred from the theoretical perspective by this study, due to no generic model of programme management being evident or seen to be in emergence.

The research conducted by this study under this guiding principle demonstrates there is consistency with the literature in that no generic model exists, however there is evidence that a generic model is beginning to emerge. The analysis of the research data gathered under this guiding principle has been analysed and generated a medium level of maturity in practice. The conclusion from the research is a greater level of maturity exists in practice when compared to the theoretical setting. Further analysis carried out on the research data has led this research to develop a generic programme management lifecycle. A further conclusion that can be drawn from this piece of analysis is that there is a strong opportunity to test a generic model for managing programmes. The development of a generic model should serve the practitioner community in standardising programme management practice and should be seen as a significant achievement of this research and is a unique piece of work when compared to the existing literature.

The difference in maturity demonstrated between the literature and practice constitutes a significant finding and should be added to the current body of literature to ensure the theoretical position is aligned with the practical setting. Furthermore, a distinct research opportunity has been realised through the generation of a generic programme management lifecycle model which can be tested to bring further depth to the literature, plus further enhance and mature the programme management practice.

6.4.4 Do Programmes Have Clearly Defined Governance, Roles and Responsibilities?

The theory associated with governance, roles and responsibilities clearly states that these aspects of programmes are poorly defined and have received limited attention from researchers. Where programme governance has received attention from the literature, it has stated that governance is a key factor in programme success. With the focus from the theoretical perspective on governance, roles and responsibilities being limited, this study developed the guiding principle 'do programmes have clearly defined governance, roles and responsibilities?'. With the lack of research into this area by the academic community, this study deemed the level of maturity being low.

The research this study conducted under this guiding principle yielded a medium level of maturity based on analysis of the data collected. The results of this research can be interpreted as programme governance roles and responsibilities being somewhat defined in the practical setting. There are a number of conclusions that can be drawn from this, firstly, that there is a contrast in the maturity of this guiding principle inferred from the theoretical setting compared to that of the empirical, and that this is a significant research finding. A further conclusion that can be drawn is the maturity of this guiding principle in the empirical setting is leading that of the theoretical setting, and that there is a gap in the literature which needs to be bridged to ensure it is up to date with this element of programme management practice.

6.4.5 Answer to 'How are Programmes being Delivered?' Research Question

The study carried out under this research question shows that programmes are beginning to be managed with established techniques, but that standard approaches are still not in place. It also shows no generic model of management exists, but that one is proposed by this research, and that there is some definition of governance, roles and responsibilities, but further development is required. When one takes these conclusions and compares to the research question, it can be interpreted that programmes need to further develop techniques and approaches, that a generic model can be developed across different types of programmes, and this would benefit from further research in this area.

6.5 Is further research required in programme management?

The literature has stated directly that further research is required in the area of programme management, this coupled with the lack of research in this area of management led to the study developing this research question. The gap in research is addressed using two maturity guiding principles which look at programme manager competencies and future research requirements, the next two sections outline the main conclusions.

6.5.1 There is a Need to Understand the Leadership Competencies of Successful Programme Managers

The programme management literature has outlined how poor programme management competencies are evident as a result of poor programme management methodologies, and how important this competence is to the success of programmes meeting their goals. It also lists a number of competencies; however, no comprehensive research is evident into what are the key competencies of successful programme managers. With this background, the research study deemed it relevant and important to investigate this particular area and led to the development of the guiding principle. This study judged the level of maturity for the guiding principle to be low due to the lack of research specifically around programme manager competencies and their link to programme success.

Research yielded a medium level of maturity for this guiding principle, this can be interpreted as stating the leadership competencies of successful programme managers are understood, however further maturity is required to bring a greater understanding of these competencies and to ensure programme managers have them when executing programmes. One can conclude there is a greater understanding of the competencies of successful programme managers in practice compared to that in an academic setting. Also, it can be seen that there is a need for further research to enhance and bring further maturity to this aspect of programme management, these conclusions constitute significant research findings. The theoretical implications from this research are that the literature needs updating to reflect maturity in practice, and that further research is justified in this area.

6.5.2 Future Research in Programme Management?

The programme management literature has outlined directly and broadly a number of areas where further research is required, these include the linking of competence models to programme characteristics, the definition of programme success, and the fact that this is an emerging area of management. This research coupled the literature's assessment for the need of further research with the level of maturity across the other guiding principles being mainly of low maturity, led to developing this final maturity guiding principle. This study determined the level of maturity to be low due to the lack of research generally in the programme management discipline and based on the interpretation of the number of low maturity scores across the other guiding principles.

The research carried out under this guiding principle yielded a medium level of maturity, justifying further research generally into the practice of programme management. The maturity of this guiding principle in the practical setting contrasts that of the theoretical setting, and one can conclude the literature lags behind the empirical view of maturity. Also, one can further conclude that there is a justification for future research in the area of programme management due to the current level of maturity of the research conducted to date. This constitutes a significant research finding and warrants the current body of literature being updated to reflect this research outcome, and to focus more efforts into programme management practice research.

6.5.3 Answer to 'Is Further Research Required in Programme Management?' Research Question

This study clearly shows that further research is required in the practice of programme management, however not to the level the literature states. The area of programme management competence was highlighted as an area of research need, this study still concurs with that assessment, but not to the same level indicated by the literature. When compared with the maturity scores across the guiding principles, there is a strong justification for the level of research to continue and increase to bring greater understanding and maturity to this area of management practice.

6.6 The maturity of the practice of programme management

Finally, the programme management research literature has focused on a number of areas, however none directly on an overarching programme management maturity assessment, this was seen as a significant gap, and important to the development of programme management research and practice. The study was constructed in such a way that the combined analysis of the research into the various guiding principles should yield an overall programme management maturity score. The theoretical perspective, when viewed across the twelve maturity guiding principles, could be viewed as demonstrating a low level of maturity for the practice of programme management, based on eleven of the guiding principles having low maturity, and only one having medium maturity. The research analysis across the twelve business sectors has determined the level of maturity for programme management in the practical setting is medium. The primary conclusions from this research are that the practice of programme management is at a medium level of maturity, and that the literature currently has no overarching assessment of maturity. This represents a significant research finding in a number of ways, firstly that a structure for assessing programme management maturity has been developed which has not been done in the past, that the current level of maturity in practice is medium, and that a structure for future development and research now exists. A further conclusion is that the theoretical perspective lags that of the empirical setting as a result of no maturity assessment ever being researched or developed, and that the current level of maturity in practice is demonstrated, through this research criteria, as being medium. The outcomes from this research justifies the amendment of the literature to reflect this outcome, and future research in this area based on the model in this study to improve the maturity of programme management practice. These points should be seen as the main achievements of this research and are unique to this branch of research.

6.7 Limitations and Recommendations for future research

As with any research, it must be acknowledged that this study has a number of limitations. The first of these centres around the lack of previous research in the area of programme management, and the wide opportunity for further research. The limitation this may create is determining what are the most important and relevant areas in which to pursue a study in this management area. While this is down to the interpretation of the researcher, others may have quite justified views on alternative avenues for research in programme management. The limitation created by lack of research in this topic has also created another limitation around the model of analysis developed for this study. Due to the lack of data and research pertaining to programme management maturity, this has led to the researcher having to develop a specific qualitative analysis tool to interrogate the data mined from the interview process. While it has been justified why this model of analysis has been used for this study, it could none the less be interpreted as a limitation of the study, where the use of existing maturity assessment models may carry more weight and reputation. A third limitation that must be justified is access to interview candidates, where this study had targeted a population of thirty-four candidates, the final interview population was fifteen as a result of people's availability or willingness to participate. This study had ambitions of securing a large percentage of the population for interviews, but the constraints of access and time hindered this. Finally, the aspect of time is a limitation that must be acknowledged, as this provides a realistic constraint under which the research must be executed. This study commenced in September 2012, and at the time of writing this conclusion, almost five years had elapsed, therefore further activities would be difficult to justify in this study from a personal and professional time perspective.

Several recommendations for future research can be made as a result of this study. Firstly, the author believes this study has narrowed the gap in programme management research, and that it should be possible to pursue future research in a quantitative rather than qualitative backdrop as a result of the research gap narrowing. Opportunities for future quantitative assessments should be possible by using any of the twelve maturity guiding principles as a starting point for future studies. One key development of this research is the emergence of a generic programme definition, this is another opportunity for future quantitative research which would benefit both the practitioner and theoretical perspectives. Another significant output has been the development of a generic programme lifecycle, the intent of which is to be used across different strategic organisational initiatives. A further avenue for research has been raised for the use of

learning cycles to provide a feedback loop in the programme lifecycle which it would be hoped ensures the correct programme success and benefits realisation. Another recommendation for future research lies with the continuation of the maturity assessment designed for this study, where further enhancements in programme management maturity can be made with the application of this maturity assessment tool. Finally, the literature has clearly stated the need for more research in this management area, where the shortage of literature and research supports this view. It also supports this author's view that there are many opportunities for future research in this field to enhance and bring further maturity to programme management.

6.8 Implications and Usefulness of the Research

The introduction section stated an overarching maturity assessment would provide a beneficial contribution to the current body of work. It also stated a 'maturity assessment would serve to set a marker of where the discipline of programme management currently lies and may focus future research in a direction that enhances both practice and research'. The maturity assessment outlined is built from what this study sees as a number of components of programme management. The implications of this research will hopefully be that further research can be ignited, and the components of programme management outlined in this study can be used as individual research strands through quantitative studies to further enhance the body of work and maturity in this area.

The usefulness of this study can be interpreted in both the academic and practical settings. From an academic standpoint, the research could be deemed useful in understanding where the literature is positioned against the practical setting. This can be used as a yardstick to direct further research to the benefit of both academia and practice. In the practical setting the broad research questions outlined section 1.5.1 have been addressed through this study. The hope is that the 'answering' of these questions will aid practitioners in giving a better understanding of programme management by using a standard definition, generic model and defined roles and responsibilities. It is also hoped that this research can use in the training of existing and potential programme managers.

6.9 Summary

The conclusion chapter has given an overview of how each of the research questions identified in the introduction chapter have been investigated by way of the main conclusions emanating from the research. The overarching conclusion is the theoretical perspective lags behind that of the empirical in terms of programme management maturity under the criteria of this study. Each of the twelve programme management maturity guiding principles demonstrates a higher level of maturity individually than that evident in the literature. No overarching maturity assessment of programme management has been carried out to this point in the literature, this research has demonstrated a medium level of maturity exists based on the guiding principles used for the research. The research has analysed the data from this study to generate a generic programme management lifecycle, and a generic definition for a programme, both of which are considered new significant contributions. The chapter has outlined the limitations of this research, and recommendations for future research, plus the implications and usefulness of this study. The development of a maturity assessment model, a maturity score for programme management practice, the generation of a programme definition and a generic programme lifecycle based on the research data are the main achievements of this research and are unique compared to the existing body of work.

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8 Appendix

Appendix A

Interview Questions:

1. Ice breaker question – Draw an outline of your organisation and explain where programme management sits
2. Can you describe what methodologies are used to execute projects in your organisation?
3. Do you consider there to be a clear link between project interdependencies, and if so, what are they?
4. Can you describe if and how projects are used to implement strategy and change in your organisation?
5. Different definitions of programmes exist, can you outline how your organisation defines a programme?
6. Do you believe there is a link from projects to programmes, and can you please explain how?
7. Programmes are sometimes used as a vehicle/enabler to implement strategic initiatives. What is your opinion?
8. What is the range of strategic initiatives which programmes are used to implement?
9. How would the programme process be seen in your organisation related to their duration and linking to strategic needs?
10. What does your organisation see as the difference between projects & programmes?
11. It is stated there is a link between project outputs and programme outcomes. Can you outline what these links are for projects and programmes in your organisation
12. Can you outline how your organisation manages programmes, does this include as a portfolio, or toward a common goal?
13. Can you describe the programme management methodology and governance structures your organisation uses?
14. Can you describe how the programme management methodology in your organisation matured over time and has it responded well to change?
15. Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?
16. How does your organisation define programme success and critical success factors, how are they measured?
17. How is the definition of programme success and critical success factors are communicated within and outside the programme team in your organisation?
18. Can you explain how benefits realisation linked to programme success in your organisation?
19. What would be seen as the key programme manager competencies?
20. How are these competencies used to select and develop programme managers?
21. Can you provide an example of what training is used to develop programme managers in your organisation?

Appendix B

Dear XXXX,

I am currently pursuing a part-time PhD study at Dublin City University Business School (under the supervision of Dr. Paul Davis) in which I am researching strategic programme management maturity in Multinational corporations.

I recently connected with you on LinkedIn. The purpose was to enquire if you would available to take part in a 45 minute interview on this subject. The interview will entail a discussion on project and programme management, their structures in your organisation, their link to strategy and success criteria. All information recorded in the interview will be kept strictly confidential, an attached DCU ethics documentation should provide reassurance of this.

If the answer is yes to this request, please respond to this e-mail and I accommodate a face to face meeting at a time, date and location of your convenience.

On completion of all interviews in this research, I will send a summary of key findings to all participants. Hopefully you should find this of use in your day to day management of programmes.

Should you require further details on this research, please feel free to contact me via e-mail, or a phone call can be arranged to discuss further.

Kind Regards

Noel Hassett.

Appendix C

Ollscoil Chathair Bhaile Átha Cliath
Dublin City University



27th March 2015

Dr Paul Davis
Dublin Business School

REC Reference: DCUREC/2015/044

Proposal Title: Strategic Programme Management – An Institutional Examination of the Phenomenon

Applicant(s): Dr Paul Davis; Mr Noel Hassett;

Dear Paul,

This research proposal qualifies under our Notification Procedure, as a low risk social research project. Therefore, the DCU Research Ethics Committee approves this project.

Materials used to recruit participants should state that ethical approval for this project has been obtained from the Dublin City University Research Ethics Committee.

Should substantial modifications to the research protocol be required at a later stage, a further submission should be made to the REC.

Yours sincerely,

A handwritten signature in black ink that reads 'Dónal O'Mathúna'.

Dr Dónal O'Mathúna
Chairperson
DCU Research Ethics Committee



Taighde & Nuálaiocht Tacailocht
Ollscoil Chathair Bhaile Átha Cliath,
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Appendix D

Item	Sector	Title/Position	Interview Letter Issued	Interview Agreed	Interview Date	Notes Transcribed	Comments
1	Pharmaceuticals	Director Supply Chain Strategy			TBC Sept		No Response
2	Energy	Programme Manager			01 July '15	Mid Sept ??	No Date Agreed
3	Banking	Programme Manager					No Response
4	Pharmaceuticals	Programme Manager			15 May '15	25th Jul '15	Yes Interview completed and transcribed
5	Pharmaceuticals	Programme Director					No Response
6	Consultancy	Programme Management Consultant					No Response
7	Telecommunications	Transformation Programme Manager					No Response
8	Pharmaceuticals	Chief Executive Office			17-Aug-15	Late Aug '15	28 Aug '15 Yes
9	Banking	Senior Programme Manager			22-Jun-15		
10	IT	Senior Programme Manager			22-Jun-15	05 July '15	T.B.C
11	Telecommunications	Senior Programme Manager			27 June '15	27 June '15	30 July '15 Yes
12	Hospital / Healthcare	Assistant Executive Director			21 June '15	26 June '15	11th Aug 09:00 Yes
13	Banking/Finance	Programme Manager			27 June '15	27 June '15	TBC Start Aug?
14	Semi - Conductor	Global Supply Director			21 June '15	21 June '15	29 June '15, 10:00 Yes
15	Information Technology	Programme Manager (IT)			27 June '15	28 June '15	07 July, 10:00 Yes
16	Electronics	Programme					
17	Engineering Services	IPO Director			27 June '15		
18	Public Service	Finance Director			27 August '15	02 Sept 15	
19	Consultancy	Programme Manager Warehouse/Logistics					No Date Agreed
20	Wealth Management	Senior Programme Manager			22-Jun-15	01 Sept '15	28-Sep-15 Yes Interview completed 28 Sept 15
21	Consultancy	Director & COO			21 June '15	21 June '15	30 June '15, 10:00 Yes Paul Davis Contact - Interview completed & transcribed
22	Banking	Head of Strategic Change			13 Jul '15	14 Jul '15	08-Oct-15 Yes Paul Davis Contact
23	Banking	Chief Procurement Officer					No Response
24	Public Sector	Senior Programme Manager			27 June '15	27 June '15	17th Aug '15, 14:00 Yes Paul Davis Contact - Interview completed & transcribed
25	Pharmaceuticals	Vice President of External Manufacturing			26 June '15	Mid Aug??	Refused Interview 02 July 15
26	Consultancy						No Date Agreed
27	Consultancy						Partifinder respondent interviewed
28	Consultancy	Senior Programme Manager			21 June '15	05-Aug-15	12th Aug, 10AM Yes Paul Davis Contact - Interview completed & transcribed
29	Insurance	Senior Programme Manager			07 Sept '15	16 Sept '15	Yes Interview conducted and completed
30	Pharmaceuticals	Director Supplier Relationship Management	N/A		29 May '15		Interview agreed, no further response re. date for interview
31	Telecommunications	Head of Transformation					Recommended by another interviewee. Contacted, no response
32	Pharmaceuticals	Vice President Operations			31 Aug '15	31 Aug '15	Yes Interview completed 31 Aug '15
33	Information Technology	Non executive Director			07 Sept '15	07 Sept '15	15-Sep-15 Yes Interview Completed 15 Sept 15
34	Pharmaceuticals	Programme Manager			21 August '15	01 Sept '15	09 Sept '15 Yes Interview Completed 09 Sept 15

Appendix E

<u>Noel Hassett (DCU Student No 12212316) PhD Interview Notes</u>		
Interviewee:		
Date & Time:		
No.	Question	Category
1	Draw an outline of your organisation & describe where programme management sits?	Project Mgt
2	Can you describe what methodologies are used to execute projects in your organisation?	
3	Do you consider there to be a clear link between project interdependancies, and if so, what are they?	
4	Can you describe if and how projects are used to implement strategy and change in your organisation?	
5	Different definitions of programmes exist, can you outline how your organisation defines a programme?	
6	Do you believe there is a link from projects to programmes, and can you please explain how?	
7	Programmes are sometimes used as an vehicle/enabler to implement strategic initiatives. What is your opinion?	
8	What is the range of strategic initiatives which programmes are used to implement?	
9	How would the programme process be seen in your organisation related to their duration and linking to strategic needs?	
10	What does your organisation see as the difference between projects & programmes?	
11	It is stated there is a link between project outputs and programme outcomes. Can you outline what these links are for projects and programmes in your organisation?	
12	Can you outline how your organisation manages programmes, does this include as a portfolio, or toward a common goal?	
13	Can you outline the lifecycle stages on your organisation's programmes?	
14	Can you describe the programme management methodology and governance structures your organisation uses?	
15	Can you describe how the programme management methodology in your organisation matured over time and has it responded well to change?	
16	Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?	
17	How does your organisation define programme success and critical success factors, how are they measured?	Success Criteria
18	How is the definition of programme success and critical success factors are communicated within and outside the programme team in your organisation?	
19	Can you explain how benefits realisation linked to programme success in your organisation?	
20	What would be seen as the key programme manager competencies?	
21	Are these competencies used to select & develop programme managers?	Programme Managers
22	Can you provide an example of what training is used to develop programme managers in your organisation?	

Appendix F

Noel Hassett (DCU Student No 12212316) PhD Interview Notes		
Interviewee:		
Date & Time:	12 Aug 2015, 10:00	
No.	Question	Time
1	Draw an outline of your organisation & describe where programme management sits?	
	We deal with two types of programmes, one is the business change type which has elements of technology and people process, the second is specifically IT change programmes. That is the typical scope where we would be typically be engaged in.	00:00 - 00:43
	What we typically find on the business type of programme is at a CEO and board level a strategy is developed and handed to the COO in our experience, then the COO tends to allocate it to a head of function regardless if it is cross functional or not, essentially there would be one key function/delegate. Within that function, the head would setup the programme team, and they would look across the other functions. So the programme would be reporting to a head of function/steering committee, where the head of function is the sponsor and he/she reports up to the COO. This is all done through a matrix organisation, so for example if a head of HR was charged with sponsoring a programme, he would call in the various disciplinary requirements from other departments, but it would be seen as a HR programme.	00:44 - 02:06
	When a programme is IT led change, it tends to go to through the CIO, which there is often a bit of a gap from the rest of the business, and the CIO tends to have more structured programme management office, and within the programme management office he would put his various programmes. Again, these IT programmes would look across the organisation in a matrix fashion.	02:07 - 02:44
2	The distance from IT to the rest of the business can create some difficulties in bringing a programme to BAU state, from our point of view our recommendation is to always have a business led programme, but often and depending on the weight of technology, if it's a very heavily weighted technology driven change, the CIO tends to hand this down, and then the issue of benefits realisation becomes an issue, because the CIO delivers the technology and the benefits are someone else's problem	02:45 - 03:24
3	Can you describe what methodologies are used to execute projects in your organisation?	
	We are seeing that more and more. I would say it is not 100% consistent, but within the last 5 years we are seeing that most companies we work with have a methodology in place. This is either based on a standard or a variation of a standard. When we look at methodologies, it's normally all gates, they tend to put in a gating type of methodology similar to what is used in PRINCE2. Very few people are using one methodology i.e. PRINCE2 or CPM, but it is a variation of a number of methodologies based around some type of gating and phasing type of approach. So, of the clients I have worked with in the last 5 years, certainly if they all didn't have a methodology at the start, they certainly have it now.	03:41 - 04:37
4	Do you consider there to be a clear link between project interdependancies, and if so, what are they?	
	Not always. It can depend on the maturity of the company, but also on the size of the programme. Individual projects can stand alone, however if there are a number of projects in a workstream in an overall programme, we are called in a lot where those dependancies break down sometimes due to lack of communication. A lot of programmes I have seen tend to manage their programmes like their projects and miss the point about benefits and dependancies that the programme would bring. What is meant by managing projects like programmes is that they have a 'fixed scope' mentality, and trying to carve out individual work streams that operate independently because it fits their methodologies and the actual overarching governance of the programme where project managers need to watch what is happening across the programme, that is a struggle for them [programme managers] and is not as mature in companies, definitely not.	04:38 - 06:07
5	Can you describe if and how projects are used to implement strategy and change in your organisation?	
	My companies definition of a project is that it is a point of delivery within a programme, whereas a programme is a longer term series of transitions of the business, whereas as a project would be a one transition point from A to B, so that's your project. So, yes, companies do use projects to try to implement strategy, but we would be saying that is a short-sighted view.	06:08 - 06:38
5	Different definitions of programmes exist, can you outline how your organisation defines a programme?	
	Speaking for our clients, typically the programmes are defined as multiple workstreams being brought together as a programme. Or the other definition was when there is a CEO/COO level strategic initiative, that tends to be called a programme. In terms of programme management definition, ours would be Goal-Oriented that tends to get the programme tag, that is typically a CEO/COO level strategic initiative that we are going to go after, that tends to get named as a programme.	06:39 - 08:29

Appendix G

Programme Management Maturity Guiding Principle Link to Interview Questions	
Maturity Factor	Interview Questions
Programme Management is Derived from Project Management	<p>Research Q2: Can you describe what methodologies are used to execute projects in your organisation?</p> <p>they?</p> <p>organisation?</p>
The Conception of Programme Management is not Universally Agreed	<p>Research Q6: Do you believe there is a link from projects to programmes, and can you please explain how?</p>
Is there a lack of distinction between projects and programmes?	<p>programme?</p> <p>Research Q9: How would the programme process be seen in your organisation related to their duration and linking to strategic needs?</p> <p>Research Q10: What does your organisation see as the difference between projects & programmes?</p> <p>Research Q11: It is stated there is a link between project outputs and programme outcomes. Can you outline what these links are for projects and programmes in your organisation?</p>
Is there a lack of established programme management techniques?	<p>Research Q14: Can you describe the programme management methodology and governance structures your organisation uses?</p> <p>Research Q15: Can you describe how the programme management methodology in your organisation matured over time and has it responded well to change?</p> <p>Research Q16: Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?</p>
'Is there a generic model of programme management?	<p>Research Q12: Can you outline how your organisation manages programmes, does this include as a portfolio, or toward a common goal?</p> <p>Research Q13: Please outline the lifecycle stages on your organisation's programmes?</p> <p>Research Q14: Can you describe the programme management methodology and governance structures your organisation uses?</p>
There is no agreed definition of a programme	<p>programme?</p> <p>Research Q10: What does your organisation see as the difference between projects & programmes?</p> <p>Research Q11: It is stated there is a link between project outputs and programme outcomes. Can you outline what these links are for projects and programmes in your organisation?</p> <p>Research Q12: Can you outline how your organisation manages programmes, does this include as a portfolio, or toward a common goal?</p> <p>Research Q13: Please outline the lifecycle stages on your organisation's programmes?</p>
Are programmes aligned to business needs?	<p>Research Q7: Programmes are sometimes used as an vehicle/enabler to implement strategic initiatives. What is your opinion?</p> <p>Research Q8: What is the range of strategic initiatives which programmes are used to implement?</p> <p>Research Q17: How does your organisation define programme success and critical success factors, how are they measured?</p> <p>Research Q18: How is the definition of programme success and critical success factors are communicated within and outside the programme team in your organisation?</p> <p>Research Q19: Can you explain how benefits realisation linked to programme success in your organisation?</p> <p>Research Q20: What would be seen as the key programme manager competencies?</p> <p>Research Q21: How are these competencies used to select and develop programme managers?</p> <p>Research Q22: Can you provide an example of what training is used to develop programme managers in your organisation?</p>
Is there a standard approach to programme management?	<p>Research Q12: Can you outline how your organisation manages programmes, does this include as a portfolio, or toward a common goal?</p> <p>Research Q13: Please outline the lifecycle stages on your organisation's programmes?</p> <p>Research Q14: Can you describe the programme management methodology and governance structures your organisation uses?</p> <p>Research Q15: Can you describe how the programme management methodology in your organisation matured over time and has it responded well to change?</p> <p>Research Q16: Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?</p>
'Do programmes have clearly defined governance, roles and responsibilities?	<p>Research Q14: Can you describe the programme management methodology and governance structures your organisation uses?</p> <p>Research Q15: Can you describe how the programme management methodology in your organisation matured over time and has it responded well to change?</p> <p>Research Q16: Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?</p> <p>Research Q18: How is the definition of programme success and critical success factors are communicated within and outside the programme team in your organisation?</p>
Is future research required in the area of programme management?	<p>Research Q15: Can you describe how the programme management methodology in your organisation matured over time and has it responded well to change?</p> <p>Research Q17: How does your organisation define programme success and critical success factors, how are they measured?</p>
There is a need to understand the leadership competencies of successful programme managers	<p>Research Q20: What would be seen as the key programme manager competencies?</p> <p>Research Q21: How are these competencies used to select and develop programme managers?</p> <p>Research Q22: Can you provide an example of what training is used to develop programme managers in your organisation?</p>
There is a poorly developed definition of programme success	<p>Research Q17: How does your organisation define programme success and critical success factors, how are they measured?</p> <p>Research Q19: Can you explain how benefits realisation linked to programme success in your organisation?</p>

Appendix H

<u>Interview Timeline & Questions</u>	
0 Mins	Introduction & run through Ethics and confidentiality docs, start recording.
5 Mins	Draw an outline of your organisation & describe where programme management sits.
10 Mins	Can you describe what methodologies are used to execute projects in your organisation? Do you consider there to be a clear link between project interdependencies, and if so, what are they? Do you believe there is a link from projects to programmes, and can you please explain how? Can you describe if and how projects are used to implement strategy and change in your organisation?
15 Mins	Programmes are sometimes used as an vehicle/enabler to implement strategic initiatives. What is your opinion? What is the range of strategic initiatives which programmes are used to implement?
20 Mins	Different definitions of programmes exist, can you outline how your organisation defines a programme? How would the programme process be seen in your organisation related to their duration and linking to strategic needs? What does your organisation see as the difference between projects & programmes? It is stated there is a link between project outputs and programme outcomes. Can you outline what these links are for projects and programmes in your organisation?
25 Mins	Can you outline how your organisation manages programmes, does this include as a portfolio, or toward a common goal?
30 Mins	Please outline the lifecycle stages on your organisation's programmes? Can you describe the programme management methodology and governance structures your organisation uses? Can you describe how the programme management methodology in your organisation matured over time and has it responded well to change? Can you describe how roles and responsibilities are defined and communicated within programmes in your organisation?
35 Mins	How does your organisation define programme success and critical success factors, how are they measured? How is the definition of programme success and critical success factors communicated within and outside the programme team in your organisation? Can you explain how benefits realisation linked to programme success in your organisation?
40 Mins	What would be seen as the key programme manager competencies? How are these competencies used to select and develop programme managers? Can you provide an example of what training is used to develop programme managers in your organisation?
45 Mins	Close Interview, discuss communication of data to interviewee

Appendix I



Dublin City University
RESEARCH ETHICS COMMITTEE

NOTIFICATION FORM FOR LOW-RISK PROJECTS

Application No. (office use only) DCUREC/2015/_____

Section A: Applicant Details

PROJECT TITLE:	Strategic Programme Management – An Institutional Examination of the Phenomenon
APPLICANT NAME:	Noel Hassett (Student No. 12212316)
SCHOOL/UNIT:	School of Business
APPLICANT EMAIL:	noel.hassett4@mail.dcu.ie
<i>If a student applicant, please provide the following additional information:</i>	
Programme of Study:	DCU PhD Programme (Part Time)
Supervisor Name:	Paul Davis
Supervisor Email:	Paul.Davis@dcu.ie

Section B: Questions

1. Notification Review is reserved for low-risk social studies that fall under the following classifications. Please indicate your project type below:

Please mark as appropriate:	
<input type="checkbox"/> Anonymous Survey (the topic will not elicit significant difficulties for participants)	
<input type="checkbox"/> Observation (without audio or visual recording) of a public setting	
<input checked="" type="checkbox"/> Questioning participants regarding their opinions on products or services	
<input type="checkbox"/> Questioning students about standard educational practices	
<input type="checkbox"/> Study will monitor the impact of participants' daily activities	
<input checked="" type="checkbox"/> Questioning professionals in their professional capacity regarding their professional activities	
<input type="checkbox"/> Analysis of existing anonymised data which has been provided to the researcher by a third party	
<input type="checkbox"/> Collection of biological samples which are anonymised and do not require invasive techniques (e.g. hair, nails).	
<input type="checkbox"/> Other Please explain:	

2. Please provide a justification for why your study is considered to be low-risk?

This study is considered low risk as all participants and their respective comments and information gathered during the course of the study will be kept confidential, with no personal details published. Part of the aim of this study is to keep any information of a strategically competitive or sensitive nature confidential, any reasonable requests made by participants to ensure this will be actioned.

3. Please describe how your participants will be recruited?

Participants will be recruited using my professional and academic network, and via requests made through social media (i.e. LinkedIn).

4. Informing your participants – Plain Language Statement

Plain Language Statement (PLS) should be used in all cases. This is written communication in plain language that you will be providing to participants, outlining the nature of their involvement in the project and meeting their expectations. The PLS should specifically describe who will be involved in participants, the risks and consequences for them, and other information relevant to their involvement. Please note that the language used must reflect the participant age group and corresponding comprehension level – if your participants have different comprehension levels (e.g. adult clients and children), then separate forms should be prepared for each group. The PLS can be appended in an email to which an online survey is attached, or incorporated in an individual or複数 of other sources being used. A copy of the PLS should be attached to this application. See for examples completed on the website <http://www.dcu.ie/research/reviews/applications>.

Last updated January 2015

Please confirm whether the following issues have been addressed in your plain language statement for participants:

	YES or NO
Introductory Statement (PI and researcher names, school, title of the research)	Yes
What is this research about?	Yes
Why is this research being conducted?	Yes
What will happen if the person decides to participate in the research study?	Yes
How will their privacy be protected?	Yes
How will the data be used and subsequently disposed of?	Yes
What are the legal limitations to data confidentiality?	N/A
What are the benefits of taking part in the research study (if any)?	Yes
What are the risks of taking part in the research study? No risks	Yes
Confirmation that participants can change their mind at any stage and withdraw from the study	Yes
How will participants find out what happens with the project?	Yes
Contact details for further information (including REC contact details)	Yes

If any of these issues are marked NO, please justify their exclusion:

5. Capturing consent – Informed Consent Form

In most cases where interviews or focus groups are taking place, an Informed Consent Form is required. This is an important document requiring participants to indicate their consent to participate in the study, and give their signature. If your participants are minors (under 16), it is best practice to provide them with an assent form, while their parents/guardians will be given the Informed Consent Form. In cases where an anonymous questionnaire is being used, it is enough to include a tick box in the questionnaire (underneath the information section for participant), where the participant can indicate their consent. See link to sample templates on the website: http://www4.dcu.ie/research/research_ethics/forms.shtml. A copy of the Informed Consent Form should be attached to this application.

Note – IF AN INFORMED CONSENT FORM IS NOT BEING USED, THE REASON FOR THIS MUST BE JUSTIFIED HERE:

Important Notes:

- Please ensure you attach any additional relevant documentation to your application: E.g. copy of Survey/Questionnaire, copy of Interview/Focus Group schedule, copy of permission/approval from external sources (i.e. approval to access individuals in an organisation, school, community group)
- The application should consist of one electronic file only. The completed application must incorporate the plain language statement, informed consent form and all supplementary documentation
- All sections of the application form must be answered. The completed application must be proofread and spellchecked before submission to REC
- Your application must be e-mailed to the DCU Research Ethics Committee at rec@dcu.ie. Student applicants must cc their supervisor on that e-mail – this applies to all student applicants (masters and postgraduate). The form should be approved and signed by the supervisor in advance of submission to REC.

Applications which do not adhere to these requirements will not be accepted for review and will be returned directly to the applicant. The administrator to the Research Ethics Committee will assess, on receiving such notification, whether the information provided is adequate.

Please note: Project supervisors have the primary responsibility to ensure that students do not take on research that could expose them and the participants to significant risk, such as might arise, for example, in interviewing members of vulnerable groups such as young children. In general, please refer to the REC Guidelines for further guidance on what research procedures or circumstances might make a higher level of ethical approval necessary.
See https://www4.dcu.ie/research-support/research_ethics/guidelines.shtml

DECLARATION BY PRINCIPAL INVESTIGATOR(S)

Last updated January 2015

In the case of student applicants the Principal Investigator is their supervisor.

The information contained herein is, to the best of my knowledge and belief, accurate. I have read the University's current research ethics guidelines, and accept responsibility for the conduct of the procedures set out in the attached application in accordance with the form guidelines, the REC guidelines (https://www4.dcu.ie/researchsupport/research_ethics/guidelines.shtml), the University's policy on Conflict of Interest, Code of Good Research Practice and any other condition laid down by the Dublin City University Research Ethics Committee. I have attempted to identify all risks related to the research that may arise in conducting this research and acknowledge my obligations and the rights of the participants.

If there exists any affiliation or financial interest for researcher(s) in this research or its outcomes or any other circumstances which might represent a perceived, potential or actual conflict of interest this should be declared in accordance with Dublin City University policy on Conflicts of Interest.

I and my co-investigators or supporting staff have the appropriate qualifications, experience and facilities to conduct the research set out in the attached application and to deal with any emergencies and contingencies related to the research that may arise.

Electronic Signature(s):

Principal investigator(s):



Print Name(s) here:

NOEL HASLETT

Date: 09 Mar 2015

Last updated January 2015

Appendix J

Dublin City University Mail - DCUREC2015_044 | Strategic Programme Management... Page 1 of 2



Noel Hassett <noel.hassett4@mail.dcu.ie>

DCUREC2015_044 | Strategic Programme Management – An Institutional Examination of the Phenomenon

1 message

Rec Dcu <rec@dcu.ie>
To: Noel Hassett <noel.hassett4@mail.dcu.ie>
Cc: paul davis <paul.davis.dcu@gmail.com>

2 June 2015 at 16:42

Dear Noel,

Thank you for your telephone call.

Further to your submission to DCU Ethics Committee, I can confirm that your project: **DCUREC2015_044 | Strategic Programme Management – An Institutional Examination of the Phenomenon** has been approved by REC.

Please find attached below the formal letter of approval for your records.

We wish you every success with your research.

As discussed, this approval was granted on 27th March 2015.

Kind regards

Marguerite

On 9 March 2015 at 17:05, Noel Hassett <noel.hassett4@mail.dcu.ie> wrote:

>
> Dear Sir/Madam,
> I have attached the following forms as the ethics review application/submittal for my
PhD studies. Please find attached the following forms:
> 1) Ethics Approval form
> 2) Ethics Approval form signatory page signed by principle investigator (Noel Hassett)
> 3) Informed Consent Form
> 4) Plain Language Statement
> 5) Interview Questionnaire
>
> Please feel free to revert with any questions or queries you may have on this matter.
>
> Regards & Thanks,
>
> Noel.

Kind regards
REC

Research Ethics Committee
Dublin City University
Tel: 01 700 7816

Appendix K

DUBLIN CITY UNIVERSITY

Sample Template – Plain Language Statement (approx. 400 words)

A Plain Language Statement should use language that reflects the participant age group and corresponding comprehension level. It should generally contain the following information. The headings are there for guidance and do not need to be included in your form.

I. Introduction to the Research Study

The title of this study is Strategic Programme Management – An Institutional Examination of the Phenomenon. This research is being conducted as part of the studies of Noel Hassett's PhD (part time) under the doctoral programme at the Dublin City University Business School and under the direct supervision of Dr. Paul Davis.

This study is being carried out as a result of a review of the programme management and institutional Theory literature. This review has shown a small level of research into programme management and has highlighted gaps in the literature and the practice of programme management. The review has also shown that aspects and traits of institutional theory can be used to possibly close some of the gaps identified in the programme management literature, but also hold the possibility of bringing greater maturity to the practice of programme management.

The principle investigator will be Noel Hassett, who will be supported by his supervisors Dr. Paul Davis (Dublin City University) and Dr. Steve Martin (Coventry University). The principle investigator can be contacted via e-mail at noel.hassett4@mail.dcu.ie

II. Details of what involvement in the Research Study will require

The involvement in this study will require candidates to take part in semi-structured, voice-recorded interviews which will take one hour to complete. The interviews will be conducted via a set list of interview questions, however further clarification questions may be raised during the interview. All questions raised and asked during the interview will be strictly associated with this field of study. Follow-up clarifications and meetings may be requested and conducted at the discretion of the interviewee.

III. Potential risks to participants from involvement in the Research Study (if greater than that encountered in everyday life)

There are no risks to participants taking part in this study.

IV. Benefits (direct or indirect) to participants from involvement in the Research Study

It is hoped the learning's from this research study will bring a greater understanding and maturity to the field of strategic programme management. These key learnings can be openly shared with study participants at their request via e-mail or follow-up face to face meetings. A copy of the final results chapter will be made available to all participants.

V. Advice as to arrangements to be made to protect confidentiality of data, including that confidentiality of information provided is subject to legal limitations

N/A

VI. Advice as to whether or not data is to be destroyed after a minimum period

Data will only be used and made available as part of this PhD study.

VII. Statement that involvement in the Research Study is voluntary

Study participants involvement in this study is voluntary and at their sole discretion. Participants may withdraw from this research study at any point and may request the withdrawal of information and data they have provided during this study.

VIII. Any other relevant information

For example:

- All information and data gathered during this study will be used for academic purposes, and will not be passed on to other bodies or commercial organizations for commercial purposes.
- The information and data gathered during this study is to be used purely for the research being conducted by Noel Hassett and his research into strategic programme management.

A Plain Language Statement should end with the following statement:

If participants have concerns about this study and wish to contact an independent person, please contact:

The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9. Tel 01-7008000