



# **Project Management Skills for Delivering Innovation Strategy**

**مهارات إدارة المشاريع من أجل تقديم استراتيجيات الابتكار**

**by**

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**A dissertation submitted in fulfilment  
of the requirements for the degree of  
MSc PROJECT MANAGEMENT**

**at**

**The British University in Dubai**

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September 2017**

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## **Abstract**

Due to the lack of organization's success within some government sectors in Dubai, the project management skills in delivering innovation strategy have received a heated debate of later since business strategies have become paramount towards keeping pace with competitors. In this study three areas of concern are analysed and investigated in determining the importance of professional development towards implementation of innovation strategy. The three areas include; project management skills, professional development and innovation strategy. Further the paper explores the managerial problems and challenges that face government organization that could form a stumbling block towards delivering innovation strategies. The study further aimed at determining the relationship between project management and innovation strategy, investigating the impacts of implementation of strategy innovation on the success of the government organizations, examining and analysing the relationship between innovation and companies' success, analysing the project management skills needed in delivering innovation strategy, investigating the factors that contributes to the improvement of the project management skills and lastly investigating the framework that could be used in ensuring successful alignment of project management with innovation strategy. The study findings are based on quantitative approach in regard to project management skills in delivering innovation strategy with the government sector in Dubai. The study revealed that, most organizations that have adopted innovation strategy and other business strategies have become more efficient and consequently have developed competition advantages, success of most government organizations depend on the following factors; careful timing of events, setting priorities and balancing of priorities, use of charismatic leadership aimed at handling conflicts and pressures and concentrating on the objectives and goals of the project just to mention a few.

## نبذة عن المشروع

ونظرا لتدني النجاح في بعض القطاعات الحكومية في دبي، فإن مهارات إدارة المشاريع في تقديم استراتيجيات الابتكار لقيت نقاشا ساخنة منذ أن أصبحت استراتيجيات الأعمال ذات أهمية قصوى نحو مواكبة المنافسين. في هذه الدراسة يتم تحليل ثلاثة مجالات من مجالات الاهتمام والتحقيق فيها لتحديد أهمية التطوير المهني نحو تنفيذ استراتيجيات الابتكار. وتشمل المجالات الثلاثة؛ مهارات إدارة المشاريع، التطوير المهني واستراتيجية الابتكار. وعلاوة على ذلك، تستكشف الورقة المشاكل والتحديات الإدارية التي تواجه المنظمة الحكومية و التي يمكن أن تشكل حجرة عثرة نحو تقديم استراتيجيات الابتكار. كما تهدف الدراسة إلى تحديد العلاقة بين إدارة المشروع واستراتيجية الابتكار، وسيتم التحقيق في قياس أثر تنفيذ الابتكار الاستراتيجي على نجاح المؤسسات الحكومية، ودراسة وتحليل العلاقة بين الابتكار ونجاح الشركات، وتحليل مهارات إدارة المشاريع اللازمة في تقديم استراتيجيات الابتكار، والتحقيق في العوامل التي تسهم في تحسين مهارات إدارة المشروع، وأخيرا التحقيق في الإطار الذي يمكن استخدامه لضمان نجاح مواءمة إدارة المشروع مع استراتيجيات الابتكار. وتستند نتائج الدراسة إلى النهج الكمي فيما يتعلق بمهارات إدارة المشاريع في تقديم استراتيجيات الابتكار مع القطاع الحكومي في دبي. وكشفت الدراسة أن معظم المنظمات التي اعتمدت استراتيجيات الابتكار واستراتيجيات الأعمال الأخرى أصبحت أكثر كفاءة، وبالتالي وضعت مزايا المنافسة، ونجاح معظم المنظمات الحكومية تعتمد على العوامل التالية؛ التوقيت الدقيق للأحداث، تحديد الأولويات، تحقيق التوازن بين الأولويات واستخدام القيادة الكاريزمية الرامية إلى التعامل مع الصراعات والضغوط والتركيز على أهداف وغايات المشروع على سبيل المثال لا الحصر.



## **Dedication**

This paper is dedicated to my Government, to my superiors who taught me that the best kind of now-how. It is also dedicated to my family who elaborated to me that even a huge mission can be completed if it is done step by step at a time, which I have achieved

## Acknowledgement

Special thanks to the distinguished faculty of British University in Dubai who have served me in terms of provision of detailed guidance and motivation throughout the course and in conducting the research. I extend my appreciation to my advisor **Professor Abdel Halim Boussabaine** who has generously offered me his time and skill to better my work, and as a result, I thank him for his positive input and good-natured support. I further thank my classmates for offering materials from their research, from which the contents of the innovation strategy were retrieved. I thank my friends who cheered me on from the beginning and my family for their good-natured support

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## **CHAPTER ONE: INTRODUCTION**

### **1.1 Background statement**

Innovation has become a vital factor in ensuring that companies succeed in delivering quality projects (Bartlett, 2004). Consequently, ensuring that projects are of high quality requires project management skills amongst the stakeholders involved in the project. As disclosed by Richman (2012), project management skills in organizations have become vital in delivering innovation strategy and ensuring the success of projects. The skills include developing people, the ability to plan for preservation on sustainable issues (Richman, 2012). In addition, planning helps in minimizing any risk that might affect the project in the future. It also gives the necessary direction on the activities of the project (Buser, 2014). Another crucial skill is sustainable city planning that helps Dubai remain competitive (Msoroka, 2012). Delivery of innovative strategies also needs innovative skills, and having the ability to financially develop to ensure that there is the advancement in economic and asset (Buser, 2014). Many scholars and researchers have investigated on various topics in business management and have found out that many business organizations change in response to many factors such as markets demands, market products, competition, and prices among others (Pehrsson, 2007).

### **1.2 Innovative strategies within the context of project management**

In order to meet some of these demands and consequently enhances organizational growth adoptions of innovative strategies need to be put in place (Fedorova and Boldyreva, 2014). These innovative strategies such as strategic capabilities, corporate strategies, business strategy and direction strategy are paramount if business success and effective management skills are anything to appreciate (Johnstone, 2005). Innovative strategies are construed in a manner aimed at determining the long-term goals and purpose of the business organization and ensure

adoption of the necessary actions and resources for meeting the mentioned goals (Kuryatnikov and Linder, 2015).

Researchers over the years have put emphasis on business strategies and management skills to ensure business success. The interest is attributable to the fact that, innovative strategies and better management skills are paramount for effective and efficient business operations. High organizational performance is a result of doing the right thing within a given business project and not attending to the right project. Despite the beauty that these strategies come with, project managerial skills are very important to achieve high business performance (Rahman, 2016). Organizational and institutional managers are faced with a variety of challenges that needs to be addressed in good time and hence, several innovative strategies are paramount. Scholarly work and previous research work has shown that the aforementioned strategies have resulted to better business activities with less personal and capital or resource inputs (Shazia, 2012 ; Alsughayir, 2014)). Innovative strategies are complex in nature, are applied in the situation of uncertainty, tend to affect operational decisions and lastly require an integrated approach. In addition, discussion concerning sustainability and scarcity of resources, project management skills that generally influences the outcomes in a given organization (Mitchell-Ketzes, 2003; Sunindijo, 2015)). Though many researchers have investigated on the same subject, business opportunities and operations are prone to rapid changes within a short period of time and for these gaps will always result (Rahman, 2016). Management entails the process of planning, coordination, delegation, controlling business activities and other projects with an aim of realizing specific goals and objectives. Business strategy innovation helps an organization to achieve competitive merits over the previous by converting the new ideas and knowledge into services and products. With strategy innovation, a combination of innovation methods, tools, designs and services must be employed. To successfully bring up a strategy innovation, environmental and market gap analysis must be done, new ideas and knowledge identified, and lastly development of an

implantation plan. With new management skills collaborative decision making has been adopted and has led further business improvement.

For any business to flourish and enjoy success, basic management and leadership skills are vital. Further, the skills are important for a business to be healthy and also for its growth. Business organizations are known to experience crises and with the aforementioned skills firms and companies can easily sail through. These basic management skills include, planning, delegation, decision making, problem solving and effective communication.

Other important skills that many researchers have identified include constant checks, risk assessment and management, control of various units within the organization and constant reporting. Innovation strategy can be applied in all small and large scale projects and this will be high applicable if Dubai is to remain competitive (Ceric, 2014). In business field, competitors are ever looking for new ways of taking advantage in the market and consequently assume many customers. Therefore, seeking competitive business strategies remains number one action if Dubai is to expand and stay prolific. Managers are posed with the challenge of identifying business strategies in terms of the cost of leadership, exercising differentiation and maintain focus within their organization.

Previous works have shown that various organizations have battled to infuse and sustain innovative strategies and consequently ensure better project management. A number of firms which this study will not disclose will be considered. Innovation strategy plays a key role in ensuring that the available natural resources such as water, electricity and raw materials are sustainably used without their depletion (Marchi, Maria and Micelli, 2012). The objective of this study will entail innovation strategy of a chosen organization in Dubai (Colino, 1986). Transformation of various organizations across the globe has taken a centre stage through incorporation of various strategies and this paper will concentrate on innovation strategy in an organization based in Dubai (Lezhneva and Kozhevina, 2016). Despite the tremendous growth

that has been witnessed throughout the continents, several challenges have been highlighted by different researchers. For instance, challenge of data collection, its synthesis and consequently its interpretation within a given organization has been a stumbling block towards problem solving and decision making. Therefore, achievement of the company's goals and objectives have been hindered by some of these challenges and the present study will highlight some of these issues and later on provide recommendation and possible limitation that one is likely to meet in conducting a study inclined to project management and innovation strategy. Some of these challenges are as a result of lack of responsibilities by the employees, sleeping on job by managers, lack and inadequate personnel, poor project control and lack of desirable coordination within the organization among others. The sum total of these factors greatly affects the actions and activities in a given organizational project.

Projects in Dubai have had similar challenges, which simply imply very little or no progress in some of these projects. A thorough overhaul of how various activities are executed need to be at the centre stage of the current study, more so on the project management with an aim of delivering innovation strategy. To actualize the objectives, goals, and the purpose of the organizational project, management therefore, is poised to find existing and new alternatives through innovation. (Norah, 2016) describes the project ABC as follows, "The construction sector constitutes one of the industries where management of multiple projects and project portfolios has become increasingly common (Aritua et al., 2009). Different firms are engaged in the management of project portfolios however distinctive organizational performances with regard to this management of diverse projects have been registered." Norah further highlights that some firms have achieved success based on market and location dimensions while others have been unable to tame the necessary resources and innovation strategy. According to Steve jobs, to generate ideas is to be creative, to convert ideas to results is to be innovative. The scholar further asserts that, being innovative in an organized and user oriented fashion is the essential

competitive parameter of the 21<sup>st</sup> century. The service users remain important elements in project management and form potential agents for change and always move into innovation strategy from creative phase (Frederiksen and Knudsen, 2017). Innovation strategies therefore, involve competencies from all stakeholders not forgetting the national and international partners. Many economists and researchers have suggested that, to realize innovation strategy, swift process from the generated idea to its realization and implantation of services is an advanced process that can keep competitors on check and therefore, business organization should adopt these swift processes since they are cornerstone to development (Krasavin and Krasavina, 2015).

Further, authors have found out that innovation is branding as well and provides the organization with desirable positive attention from service users, politicians and as well as professional colleagues (Vel, Dayal and Eastaugh, 2010). Project management skills in delivering innovation strategy described as a project model can be achieved through various processes or actions which may include benchmarking as well. Benchmarking in business organization involves participation of the users in strategic innovation, interaction with professionals, contributes to strengthening and adding vigour to quality of innovation (Innovation performance and the role of senior management, 2004). Seeking inventive new measures, mitigation and creativity among the organization staff are necessary and paramount preconditions for innovation strategy and consequently makes working with the innovation pleasant. Reports have suggested that to achieve innovation strategy, necessary resources must be put in place and priority given to ways of making them available both through internal and external sources. The management in Dubai therefore, need to prioritise on the new ideas and further allocate desirable funds to achieve innovation strategy. Moreover, cooperation among the service users is necessary, utilization and coordination of professional competencies forms a backbone to project management and innovation strategy. Therefore, several methods should be observed and

followed to the letter. Some of these methods include; keen observation of the users, conducting in-depth interviews among the workers and customers as well.

Alerting the service users of the new solutions, products and services in town and use this information to stage a dialogue with the users about the future demands and needs, ensuring that inconsistencies are uncovered since users tend to say one thing and perform another, and lastly ensure development of concepts and designs in conjunction with the users (Niemczyk, 2011). A variety of information from the review of the literature suggest that most companies fail to achieve the set objective and goals due to relaxed management and lack of supervisory bodies that would in turn keep workers, departments, and any other unit within the organization on toes. Major methods of ensuring innovation strategy have been put been discussed before and therefore, Dubai project of these would benefit a great deal if these methods are adopted. These methods include; first, the project management should consider the structure, business and corporate strategy, organization of the units, competencies among the professionals, culture and external influences and cooperation (Vanhaverbeke and Peeters, 2005). Secondly, the firm should further enable generation of new ideas. Thirdly, conduct a simple evaluation of the ideas and knowledge. Lastly, the organization should develop a business plan followed by implementation and consequently involvement of customers and other interested parties.

### **1.3 Statement of the Problem**

Arising from the background statement, it is clear that there is still a gap in the amount of skills that is required to ensure that companies deliver innovative projects (Al-Shahi, 2005). There is need for this study to understand the skills needed to improve the level of innovation in Dubai. Project management skills in delivering innovation strategy have taken the centre stage in the world of business and the subject forms one of the major area of research among economists. In the background information provided above, it is evident that various organizations face numerous challenges in achieving business and innovation strategy (Krasavin, 2015). Therefore

the present study seeks to investigate the project management skills in delivering innovation strategy. The issues of concern in the present research are the achievement of the company's goals and objectives which have been hindered by various challenges (Bartlett, 2004). Some of these challenges are as a result of lack of responsibilities by the employees, sleeping on job by managers, lack of enough personnel, poor project control and lack of desirable coordination within the organization among others (Borins, 2002).

The sum of these factors greatly affects the actions and activities in any given organizational project. Projects in Dubai have had similar challenges, which simply imply very little or no progress in some of these projects (Keil, 2013). A thorough overhaul of how various activities are executed need to be at the centre stage of the current study, more so on the project management with an aim of delivering innovation strategy (Waheed, 2016). To actualize the objectives, goals, and the purpose of the organizational project, management therefore, is poised to find existing and new alternatives through innovation (Huemann, 2016). In spite of the recent works by scholars on project management, business organizations have identified various business strategies such as corporate strategy, strategy capabilities, and strategic directions among others (Kerzner, 2015). The strategies have been achieved through various organization's projects, simulation and modelling of the management skills and competency (Pollack, 2016). The present work therefore, concentrates on the project management skills in delivering innovation strategy. It is evident that products and services keep on changing and assuming new shapes, sizes and tastes and therefore users tend to be attracted by new arrivals and hence, this may produce an overall poor performance within the organization (Niemczyk, 2011). The low income experienced therefore, calls for a further thinking and many businesses are forced to change in order to meet the new demands by customers and also be at level with the competitors (Keil, 2013). To ensure that the aforementioned challenges are arrested or reduced the paper

seeks to shed light on the project management skills that are construed towards innovation strategy in Dubai business projects (Ceric, 2014).

The study will concentrate on the declining performance on business projects whose causes are deeply seated on poor management skills and also failure to incorporate effective business strategies such as innovation strategy among others. Further, the paper also focuses on examining and investigating how organization can generate new ideas, implement and consequently manage projects based on new approaches (Chmielecki, 2015).

#### **1.4 The Purpose of the Study**

The study aims at analysing the project management skills for delivering innovation strategy. The study will explore the relevance of these skills in ensuring that any innovation strategy conceptualised for growth is successfully undertaken.

#### **1.5 Significance of the Study**

This study is hinged on the fact that the quality of any project implementation plan should be very high to ensure that the project succeeds. Throughout this study, the focus will be to discuss the relevant project management skills that are necessary for the delivery of any innovation strategy. Therefore, the study will be essential in equipping project managers with the relevant skills and knowledge to advance their innovation delivery models. Further, the study will be quite significant in establishing the relationship between innovation delivery strategies and project management. As Frederiksen and Knudsen (2017) assert, any innovation delivery model is centred on effective project management. This is to say that project management is at the centre of any innovation strategy, in this regard, it is important if relevant project management skills are taught to project managers or to stakeholders implementing any innovation strategy. In a nutshell, the salient role of this study will be to highlight those project management skills that are central to the delivery of any innovation strategy today

## **1.6 Research Objectives**

1. To outline the manner in which management skills have enhanced innovation delivery strategies.
2. To investigate the manner in which technical skills in project management have influenced innovation strategy
3. To evaluate the extent to which business and leadership skills in project management have impacted on innovation strategy?
4. To assess how communication skills have influenced innovation delivery strategies.

## **1.7 Primary Research Question**

1. To what extent have the management skills in project management today influence the innovation delivery strategies in Dubai today?
2. How has Dubai implemented technical skills in project management to enhance their innovation strategies?
3. What business and leadership skills are required by project managers to be able to deliver innovation strategies today?
4. What roles have communication skills played in project management today as a way of enhancing delivery of innovation strategies?

## **1.8 Summary of the chapter**

This section has given a background statement to the research topic. Further, several other introductory statements have been given to highlight the extent to which project management skills are essential in the delivery of innovation strategies. The aims, objectives and the goals of the study have been equally listed in this chapter. Moreover, the chapter has developed the relevance of this study and even the research questions that the study will seek to answer

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Innovation**

Innovation is regarded as the process of translating an invention or idea into a product or service that can create value or which customers are willing and able to pay (Lock, 2013). To be innovative it is vital for the idea to be replicated at a cost and needs to satisfy specific needs of customers. The process includes all the methods in which new ideas are developed and converted into products that are useful (Korhonen, 2014). However, Mesa (2016) indicates that innovation is only possible in cases where managers have the necessary project management skills needed. The skills help businesses understand the different types of innovation, innovation models, and the benefits that come with being innovative (Lock, 2013).

### **2.2 Types of Innovation**

There are three main types of innovation that includes product innovation, process innovation, and organizational innovation (Kidd, 2009). Product innovation is when the market introduces a new technology product whose characteristics are significantly different from previous products (Niemann, 2014). It also involves the improvement of the existing products. The next form of innovation is the process innovation which refers to the adoption of new production methods of highly improving them. The innovation process can be used to produce and deliver new and improved products that cannot be done using conventional methods of production (Shackelford, 2004). Finally there is the organizational innovation where changes are introduced in terms of management of the entity (Rocheleau, 2006). In this case, there are often new changes in the management and organizational processes because of incorporating new business structures (Sozuer, 2014).

## **2.3 Theoretical framework: Innovation Models**

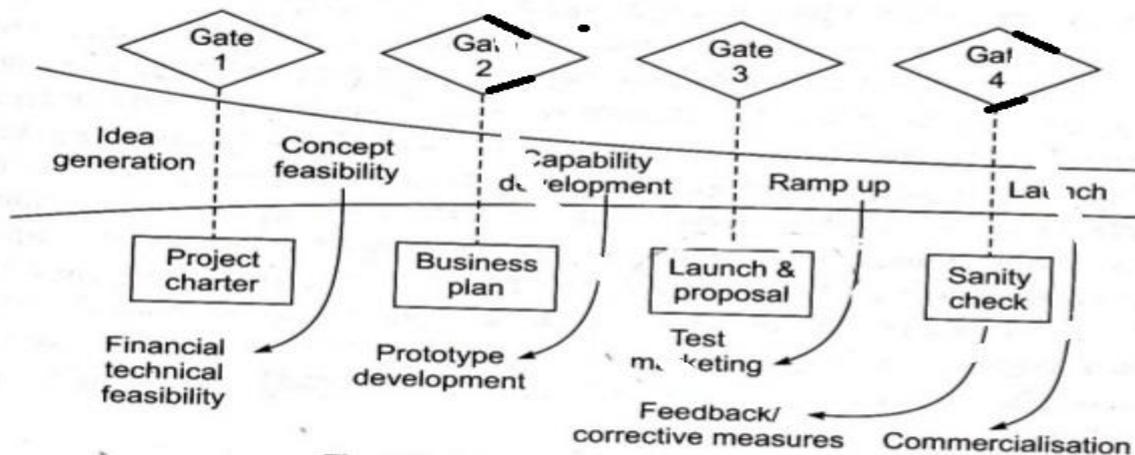
### **2.3.1 Linear Model**

The model of innovation means the act of innovation that is out-dated, but is still applicable in most cases (Turner, 2016). It provides a way of theorizing the sequence of the process that leads to innovation. Sequence is considered to be too rigid in describing a process that is dependent on science and technology, or the market to start the development of innovation (Sozuer, 2014). The strict separation that is seen between innovation, marketing, and invention does not give an accurate representation of the dynamics of innovation in today's world (Webb, 2000). Being a first generation model, the linear model only takes account of the application of market pull or science/technology as a way of starting the innovation process.

Sozuer (2014) establishes that the whole concept behind the linear model of innovation is to minimise risks. This is corroborated by Webb (2000) who discussed that the linear innovation process model focuses on the need to freeze the project or the concept at the infant phase as a way of lowering or mitigating the risks that may be involved in the project. Innovation process in the enterprise, based on the precincts of this model, entail several sequential phases or stages which are arranged in a way that the phase preceding is automatically cleared before undertaking the succeeding phase. Essentially, this is an affirmation that the linear model or strategy seeks to ensure that the project must undergo through what Webb (2000) refers to as a "pass gate" before the next phase is undertaken. The stakeholders in the project must thus be able to develop a clear criterion that would be employed for the project to pass through each of the gates and the "gatekeeper" should be strategically placed to ensure that no phase can be bypassed.

#### **Figure 2.1: Linear innovation strategy model**

## Linear Innovation Process Models



### Benefits of the model

As discussed by Turner (2016), the system only works effectively when there is an element of time. Webb (2000) asserts this notion by noting that linear innovation strategy works well when time is required is relatively shorter in comparison to the rate at which changes in the environment are experienced. It has also been noted that the strategy is highly beneficial in cases where reliability and safety are emphasised. The simplicity of the model is said to be a very important factor for its selection and thus even for beginners, the model is quite easy to use in managing innovations.

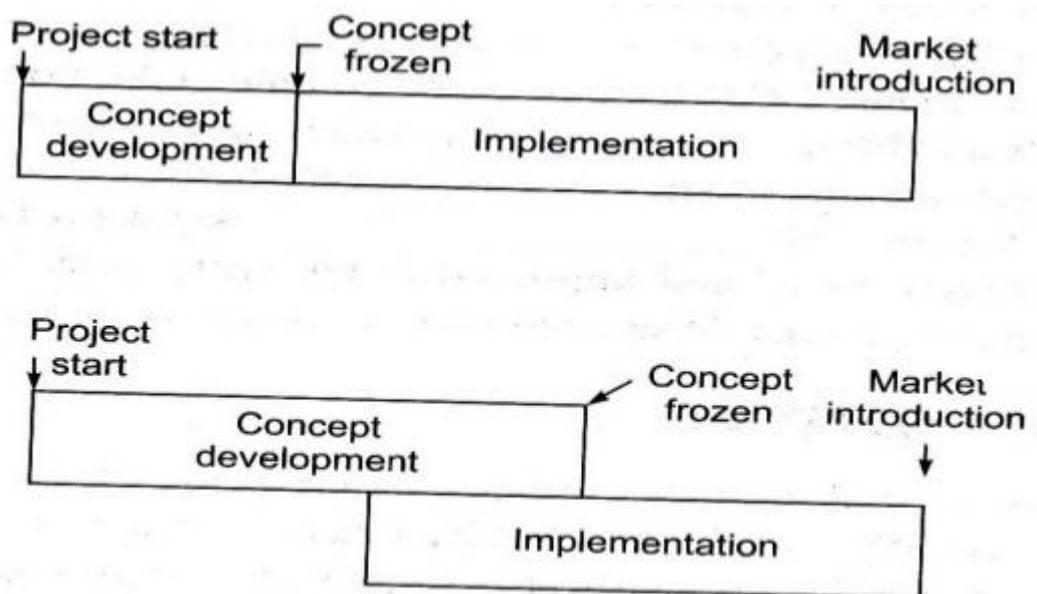
While the simplicity of the model has been noted as a very strong point of its application, it has since been established that lower knowledge of the gatekeepers can lead to poor judgements hence leading to poor projects. Moreover, as disclosed by Niemann (2014), the fact that the process goes through many gates means that it is very slow. The progressive manner of the process makes it time consuming. Other weaknesses of the model as discussed by Hermarij (2016). entails such issues like the narrow criterion for evaluation which has been noted to be very rigid based on the findings of (Kidd, 2009). In addition, Turner (2016) discloses that concepts can be frozen too early in trying to mitigate risk factors while in essence, the concept

would pick up at a later date and perform well. The common types of this model include the technology push model and the market pull models for innovation.

### 2.3.2 Flexible innovation models

Open model innovation is a new form of innovation strategy that companies can take advantage of by taking advantage of the innovation that comes from outside the company (Niemann, 2014). The main point of this model is to open the innovation's creative processes to get innovative ideas from any source (Turner, 2016). The strategy holds to the thought that innovations do not have to be necessarily linear. Ideas and improvements can emerge from the very many sources around to enhance the innovation process. The flexible innovation model, unlike the linear model, is not rigid but rather leaves the door wide open for the input of others throughout the innovation period.

**Figure 2.2 Flexible innovation strategies**

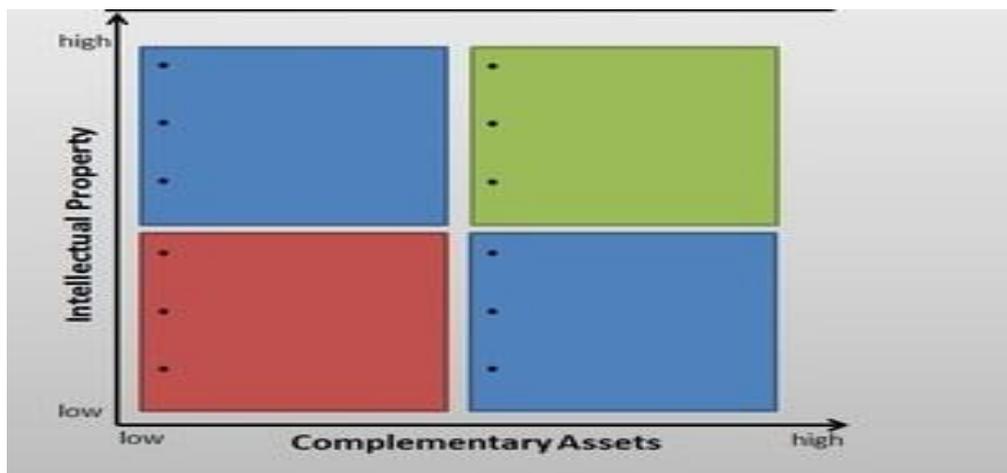


### 2.3.3 Teece Model

Teece came up with a model that describes two factors that are crucial in looking for profits from innovation (Niemann, 2014). It also considers complementary assets and the ease of

imitability or imitation. The imitation can be from technology protection intellectual property (Turner, 2016). This model, notes Kidd (2009), aims to evaluate the various levels of returns that an organization could be having with its systems considering the dimensions of what Strohmeier (1992) refers to as “industrial property rights” together with complementary assets (Niemann, 2014).

**Figure 2.3: Teece innovation strategy**



The Teece model can be effectively used to make predictions on who will benefit from any form of innovation. In addition, the model is also essential in developing a very clear understanding of the whether companies will have higher rates of incentives as a way of boosting their investments in certain innovations. While this theory has been noted to be quite extensive in its analysis, Vanhaverbeke, and Peeters (2005) disclose that the salient flaw is that it does not have empirical evidence and thus there is a lot of difficulty in isolating the imitability effects from the complementary effects and even other factors

## **2.4 Importance of Innovation**

Innovation is a crucial concept that needs to be understood by top management team. If used in the right way innovation can provide the company with the necessary competitive advantage needed to be successful in the market according to Niemann (2014). Innovation includes ideas that are often developed into products and services (Webb, 2000). According to

Kidd (2009) innovations result in changes which are recognised as new by customers. It is a term that is often used to describe the process involved in making improvements through the introduction of new things (Christophe, 2016). Thus the two words that are closely related to innovation include new and process (Buser, 2014). Innovation needs to be something new that the business is able to take advantage of (Shackelford, 2004). The modern economy is usually known as the innovation economy where human engages in the business world is constantly pursuing wealth through the process of innovation (Sozuer, 2014). Evidently the successes of companies do not come from their acres of land or chandeliers, but from their systems and intellectual capabilities according to Webb (2000). Niemann (2014) indicates that information and innovation are vital assets of a business and need to be handles in new ways. The traditional monitoring system designed aimed at dealing with tangible input and output is not accurate in surviving in the market (Hermarij, 2016). Companies are required to share data and advancement inside and figure out how to adjust all the more rapidly to outer conditions keeping in mind the end goal to hold their upper hand (Shackelford, 2004).

## **2.5 Innovation Management**

There is no concurred meaning of Innovation Management. The term alludes to a procedure of producing an incentive to the company through the creation, renewal, dissemination, and appropriate utilization of innovation (Borins, 2002). It can also be regarded as an creative method for using data and individuals all through the business (Shackelford, 2004). A basic definition is that it is about make utilization of "what is known" in the most ideal way to gain the skills in the business world (Christophe, 2016).

Management of innovation is the mantra that encourages the smooth flow and dispersion of innovation of the people, teams, or groups over the association in certain ways that straightforwardly influences the execution and potential levels (Borins, 2002). Decisively, Innovation Management's main objective is getting the correct data within the correct setting to

the opportune individual at the ideal time for the right business reason (Shackelford, 2004). It includes a scope of practices utilized as a part of an association to recognize, make, speak to, convey and empower adjustment of bits of knowledge and encounters (Sozuer, 2014). Such practices results in the things like enhanced execution levels, upper hands, advancements and sharing of lessons educated and ceaseless change of association (Shackelford, 2004).

## **2.6 Innovation strategy**

According to basic financial statements of a Not-for-profit organization (2015), innovation strategy refers to the process by which planning is made by an organization or a market through products and services creativity and innovation usually done through investing on various researches and development activities. Innovation strategy is a very important factor in the success of many companies and organizations, such as those companies that are specialised in the field of information technology. Many institutions have come to realize that for them to remain competitive in the business market then it is very crucial to include various business strategies among them being innovation strategies (Fedorova and Boldyreva, 2014). Engagement of this innovation strategies in the companies may propel the success of a given organizations. Different types of business strategies include; innovation strategy, product differentiation, price skimming, corporate strategy, direction strategy, choice strategy and acquisition strategy. These strategies in most cases forms part of the innovation strategies and hence their brief discussion is vital in this study. Growth strategy encompasses bringing in a variety of new products or adding features to the existing features. This can be done through repackaging, adding a few ingredients to the existing products and giving the product a new name which in most cases is referred to as rebranding. Small companies may be forced to change or in other cases be made to increase the products channels to keep up with the competition in the market (Provasnek et al., 2016). Many customers tend to follow the organizations that offer the newest technology and hence this poses a big threat to the other existing organizations. For an organization to adapt to the existing

competition, it may be forced to find new markets for its products and services. For instance, a consumer manufacturer may realize through research that industrial or firm works like its products and services (Lezhneva and Kozhevina, 2016). The existing project may often use a product differentiation strategy to propel their competitive advantages.

## **2.7 Project**

A project provides a great opportunity for individuals and organizations to achieve their objectives in a more efficient way through the process of implementing change according to Bartlett (2004). They help organizations to make the desired changes in an organized way and reduce the possibility of failure (Buser, 2014). Projects are often defined as specific, finite activity that results in measurable and observable result under specified requirements (Christophe, 2016). However, it is vital to note that projects are different from other works as evidenced from their characteristics (Hans-Georg, 2016). Projects have the characteristic of being temporary because they have a finite start and a finite end. The start of the project is when it is initiated and its concept is also developed. The end is reached in situations where all the objectives have been met. The second characteristic is the fact that each project aims at producing specific deliverables that can be in the form of a service, product, or other results (Hermarij, 2016). They aim at addressing the need or problem that was analysed before the start of the project. Finally, projects are characterised as having progressive elaboration where there is continuous investigation and improvement, to ensure that more comprehensive and accurate plans are produced (Huemann, 2016). The successive iteration of the planning process results in the development of solutions that are effective to progress and develop the projects (Kerzner, 2004). However, to ensure success, projects need to be managed.

## **2.8 Project Management**

Project management is regarded as the process of planning, initiating, executing, controlling and closing work to achieve specified goals and meet certain success criteria (Kerzner, 2009). Proper project management leads to innovation (Kerzner, 2015).

### **2.9 Project management skills**

Project management skills are very important in ensuring that the projects are run as intended in both private and public organization. Most individuals learn and develop management skills because they are ready to make desirable changes within a given organization. Changes are paramount and most the times they ultimately deliver the outcomes or objectives desired for high performance (Keil, Lee and Deng, 2013). Training managers and leaders to attain these project management skills is quite paramount in delivering innovation. Examples of the critical skills that improve the competencies and the consequently enhance the efficiency of the managerial roles include; communications skills, leadership skills, collaborative skills, project management skills, risk assessment skills, risk-taking skill, creative and innovative skills (Hwang and Ng, 2013). To pass relevant information concerning the project management, it is important to create a compelling presentation to enhance and support the objectives of the organization and also buy-in ideas, opinions and perceptions as well as inspiring others to achieve better results and demonstrate emotional and mental intelligence (Pollack and Adler, 2016). For any government sector to achieve high performance, effective communications should be exercised and observed to the letter. Effective communication involves the process of passing information from person to another. In the process of effective communication, it is ensured that, the encoder frames the statements, questions and phrases in a manner to ensure that the recipient takes the shortest time possible to decode the message and consequently provide a feedback intended for further actions. To communicate effectively, several factors should be considered. These factors are; the language that the recipient understands, the distance involved, needs and

preferences, the environment, and clarity among other factors. In addition to these factors that affect effective communication, the most important forms of communication should also be used interchangeably.

There are two forms of communication, verbal and non-verbal. Verbal communication takes place when two or more people are conversing, with one person talking at a time and the other person listening. For effective verbal communication, speaking and listening must occur. To supplement verbal communication (speech, talking, listening), people employ a variety of non-verbal communication forms. Some of the non-verbal communication forms include; use of body language, facial expression, gestures, touch or contact and maintaining eye contact. In project management skills setting, the practitioners and service users should embrace the importance of these communication forms, and employ them in different situations to ensure that information is passed over (Sjölin, 1988).

For instance, the manager's behaviour, attitudes, appearance and how they present themselves send messages to all stakeholders and practitioners on how they think and feel. Therefore, managers and workers need a wide range of skills to respond to questions, break bad news, provide support to one another, contribute to fellow colleagues and meetings, and determine the individual's problems, needs and concerns. To critically and logically approach business, solve project management problems, research options, and focus on the available and meaning data, draw valid conclusions and further provide right recommendations, a manager requires to possess critical and innovative skills. Critical skills entail specific capabilities desired within an organization. Some of the critical skills include general management skills, customer holding skills, information technology skills, teamwork skills and communication skills. Critical thinking involves making reasoned and objective judgement that is well-thought out.

Managers who apply critical thinking do not accept all arguments, ideas, opinions and conclusions from the stakeholders and practitioners rather have some attitude that involve

questioning how such arguments and conclusions come about. In previous works, most researchers on management skills have found that managers require evidences that support any different ideas, arguments and conclusions (Waheed, 2016). Managers who use critical thinking ask questions like; how do you know that? How did that happen? What makes you think when we take that path we will succeed? In reference to project management skills, many managers decide to make alterations in their daily lives based on the previous experience within the organizations. In project management, the managers need innovation skills to contribute to great performance of the organization. The innovation skills contribute to production of new and improved strategies, products, directions, products, process and services (Vanhaverbeke and Peeters, 2005).

According to the findings of Lee (2014), project management skills are those knowledge areas, abilities and techniques that are required to successfully implement a program. affirms this by noting that various project management skills are required in managing various projects. It is imperative for project implementers to recognize these skills and establish their relevance in the implementation matrix of the project. Principally, as noted by Niemann (2014), project management skills are the basic cogs through which project rotate. Camillus (2011) describes project management skills as key competencies by the impementors that are critical in the daily operations of the projects. Vanhaverbeke and Peeters (2005) described project management skills as those abilities that are unique to the implementers. Moreover, these abilities can be acquired through deliberate efforts like education or through experience. Lee (2014) segments the project management skills into cognitive skills which entail ideas about the project and the general ideas regarding the management of the project. In addition, Lee (2014) includes technical and interpersonal skills as well as very essential in the implementation of projects.

## **2.10 Factors Influencing Success of project management and organizations success**

Business organization may be a company, a firm, a person or a group that bring factors of production such as human resources, physical resources, or inputs and capital together with an objecting of production of goods and services. Organizations avail goods and services to the communities of their operation. Business organizations can exist in different forms depending on factors such as the size and the structure of the organization, the forms include, sole proprietorship, partnerships, corporations, and also limited liability companies. It is important to note that depending on the structure and size, business organization need a strong foundation. A business foundation determines the success of any organization. On this regard, entrepreneurs play the function of identifying a business gap and bringing resources together for successful operation of a business enterprise (Caprotti, 2012). The resources that are vital for a start include labour, technological capabilities and ideas and machinery, financial resources, raw materials, required capital, innovative strategies as well as managerial resources.

Plans are also laid well dictated to govern actions and operations of the business activities. thus, it does not matter how efficient your services deem, the way in which you plan and organize your business is just as vital for the success of the project(Ayala Calvo, J. and Manzano García, 2010). Business organizations should be operated by skilled personnel from employees to leadership. The experience of the managers and workers help in improving the efficiency of the the operations of the firm (Attaran, 2007).

To enhance nproduction, some of the most important elements can be imported out of the organization. Operations of a business are highly influenced by the external environment. These external factors must be keenly evaluated and appropriate actions taken to help elimination of the negative factors. Relevant leadership authorities are established in any business organization make sure that senior workers guide the junior and automatically delegate duties and also differentiation of various roles within the business organization. Innovation strategy, therefore

helps in adding performances that can be explored in the verge of bring success to the business organization.

Most researches have revealed that, the aim of every business project is to make profit. The successful performance of an organization are evaluated by profit, quality of products and its ability to do well in a competitive environment (Lecraw, 1989). The organization has the responsibility of provision of goods and services and making the available to the costumers through advertising and promoting the products and services using advertisement and the organization's agencies. The the role of these advertisements is to increase the customer base and fetch the available markets. For survival, people need a continuous supply of goods and services. Business organization should therefore identify these factors affecting production and ensure that there is effort made towards provision of a health business environment and avoid stiff competition from external organization. Business economists have suggested that, to ensure health environment in business, managers and directors should embrace different business strategies are put in place.

Factor influencing organizational activities include, environment of the organization (both internal and external), customer base, government policies, raw materials, organization's strategies (strategy choices, strategy position and strategy in action) just to mention a few. For a start, environment is among the most important factors that affect the operations and functions of an organization. Raw materials to be used in th production are found on the environment. A business organization must widely research before they make an informed decision on the location of the organization. The environment can be categorised into two major parts namely, internal and external environment. Internal environment comprises of the factors that affect business organization internally (Kotey, 1999). This internal environment factors affects organizational operation directly and they include, the workers, organizational culture, resources,

strategy risks and innovation among many others. These factors are very crucial in that without them business activities may not take place.

It's the responsibility of the leadership in any business firm to ensure that all these factors are organized and channelled in certain directions for maximum production. However, external factors do not affect business operations directly though without them businessmen and women could face problems in their objective achievements. Examples of these factors include social factors, technological factors, market sizes, customers, and political factors. These factors provide an alternative in ensuring that business organization realize maximum profit. In the modern world technological factors are very important in that almost all the various departments have been digitalized (Kennedy, S. 2005). Without them a business organization may not succeed due to competition that would be brought forward from outside world. Other very important factors include market sizes and customers. It is vital to consider and evaluate the availability of the markets.

It has been found out that another vital factor that may influence success of a business is the customer base. The work of any business is to provide goods and services in an acceptable manner in the eyes of the customers. These goods and services need to be utilized which is the objective of any business venture, thus, consumers play a very vital role in ensuring the success of a business organization. It's the work of the business entrepreneur to identify places with large population, which does not only form a customer base but also provide the important labour force required in the industry (Ayala Calvo and Manzano García, 2010). Government policies dictate the location and operations of business activities through taxation, influencing the decision among others. For example, when the government intends to establish a learning institution or anything that involves public domain interest, the existing business activity can be relocated to pave way for the government priorities. Moreover, the government may ban exploitation of resources past a certain level. Due to these limitations, business faces the

challenge of relocation. Monitoring the project performance plays a very important role in ensuring that the government organizations are on-course and on-schedule in realizing the objectives and goals. Most scholars have identified technology as very core in any project; change of technology has influenced business. Most organizations who employ labour-intensive methods of production find it so hard to switch to capita intensive methods in order for them to cope with firms who have accomplished competition advantage. Several problems or challenges that organizations meet include; assumption of debts at very early stages makes it too difficult for the company to operate or run since managerial resources may lack or become inadequate, unreliable infrastructures which aid in the transfer of goods and services and in places where there are no/ or unreliable means of transport, delivery of goods and services as well as access to sources of raw materials maybe task, high insecurity such as civil wars and instability may scare away investors from putting up enterprises, lack of professional skills have been found to cause collapse firms because most entrepreneurs have very little or no entrepreneurship skills.

A strategy which an organization intends to add or invent forms the backbone of the business operations. Recently, this factor has demanded a lot of attention and therefore plays the most important role for a business success. Innovation strategy factors are divided into the following: position strategy, capabilities strategy, strategic choices as well as strategy in action. The position strategy is concerned with the broad view of the external environment, capabilities, culture and the goals of an organization. Therefore, an organization in line with strategic position ensures that various factors are effectively used to match the pressure from the outside world (Longman and Mullins, 2004). Social factor are some of the factors which comprise the changing culture and evolving demographics which are very important in any business organization. For instance, a business organization formed to provide sanitary towels for ladies should consider the population gender ratio since in some areas girls are more than boys while in others the converse is true. In such a situation, an organization would face the challenge of collecting data or

retrieving from secondary sources in order to obtain the trends in the changes in the populations in terms of sex and age composition.

The common denominator in such data analysis is, for example, in places with high population of young and aged females such a business would not thrive to expectations because the number of the targeted customers would be very low. Thus the location of a business depends on several factors and if these factors are not well investigated then business organization would operate at a loss. Another example that would highly shed light on the position of the business firm is, for example, in places with high Muslim population, a business aimed at offering pork would face low number or no customers at all. On the same note, a business organization should concern itself with its ability to survive in a competitive environment and whether the plans at hand can provide an ending solution to the problem of competition. The business firm should be competent in production of high quality goods and services that would attract many customers. For example in any job market customers will be attracted to match forth to workshops or malls that stock high quality goods. Investors, therefore, should strategize before venturing into the field of business since many businesses are coming up and therefore for survival, long lasting plans should be sought. Monopoly markets enjoy less competition and this in one way or another makes a business organization survive without necessarily having many customers. Exercising monopolistic business was found to be an everlasting solution to competition (Lee, 2014).

Capabilities change with the evolving world and therefore it's the responsibility of any business organization to apply new tactics in order to cope with the changing world since capabilities last for a short duration and in the end become irrelevant. commencing new capabilities such as; sensing capabilities, seizing capabilities and then re-configuring capabilities forms a better option for business success. Capabilities of sense involves new inventions in the field of markets, technologies and opportunities. Seizing capabilities are concerned with use of new products and activities while the re-configuration capabilities involve renewal of the existing

capabilities. For any business organization to marshal and ensure maximum profits these capabilities should be put together and right management plans employed to ensure that the operations do not come to a standstill (Sykes, 1986). For example, if a business organization is specialised in offering food stuffs such as chicken, meat, rice and fish fillets, it is the role of the business management to understand the trend and identify which among the products is selling at very high rate and increase its availability. It's also the manager's responsibility in identification of more other food stuffs that can be offered to increase the number of customers (related diversification).

Choice strategy and corporation provides another important innovation in business organization. In this paradigm, business organizations focus on various aspects which enable the business to develop muscles and survive in the market. Some of the most important aspect that should be considered include; price wars, a situation in which business alters the prices to keep pressure on the competitors. Another important dimension is outsourcing which generally describes the process of subcontracting activities that are done within the business to the external supplies (Business strategy and the environment, 1993). Outsourcing is a paramount process for it brings external inputs to the business. Outsourcing can further be coupled with consolidation which is a new innovation strategy that has cropped up and involves concentrating on the current markets and with the current products. The world has become very diverse and new ideas, machines, products among others are invented every day and therefore, it is the responsibility of the business organisation, to focus on the changes that are taking place so as to ensure that the organisation is not left out and competes favourably in terms of offering new products (Kennedy, 2005).

## **2.11 Summary**

This chapter has given the literature background of the concept of innovation, the strategies for innovation and the models for innovation. Through this chapter, the theoretical

framework of the study has been established together with the systematic assessment of the opinions of others regarding innovation and the various models of innovation. Through this chapter, a clear conceptual and theoretical background have been revealed as a way of laying down the foundations of the study.

## **2.12 Managerial Skills**

### **a. Effective Resource Distribution and Management**

The effective distribution and management of resources is the allocation of different types of resources in all organizations in a manner that envisages professionalism in management-related matters. Corporate distribution resources help to allocate gadgets or tools in a way that supports the increase of business profitability (Caprooti, 2012.) Companies can achieve effective resource allocation and management by centralizing certain functions in specific departments, providing innovative technologies that are applied, while supporting the whole purpose of business in the market.

Effective resource distribution and management comes about because a business organization often avails goods and services to the societies. When entrepreneurs identify a business gap, they bring resources together for successful production. The effective resources that are distributed include the labour, technological ideas and machines, financial resources, raw materials, capital, innovation strategies and managerial resources (Caprotti, 2012). The implication here is that a company's prosperity is often accompanied with the right contents of distribution resources and management strategies.

### **b. Timely delivery of Project Objectives**

Project management is regarded as the entity of planning, initiating, executing, controlling and closing work to achieve specified goals and meet certain success criteria. From the definition, it is apparent that timely delivery of project objectives is often associated with project management. The rationale is based on the fact that timely delivery is the act of

effectively and professionally receiving or sending a product to the end user. In this case, innovation comes into play in circumstances of delivering the project in a timely manner. For instance, use of a company website to pay for a product will be effective as the process will be acted upon immediately in terms of timely delivery (Kerzner, 2009). The objective of the company in this case will be met because use of innovation will help them reach a wider market and at the same time increase their shares in the market.

The contents of timely delivery of a project objective also arises from having the needed skills as a firm. The presence of the right skills in matters associated with planning will ascertain that the needs of the market are met in a positive manner. The reason is associated with team work and understanding. Therefore, utilization of time delivery through innovation of technology gadgets like the internet makes certain that there is an undertaking and as a result, a timely delivery of project objective is made possible (Kerzner, 2009).

#### c. Effective Human Resource Management

Human resource management is fundamental as it guides an organization to move towards the right direction in terms of performance and completion of a task. The effective human resource management arises from the contents of project management skills. Human resource management attributes like communication skills, leadership skills, collaborative skills, project management skills, risk assessment skills, risk-taking skill, creative and innovative skills are needed in matters related to HRM (Keil, Lee and Deng, 2013). Use of effective communications consists of the process of pass the information from person to another. In the process of actual communication, it is ensured that, the encoder frames the statements, questions and phrases in a method to ensure that the receiver takes the shortest time possible to understand the message and accordingly provide a feedback intended for further actions(Hwang and Ng, 2013). Thus, effective Human resource management is required in matters related to innovation analyzation because of its technicality and understanding of the end reader.

#### d. Problem-Solving Skills

Problem-solving skills are needed in a thriving organization to generate the needed results. For instance, in cases where one is unable to create a programming application, the skills of a programmer. The problem-solving skills arises from the models of innovation, which entails strategizing before coming with a precise solution on what innovation entails in detail. Models of innovation as part of problem solving skills basically consist of providing a way of theorizing the sequence of the process that leads to innovation (Webb, 2000). The implication here is that problem-solving arises from the models of innovation where I had to utilize the contents of different models in order to better understand what innovation entails.

The use of models of innovation permitted me as a researcher to better undertake by analysis and as a result came up with a conclusion on innovation in beneficial perspective. Through the use of innovation models as a form of problem-solving application, I came to realize that innovation offers a company with the needed competitive advantage to be successful in the market (Turner, 2016). My Theoretical Framework indicates that solving an issue is possible because the steps of the different models are illustrated in a manner that generalizes the contents of innovation in a fulfilling manner.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Research philosophy**

The study is developed through the interpretivism research philosophy. According to interpretivism, access to reality of various phenomena in the society can only be revealed through subjective assessment. Interpretivism is in direct contrasts with the subscriptions of the positivists who disclosed that phenomena can only be understood through objectivism (Welman, Kruger & Mitchell,, 2005). This study however is based on the feelings of individuals based on the topic of the research. The significance of this method of study is based on the fact that the respondents in the study gives their direct opinions or views in the study which can thus be extrapolated to other member of the sampled population (Merriam,2005).

### **3.2 Research approaches**

The study is developed through the prism of inductive research. Inductive research, as noted by Kumar & Phrommathed (2005), aim to prove a theoretical view as opposed to the deductive approaches which are generally geared towards the development of a new concept. It is true that project management skills are important in the delivery of any innovation strategy, but to what extent or rather, what exact project management skills are important in the delivery of innovation strategy? A critical assessment of the research topic and the objectives reveals that the most relevant research approach would be to undertake an inductive study. Moreover, the research is, to a large extent, hinged on descriptive analysis. However, the analytical tools that were employed also focused on establishing causal relationship. In this regard, the manner in which certain project management skills are essential in delivering innovation strategies will be disclosed. Combining these two research strategies have enhanced the internal validity of the study to a great extent.

### **3.3 Research design**

Quantitative techniques will be used in making relevance inferences in the study. Based on the findings of Marczyk, DeMatteo, & Festinger (2005), quantitative methods employ numerical data to analyse the opinions of the respondents and establish responses to the established research questions. In this study, numerical data was manipulated after being collected from the respondents and relevant inferences made from the data. Quantitative research approaches, notes Neuman (2002), generalizes results from a large population into smaller “representative” samples and thus make generalizations from this sample. The strategy is based on the fact that it is near impossible to undertake an extensive research on the whole population and so generalizations must be made from a smaller population sample (Pinsonneault & Kraemer, 2013).

### **3.4 Sampling methodology**

The study undertook purposive sampling to identify the respondents. The participants in the study included in the study entailed managers of top businesses in Dubai, senior government employees and players in the private sector engaged in huge projects. Based on the purposive sampling criterion adopted for the study, the participants will be chosen and identified based on the time spent in the workplace. All the respondents in this study must be participants with a lengthy experience in their respective career for not less than three years.

### **3.5 Data collection strategy**

The study employed both primary and secondary data collection tools to collect data from the identified population sample. The secondary data collection tools entail the use of books, journals, internet and other literature materials to establish the theoretical and conceptual frameworks of the study. In terms of the primary data collection modalities, the study used structured questionnaires to collect the opinions of the identified respondents based on their understanding of the research questions. The use of questionnaire was selected due to the fact that it is the most relevant tool in undertaking quantitative research. Moreover, collecting data

using questionnaires is not as costly as other data collections tools. But while the relevance of this tool in data analysis is eminent, Kothari (2004) notes that the technicality in drafting questionnaires makes it a very hard tool to collect data from respondents. Poor design of questionnaires may significantly lower its internal validity and reliability.

### **3.5.1 Selection process for participants**

As noted earlier, main population of concern in the study are involved in management of various organizations and also senior government employees engaged in formulation of innovation strategy. The criteria used to select the respondents revolved around the respondent's experience in working in a managerial position. All the individuals selected were part of the organization's capacity building and also engaged in the strategic planning of the organization. The participants selected had adequate knowledge about project management skills and innovation strategy formulation process. Questionnaires were self-administered online after a consensual agreement on confidentiality was agreed upon with the sampled respondents. A total of 75 respondents were selected for the study. The responses were entered into the SPSS data analysis platform and analysed to make the relevant inferences

### **3.6 Validity and reliability of the research**

To ensure internal validity and consistence, the drafted questionnaire was subjected to Cronbach alpha analysis (see chapter 4 for the reporting) Moreover, the study piloted the study program one week to the research process where the questionnaires were distributed to a tenth of the respondents and the validity of the tool evaluated.

### **3.7 Design of the questionnaire**

The questionnaire, as earlier mentioned, was the primary the collection tool. The design focused on several variables that were considered as central in answering the research questions and helping in meeting the goals of the study. The biographical information section of the tool intended to give a view of the respondents. The study was segmented into four critical skills,

variables whose input in project management of innovation strategies are considered very cardinal. These entail communication skills, leadership skills, technical skills and leadership skills. To enhance the content validity of the study, several questioners were asked under the sub themes of these skills. These were to be responded to in the Likert scale fashion beginning from the least agreeable to the strongly agreeable. The study noted that through the developed Likert scale template, the extent to which these skills affect the success of the implementation of an innovation strategy would be deduced. The respondents were expected to select just one response from the Likert scale as the responses are considered mutually exclusive. At the end of each of the Likert questions within the sub theme of every skill, the study asked an overall question regarding the feelings of the respondents in reference to the program implementation skills. These were equally

## CHAPTER FOUR: FINDINGS

### 4.1 Reliability and validity tests for the questionnaires

As a pre-test strategy, the study engaged the developed questionnaire to establish if the survey questions meet the reliability and validity thresholds that have been set by the study. In this regard, the study employed a Cronbach's alpha test which is used to measure the consistency of the questionnaire. Based on the results summarised below, the Cronbach's tests disclosed that the reliability level was at (87.9%) which essentially reveals that the questionnaire has a very high level of internal consistency for the scales used. For the study, this is a quintessential depiction of an objective study which is reliable.

**Table 4.1 Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.879	.744	13

### 4.2 Demographic attributes of the respondents

#### 4.2.1 Gender of the respondents

Majority of the respondents interviewed in the study were males. This is projected by (56%) of the total respondents. The females were represented by (44%) of the respondents. Table 1 below gives a summary of the same.

**Table 4.2 : Gender**

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	54	56.0	56.0	56.0
Females	46	44.0	44.0	100.0
Total	100	100.0	100.0	

#### 4.2.2 Age of the respondents

In terms of the age of the respondents, the study noted that the majority of those who were subjected to the interview were aged above 35 years. This was indicated by (50.7%) of the sampled respondents. Meanwhile, (34.7%) of those interviewed were aged between 31-35 years old. The respondents who were aged between 26 to 30 years represented (14.7%) of the respondents. Evidently, the majority were over 35 years old. Table 2 gives a summary descriptive statistic of the age of the respondents.

**Table 4.2: Age**

	Frequency	Percent	Valid Percent	Cumulative Percent
26-30	19	14.7	14.7	14.7
31-35	31	34.7	34.7	49.3
above 35 years	50	50.7	50.7	100.0
Total	100	100.0	100.0	

#### 4.2.3 Level of qualification at work

The study found out that majority of those sampled for the study was middle level managers in the organization. This was represented by a percentage value of (41.3%). This was followed by the top level managers with a cumulated percentage value of (40%). Consequently, the junior officers were represented by (18.7%) of the total number of respondents. Table 3 gives a summary of the results.

**Table 4.2: level of qualification of the respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
Junior officer	27	18.7	18.7	18.7
Middle level officer	37	41.3	41.3	60.0
Senior officer	36	40.0	40.0	100.0
Total	100	100.0	100.0	

#### 4.2.4 Career experience

The results established that the majority of those sampled for this study had a career experience of between 3 and 5 years at their respective fields. This was represented by (64%) of the total population. In addition, (17%) of the total number of respondents had an experience span of over 5 years. The rest of the respondents (18.8%) had between 0 and 2 years of experience in their respective fields or professions. The table below gives a summary of the results

**Table 4:3**

	Frequency	Percent	Valid Percent	Cumulative Percent
0-2 years	22	18.7	18.7	18.7
3-5 years	56	64.0	64.0	82.7
+5 years	22	17.3	17.3	100.0
Total	100	100.0	100.0	

#### 4.3 Management skills in projects

**Table 4.4**

	Frequency	Percent	Valid Percent	Cumulative Percent
Effective resource distribution and management	41	46.7	46.7	46.7
Timely delivery of project objectives	27	28.0	28.0	74.7
Effective HR management	21	20.0	20.0	94.7
Other	11	5.3	5.3	100.0
Total	100	100.0	100.0	

Most of those subjected to the interview session disclosed that management of projects, in their opinion, entails an effective model of resource distribution (46.7%). This was comparable to (28%) who noted that the concept of management in project implementation involved timely delivery of the project. Meanwhile, (20%) of the respondents disclosed that effective HR management is in their opinion, the essence of management in projects. (4%) of the respondents

gave diverse opinions regarding the concept of project management. This is indicated in the summary output table above.

#### 4.3.1 Problem solving skills

As indicated in the summary table 4.2 below, majority of the respondents “strongly agreed” that effective management has enhanced problem solving skills in project management. This was established at (42.7%) as compared to the (33.3%) of the respondents who “agreed” that problem solving skills in project management have been enhanced through effective management. Moreover, the study revealed that (8.0%) and (5.3%) disagreed and “strongly disagreed” respectively to the notion that effective management has enhanced problem solving skills in project management. (10.7%) of the respondents remained neutral. This is illustrated in the summary table below:

**Table 4.5**

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	9	5.3	5.3	5.3
Disagree	11	8.0	8.0	13.3
Neutral	13	10.7	10.7	24.0
Agree	30	33.3	33.3	57.3
Strongly Agree	37	42.7	42.7	100.0
Total	100	100.0	100.0	

#### 4.3.2 Management skills and planning projects

(44%) of the respondents interviewed disclosed that they “strongly agreed” to the assertion that management skills are essential in the planning of projects. Meanwhile, (33%) did “agree” to the same even as (10.7%) remained non-committed to the same. A minority, (5.3%) and (6.7%) of the respondents interviewed “strongly disagreed” and “disagreed” respectively to the assertion that management skills are central to the planning of projects. Table 4.3 below gives a summary of the same.

**Table 4.6**

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	9	5.3	5.3	5.3
Disagree	10	6.7	6.7	12.0
Neutral	13	10.7	10.7	22.7
Agree	30	33.3	33.3	56.0
Strongly agree	38	44.0	44.0	100.0
Total	100	100.0	100.0	

### 4.3.3 Management skills have enhanced delegation of duties

Through management skills, delegation of duties to the various stakeholders has been achieved. This is according to (48.0%) who “strongly agreed” and (29.3%) who “agreed” to the assertion. Meanwhile, a minority of those respondents who were subjected to the interview session disclosed that they “strongly disagreed” to the assertion that through management, delegation of duties in project management have been enhanced. This was established to be at (2.7%) and (5.3%) who “strongly disagreed” and “disagreed” respectively.

**Table 4.7**

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	8	4.0	4.0	4.0
Disagree	9	5.3	5.3	9.3
Neutral	15	13.3	13.3	22.7
Agree	38	44.0	44.0	66.7
Strongly agree	30	33.3	33.3	100.0
Total	100	100.0	100.0	

#### 4.3.4 Management skills have improved transparency in project management

The study sought to understand the extent to which management skills have been used in improving the levels of transparency in project management. From the survey, majority of the respondents asserted that indeed management in project management has been key in the improvement of the transparency of the operations of the project implementers (48%). Meanwhile, (29.3%) “Agreed” to the same. In contrast, (2.7%) which is the minority “strongly disagreed” even as (5.3%) “Disagreed” to that effect. The summary output is in table 4.5 below.

**Table 4.8**

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	7	2.7	2.7	2.7
Disagree	9	5.3	5.3	8.0
Neutral	16	14.7	14.7	22.7
Agree	27	29.3	29.3	52.0
Strongly agree	41	48.0	48.0	100.0
Total	100	100.0	100.0	

#### 4.3.5 Extent to which "management" skills are relevant in the delivery of innovative strategies

Management skills in projects are quite essential in the delivery of innovation strategies in Dubai. This is according to (52%) of the respondents who noted that “to a very great extent,” these skills are essential. (36%) revealed that the skills are relevant to the delivery of innovation management “to a great extent” even as (8%) disclosed that the relevance is to a “moderate” extent. The minority (4%) opined that the relevance is “to a low extent.” Table 4.6 below summarises these findings.

**Table 4.9**

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	To a very low extent	5	4.0	4.0	4.0
	moderate extent	11	8.0	8.0	12.0
	great extent	32	36.0	36.0	48.0
	Very great extent	42	52.0	52.0	100.0
	Total	100	100.0	100.0	

#### 4.4 Technical skills

The study sought to outline the extent to which technical skills in project management have enhanced the management of innovation strategies in Dubai. This variable was focused on establishing the implications technical skills in managing innovative strategy projects in the country. The Likert scales below summarised the output of the results as far as the relevance of technical skills in enhancing innovation delivery skills are concerned in Dubai.

##### 4.4.1 Understanding about technical skills in project management

The concepts of technical skills in project management encompass the knowledge and skills that are specific for certain aspects of the project. This is according to (28.6%) of those interviewed. Meanwhile, (27.4%) were of the opinion that the while concept of technical skill in project management entails the skills that are needed after training to help in the management of projects. (23.8%) disclosed that it is about the practical skills that are needed in the implementation of various projects. (9.5%) of the respondents gave out varied responses on their ideas about technical skills as an important component of managing projects in Dubai. The summary output table below highlights these responses.

**Table 4.10**

	Frequency	Percent	Valid Percent	Cumulative Percent
Knowledge and skills for specific projects	30	28.6	28.6	39.3
Skills required after training to manage projects	29	27.4	27.4	66.7
Practical skills needed in the implementation of various projects	27	23.8	23.8	90.5

Other	12	9.5	9.5	100.0
Total	100	100.0	100.0	

#### 4.4.2 Enabled project management teams to design a proper financial plan

Technical skills have enabled the project management teams to design a proper pecuniary schedule for the project. This is according to the majority of the respondents in the study (57.1%) strongly agreed to this assertion even as (22.6%) “Agreed”. Meanwhile, the minority represented by (2.4%) strongly disagreed even as (1.2%) disagreed that technical skills are very essential in the budgeting phase of the project.

**Table 4.11**

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	7	2.4	2.4	13.1
Disagree	6	1.2	1.2	14.3
Neutral	11	6.0	6.0	20.2
Agree	24	22.6	22.6	42.9
Strongly agree	53	57.1	57.1	100.0
Total	100	100.0	100.0	

#### 4.4.3 Technical skills have promoted the use of technology in enhancing project management

Majority of the respondents noted that technical skills are critical in the promotion of the use of technological now-how in project management. (39.3%) and (27.4%) of the respondents either “strongly agreed” or “agreed” that this is true. Meanwhile, a minority of the interviewees disclosed that they “strongly disagreed” to the assertion that technical skills have been very essential in the promotion of the use of technology in promoting project management. The summary table below gives the details of the responses

**Table 4.12**

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	13	9.5	9.5	20.2
Disagree	11	7.1	7.1	27.4
Neutral	10	6.0	6.0	33.3
Agree	28	27.4	27.4	60.7
Strongly agree	38	39.3	39.3	100.0
Total	100	100.0	100.0	

#### 4.4.4 Project management teams are able to monitor the progress of projects effectively

Technical skills, according to (45.2%) of the respondents are essential in the promotion of monitoring and evaluation of the progress of progress involving innovation strategies in Dubai. this is comparable to the (3.6%) and the (7.1%) who disagreed to the notion that these skills are relevant to the monitoring of projects. (3.6%) remained neutral.

**Table 4.13**

	Frequency	Percent	Valid Percent	Cumulative Percent
	14	10.7	10.7	10.7
Strongly disagree	8	3.6	3.6	14.3
Disagree	11	7.1	7.1	21.4
Neutral	8	3.6	3.6	25.0
Agree	31	29.8	29.8	54.8

Strongly agree	43	45.2	45.2	100.0
Total	100	100.0	100.0	

#### 4.4.5 Extent to which technical skills have enhanced project management

To what extent are the technical skills in project management essential in handling projects of innovation delivery in Dubai? Majority of the respondents admitted that this is true to a very great extent (57.1%) as compared to the (17.9%) who maintained that these skills are essential to a “great” extent. (3.6%) disclosed that the extent is moderate even as (3.6%) and (7.1%) maintained that the technical skills have enhanced project management “to a very low” extent and to a low extent respectively. This is displayed in the summary table below.

**Table 4.14**

	Frequency	Percent	Valid Percent	Cumulative Percent
To a very low extent	8	3.6	4.0	4.0
To a low extent	11	7.1	8.0	12.0
To a moderate extent	8	3.6	4.0	16.0
To a great extent	20	17.9	20.0	36.0
to a very great extent	53	57.1	64.0	100.0
Total	100	100	100	

#### 4.5 Leadership skills in project management

Are leadership skills essential in project management of innovation strategies? To what extent are these leadership skills crucial in enhancing projects dealing with innovation strategies in Dubai? The research focused on leadership skills and their relevance on the same.

#### 4.5.1 Understanding about leadership skills in project management.

Leadership entails the inspiration of the project implementation team as disclosed by (76.2%) of the interviewees. (13.1%) however mentioned that leadership entails developing a performance appraisal system to evaluate the level of input of the project implementation team. This is comparable to the (10.7%) who gave varied responses as to the concept of leadership in project management. This was summarised in the output table below:

**Table 4.15**

	Frequency	Percent	Valid Percent	Cumulative Percent
		10.7	10.7	10.7
Inspiring team members for a specific course	84	76.2	76.2	86.9
Developing a performance appraisal system for project stakeholders	16	13.1	13.1	100.0
Total	100	100.0	100.0	

#### 4.5.2 Critical in promoting commitment to the pursuance of the project to its completion

Leadership skills in project management can improve the commitment of project team to the realization of the objectives of the projects. This is affirmed respectively by (29.8%)

And (44.0%) who “strongly agreed” and “agreed” that leadership promotes the commitments of the team members. However, (10.7%) disagree strongly even as (15.5%) “Disagree” that there is promotion of commitment to the project through leadership skills.

**Table 4.16**

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	14	10.7	10.7	10.7
Disagree	18	15.5	15.5	26.2
Agree	45	44.0	44.0	70.2
Strongly agree	30	29.8	29.8	100.0

Total	100	100.0	100.0
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#### 4.5.4 Through leadership skills, the project management team can effectively mobilize for resources for the project

Resource mobilization is an essential component of project management that leadership skills have enhanced. Majority of the interviewees “strongly agree” to this assertion at (25%) and (52%) who “agree.” Meanwhile, (10.7%) noted otherwise by “strongly disagreeing even as (2.4%) of the respondents remained neutral to the assertion that leadership skills are essential in resource mobilization for the project.

**Table 4.17**

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	9	10.7	10.7	10.7
Disagree	7	2.4	2.4	13.1
Neutral	7	2.4	2.4	15.5
Agree	11	7.1	7.1	22.6
Strongly agree	44	52.4	52.4	75.0
Total	21	25.0	25.0	100.0
Total	100	100.0	100.0	

#### 4.5.6 Extent to which Leadership skills have enhanced project management

(33.3%) noted that leadership skills have enhanced project management “to a very great extent” as compared to the (19%) who disclosed that this is practical to a “great” extent. Meanwhile, (17.9%) admitted that leadership skills have enhanced project management to a low extent. The summary table below gives other details from the respondents.

**Table 4.18**

	Frequency	Percent	Valid Percent	Cumulative Percent
To a moderate extent	22	19.0	21.3	21.3
To a great extent	22	19.0	21.3	42.7
To a low extent	17	17.9	20.0	62.7
to a very great extent	36	33.3	37.3	100.0

Total	100	89.3	100.0
Total		100.0	

## 4.6 Communication skills

The study also established that communication skills are quite important in the implementation and management of projects involving innovation strategy in Dubai. The concept of communication has been used in various modalities to promote the success rates of the projects. This section sought to understand the extent to which this variable can be used to promote the conceptualization and implementation of projects of innovation strategies in Dubai.

### 4.6.1 Enhanced correspondence between the project management and implementation team

Communication skills will help in the enhancement of the level of correspondence between the project management team. Majority of those interviewed agreed to this. (63.1%) did admit to the same even as (10.7%) “Agreed.” Meanwhile, the minority of the respondents disputed this assertion. (3.6%) and (7.1%) were cases of “strong disagreement and “disagreement” respectively.

**Table 4.19**

	Frequency	Percent	Valid Percent	Cumulative Percent
	9	10.7	10.7	10.7
Strongly disagree	8	3.6	3.6	14.3
Disagree	11	7.1	7.1	21.4
Neutral	9	4.8	4.8	26.2
Agree	14	10.7	10.7	36.9
Strongly agree	64	63.1	63.1	100.0
Total	100	100.0	100.0	

#### 4.6.2 Enhanced correspondence between the team and the outside world

Leadership skills in any project are essential “linkages” to the outside world according to (63.1%) of the study. (11.9%) equally agreed that through leadership skills, a project can maintain a good correspondence between itself and outer world. (4.8%) of the respondents “strongly disagreed” that correspondence between the project management team and the outside world is enhanced through effective communication skills. (4.8%) of the respondents remained neutral.

**Table 4.20**

	Frequency	Percent	Valid Percent	Cumulative Percent
	9	10.7	10.7	10.7
Strongly disagree	9	4.8	4.8	15.5
Disagree	9	4.8	4.8	20.2
Neutral	9	4.8	4.8	25.0
Agree	15	11.9	11.9	36.9
Strongly agree	64	63.1	63.1	100.0
Total	100	100.0	100.0	

#### 4.6.3 Strategic decisions are deliberated and acted upon effectively to the benefit of the project

(48.8%) strongly agreed that communication skills in the project implementation phase are important in the promotion of deliberation of ideas amongst the team members. (36.9%) agreed to the same notion even as (1.2%) disagreed that communication is important in the enhancement of internal deliberations to the benefit of the project. (1.2%) remained neutral.

The table below gives this verdict by the respondents.

**Table 4.21**

	Frequency	Percent	Valid Percent	Cumulative Percent
	9	10.7	10.7	10.7
Strongly disagree	6	1.2	1.2	11.9
Disagree	6	1.2	1.2	13.1

Neutral	6	1.2	1.2	14.3
Agree	37	36.9	36.9	51.2
Strongly agree	48	48.8	48.8	100.0
Total	100	100.0	100.0	

#### 4.6.4 Effective in developing a high level of trustworthiness amongst the project management team

The concept of communication has been christened as quite instrumental in entrenching trust amongst the project management team members. From the survey, (35.7%) and (23.8%) strongly agreed and agreed respectively to the assertion that communication aids in improvement of trust in project management. Moreover, (9.5%) and (8.3%) strongly disagreed and disagreed to the notion. This is comparable to (11.9%) who remained neutral. The table below outlined the details.

**Table 4.22**

	Frequency	Percent	Valid Percent	Cumulative Percent
	9	10.7	10.7	10.7
Strongly disagree	13	9.5	9.5	20.2
Disagree	12	8.3	8.3	28.6
Neutral	15	11.9	11.9	40.5
Agree	25	23.8	23.8	64.3
Strongly agree	35	35.7	35.7	100.0
Total	100	100.0	100.0	

#### 4.6.5 Extent to which communication skills have enhanced project management

Based on the majority of the respondents in the study, communication skills are really essential in the management of projects (41.7%). This is comparable to the (19.0%) who noted that the relevance is to “a great extent” while (19%) noted that it is to a moderate extent. Meanwhile, (9.5%) mentioned that the communication skills are to a low extent relevant in enhancing project management.

**Table 4.23**

	Frequency	Percent	Valid Percent	Cumulative Percent
To a moderate extent	20	19.0	21.3	21.3
To a great extent	20	19.0	21.3	42.7
To a low extent	14	9.5	10.7	53.3
to a very great extent	41	41.7	46.7	100.0
Total	100	100.0	100.0	

Total

#### 4.7 Correlations analyses

A Pearson (correlation analysis) was undertaken to establish the relationship between the extents to which technical skills have influenced project management. There was a positive correlation between technical skills and project management. This was equally established in terms of management skills and leadership skills where a positive correlation was noted. In essence, it is conclusive to admit that these three classes of skills have fundamental implications on project management. Table 4.24 below summarises this

	extent to which technical skills have enhanced project management	Effective management has enhanced problem solving skills	extent to which Leadership skills have enhanced project management
Pearson Correlation	1	-.114	-.013
Sig. (2-tailed)		.332	.915
N	100	100	100
Pearson Correlation	-.114	1	-.013
Sig. (2-tailed)	.332		.909
N	100	100	100
Pearson Correlation	-.013	-.013	1
Sig. (2-tailed)	.915	.909	
N	100	100	100

## **CHAPTER 5: DISCUSSION**

### **5.1 Management and leadership skills**

As discussed by Wolf and Hanisch (2014), there are various aspects of management of projects. Firms must be able to develop a clear management and leadership rubric if they are to ensure that their projects are well managed. Developing an effective management rubric cuts across the manner in which the resources of the project are managed beginning from the most important resource - labour, to other resources like capital (Pehrsson, 2007). As found out in this study, a conceptualisation of an effective management and leadership skills must thus be considered if projects of innovation strategies are to realise their objectives (Wolf and Hanisch, 2014).

This study emphatically notes that one aspect of management that must be entrenched in the project management lifecycle should focus on the improvement of the trust levels between the players in the project. Management, as a principle, must be hinged on various ethical precincts and his is meant to inspire trust amongst the project implementation team. According to the findings of Johnstone (2005), very many projects and activities of companies have failed based on poor trust between or amongst the project implementation team. This, furthers (Pehrsson, 2007), becomes an eye opener for various managers engaged in the monitoring of specific projects. There is substantial input of the type of management adopted in a project on the success of the project. Considerably, the project management team should be able to develop a culture within the organization that ensures that the team holds each other in high esteem, accountability is enhanced a consequence of which is improved trust level between the players involved in project implementation and management.

Effective management, especially within the realms of human resource, is quite essential in the enhancement of the success of the project. This study has since established this assertion that in order to succeed; the human resource engaged in the implementation of the projects must be well

managed. A proper rubric of management should be developed by the organization as a way of ensuring that each member of the staff optimally contributes to the execution of the project. Colino (1986) cites various human resource management principles like the delegation of duties, teamwork and motivation as some of the leading facets of human resource development that should be pursued by the project management and implementation team to ensure that a specific project is established on a pedestal of success.

Management and leadership have also been found out to be critical in the planning of the project. According to the findings of this study, management as a pillar of project management relies heavily on planning (Johnstone, 2005). To ensure that the project succeeds, the stakeholders must lay down a structure or a plan segmented into various aspects. Effective management should thus be receptive to effective planning modalities as a way of enhancing the success probability of a project. The findings of this study affirm what Christophe (2016) noted in the work, He mentions that throughout all the project lifecycles, planning is an essential aspect that cannot be ignored. It is important if all the stakeholders are engaged in the planning and conceptualisation phase. All these aspects of planning are embedded within management as a principle.

The success of any innovation management strategy, as developed by , cannot be realised if the management is poor or weak. And as deduced from the studies of Richman (2012, management and leadership skills seem to be one and the same with very little variations in the manner in which they are executed. The findings of this study is that majority of the respondents interviewed are in agreement that there is need to develop a very firm leadership strategy, coupled with a robust management skill to be able to realise the objectives of the program innovation strategy. Colino (1986 notes that in the private sector, emphasis is made on these two skills because they are considered as the key driver of the innovatin strategies. But while focus is on these skills, many scholars have noted that the element of experience is equally a factor of project management in innovation strategy.

Based on the theoretical strands of this study, there is sufficient proof to admit that the implementation of any innovation strategy relies heavily on good management and leadership skills (Richman,2012). There is a sense from the findings of this study that the conceptualisation of any innovation strategy cannot be considered complete if the model of managing the strategy is not taken into account. The model of the management is dependent on the skills of the managers. But while this is a very critical component of managing innovation strategies Kerzner (2009) discloses that the concept of management is segmented at various levels. This resonates well with the assertions of Kidd (2009) who noted that the management skills require to be segmented at different levels for effective delivery of innovation strategy.

### **5.3 Technical skills**

Projects rely on various technical skills to be executed successfully. In fact, according to the findings of Msoroka (2012), the efficiency in the execution of the mandate of the project relies heavily on the technical abilities of the project implementation and management team. This has further been explained by Richman (2012) in the studies, *Project design and management knowledge and project management skills* that the human resource capital is the singular most important aspect of project management that will determine its successful completion or otherwise. In this regard, the hiring of the human resource capital must be based on competitive bidding and the evaluation of the technical abilities of the human resources.

In terms of planning, projects would require sufficient knowledge –technical for that matter, to establish the framework of operations and succinctly outline the project schedule. Developing a project schedule requires immense technical skills. As noted by Kerzner (2009), it entails the quantization of the tasks involved in the project and developing a robust working schedule based on this. Corroborates the relevance of technical skills by noting that technical skills are essential in the budgeting for the project. Developing a clear bill of quantities for instance, must be based on sufficient technical skills by the project management team and

perhaps, an extensive experience. The team should have the wherewithal to capture all the tasks anticipated in the project, all the materials that would be required during the project lifecycle and compute the cost implications of the project in terms of time and resources, these are activities that require elaborate skills.

Other than developing a concise financial plan for the project, technical skills in project management have also been noted to be quite relevant in the implementation of the use of technology in the specific project. The use of technology in project management has plenty of merits. Having technical skills enable member to employ the use of thee disruptive technological concepts to improve the success rate of the project. Kidd (2009) notes that the use of technology in project implementation has immense value to the project management team and thus it must be encouraged by all means.

One of the most critical aspects of project management is monitoring and evaluating the project in its completion. This study has effectively found out that technical skills have been frequently used in the monitoring of various aspects of the project. Monitoring the progress of project n tony enables the project management team to formulate strategies to improve the project, but also aids in saving resources that would otherwise be plunged into the project. There is a growing proposal to ensure that the project management team selected for a specific project should be well trained in their technical fields to ensure that the project runs very smoothly. In fact, notes that other hiring the best trained human resource capital, it is critical and even more practical that the staff members are well trained in various aspects of the project to give them a mastery of the project so that the implementation phase of the project may be as seamless as possible. To a large extent do the technical skills of the project management team influence the performance of the project?

One of the most important dimensions of effective implementation of innovation strategy is embedded in the technical abilities of the stakeholders in the program. Sozuer & Spang (2014) emphasised this by noting that technical skills are the pillars of any program. The stakeholders in any project management for innovation strategy should be competitive in their areas of expertise. The responses in this study seems to support this admission by Shackelford (2004). Expertise in their areas of operation cements the success of the project (Kidd ,2009) since the input in the project is the requires input. Camillus (2011) develops this further by noting that while management and leadership remains critical skills in giving the directions of the project, the technical skills are the foundations of the study. the stakeholders should execute their skills within the standards required if the innovation strategy is to be successful.

#### **5. 4 Communication skills**

Communication skills are central in the management of projects. This study laid emphasis on the relevance of communication in enhancing the correspondence between the project management team and the outside world. This study corresponds with the conclusions made by (Shackelford (2004) that project management team must be able to develop a very strong communication management strategy as a way of improving the relations between the project and the outside world. This means that the project management team should maintain a very “clear and succinct” information regarding the progress of the project, the hitches and whatever communiqué that the project management team deems fit to communicate to the public.

Government projects for instance, require constant updates since the public interest seems to be quite humongous. In this regard, communication will act as a very important bridge through which the public can access the details about the project that are deemed relevant to be communicated to them. Essentially, through effective communication modalities, the project management team gets to correspond with other stakeholders who may not be directly engaged in the project, but needs to know the project progress.

But while communication has been labelled as an important tool to correspond with the outside world, its relevance is still eminent within the project management team (Sozuer & Spang, 2014). This study asserts that correspondence between the project management team is even more important and this necessitates the team to develop a very elaborate communication procedure. Moreover, the project management and implementation tool requires an effective chain of communication right from the project management to the lowest cadre of staff. In his detailed analysis of the role of communication in project management, Sozuer & Spang (2014) disclose that the success of the project is deeply intertwined with the communication model embraced by the team. An effective communication framework leads to improved work relations between the various stakeholders involved in the project. There is a “seamless” work process in a project where the communication model established is relevant (Shackelford, 2004).

Deliberations of strategic decisions, making structural adjustments to the projects and even conceptualising improvement strategies for the project are inherently connected to the communication model developed by the project. Undertaking all these activities require a robust communication process amongst all the stakeholders involved. In this regard, it is definite to admit that communication plays a major role in the effective project management of innovation strategies. The implications of this finding is that the operational template of any project management lifecycle must be founded within a practical yet effective communication model. Camillus (2011) describes a good communication model as one that is capable of giving all the members of the team an opportunity to “be heard” and even “to listen.” But most notably, as opined by Lee (2014), good communication templates must be hinged on the concept of clarity and promptness. The project management team must receive and even send out any form of communication in very clear terms to the rest of the team. Providently, the team should ensure that the model of communication embraced is cognizant of the value of time as a resource in

project management so that any form of communication is prompt enough for the team members to work on it effectively.

## CONCLUSION

Evidently, this study affirms that delivering any innovation strategy requires several project management skills and not a single skill. The findings in this study affirm the assertions of Niemann (2014) that the implementation of any innovation strategy requires several skills of project management to be harnessed. These skills need to be harnessed to create a synergy for effective delivery of these innovation strategies. In his study regarding the implementation strategies of social investments, Shackelford, (2004) noted that program managers need to better understand the manner in which they approach the society. In this regard, he notes that there is need to develop robust communication skills to this effect. Indeed this study affirms that amongst the many project management skills that are required in the implementation of innovation strategies. His assertions are affirmed by this study as well that communication is amongst the key principles of project management for innovation strategies either in the government or for the private sector (Camillus, 2011).

Coupled with the communication skill, this study emphatically admits that there is need for the stakeholders to have an in-deep understanding of how to lead in any project being undertaken. This is why Borins (2002) noted that there cannot be any successful execution of any program without leadership. Through leadership, the trajectory of the implementation process can be directed towards success. But while Webb (2000) agrees that the leadership skills are quite relevant in the implementation of innovation strategies, he discloses that a combination of communication and leadership skills in the implementation of innovation strategies is more desirable.

There is need for the stakeholders engaged in the implementation of an innovation strategy to undergo training in leadership if the innovation strategy implementation is to be successful. Turner, (2016) compares leadership as the compass that directs the implementation of the project to its completion. In fact, his sentiments resonate very well with the assertions that

have been made in this study noting that leadership must give direction in the implementation of the innovation strategy and this can only be made possible if the stakeholders in the project are endowed with the right leadership skills.

This paper also affirms that technical skills are eminent in the implementation of any innovation strategy. It is quite important that the executioners of an innovation strategy are aware of the technicalities of the innovation strategy (Webb, 2000). This is a mandatory requirement in any project implementation since the success of the whole project is built on the extent to which the stakeholders know and understand what they intend to implement.

Conclusively, this study notes that the successful implementation of an innovation strategy is dependent on several factors (Buser, 2014). There is no single factor that can be pointed out as more significant as compared to the other. Rather, a combination of all these skills described in this study is capable of generating a desirable outcome in as far as the implementation of the innovation strategy is concerned (Niemann, 2014). The implications of this study to the project managers and implementers are quite evident. There needs to be clear training schedules where these skills are imparted to them as a way of enhancing the success rate of the innovation project.

## References

- Attaran, M. (2007). Collaborative computing: a new management strategy for increasing productivity and building a better business. *Business Strategy Series*, 8(6), pp.387-393.
- Ayala Calvo, J. and Manzano Marcía, g. (2010). Established business owners' success: influencing factors. *Journal of Developmental Entrepreneurship*, 15(03), pp.263-286.
- Al-Shahi, R. (2005). Bias from requiring explicit consent from all participants in observational research: prospective, population based study. *BMJ*, 331(7522), pp.942-0.
- Alsughayir, A. (2014). Human Resource Strategies as a Mediator between Leadership and Organizational Performance. *International Business Research*, 7(3).
- Bartlett, J. (2004). *Project risk analysis and management guide*. High Wycombe: Association for Project Management.
- Buser, R. A., Massis, B. E., & Pollack, M. (2014). *Project management for libraries: A practical approach*.
- Borins, S., 2002. Leadership and innovation in the public sector. *Leadership & Organization Development Journal*, 23(8), pp. pp.467 - 476.
- Business strategy and the environment. (1993). *Environment International*, 19(3), p.310.
- Barbara, S. (2016). Selected Aspects Of Grounded Theory Methodology. A Qualitative Research Strategy. *Seminare. Poszukiwania naukowe*, 2016(37)(nr 4), pp.139-149.
- Christophe, E. A., 2016. Project and Innovation Management: Bridging Contemporary Trends in Theory and Practice. *Project Management Journal*, 47(2).
- Camillus, J. (2011). Organisational identity and the business environment: the strategic connection. *International Journal of Business Environment*, 4(4), p.306.

Caprotti, F. (2012). Environment, Business and the Firm. *Geography Compass*, 6(3), pp.163-174.

Chmielecki, M. (2015). Factors Influencing Effectiveness of Internal Communication.

*Management and Business Administration, Central Europe*, 23(2), pp.24-38.

Ceric, A. (2014). Strategies for minimizing information asymmetries in construction projects: project managers' perceptions. *Journal of Business Economics and Management*, 15(3), pp.424-440.

Colino, R. (1986). Turnaround strategies for an international organization. *Journal of Business Strategy*, 7(2), pp.52-61.

Cartwright, A. (1988). Interviews or Postal Questionnaires? Comparisons of Data about Women's Experiences with Maternity Services. *The Milbank Quarterly*, 66(1), p.172.

Etchegaray, J. and Fischer, W. (2010). Understanding Evidence-Based Research Methods: Reliability and Validity Considerations in Survey Research. *HERD: Health Environments Research & Design Journal*, 4(1), pp.131-135.

Fowler, D. (1993). Packaging and world class competitive products. *Packaging Technology and Science*, 6(6), pp.291-296.

Fedorova, E. and Boldyreva, R. (2014). Innovative approach to strategic management of the enterprises. *Business Strategies*, (1), p.22.

Frederiksen, M. and Knudsen, M. (2017). From Creative Ideas to Innovation Performance: The Role of Assessment Criteria. *Creativity and Innovation Management*, 26(1), pp.60-74.

- Gesche, J., Renault, K., Nørgaard, K. and Nilas, L. (2014). Representativeness of Participants in a Lifestyle Intervention Study in Obese Pregnant Women - the Difference between Study Participants and Non-Participants. *Obesity Facts*, 7(6), pp.351-360.
- Guimaraes, T. and Langley, K. (1994). Developing Innovation Benchmarks: An Empirical Study. *Benchmarking for Quality Management & Technology*, 1(3), pp.3-20
- Hwang, B. and Ng, W. (2013). Project management knowledge and skills for green construction: Overcoming challenges. *International Journal of Project Management*, 31(2), pp.272-284.
- Hans-Georg, G., 2016. Project Networks—an Important—but Still Under-Researched Topic in Project Management Research. *Project Management Journal*, p. 1.
- Hermarij, J., & Bruce-Feijen, T. (2016). *The better practices of project management: Based on IPMA competences*. Zaltbommel: Van Haren Publishing.
- Huemann, M., Keegan, A., and Muller, R., 2016. Managing the project-based organization. *International Journal of Project Management*, 34(8), p. Pages 1670–1671.
- Innovation performance and the role of senior management. (2004). *Strategic Direction*, 20(5), pp.28-30.
- Johnstone, M. (2005). Applying small business success strategies in the corporate world. *Handbook of Business Strategy*, 6(1), pp.235-238.
- Kerzner, H. (2004). *Advanced project management: Best practices on implementation*. Hoboken, N.J: Wiley.

- Kerzner, H. (2009). *Project management: A systems approach to planning, scheduling, and controlling*. Hoboken, N.J: John Wiley & Sons.
- Kerzner, H. (2015). *Project management 2.0: Leveraging tools, distributed collaboration, and metrics for project success*.
- Kidd, T. T. (2009). *Handbook of research on technology project management, planning, and operations*. Hershey, PA: Information Science Reference.
- Korhonen, T. L. T. a. M. M., 2014. Management Control of Project Portfolio Uncertainty: A Managerial Role Perspective (pages 21–37). *Project Management Journal*.
- Kennedy, S. (2005). *The business of lobbying in China*. 1st ed. Cambridge, Mass.: Harvard University Press.
- Kotey, B. (1999). Debt Financing and Factors Internal to the Business. *International Small Business Journal*, 17(3), pp.11-29.
- Krasavin, e. and Kasavina, r. (2015). immanence and complementary features of creative processes in small innovative enterprises. *Historical and social-educational ideas*, 6(6\_2), p.246.
- Kuryatnikov, A. and Linder, N. (2015). Features of creation of corporate innovative systems of holdings. management of innovative processes of holding. *Business Strategies*, (8), p.3.
- Khin, S., Hazlina Ahmad, N. and Ramayah, T. (2010). Product innovation among ICT technopreneurs in Malaysia. *Business Strategy Series*, 11(6), pp.397-406.
- Keil, M., Lee, H. and Deng, T. (2013). Understanding the most critical skills for managing IT projects: A Delphi study of IT project managers. *Information & Management*, 50(7), pp.398-414.

- Lezhneva, A. and Kozhevina, O. (2016). CREATING COMPETITIVE ADVANTAGES THROUGH INNOVATION STRATEGY IMPLEMENTATION. *Business Strategies*, (5), p.4.
- Lock, D. (2013). *Project management*. Burlington, VT: Gower.
- Lecraw, D. (1989). The Management of Countertrade: Factors Influencing Success. *Journal of International Business Studies*, 20(1), pp.41-59.
- Lee, J. (2014). Reviewer Acknowledgements for Business Management and Strategy, Vol. 5, No. 1. *Business Management and Strategy*, 5(1), p.212.
- Longman, A. and Mullins, J. (2004). Project management: key tool for implementing strategy. *Journal of Business Strategy*, 25(5), pp.54-60.
- Lezhneva, A. and Kozhevina, O. (2016). Creating competitive advantages through innovation strategy implementation. *Business Strategies*, (5), p.4.
- McLafferty, I. (2004). Focus group interviews as a data collecting strategy. *Journal of Advanced Nursing*, 48(2), pp.187-194.
- Msoroka, M. (2012). *Project design and management knowledge and project management skills: Mohamed Msoroka*. Munich: Grin Verlag.
- Mesa, H., Molenaar, K., & Alarcon L, 2016. Exploring performance of the integrated project delivery process on complex building projects. *International Journal of Project Management*, 34(7), p. Pages 1089–1101.
- Mitchell-Ketzes, S. (2003). Optimising business performance through innovative workplace strategies. *Journal of Facilities Management*, 2(3), pp.258-275.

- Marchi, V., Maria, E. and Micelli, S. (2012). Environmental Strategies, Upgrading and Competitive Advantage in Global Value Chains. *Business Strategy and the Environment*, 22(1), pp.62-72.
- Niemann, H., 2014. Project Management–Related Software Systems and Their Legal Protection: Emergence, Distribution, and Relevance of Business Method Patents. *Project Management Journal*, pp. pp. 38-54.
- Newton, S. (2013). *The professional's guide to business development*. 1st ed. London: Kogan Page23.
- Niemczyk, J. (2011). A Strategy as an Innovation - A New Strategy Concept. *Organization and Management*, 2011(5 (148)).
- Pehrsson, A. (2007). The “Strategic States Model”: strategies for business growth. *Business Strategy Series*, 8(1), pp.58-63.
- Provasnek, A., Schmid, E., Geissler, B. and Steiner, G. (2016). Sustainable Corporate Entrepreneurship: Performance and Strategies Toward Innovation. *Business Strategy and the Environment*.
- Pollack, J. and Adler, D. (2016). Skills that improve profitability: The relationship between project management, IT skills, and small to medium enterprise profitability. *International Journal of Project Management*, 34(5), pp.831-838.
- Pomorski, L. (n.d.). Acting on the Most Valuable Information: 'Best Idea' Trades of Mutual Fund Managers. *SSRN Electronic Journal*.

- Quesada, H. and Gazo, R. (2007). Methodology for determining key internal business processes based on critical success factors. *Business Process Management Journal*, 13(1), pp.5-20.
- Richman, L. L. (2012). *Improving your+ project management skills*. New York: American Management Association.
- Rocheleau, B. A. (2006). *Public management information systems*. Hershey, Pa: Idea Group Pub.
- Rahman, M. (2016). Organization Strategies & Innovative Leadership Management. *International Journal of Business and Management*, 11(10), p.206.
- Shackelford, B. (2004). *Project management training*. Alexandria, Va.: ASTD Press.
- Sozuer, M., & Spang, K., 2014. The Importance of Project Management in the Planning Process of Transport Infrastructure Projects in Germany. *Procedia - Social and Behavioral Sciences*, Volume 119, pp. Pages 601-610.
- Sykes, H. (1986). The anatomy of a corporate venturing program: Factors influencing success. *Journal of Business Venturing*, 1(3), pp.275-293.
- Salunke, S., Weerawardena, J. and McColl-Kennedy, J. (2011). Towards a model of dynamic capabilities in innovation-based competitive strategy: Insights from project-oriented service firms. *Industrial Marketing Management*, 40(8), pp.1251-1263.
- Shazia, A. (2012). Innovative instructional strategies: A business and management perspective. *African Journal of Business Management*, 6(44), pp.10958-10966.
- Sunindijo, R. (2015). Project manager skills for improving project performance. *International Journal of Business Performance Management*, 16(1), p.67.

Sjölin, V. (1988). Introduction - the value of effective communication. *Fire and Materials*, 13(1), pp.277-282.

Stephens, N. (2007). Collecting data from elites and ultra elites: telephone and face-to-face interviews with macroeconomists. *Qualitative Research*, 7(2), pp.203-216.

Strohmeier, S. (1992). Development of interpersonal skills for senior project managers. *International Journal of Project Management*, 10(1), pp.45-48.

Vanhaverbeke, W. and Peeters, N. (2005). Embracing Innovation as Strategy: Corporate Venturing, Competence Building and Corporate Strategy Making. *Creativity and Innovation Management*, 14(3), pp.246-257.

Vel, K., Dayal, A. and Eastaugh, D. (2010). Retail physicality and identity change as innovation strategies: the case of Better Life. *Business Strategy Series*, 11(4), pp.204-213.

Waheed, Z. (2016). Understanding Project Management: Skills and Insights for Successful Project Delivery  
Understanding Project Management: Skills and Insights for Successful Project Delivery Gary Straw Kogan Page 2015 Softback 328 pp. £29.99 ISBN: 978-0-7494-7055-5. *Facilities*, 34(7/8), pp.493-494.

Wolf, P. and Hanisch, C. (2014). Managing regional innovation strategy projects. *Organisational Project Management*, 1(1), p.37.

## Questionnaire

QUESTIONNAIRE	<b>PART ONE: GENERAL INFORMATION</b> <i>Please tick one box for each question:</i>
	<b>A. Age:</b>  (1) 26-30 <span style="float: right;">(✓)</span>  (2) 31-35 <span style="float: right;">( )</span>  (3) Above 35 <span style="float: right;">( )</span>
	<b>B. Gender</b>  (1) Male <span style="float: right;">(✓)</span>  (2) Female <span style="float: right;">( )</span>
	<b>C. Experience</b>  (1) 0-2 years <span style="float: right;">(✓)</span>  (2) 3-5 years <span style="float: right;">( )</span>  (3) +5 years <span style="float: right;">( )</span>
	<b>D. Organizational Position</b>  (1) Junior Officer <span style="float: right;">( ✓)</span>  (2) Middle Management <span style="float: right;">( )</span>

	(3) Senior Officer ( ✓ )
Management skills in projects	<ol style="list-style-type: none"> <li>1. Problem solving skills</li> <li>2. Management skills and planning projects</li> <li>3. Management skills have enhanced delegation of duties</li> <li>4. Management skills have improved transparency in project management</li> <li>5. Extent to which "management" skills are relevant in the delivery of innovative strategies</li> </ol>
Technical skills	<ol style="list-style-type: none"> <li>1. Understanding about technical skills in project management</li> <li>2. Enabled project management teams to design a proper financial plan</li> </ol>

	<ol style="list-style-type: none"> <li>3. Technical skills have promoted the use of technology in enhancing project management</li> <li>4. Project management teams are able to monitor the progress of projects effectively</li> <li>5. Extent to which technical skills have enhanced project management</li> </ol>
<p>Leadership skills in project management</p>	<ol style="list-style-type: none"> <li>1. Understanding about leadership skills in project management.</li> <li>2. Critical in promoting commitment to the pursuance of the project to its completion</li> <li>3. Through leadership skills, the project management team can effectively mobilize for resources for the project</li> <li>4. Extent to which Leadership skills have enhanced project</li> </ol>

	management
Communication skills	<ol style="list-style-type: none"><li>1. Enhanced correspondence between the project management and implementation team</li><li>2. Enhanced correspondence between the team and the outside world</li><li>3. Strategic decisions are deliberated and acted upon effectively to the benefit of the project</li><li>4. Effective in developing a high level of trustworthiness amongst the project management team</li><li>5. Extent to which communication skills have enhanced project management</li></ol>

END