

# A Study on How Projects Planning Leads to

# **Projects Success**

دراسة عن كيفية تخطيط المشاريع لضمان نجاح المشاريع

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# Dissertation submitted in partial fulfillment of the requirements for the degree of MSc Project Management

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## DISSERTATION RELEASE FORM

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Title

A STUDY ON HOW PROJECTS PLANNING LEADS TO PROJECTS SUCCESS

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#### Abstract

A project manager's responsibility by and large as a leader is to guide the entire project team, to work towards successful completion of a project according to the predetermined goals. This research study looks into the connection between project planning and project success taking the case of a construction project. This was done by examining to what extent project planning plays a significant role in ensuring a project attains success status. The major aspects of project planning were examined and they include; requirements definition along with development of project specifications as well as project management processes and benefits of project planning. These pivotal aspects of project planning were analysed with respect to project success as far as the end user, the stakeholders and the entire project team are concerned.

A number of researchers indicated that at the project planning stage it is quite challenging for the project team, particularly to accurately determine actual project tasks needed to complete a project. However, in reality project planning ensures fundamental facts about a project such as scope, schedule, design and quality likewise budgets are projected for the entire project life, this in turn impacts the rest of the project phases. This is the case as the project plan documents and guides the execution of project activities while taking into account constraints such as time and quality among many others. In the end, this research has established that given the impact of project planning in every project stage and if done well, it can be a good platform to ensure the project team and project activities continually pull in the same direction to make a project successful. More importantly, project success implies a number of things to the project stakeholders, so a broad definition of project success has to be taken into account when embarking on a project.

*Keywords*: Project planning; project execution; project success; strategy; project team.

## **Arabic Abstract**

الخلاصة

مسؤولية مدير المشروع من قبل والكبيرة كإداري هو لإرشاد فريق المشروع بأكمله على العمل من أجل الانتهاء بنجاح من المشروع وفقا للأهداف المحددة سلفا . تبحث هذه الدراسة في العلاقة بين تخطيط المشروع و نجاح المشروع وأجريت هذه الدراسة على المشاريع المعمارية . وقد تم ذلك عن طريق فحص مدى الدور الهام الذي يلعبه التخطيط للمشروع في ضمان نجاح المشروع.

تم فحص الجوانب الرئيسية لتخطيط المشروع وأنها تشمل؛ تعريف متطلبات المشروع جنبا إلى جنب مع تطوير مواصفات المشروع فضلا عن عمليات إدارة المشاريع وفوائد التخطيط للمشروع . وقد تم تحليل هذه الجوانب المحورية من التخطيط للمشروع فيما يتعلق نجاح المشروع بتقدير للمستخدم النهائي وفريق المشروع بأكمله .

وأشار عدد من الباحثين أنه في مرحلة التخطيط للمشروع هو تحد كبير لفريق المشروع ، وبخاصة أن تحدد بدقة مهام المشروع الفعلية اللازمة لإكمال المشروع . ومع ذلك ، في تخطيط المشاريع واقع يضمن الحقائق الأساسية عن مشروع مثل الجدول الزمني، التصميم و الجودة والميزانية المالية لحياة المشروع بأكمله ، وهذا بدوره يؤثر على بقية مراحل المشروع .

هذا هو الحال في وثائق خطة المشروع وأدلة تنفيذ أنشطة المشروع مع الأخذ بعين الاعتبار القيود مثل الوقت و الجودة ضمن أشياء أخرى كثيرة . في النهاية ، فقد أنشأت هذه الأبحاث نظرا لتأثير تخطيط المشاريع في كل مرحلة من مراحل المشروع ، وإذا نجحت ، يمكن أن تكون منصة جيدة لضمان فريق المشروع و أنشطة المشروع بالاستمرار في نفس الاتجاه لجعل المشروع ناجح . والأهم من ذلك نجاح المشروع ينطوي على عدد من الأشياء لأصحاب المصلحة في المشروع ، لذلك تعريفا واسعا عن نجاح المشروع يجب أن يؤخذ بعين الاعتبار عند الشروع في المشروع.

كلمات البحث: تخطيط المشروع ؛ تنفيذ المشروع ؛ نجاح المشروع ؛ الاستر اتيجية ؛ فريق المشروع

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#### **CHAPTER 1: INTRODUCTION TO THE STUDY**

For every project it is anticipated that the project leader will devise a detailed project plan in the planning stage, and further ensure that it is enforced in a manner consistent to the project vision as well as mission (Bender 2009). Incidentally, according to Wong (2010) though project planning is a crucial aspect of any project management process, currently a number of project leaders and even project teams are yet to fully comprehend how it is linked to a project's success. Without doubt this lack of adequate comprehension of the contributions of project planning specifically to project success has lead to numerous cases of project failure.

Altogether, a project ought to be planned to a suitable degree purposely to effectively utilise time and many other project resources while at the same time reducing the negative effects of project constraints such as costs and risks. This is simply because failure to sufficiently plan project activities in one way or another heightens chances of project failure, as the project team would lose focus for project activities (Wysocki 2011). This first chapter introduces the crucial aspects of this research study such as the background of the problem along with research objectives and research hypothesis as indicated in the subsections below.

#### **1.1. Introduction to the Problem**

Project success unavoidably is the responsibility of not only project leaders but also of the entire project team, who are collectively required to carefully plan project activities from inception to project closure (Camilleri 2011). A project as defined in Wysocki (2011) is basically a short-term undertaking, which has a specified start and end period. This undertaking is also carried out using limited resources such as time and finances, chiefly to accomplish predetermined goals. Incidentally, for every project, a comprehensive project plan as pointed out in Bender (2009) is among the necessities that project teams and their leaders alike need to take into account prior to setting about a project. Ideally, comprehensive project plans are created during the project planning stage of the project management process.

Where project planning according to Dvir, Raz and Shenhar (2003) basically involves activities such as creation of project schedule, budget, establishment of risk strategies and preparation of project objectives along with project deliverables among many other plans. This stage is finalised when a project team seeks formal approval for the comprehensive project plan before its enactment. In other words, project planning calls for efficacious integration of performance criteria and project objectives to enable a project team ameliorate its project delivery and ultimately its outcome (Turner and Zolin 2012).

More importantly, the project planning stage is essentially to enable the project team to better comprehend project drivers and other related issues, so as to make sure that a given project fulfils the set objectives (Belout and Gauvreau 2004). However, in most cases project planning is given little attention than it deserves, in favour of carrying on with the rest of the project activities such as implementation. The major reason being those involved in a project do not fully understand how project planning could impact project success. This has continued to lead to a situation where project teams fail to recognize the importance of project plans, particularly in utilizing project resources such as time and finances likewise in handling project challenges (Camilleri 2011). This study examines the relationship between project planning and project success, by analysing the effort spent in project planning and the measure of the level of success met taking the case of a construction project.

#### **1.2. Background of the Problem**

For each project undertaken, the project planning stage is an essential constituent since it necessitates the project team to lay down fundamental project activities and how such activities are to be carried out using available resources (Bender 2009). Some of the crucial activities undertaken at the project planning stage include extensive preparations for the each project phase such as allocation of resources and preparation of detailed project designs. Correspondingly, project planning as indicated in Belout and Gauvreau (2004) touches on dealing with project issues in a way that customer needs along with expectations are adequately addressed. This is for every project team member to adequately

comprehend what is required to realize project goals of time and quality as well as budget, and for project issues to be noted as well as tackled, early enough before they cause unnecessary inconveniences (Turner and Zolin 2012).

More importantly, the outmost touchstone of project success is based on its delivery, which is drawn from the effort and care along with skills the project team input at the planning stage (Reiss 2007). Whereby, a project as pointed out in Gido and Clements (2008) is broken down into a number of deliverables, with the net deliverable being the end product of the project. Here, without coherent as well as timely delivery the project will most likely fail; hence the project team and its leader ought to ensure the project runs smoothly towards realisation of project objectives, which will translate to more trust from clients (Belout and Gauvreau 2004).

In reality, most project teams and their leaders are not fully aware that project planning in a significant manner influences the overall outcomes of the project (Reiss 2007). Even with the fact that extensive project planning as pointed out in Belout and Gauvreau (2004) is needed to determine overall project direction prior to its implementation, and to ensure coherence in the execution of project activities as the project team get to understand their role in the project . Markedly, this stage demands that major project stakeholders actively engage in setting project objectives and ways in which such objectives will be realized. This is simply done by establishing the relationship between project planning and its success, in doing so project teams are better placed to improve on project planning activities.

#### **1.3. Rationale of Study**

Once the nature as well as scope of the project has been established, the following step involves extensive project planning activities. Whereby the main intention is to make systematic designs on how to utilise project resources, lay out project plans and identify the actual activities that ought to be carried out to attain project goals (Belout and Gauvreau 2004). Project planning according to Gido and Clements (2008) is an inescapable stage in a project, construction projects included as it explores the crucial project activities and how they should

be carried out to accomplish desired objectives. Specifically, project planning being a stage where strategies are laid down on how the project team is to stay on course of attaining project goals. Whereby, some of the major activities involved in project planning include; ascertaining the design a project, which is followed by formulation of the anticipated project scope and choosing of project team (Bender 2009).

Also important in the planning stage is the keying out of project deliverables and establishing the overall work breakdown composition, together with the laying out activities required to meet those deliverables (Belout and Gauvreau 2004). In addition to that, approximation of resources needs, time and cost relating to the project activities is done at the project planning stage. The manner in which the all those project planning activities are carried out either directly or indirectly influence the final outcome of a project (Wong 2010).

In the modern business world, the major challenge for the project leaders as well as the project teams is to establish effective ways on how to plan and meet project objectives, even with the ineluctable project constraints (Poli, Cosic and Lalic 2010). Unless radical measures are taken to emphasize the impact of planning on project success, project planning will definitely continue to face several challenges now and in the future. This concern points at the need to unearth the relationship between project planning in line with project success in the contemporary business scene.

The study of a link between project planning and project success in construction projects will serve as an important contribution to respond to the research question. This study is steered by the rationale of digging into relationship between project planning and its success taking the case of a construction project. Also, this study will help to build up information consistent to research findings on project planning and project success.

#### 1.4. Aims and Objectives of Study

Effective integration of competent human resources, good planning along with risk management and great project execution as well as good communication all in one way or another influence project success (Reiss 2007). In a move to establish the relationship between project planning and project success, this research work has critically analysed major project planning activities and how such activities can either make or break successful delivery of a project (Gido and Clements 2008). The purpose of this study is to establish the link between project planning and project success and key features of successful projects, taking the case of a construction project. As shaped by the purpose of the study, the major objectives of this dissertation are;

- To identify crucial project planning activities taking the case of a construction project.
- To analyse the importance of project planning.
- To examine the various project pressures and their effect on project success.
- To examine factors responsible for project success and the criteria for project success.
- To evaluate ways of measuring project success in a construction project.
- To develop a dynamic project planning process that will increase chances of project success.

#### **1.5. Research Question**

The research question for this dissertation is "To establish and evaluate the relationship that exists between project planning and project success, taking the case of a construction project and to ascertain ways to increase chances of project success through project planning". The working hypotheses for this research study are: first is that project planning is a major factor for project success irrespective of the field of a given project. The second hypothesis is that project planning heightens possibilities for effectively integrating project activities, an aspect that is pivotal for project success.

#### **1.6. Definition of Terms**

**Projects** as defined in Wong (2010) are a set of activities with a predetermined start as well as completion period aimed at accomplishing certain objectives. This

term was chosen and defined to enable the reader of this document to understand the difference between a project and other company operations.

**Planning** - as described in Reiss (2007) is a cognitive process that entails formulation of action plans regarding a given activity such as a project. This term is frequently spotted in this document since it is a major research variable in this research study.

**Project success** – is a state where the predetermined project objectives are accomplished Gido and Clements (2008). This is one of the major research variables used to respond to the research topic.

**Deliverable** – as discussed in Gido and Clements (2008) is the outcome of a project which includes a full functional housing facility in the case of a construction project. A term that is used interchangeably with project results simply to determine the relationship between the major research variables in this study.

**Constraint** – as defined in Bender (2009) encompasses certain conditions that project teams have to take into account while carrying out a project since they impact the eventual outcomes or project results. This terminology is used in this document to shed light on factors what impacts research variables.

#### 1.7. Scope of Work

The chosen organisation for this research study to aid in the collection of primary research and for extensive analysis of the real project planning situation is Bechtel Corporation. Bechtel Corporation is one of the largest engineering as well as construction private company in Dubai Real Estate industry, established in 1898. The company also specialises in project management activities in Dubai and other parts of the world. Since its incorporation, the company has been involved in numerous construction as well as project management activities such as of construction of shopping malls, airports and dams among many others, with roughly 500 employees in Dubai (Bechtel Company Website). Based on its extensive involvement in construction and project management activities, Bechtel Corporation has emerged as an ideal company to critically examine the research subject in depth.

The main research methods utilised for this dissertation study include; one is primary research technique, where research questionnaire were issued to 58 employees and personal interviews carried on 5 senior employees, all of Bechtel Corporation in Dubai. This was done to collect primary data on how project planning is linked to project success taking the case of a construction project. The second method is via secondary research, where relevant information on project planning as well as project success from various secondary sources such as books, internet sources and peer-reviewed articles as well as journals among others were reviewed.

#### **1.8. Structure of Dissertation**

This dissertation is organised in terms of chapters, each with a number of subsections. Markedly, each chapter has tackled a number of issues that relate to the research subject, which is "project planning and how it is linked to project success". The first chapter outlines the research plan for the entire dissertation, which is made up of the background as well as statement of the problem and research objectives among others. The second chapter is based on secondary data, where relevant literature on project planning along with project success has been critically analysed purposely. After the second chapter is the third chapter, where the research methodology touches on the data collection, research techniques and design among many other aspects have been discussed. In the fourth chapter, the research findings coupled with extensive discussion of the primary research findings in relation to secondary data is given. In the last chapter, fifth, the research conclusions are made followed by recommendations and areas for further research pinpointed.

### **CHAPTER 2: LITERATURE REVIEW**

#### 2.1. Introduction

This section is on the reviewed literature, done with an endeavour to respond to the research topic that posits: a study on how project planning leads to project success with particular reference to a construction project in Dubai. Considering the significance of project planning, there is considerable information on this research subject.

This literature review considers in detail the major interconnected research variables that touch on the focal point of this study. The first research variable is project planning in light of construction projects, and the second variable is project success. Generally, it is assumed that project planning impacts project success; however it is not known exactly to what extent it influences project success, this study looks into how planning contributes to project success.

#### 2.2. Construction Projects

Construction projects as indicated in Turner and Zolin (2012) involve the development of structures such as commercial buildings, residential units and other forms of infrastructure. These projects are generally carried out by a professional team, which according to Bender (2009) involves members such as architects, engineers as well as quantity surveyors and project managers as well as the unskilled personnel. More importantly, each of these project team members has its responsibilities well cut out for them for the entire project life. Such responsibilities are generally assigned contingent on the scope as well as nature of the project, purposely to ensure a project successfully takes off and ultimately accomplishes desired goals (Gido and Clements 2008).

Generally, the scope of a construction project is set out in a contract between the client and the contractor witnessed by the members of the project team. A construction project is broken down into a number of stages, each with different milestones and tasks for purposes of control as well as tracking project progress (Roberts 2011). The outputs of various stages phase of a construction project include detailed comprehensive plans, detailed designs among many others. By the same token, as with all other projects a project manager of a construction project is expected to efficaciously integrate project activities and ensure the predetermined goals are realised - project success. Whereby, at the heart of all these project activities is the planning phase (Camilleri 2011).

#### 2.2.1. Phases and Processes of a Construction Project

Just like with projects in different fields of operations, for construction projects, project teams along with their leaders ought to utilise well-structured project methodologies. Such methodologies could either be in-house or external, depending with specific organisations (Roberts 2011). Apparently, such approaches have a number of distinct features or activities that seems to apply somewhat different language, even though they basically share major features. That is each project has a number of stages with various processes inherent in each of these stages, as exemplified in the figure below (Mindtools Website).



**Project Phases** 

Figure 1: Project Management Structure. Source: (Mindtools Website).

Some of the major phases of a construction project that project leaders utilise to structure project activities as well as deliverables for successful results. Hence, they are pivotal aspects of a project through which project deliverables are established as well as measured at the completion of each stage to check whether they meet the purpose (Roberts 2011). The major phases include; the first phase which is on the establishment of the project strategy together with the business case. In this phase the project team is required to specify the main features of a project and suggest the move to be undertaken to actualise the project strategies already identified (Mindtools Website).

Also, in establishing the business case for a given project a number of activities are carried out purposely to identify importance of that the project using tools such as S.W.O.T analysis to establish the strengths along with weaknesses as well as the opportunities the project team will face. The other crucial tool is risk analysis that enables the project team to identify some of the major projects risks, which they can come up with efficacious ways to mitigate them (Meredith and Mantel 2011). At the end of this particular phase, the project team is expected to have an approval from major project stakeholders to implement the project proposal. This can only happen once the project goals within the set project constraints (Gattiker and Carter 2009).

The second phase is about preparation of various project activities, where the project leader is required to work closely with major project stakeholders and the rest of the project team members (Roberts 2011). Some of the common activities here include formulation as well as completion of the work breakdown structure, setting of milestones along with selection of the project team members such as recruitment of engineers, contractor and architects among others, coupled with preparation of crucial project documents among many other activities (Meredith and Mantel 2011).

The third phase deals with project design activities, where the project team using the project proposal and initiation documents accompanied with the business case embark on the creation of crucial project deliverables along with designs. Having done that, the project team is supposed to involve the major stakeholders in revising the deliverables as well as the designs so as to ensure they fit the project at hand (Russell 2011). This is essentially to create a sense of project ownership particularly for the project deliverables and other related decisions at this stage. Additionally, at the design stage the project team should ensure they have detailed designs for the project and a list of stakeholders who will commit to the project throughout its life (Gattiker and Carter 2009).

The fourth phase of a project according to Russell (2011) is the development alongside testing of project tasks or processes. This is where the creation of major elements of a project's final product is made, which could either be processes or components as deemed fit for that particular project. Testing of the final products is instigated purposely to ensure that such elements work as expected (Camilleri 2011). The fifth phase involves activities of training the project team along with the major stakeholder in getting ready for project implementation activities. This phase also entails activities such as seeking necessary support for the project activities, installing new work systems and establishing what is needed to effectively implement the project among many other activities of ensuring that a project is ready for implementation (Reiss 2007).

The sixth project phase as described in Melton (2009) touches on issues to do with seeking project support as well as benefits realization. During this phase, the project leader basically seeks to ensure the project gets necessary changeover support once project implementation commences and as the project progresses. Also at this stage, project benefits are closely evaluated to ensure that the project stays in course toward accomplishment of set objectives (Meredith and Mantel 2011).

The seventh and last phase of a project is termed as project close that needs to be done in a proper manner otherwise could interfere with the final outcome of a project (Gido and Clements 2008). At this final phase, some of the activities undertaken include dispatch along with safekeeping of project documents. Likewise, a review is made on the entire project, with an aim to improve on future projects. Generally, the above phases differ a little bit contingent on the project goals for a given project (Murch 2001).

As far as the construction project processes are concerned, some of the inherent processes in each project inclusive of construction projects they include the following. The first process is the phase management, which is basically about ensuring that the project team is able to effectively carry out and complete activities in each project phase (Melton 2009). To execute this, the project leader along with the entire team has to ensure they fully comprehend the deliverables

of each stage that need to be met before progressing to the next phase. For the most part, the project deliverables along with sign-off requisites for each phase are listed in the project initiation document (Turner and Zolin 2012).

The other activities done at the management phase includes getting the required project team members, who for a construction project include architects, engineers and many others, and allocating them their various responsibilities which ought to be in line with project goals (Vater, 2012). Also, this stage enables project teams to adequately prepare for the project as it progresses, as all this is done using a work breakdown structure as a preparation activity. This process essentially touches on specifying the general project necessities and ways to address such needs in getting groundwork of a project ready (Melton 2009).

The second process is about project planning, which entails engaging project stakeholders as well as the project team to come up detailed plans on how to start and carry on project activities (Gido and Clements 2008). This is done through establishing a work breakdown structure and setting of project milestones such as detailed plans for each project stage. This process generally seeks to ensure that each individual involved in a project is held accountable for their roles in the project (Vater 2012).

Equally important at this stage is the project team ensures that the project has the right resources and adopts effective methodologies to ensure that the project is to implement the project. Considering the activities involved at the planning process, this process definitely marks the beginning of establishing project deliverables and detailed plans, via the project strategy along with business case that will guide the implementation of a project (Gattiker and Carter 2009).

Once the planning activities are completed, the project team moves to the third stage of project control. This process basically involves putting into practice scheduled tasks through active involvement of the project teams. Likewise, it entails effectively management of project resources such as human resources, time and raw materials and effective tackling of project issues like scope, risks and cost among many others (Vater 2012). Such controls are carried out on a continuous basis chiefly to ensure the project is on the right track according to the

project plan. This involves techniques such as casual check-ins, regular site meetings among many other techniques. The information collected from such control techniques is supposed to be utilised to address any form of deviations from the project plans (Blumenthal 2011).

The fourth process is about team management, where a project leader takes charge of overseeing project team activities such as trainings and offering them crucial support they need to perform. The fifth process is communication, where the project leader ensures that all vital information concerning a project is relayed to the right persons at the right time (Citisoft 2009). The fifth process is procurement stage, where purchasing and other related activities are done, with the active involvement of the project leader. With all the project details along with tasks well projected, necessary materials are acquired to fully implement a project (Turner and Zolin 2012).

The sixth project management process as indicated in Melton (2009) is the integration process where analysis of how a project would impact other organisational activities. Here, the project team along with its leader is required to reassess the project and document the results for reference and to ameliorate future projects. Ostensibly because by re-evaluating and integrating a project, the project team is able to correct issues that negatively impacted organisational activities and its overall success. Also here the project team is able to analyse the project at each and every stage in line with the project deliverables. Need to complete as well as store all the relevant project documents (Camilleri 2011).

#### **2.3. Project Planning**

Project planning as described in Roberts (2011) generally involves assessing a project and establishing actionable courses of action among other activities on the way forward for a given project. In other words, project planning for every project is a preparative stage, in which comprehensive arrangements or programs on the when as well as how and who carries out specific project activities are determined.

More importantly, project planning takes into account available and potential human resources likewise physical resources of a business establishment (DiTullio 2011). This is done in order to ensure effective integration of project activities mainly to accomplish project objectives. Therefore, overall, project planning emerges as a crucial function in project management which involves formulation of fundamental project plans, simply to strike an optimum balance of project goals with the existing resources (Gido and Clements 2008).

#### 2.3.1. Features of Project Planning

Project planning has a number of distinct features; the first feature is that it is a goal oriented process, which is set to attain predetermined project goals. Similarly, this function puts up a sense of focus for the entire project team specifically for diverse project activities (Martin 2011). The second feature is that project planning is done purposely for future project activities, majorly through analysing as well as predicting how future project activities will be handled to realise desired objectives (Gattiker and Carter 2009). Thirdly, since project planning tackles future matters about a given project, it is gives room for changes in the business environmental, hence making it a flexible process (Heinemann 2009). The fourth feature is that project planning is an ongoing process, ostensibly because of the dynamic nature of the project management which requires the project to keep checking on if project activities conform to the set standards (Holmes 2001).

More importantly, the fourth feature of project planning is that project plans are carried out for a particular period, and upon completion of the period project plans are reassessed contingent on changing project conditions (Martin 2011). For this reason, it is prudent for the project team to regularly plan for project activities in order to ensure the different problems that keep emerging in the course of the project life are dealt with efficaciously (Martin 2011). This function is crucial in all project management stages, though the scope changes from one project stage to another. The sixth feature is that project planning is the major function of project management, which lays out the groundwork for all other project activities (Heinemann 2009).

The seventh feature is that project planning entails mental exercises, where the project team actively engages in creative thinking to come up with sound project plans that are grounded on project goals as well as estimates (Holmes 2001). The eight feature us that project planning generally necessitates active decision making where the project team is compelled to make a number of choices, based on project prerequisites (Martin 2011).

The ninth feature is that project planning is performed with the intention of attaining project efficiency, whereby the entire process strives to seek effective use of project resources primarily to realise project objectives (Gattiker and Carter 2009). Here, failure to establish elaborate plans on project implementation heightens the possibilities of the project team not meeting most of the project objectives. Therefore, if project teams wishes to have projects run smoothly, there is necessity to invest in the project planning process (Holmes 2001).

#### 2.3.2. Project Planning Process

Project planning according to Gattiker and Carter (2009) basically brings together all elements of planning into a logical and interconnected process. By utilising the model below, a project leader and the entire project team are guided to consider all project activities, to stay focused on the project, be practical and lively as well as cost effective. Hence, project planning process encourages informed decision making up to a particular extent of project complexity (Gido and Clements 2008). Where a project engages many people for a considerably long period of time, then more conventional methodologies as well as approaches are adopted. The project planning cycle is illustrated in the figure below. It is basically considered as a cycle, since it involves continuous evaluation of project plans to ensure they are in line with the project objectives (Vater 2012).



Figure 2: Project planning process. Source: (Mindtools Website).

The project planning cycle as described in Harrison and Lock (2004) involves eight major steps in the illustration above. The initial stage of project planning as indicated in (Mindtools Website) involves extensive analysis of opportunities to be exploited with reference to the project in hand. The analysis basically involves the project team looking into the current position of an

intended project and establishing how that situation can be improved (Reiss 2007).

Some of the techniques utilised to analyse project opportunities include using techniques such as SWOT analysis to assess the strengths along with weaknesses as well as opportunities and threats a project will face if carried out (Verzah 2011). The other critical analysis tool at this stage is risk analysis, which enables the project team to critically examine possible project risks that could impact a project and how to deal with such situations (Reiss 2007). Moreover, the project team can take into account pressures for change which would inspire the need to undertake a given project. This stage essentially guides the formulation of project aim, which is basically done through an orderly approach of formulating goals alongside objectives the project seeks to meet (Roberts 2011).

The second stage involves identifying the aim of a given project plan, based of the opportunities identified in the initial project planning stage. Roberts (2011) argues that, project aim puts up a rationale for tackling project activities besides ensuring the project team's focus is centred on the planning process. Furthermore, the project aim concentrates on the expected project outcomes therefore it needs to be precisely as well as accurately documented or else project activities will fail to deliver desired results (Kerzner 2004). As much as possible the project aim should be expressed in qualitative terms, for instance on sales return among many others. Further, the project aim can be clearly and explicitly stated in qualitative terms thus ought to be attainable, practical and adequate for the project purpose (Dvir, Raz and Shenhar 2003).

The third stage involves the exploration of options of project planning premises, which are basically the ideas on the various events that define the future of a project and are the cornerstone of planning (Kerzner 2004). Essentially, planning options touch on not only internal factors but external factors as well which influence project activities such as government regulations, economic conditions and cultural aspects (Reiss 2007).

As for internal options the project team can control their effects, while for the external factors the project team can only come up with ways of avoiding the negative effects of such factors since they are non-controllable (Harrison and Lock 2004). By and large, at this stage the project team should find out what project challenges they are likely to face during the entire project period if it implements proposed options (Gido and Clements 2008).

The fourth project planning stage as discussed in Harrison and Lock (2004) involves selection of better options from the list of options suggested in the third stage above. This starts with extensive evaluation costs likewise the benefits of each course of action or option using a wide range of quantitative techniques in line with available resources as well as project objectives, chiefly to establish the relevance of a given option. Once that is accomplished, the best option is taken (McLeod, Doolin and MacDonell 2012).

The fifth stage involves detailed planning of project activities, where comprehensive project plans are developed, which will essentially aid and hasten the accomplishment of primary project plans. More importantly, such project plans essentially need to be based on the project goals or aims (Verzah 2011). Also, detailed plans should include aspects such as project budgets, financial forecasts and timetables as well as programme of works and regulations among many others. Furthermore, detailed plans must designate the project time plan, place for various project activities and the order of carrying out various project activities (Melton 2009).

It is important to note that, for all the detailed plans developed at this stage, the project leader must work towards ensuring there is adequate support for implementation of such plans in order to work towards realisation of project activities (Gido and Clements 2008). Here, subordinates and the entire project team needs to be sufficiently motivated and involved by giving them information about the project they are about to undertake (Kerzner 2009). The sixth stage of the project planning cycle involves project plan evaluation, whereby appraisal of the entire planning process is done. The appraisal is carried out contingent of the feedback received from major project stakeholders on the detailed plans presented to them by the project team (Martin 2011). This assists the project team to make crucial adjustments in case of deviations from project objectives, hence creating a connection between planning and project controlling aspects (Gattiker and Carter 2009).

The seventh stage is about actual project implementation, a stage at which completed project plans are put into action focusing on the project goals (Melton 2009). The final stage is the closure of project plan followed by post plan implementation review to determine whether project plans are leading to the desired project results and if not where changes can be made (Gido and Clements 2008). From the above description of the project planning cycle, it is clear that planning especially in projects is a continuous activity involving evaluation of project activities from time to time, in a bid to ensure a project succeeds.

#### 2.3.3. Crucial elements of project planning

When undertaking project planning activities, project leaders must take these vital aspects into consideration; first are the aims along with objectives of the project, which generally describe what the project intends to achieve once it is completed. This can be ascertained by project leaders along with the team members connecting the major business case with the real opportunities to be exploited (Gattiker and Carter 2009). The second element is the project outputs, which according to (Dinsmore and Brewin 2011) are basically what is generally required to actualise a project. The outputs must therefore be precisely identified during the project planning stage, such as well structured residential housing units among many other outputs.

The third element is the project quality criteria, which according to Harrison and Lock (2004) essentially describes the kind of project outputs needed to address the needs as well as expectations of the project stakeholders. That has to be specific, measurable and practical as well as relevant and time based for the intended purpose. This calls for active participation of project stakeholders to create the touchstones upon which project outputs will be measured. The fourth crucial element for any project planning process as pointed out in Kerzner (2009) are the project resources. Project resources are generally the various resources needed to produce anticipated project outputs. Some of the project resources include man-hours, personnel, finances and time as well as equipment among many other resources.

The fifth element is the project management, which as discussed in Dinsmore and Brewin (2011) analyses the overall approach the project team will undertake carry out a project such as decision-making, allocation of project responsibilities and checking on progress of the project. This is done bearing in mind the complexity likewise the size of a given project and the specific organisation's management system.

The sixth element is the project milestones, which are all about breaking up a project into stages each with a milestone, whereby each stage is evaluated to ensure it stays in line with the overall project goal (Gido and Clements 2008). Some of the milestones in a construction project include requirements gathering, tender preparation and execution as well as contract negotiation and many others. Undeniably, project milestones enable the project team to determine when a particular stage is reached (Hossenlopp and Hossenlopp 2010).

The seventh element is project tolerances, which discusses allowable deviations from intended project objectives before taking corrective action, touching on all project deliverables such as in terms of time and cost. This makes it easy for the project leader to manage the project without creating unnecessary anxieties (Dinsmore and Brewin 2011). The eighth element is the project dependencies, which basically involves figuring out what project activity is done after the other, for instance assessing project requirements is done prior to tender documentation. This element basically enables the entire project team to adequately comprehend the effect of changes in any aspect of a given project. They touch on not only internal dependencies but also external ones (Gido and Clements 2008).

The ninth element are the various project risks, which are identified as well as analysed by looking into what could impact smooth execution of project activities, hence establishing techniques for effectively dealing with such eventualities (Hossenlopp and Hossenlopp 2010). Lastly is the detailed project schedule, which involves the project team putting down what ought to be done and when, accompanied with dependencies and milestones as well as resources. This without doubt is a great overview of the entire project, which is subject to continuous reviews as it can never be accurate. Project stakeholders must be informed of this schedule (Jonas 2010).

Based on the above elements, there are three main deliverables as indicated in Jonas (2010) of project planning stage. The first deliverable is the project definition, whereby the entire project aspects are identified touching on matters such as project scope, techniques and objectives. Once the project definition is agreed to by the relevant project stakeholders, it forms the foundation for the project activities.

The second deliverable is an elaborate project work plan which should encompasses the following items; deliverables list, task list accompanied by measurable milestones, schedule, resource allocations, communication plan, documentation plan, project budget and project team together with stakeholder roles along with responsibilities (Harrison and Lock 2004). The third deliverable is the project management procedures that gives account to the courses of action that will be utilised to implement a project (Dinsmore and Brewin 2011).

#### 2.3.4. Major project planning documents

Strong project planning as indicated in Vater (2012) is a requirement for accomplishment of project objectives such as in terms of cost, satisfied client, budget and quality deliverables. In the planning phase of a project, the following documents are generated at the planning stage and they are needed to ensure project success. These documents vary contingent on the project size, set up and complexity as well as the planning guidelines.

The first document is the project management plan which acts essentially as a reference material and it comprises of all project as well as planning documents (Hossenlopp and Hossenlopp 2010). The second document is on project team planning, which according to Jonas (2010) offers detailed information on the responsibilities of the project team for every project stage. This document basically promotes efficacious project implementation and effective communication of project issues.

The third document is the scope plan that details the project requirements, the harmonised project scope and other related crucial project aspects (Gattiker and Carter 2009). The fourth document is the comprehensive project work schedule, which essentially maintains a list of activities, project resources, timelines, costs and milestones for a given project. Considering the nature of its information content, this document is a crucial document likewise a work guide for the project team in the execution of project activities (Gido and Clements 2008).

The fifth document is the risk planning document- which is made up of the various project risks and their accompanying control measures. This document forms part of the contingency plan, prepared to address the situation in case uncertainties take place and is to include project opportunities and ways of exploiting such opportunities (Gattiker and Carter 2009). The sixth document is a Quality assurance report that details quality standards that aligns to the project at hand, which will guide the drafting of project deliverables. Getting a quality assurance report may obviously involve product testing framework and techniques, quality requirements, quality metrics and quality deviations among many other quality aspects of a project (Melton 2009).

The seventh crucial project planning document is the detailed project schedule, which is supposed to contain high-level project stages and major project milestones. This document is an example of a bill of quantities in a construction project which is accessible by major project stakeholders such as the client, regulatory authorities, and financiers among many others. These lists of documents are crucial in any project planning and can be customised to meet specific project needs (Gido and Clements 2008).

#### **2.3.6. Project Planning Framework**



# **Project Planning Framework**

Figure 3: Project Planning Framework. Source: (Turner and Zolin 2012).

This framework generally offers a systematic structure for project planning, besides outlining the major elements of a project that are shown to be interlinked. In most occasions, project requirements as listed in the diagram above are rarely provided to the project team in one comprehensive document. Instead, most of the elements are identified as the project activities progresses through means such as discovery and assessment by members of the project team. The project leader is normally expected to ensure such elements are identified to aid in project planning as well as management. Markedly, well-planned along with well handled project elements are an integral part of successful projects (Dinsmore and Brewin 2011).

The above framework can generally act as a template for the project team along with the project leaders as they plan project activities. The first element is the project inputs which encompasses items such as the description of a given project's scope, project risks and time schedules as well as list of project activities among many others (DiTullio 2011). The second element is the project outputs, which in this comprises of a comprehensive project plan, which is meant to be utilised by the project team chiefly to carry out project activities, check project progress and guide in decision-making activities (Gattiker and Carter 2009).

The third element is the Situations / priorities, that basically spells out the criteria by which a project is evaluated and what needed to be done by the project team, while taking into account anticipated constraints such as time and budget as well as quality and scope. With this in mind, the project team should fully comprehend what defines a successful project (Turner and Zolin 2012).

The fourth element is the expected project outcomes - that is the final product delivered once a project is concluded. The fifth element is assumptions that describe the insights along with perspectives taken by the project team while working on a given project (Dinsmore and Brewin 2011). The sixth element is the external factors include aspects of the political climate, economic forces along with social as well as cultural factors that could possibly impact project performance (Gido and Clements 2008). The final element is project evaluation, which the main activity in any given project that is set to analyse the delivery of project activities and ensuring that adjustments are made as and when they are noted (Heinemann 2009).

#### 2.3.6. Significance of Project Planning

Project planning as indicated in Jonas (2010) is one of the challenging project phases for the project leaders and the project team as well. This is mainly because they are required to make informed decisions regarding resource allocation, risk management and work scheduling among many other critical project activities. In creating a detailed project roadmap for the entire project, project planning serves as a frame of reference for project stakeholders for the entire project life (Meredith and Mantel 2011). Some of the positive effects of project planning include the following.

First is that project planning in a significant manner enhances efficiency, particularly in the utilisation of project resources while taking into account project objectives. This efficiency is applicable to all projects whether large or small that have scarce resources (Melton 2009). Also, project planning encourages the project leader to appropriately organise project resources. Mainly because the project leader is able to adequately determine the resources required for a given project and when they are needed, hence leading to economies in project operations and orderly apportioning of resources (Melton 2009).

The second significance of project planning is that it creates a forum for the project team to decisively allocate project resources in a manner that will ensure the project objectives are satisfactorily met (Vater 2012). The third advantage is that through project planning project team productivity is increased, since it leads to reduced wastages of crucial project resources. Simply because planning minimizes duplication of project activities causing a rise in project returns as resources are utilised for productive project activities only (Bender 2009).

Fourth, project planning as pointed out in Jonas (2010) enables an organisation to determine project goals and how to realise them, Assist the project leader in keeping the team focused and engaged on the project. This starts with evaluation of project activities at each and every stage of a project and establishing what ought to be improved from time to time. From this perspective, project planning encompasses envisioning the anticipated project results and establishing steps critical to attain the predetermined goals. In doing so, the project team is encouraged to work on well defined project activities (Wong 2010).

Fifth, there are a number of risks encountered while undertaking a project which adversely impact the project results. Through project planning, project

risks are keenly identified and effective techniques devised to reduce the impact of such uncertainties during the project management process (Wysocki 2011). Moreover, project planning makes easier to have project coordination since project plans and activities are well integrated and objectives clarified for the project team enabling them understand what they are required to do. Such effective coordination of project activities is fundamental for project success and it increases the competitive advantages for the project team, especially over project teams that do not have effective project planning (Gido and Clements 2008).

The sixth advantage of project planning is that it establishes right direction for the project team to follow. This is done through ensuring proper information, activities, guidance and accurate instructions are given to the project team members, which cannot be actualised without project planning. This brings about order as well as discipline in the carrying out project activities besides creating a favourable working environment (Camilleri 2011). The seventh advantage is that project planning is necessary for the project team to uphold good project control. This is achieved through comparison of project plans and project team performance, where any deviations identified are rectified as soon as they emerge. Besides, enactment of predetermined project goals is basis for regulating project activities (Wong 2010).

The eight advantage of project planning is that it assists the project team to lay out project goals that challenge the project leader and the team to focus on the project to attain them. Here, project goals are expected to be aggressive and at the same time practical (Jonas 2010). Furthermore, project planning helps the project team to attain such goals with fewer difficulties, as the team is encouraged to convey and apply its creativity (Belout and Gauvreau 2004).

Equally important, good project planning establishes various forms of incentives for the project team; that propels them to work harmoniously towards the realisation of project objectives. Likewise, project planning advocates for project team building and heightens the spirit of joint operation (Jonas 2010). When project planning is completed and the message passed to the team members, everyone involved in the projects gets to know their duties and what is

required to carry out assigned duties. This enables the team members see how their various roles impacts the success of a project. This in the long run cuts down possible conflict between project team members (Belout and Gauvreau 2004).

Finally, project planning facilitates better decision making on project activities. A project leader together with the rest of the project team are is required to make a number of project plans and chose the best plans for project implementation (Meredith and Mantel 2011). Through project planning, they are able to come up better decisions since the project team is able to have a realistic view of its strengths as well as weaknesses comparative to their competitors. The project team establishes their strong points and comes up with strategies to better their performance (Dvir, Raz and Shenhar 2003).

#### 2.4. Project Success

A project as discussed in Meredith and Mantel (2011) is considered as successful once it has met the predetermined goals. However, the challenging task is that project success is a subjective matter as far as the parties to a project are concerned. The most compelling evidence is that, for the various parties involved in a project from the project leader to the client, there are diverse perceptions of what project success is all about. Oftentimes, the different perceptions probably are one of the reasons as to why most projects don't turn out successful (Gido and Clements 2008).

#### 2.4.1. Project success criteria

Like whatever human activities, projects ought to be carried out and delivered based on a number of standards or measures. However, in most cases project teams start projects in the absence of a solid project success measures or they commence projects with ill-timed measures (Camilleri 2011). Success of a project as defined in Jonas (2010) is based on criteria demonstrated in the diagram below.



Figure 4: Project Success Criteria, Source (Gido and Clements 2008).

The major success measures according to Meredith and Mantel (2011) for appraising the success of a project include the following. The first measure is grounded on a project's schedule, which is generally defined in terms of deadlines and time allocations for each project activity. Also, this defines the total time needed to finish a project; and is estimated using techniques such as work break down structure. In evaluating project success based on this measure, those evaluating a project look into issues such as completion time in line with schedule that ought to be met (Gido and Clements 2008).

The second measure is the project budget, which broadly speaking is crucial aspect for most projects. This is the cost factor in a given project that relates to the budgeted amount for that project and the cost of project resources such as human resources and raw materials among many others (Gido and Clements 2008). Likewise, it involves expenditures on work packages, labour rates, control functions such as risk management among many other areas where
money used in a project. The project team along with its leader is expected adhere to the budget requirements through proper financial accountability, for a project to be considered a success (Camilleri 2011). The third measure of project success is the project team satisfaction, though often this aspect is ignored in most occasions when assessing project success. Without doubt, a happy project team translates to a successful project that meets the rest of the success criteria (Bender 2009).

The fourth measure of project success is the project quality, which as discussed in Jonas (2010) entails distinguishing attributes of a completed project encompassing the project process and final output. The criterion here is to establish whether the project delivered by the project team is able to address what it was purported to do. The fifth measure is the project Scope, where project activities that need to be performed in order to accomplish project goals are analysed. This is a pivotal aspect of a project as it influences the structuring of the project plan, project implementation and many other important features (Belout and Gauvreau 2004).

The sixth measure is Stakeholder as well as Customer satisfaction, which basically looks into how well the stakeholder needs together with expectations have been addressed. For instance, customers need to be happy with the project outcome for it to be considered a success (Camilleri 2011). Client satisfaction is analysed by seeking their opinions on the project outcome, which can be enhanced through constant communication with the client. As for the society, for a project to be considered successful it has to be beneficial to the community directly impacted by its presence (Wong 2010).

Project leaders are required to effectively handle project success measures and they are obligated to stay focused on these factors, since they can also act as project constraints it not well tackled (Camilleri 2011). This process success criteria calls for the project leaders to strike a balance among competing interests regarding a given project. Furthermore, these measures are supposed to act as a way the project team and even other stakeholders track as well as assess project progress for its entire lifecycle (Turner and Zolin 2012). All in all, there are a number of interlinked factors that determine whether or not a project is a success. These factors tend to compete with one another as changes in one measure impacts the other, where for instance widening the project scope will lead to an increase in project costs as well as increase in time required to complete a project (Wong 2010). Contingent on the contemporary project settings, project leaders must extend their view on project success. This is simply because, for the project team, success could imply attainment of project goals, while for the customer project success is much more than meeting the set goals. Project success is definitely an integration of a number of factors from the major project stakeholder's perspective (Gido and Clements 2008).

# 2.4.2. Project Success Factors

As a project leader one is essentially held accountable for rendering a successful project. The charge ends with the project leader hence it is in the interest of the project manager as the project leader to make sure that relevant tools along with techniques are utilized to make this intention come true (Gido and Clements 2008). Some of the factors that lead to project success may be taken for granted but they influence project success. The first factor is the strong support for the business case of a project from the organization and major project stakeholders. Whereby, a business case basically the outlines the reason as to why a given project was undertaken and what is expected to be accomplished once it is completed. If the necessary support for the business case is accorded, then the project team can focus on the project as they have access to the resources needed to undertake a project (Camilleri 2011).

The second factor is identification of crucial project success measures that they ought to be measurable either in terms of cost, time or any other measurable element. These factors are essential at the end of the project to evaluate project success (Turner and Zolin 2012). These factors are simply all the aspects that must be met before a project is considered successful, and they should be part and parcel of the project contract. Major project stakeholders should be actively engaged in coming up with the project success measures as their various perceptions directly influence the views on project success. In a similar manner, the stakeholders should clearly articulate the various benefits they anticipate to receive from a project once it is complete to enable the project team to focus (Gido and Clements 2008).

The third factor is efficacious project planning for every stage of a project. Here, every project undertaken is expected to have a detailed plan that encompasses the roles of every project team member and on what needs to be achieved among other issues. For that matter, a good project plan offers the following advantages (Wong 2010). One is that it precisely defines project milestones as well as project deliverables. Secondly, it gives a valid and practical project time scale besides enabling the project team to precisely estimate project costs (Jonas 2010). Thirdly project planning enumerates project resource requirements and enables the project team to identify early warming signals on project performance. Fourthly, project planning enables the project team to concentrate on their efforts and monitor project progress on a continuous basis (Belout and Gauvreau 2004).

It is important to note that, to work hastily through the project planning phase is most likely to trigger a number of problems that could compromise project success. Hence, it is imperative that the project team establishes a comprehensive project plan with some contingencies for every project they undertake (Wong 2010). Seemingly, ahead of time elaborate project planning leads to well-defined project activities and improved project setting as well as well structured project team responsibilities, factors that are crucial for a project to turn out a success (Reiss 2007).

The fourth factor is project team motivation coupled with a suitable project organisation structure, whereby according to Gattiker and Carter (2009) a motivated project team increases chances of realizing a successful project not only on time as well as budget but also in line with project success criteria. Project team motivation can be enhanced by engaging team members in project activities throughout the project process, and by developing regular milestones to enable the project team assess its progress (Turner and Zolin 2012).

When it comes to project team motivation, communication is a crucial feature to coordinating all project activities. In this case, efficacious communication systems make it easier for the project leader to set priorities based on expectations to the project team (Wong 2010). Hence increasing their understanding of what is required of them and increase chances of meeting most of the deliverables as well as milestones on time. It is good practice that communications are held on a regular basis to ensure each party is updated on project activities (Dinsmore and Brewin 2011).

The fifth factor is focus on the project scope, majorly to establish correct project expectations at the start of a project and distinctly determine what is in that project. The project team should document what is in the project scope in the main project contract, and to ensure that the client comprehends and concurs with the project scope (Dinsmore and Brewin 2011). The sixth factor is effective risk management of the various project risks at every stage of the project. For successful projects, project leaders come up with a risk log accompanied with action plans essentially to mitigate each of the identified risk while at the same time involving major project stakeholders. Obviously knowing what strategy to undertake if a certain situation happens is important in controlling detrimental risk effects that would hamper project success (Jonas 2010).

Also important is for the project team to learn to say no when it comes what it is not able to deliver before a project is undertaken. This should be done once the project team adequately comprehends the major aspects of a project from major project stakeholder's viewpoint (Jonas 2010). Lastly, for successful projects once a project is completed it must be closed to minimize wastage of resources. This would limit modifications to the project to suit the interest of certain parties to the contract at the expense of the rest of the project team. Project closure should be done once the critical project success factors have been fulfilled.

Focusing on these project success factors will enable the project team to stay clear from obvious project problems that most project teams encounter (Meredith and Mantel 2011).





Figure 5: Dimensions of Project Success. Source: (Dvir, Raz and Shenhar 2003).

According to Bender (2009), project success is supposed to be measured in terms of dimensions to enable project stakeholders analyze the various aspects of a project as illustrated above. The first dimension is on product success, which as discussed in Camilleri (2011) entails evaluating the success of the project team in meeting the project features or output in line with the detailed project plan that encompasses a number of performance prerequisites such as specifications as well as functionalities among many others. This dimension is usually assessed on project completion after its closure.

The second dimension of project success according to Dvir, Raz and Shenhar (2003) is the project management success which looks into how the entire project was handled and delivered with reference to the project management plan, specifically performance metrics. Some of the main points of focus here include cost and schedules. The third dimension is project success, which is basically about analyzing how well the project results have been met and management framework was enacted (Jonas 2010).

The fourth dimension as identified in Nastase, Tapurica and Tache (2010) is on business objective success centered on evaluating if the outcomes such as benefits to the stakeholders and achievement of objectives as established in the project plan. The first two dimensions are basically measured once a project comes to an end or at the completion of project activities. As for the last two

dimensions above, they are evaluated generally after a given project's closure period.

#### 2.4.4. Measuring Project Success

Measuring project success undeniably creates more avenues for accountability and for bettering future project undertakings. Apparently, completing a project does not necessarily translate to project success as there are a number of factors that define project success (Wong 2010). Experts in project management suggest a number of tools to measure project success in the modern society. Some of these tools include the following. One is using Earned Value Management which looks into the scope and schedule as well as cost for the entire project (Belout and Gauvreau 2004).

Tool number two is analysing project scenarios for the entire project life, primarily to identify various project issues that influenced the outcome of the project. Three is carrying out surveys which contain a number of questions on the project under consideration set to establish if the project stakeholders are satisfied with project delivery. Nowadays, a number of project managers are utilising the Six Sigma process to extensively analyse aspects of a project (Nastase, Tapurica and Tache 2010).

The fourth technique is SWOT analysis, which basically dwells on extensively evaluating project success based on its strength and weaknesses along with opportunities as well as threats. Every crucial element of the project is examined in line with the project goals; to see what a success was accomplished and what technically failed (Poli, Cosic and Lalic 2010).

The fifth way of measuring project success entails actively involving the project team in evaluating a project. This is done by ensuring that the project team respond to straightforward as well concise and measurable questions regarding the project aspects that define success. Also, it is imperative for the project leader to request the project team members to offer suggestions on how such project could be done in future. This basically calls for good communication system between the project leader and the project team members (Shenhar, Dvir, Levy and Maltz 2001).

Broadly speaking, there are a number of methods to measure project success contingent on the project success criteria listed in the literature review above such as scope and customer satisfaction among many others. The project leader is free to utilise different techniques which suits a given project (Belout and Gauvreau, 2004).

Having analysed the project criteria and measured its deliverables, some of the ways through which the project team can know that a project is a success is; first is when most of the customer's needs have been adequately met leading to a happy (Wong 2010). Secondly, a project is successful when the customer is able to come back to the project manager seeking for more the project team's services for other projects undertakings. Thirdly is when most of the project milestones along with deliverables have been met on time (Meredith and Mantel 2011).

The fourth factor is when the project has been carried within the project budget. Fifth is if project milestones together with deliverables timelines have been consistently met by the project team (Belout and Gauvreau 2004). Sixth, a project is a success when the organisation's top management receive positive remarks about the project results from the customer (Camilleri 2011).

# 2.4.5. Project Pressures and Project Success

The major challenge of project management is to meet all the predetermined goals along with objectives. As organisations in the contemporary world seek to invest in various projects, they continually face a number of challenges. These challenges in one way or another continually interrupt the smooth execution of project activities and final project delivery. Therefore, for the project leader to deliver successful projects, he or she must understand the various forms of pressures that negatively impact project delivery so as to amicably address them during the project planning stage (Belout and Gauvreau 2004).

Some of those pressures include the following; one is the unrealistic project case especially the requirements that makes it impossible for the project team to understand and carry out project tasks. The pressures emerge when the project leader is supposed to come up with suitable approaches to carry out the project, if the details of the project were not reviewed before entering to contract (Meredith and Mantel 2011).

Two is the pressures emerging from poor communication systems, bureaucracies, and poor team dynamics among many other factors. This is the case where project leaders along with the team members fail to have access to crucial project information required for performance (Wong 2010). Moreover, as project teams come from diverse social as well as cultural background their behaviours tends to vary hence need elaborate clarifications on their role in a project, if not well addressed, communication issues are likely to put pressure on performance of project activities (Dinsmore and Brewin 2011).

Three is the issue of project scope creep, where the project scope is continuously revised. Apparently, changes in project scope serves as misdirected project activities set to serve personal interests of some individuals involved in a project. In such cases, such individuals will tend to manipulate the project team activities for their own gain, hence compromising on the overall project delivery (Jonas 2010). Four is the pressures from changes in technological innovations for major project equipment that continuously require organisations to invest in such sophisticated yet costly systems from time and again (Camilleri 2011).

Five is the pressures resulting from competition for project resources with other projects undertaken by an organisation. This undeniably puts a project leader in a fix particularly on how to balancing interests of various project stakeholders to delivery expected project results (Meredith and Mantel 2011). Six is the pressures based on the expensive nature of some projects that consume a lot of resources such as time among others. In most cases, most of the project resources are scarce and the client issues demands requiring the project team to take short cuts, something that would cause the project costs (Dinsmore and Brewin 2011).

Seven is the poor project governance as well as implementation strategies relating to a given project. Since project activities especially planning ought to be done before the implementation of the project, the procedures along with programs from planning phase need to be complied as the project progresses with the involvement of the stakeholder. However, based on their self interests, the various measures undertaken by major project stakeholders adversely impact the delivery of projects (Belout and Gauvreau 2004).

Eight, uncertainties inherent in project management activities such as natural disasters and changing global business factors could put pressure on the project team. This is the case that even with project planning the future of a project is still unknown to the major project stakeholders, and the project team is still expected to deliver a successful project (Wong 2010). Nine, labour union activities would impact the performance of individuals working a project by acts such as strikes and agitations among others. Also, a rise in lobbying activities that demands project teams to embrace ethical business practices in the planning as well as execution of project plans puts pressure on project teams (Dinsmore and Brewin 2011).

Ten is the pressures resulting from human behaviours especially where employee diversity issues are not well managed in the structuring of motivation programs and other human resource related aspects. This implies that project team members may experience ongoing conflicts springing up from their diverse goals as well as expectations. Such a situation could definitely hinder the project team's overall performance that could equally jeopardize project success (Camilleri 2011).

# 2.4.6. Boosting the Success of a project

To effectively deal with the above project pressures, the project leader along with the project team members should adopt the following strategies. One is to establish close relationship amongst the parties involved in the project through enforcement of better communications systems linked to project goals. In doing so, it becomes easy to convey project information to concerned parties that is crucial for effective coordination of project activities (Jonas 2010).

Two is avoid issues of project scope creep by encouraging the parties to a project to document all that is required to be done. With each team member assigned their responsibilities and ensure that such responsibilities are well understood. Having done so, this should be communicated to all the concerned parties to ensure they are all moving towards the same direction (Turner and Zolin 2012).

Three, the project leader should embrace good project management practices by ensuring proper documentation of project information, training the project team and setting in place detailed project structures among many others. Such practices are most likely to boost accountability among the project team members which is crucial in ensuring that project resources are effectively utilized to accomplish project vision as well as mission. Also, there is need to invest in better technological equipment that would make work easier for the project team (Russell 2011).

# 2.5. Link between Project planning and Project Success

In the project planning stage of a project as pointed out in Camilleri (2011), a project leader works closely with the entire project team. This is purposely to come up with the work schedules, management frameworks, detailed designs, resource plans and communications plans as well as the project budget among many other crucial project documents. Such documents provide a comprehensive definition of a project for the project team to comprehend and work on towards realization of project goals.

For the most part, a number of aspects of a project fall into the project planning stage where the overall project management methodology is established and procedures on how to put into action given. Therefore, planning a given project in the right manner, recording in detail the plan and then executing the plan appropriately is most likely to lead to project success (Gido and Clements 2008).

Seemingly, what the project team perceives as project success in the eyes of the project stakeholders could be different. Hence the need for the project leader to fully comprehend what stakeholders regard as a winning project. For the project leader to keep off any unexpected happenings after project completion there is a pressing necessity to identify the various viewpoint of what project success entails before embarking on a project (Belout and Gauvreau 2004). It is important to note that, project success criteria are basically the various standards by which a project is appraised, while project success factors are the various factors that in one way or another determine the project results (Turner and Zolin 2012).

Broadly speaking, project success criteria has evolved significantly over time and changed from the basic iron triangle to the current detailed framework as described above. Project planning according to the literature reviewed above was found to be a fundamental aspect that shapes project success. A common factor identified by authors of project planning that leads to project planning is based on the fact that project planning directs the project team on what to do. Hence, if project planning is carried out in an effective manner it can aid project leaders and the rest of the team to comprehend how to undertake project activities successively, communicate well with each other and be a tool to keep the team focused and engaged for the duration of the project (Reiss 2007). The next chapter is describes the research methodology adopted for this research study, which encompasses aspects such as research population, sample, data collection as well as data analysis.

# **CHAPTER 3: RESEARCH METHODOLOGY**

#### **3.1. Introduction**

In this section an account is given of the research methodology applied for this dissertation to analyse the conceptual framework of project planning and how it leads to project success, taking a case of a construction project. The research design as well as population and sample along with the geographical site where this research was carried out are keyed out. Besides that, the data collection instruments together with techniques applied to uphold reliability likewise validity of the research instruments are identified here.

## 3.2. Research Approach and Design

In this study a two research approaches that is quantitative as well as qualitative approaches were analysed on their suitability to respond to the research topic adopted. A quantitative approach according to Herbst and Coldwell (2004) is an objective likewise a systematic application of previous empirical analysis of the research problem using statistical techniques. This approach also seeks to establish cause-effect relationships among research variables, using theories as well as hypothesis linked to the research subject. On the other hand, the qualitative approach according to Bryman and Bell (2007) involves collecting information on diverse perspectives of respondents on the research topic. The quantitative approach was not adopted considering the small sample size; on the other hand a qualitative approach was used.

The advantage of the qualitative approach as indicated in Herbst and Coldwell (2004) is that it gives a detailed view of the research topic even with a small sample size, hence increases chances of a researcher specifically addressing the research subject from a number of perspectives. Further, surveys as pointed out in Bryman and Bell (2007) may be utilised for exploratory along with descriptive and explanatory research. In this dissertation study, a descriptive survey design was employed to gather relevant first hand information from a research population.

In this case, through fieldwork, using questionnaires along with personal interviews, where a sample of employees was asked a number of questions on their knowledge as well as attitude towards project planning and project success. A descriptive survey was chosen ostensibly because it offers a detailed depiction of the research subject for instance the knowledge and perceptions of the respondents. This design was selected to address the intention of the study, namely to establish how project planning leads to project success, taking the case of a construction project.

#### **3.3. Research Setting**

Research setting as indicated in Bryman (2012) is the environment within which a research study is carried out that influences the kind of data assembled and interpretation of research results. This research study was carried out at Bechtel Corporation, an Engineering and Project management firm in Dubai, a business establishment which often undertakes extensive construction as well as engineering projects among many others of different magnitudes and costs, not only in Dubai but also in various parts of the world. Currently, the firm has an average of 500 employees in its Dubai subsidiary. In a year, it deals with not less than 20 construction projects and other kinds of projects that require project planning activities, hence this organisation is ideal to be involved in this research work.

#### **3.4. Research Population and Sample**

A population in research as pointed out in Sekaran and Bougie (2010) encompasses all the components such as individuals and objects among many others that conform to the touchstones for inclusion in a research study. In this study, the population comprised of all employees of Bechtel Corporation, Engineering Company based in Dubai that is mainly involved in construction and project management activities of different scopes for its various projects.

A convenient sample of 63 employees was chosen from the targeted organisation. A sample is defined in Bryman and Bell (2007) as a certain part of something taken as a representative of the entire research population. This is done with an aim of determining a certain thing under investigation about the entire research population, from the sample is selected. This sample was taken because it represents employees actively involved in construction and project management projects who understand what project planning entails. 5 employees from senior management level, 30 from middle management level and 28 from the bottom management level, who were willing to take part in the research study and who fulfilled the sampling criteria were involved.

## 3.4.1. The Sampling Criteria

A number of critical factors linked to project planning as well as project success were identified then sampling criteria was structured. The criteria were as follows; one, they had to be employees of Bechtel Corporation, an engineering firm in Dubai. Two, the employees ought to have worked with their current employer for six months or more. Three, be of a sound mind and accept to participate. Four, be 18 years or older, educated and be of any gender or race. All the respondents that took part in this study were chosen to conform to the above criteria, needed to respond to the research questions.

## 3.5. Data Collection

This study involved use of primary as well as secondary data to respond to the research problem "how project planning links to project success taking the case of a construction project". Whereby, secondary research involved use of journals, peer reviewed articles along with magazines and books to explore relevant information on the research subject. Having gotten a clear perspective of project planning and how it is linked to project success by re-examining secondary information sources on the subject, a primary research was conducted. The primary research involved gathering of first hand information from employees of Bechtel Corporation, an Engineering firm in Dubai that is largely involved in construction and project management projects and many other projects.

# **3.5.1. Data Collection Instruments**

Data collection as indicated in Bryman (2012) is a comprehensive process through which a scheduled search for all pertinent data is carried out by researcher. For secondary data collection, a descriptive survey was employed to collect data from secondary data sources such as magazines, articles, journals along with books and published research reports from the library and internet touching on the research topic. As for primary research the data collection techniques applied includes questionnaires and personal interviews.

A questionnaire as pointed out in Bryman (2012) is basically a form comprising of a number of questions created to draw out information that can be got via written answers from targeted respondents. The information collected via a research questionnaire was alike that drawn from an interview, differing only on the extent of coverage of research subject. Also, the advantage with this data collection is that the researcher was able to concentrate on particular qualitative as well as quantitative aspects the research subject. It is an easy to administer instrument and needed minimal time as well as energy.

The questionnaire was made up of not only open ended questions but also close ended questions as well in order to address crucial aspects of the research question. In the case of close ended questions there were a number of choices from which the respondent could pick while for open ended questions the respondent was required to respond in writing based on their views on the questions (Bryman 2012). The first section of the questionnaire touched on demographic information of the respondents and the second section tackled project planning and what it involves. The third section was on project success and the factors that are used to evaluate the success of a project. The fourth section was on the link between project planning and project success, and how project planning can be enhanced to realise desired project objectives.

## **3.5.2. Data Collection Procedure**

The 58 questionnaires were administered through the human resource department of Bechtel Corporation who ensured the questions were responded to and sent them back to the researcher. The data was compiled for roughly one month. Equally important, data collection through personal interviews involving 5 senior personnel of the targeted company was done on a one-on-one basis, concentrating on questions documented in the research questionnaire as inspired by the research objectives. This was set purposely to obtain expert opinion on the research subject, from senior personnel of the targeted organisation. The two data collection techniques are generally flexible and create better avenues for more detailed data collection from field research. All the participants were promised of confidentiality of the collected information that it would be solely for research purposes.

#### 3.6. Reliability and Validity

# 3.6.1. Reliability

Reliability in a research study as described in Herbst and Coldwell (2004) touches on the aspect of consistency with which the research instruments analyses basically the relationship between research variables. The personal interviews along with questionnaires brought about a harmonious uniformity in responses. Data collection errors were significantly reduced by ensuring that the human resource department of the targeted organization issued out and collected the completed questionnaires. The research environment was made suitable for both the researcher and respondents to carry out various crucial research activities by the concerned authorities - that is the University and targeted organisation respectively.

# 3.6.2. Validity

According to Bryman (2012), the validity of a research instrument is generally the extent to which that instrument evaluates what it is expected to evaluate. The research questionnaires along with the personal interviews employed in this research attained content validity since both instruments encompassed a number of issues relating to the research subject. More importantly, the research questions were established on information collected during literature review to make sure that they were illustrative of what targeted employees ought to know about project planning as well as project success.

Content validity was ensured during the data collection activity, basically by the logical coherence demonstrated during administration of the data collection instruments. Moreover, the research questions were structured using simple grammar for clarity likewise ease of comprehension, with instructions appended on how respondents were required to complete the questionnaires. All the questionnaires were responded to within a maximum of 30 minutes, minimising cases of questionnaires getting lost or being responded to parties other those targeted by the researcher.

# 3.7. Pretesting the Questionnaire

A preliminary test of the research questionnaire was done specifically to cut down on unnecessary inconveniences resulting lack of clarity on research questions. A pilot test was done involving seven respondents who met the sampling criteria established above. All the persons involved in the pilot test responded to the questionnaire with minimal difficulties, however, they pointed out a few issues that needed to be revised before using the questionnaire for fieldwork (Herbst and Coldwell 2004). Following the pre-test, a number of areas in the questionnaires that needed amendments were identified by the respondents and the researcher as well. The researcher consequently rephrased a number of questions, increased research questions and simplified the language used in the questionnaire.

# **3.8. Ethical Considerations**

Carrying out a research study calls for expertise, integrity and honesty as well as diligence. This is basically set to protect the various parties involved in a given study (Herbst and Coldwell 2004). For this research work, the researcher made sure that none of the parties to the research study suffered any detrimental effects as a result of the research activities. Therefore, to make this research work ethical the following factors were taken into account. One is that, formal permission to carry out this research was sought from the human resource department of Bechtel Corporation in Dubai. Also, verbal permission to conduct personal interviews was sought from the senior personnel of the targeted organization.

The second factor is that the respondent's affirmative response to willingly take part in the study was received before they were issued with research questionnaires and before engaging them in interviews. Respondents' consent as defined in Bryman (2012) entails agreement to engage in an activity after comprehending what the activity involves. In this research study, this was done by informing the respondents what the research was all about and how it

would benefit them. The third factor is that anonymity as well as confidentiality was upheld during the entire research process, whereby the identity of the participants was left uncovered in the data collection instruments as well as other research reports (Sekaran and Bougie 2010).

The fourth factor is on the issue of self determination along with scientific honesty with regard to research works. Whereby, to ensure self-determination the participants were provided with vital information on the study to enable them make informed decisions on whether or not to participate in the study. As far as scientific honesty is concerned, the researcher made sure that there was no manipulation of original data and design as well as methods. This was done by documenting truthfully the responses of respondents who were interviewed, and the questionnaire data was entered directly to the excel sheet, then extensive analysis was later on done of the collected information (Bryman 2012).

# 3.9. Data Analysis

Following a successive data collection exercise, the data was organized as well as analyzed. Close ended questions were analyzed using Microsoft excel and frequency tables along with graphs and charts used to represent the data. For open ended questions, as proposed in Bryman (2012), a quantitative content analysis was done by the research with an intention of quantifying the relationship between project planning and project success. Concept analysis is basically the action of assessing data in an orderly manner to determine the relationship between research variables under consideration.

# 3.10. Conclusion

For this study, a mixed methods approach and more specifically a descriptive survey designed to collect data relevant to the research topic. In respect to that, questionnaires along with personal interviews were employed by the researcher to collect data from a sample of 63 respondents from Bechtel Corporation. Permission to involve the targeted respondents was sought from the human resource department of the targeted company. Anonymity and self-determination as well as confidentiality were still observed during the entire research process.

The reliability likewise the validity of the study was boosted by carrying a pilot study using research questionnaires. All in all, this section of this dissertation keyed out research methodology inclusive of the research population and sample along with data collection instruments and actions employed to make sure that ethical standards, reliability and validity were upheld. The next chapter four looks into data analysis as well as its presentation with reference to the research topic on, "A study on the relationship between project planning and project success, with special focus on a construction project".

# **CHAPTER 4: DATA ANALYSIS AND PRESENTATION**

#### 4.1. Introduction

This section basically gives an account of data analysis along with the discourse of the research findings, supported by reviewed literature mainly to confirm the results. The findings are in line with the research subject that directed this study, "project planning and how it relates to project success". The collected data were examined carefully to key out, describe as well as dig into how project planning leads to project success with reference to a construction project. Data was gotten from personal interviews along with research questionnaires, involving 63 employees (n=63) from Bechtel Corporation in Dubai. This represented 45% of the targeted population. A total of 58 questionnaires were issued out and received and 5 personal interviews carried out for this study. The collected data was analysed using Microsoft Excel and comparative analysis for qualitative data and presented using tables and charts as well as graphs.

The intention of this study was to establish the relationship between project planning and project success and key features of successful projects, taking the case of a construction project. Hence, the major objectives of this dissertation are;

- To identify crucial project planning activities, taking the case of a construction project.
- To examine the various project pressures and their effect on project success.
- To examine factors responsible for project success.
- To develop a dynamic project planning process that will boost chances of project success.

## 4.2. Discussion of Results

The collected data was placed into categories, with the first category focusing on demographic data about the respondents such as years of work experience, gender, age group, and management level as well as education background. The second category constitutes of data drawing on project planning activities and their significance. The third category of research results is on project success and the various factors that define it. The fourth category is on the relationship between project planning and project success. Descriptive analysis was basically utilised to describe frequencies as well as percentages of research findings. The implication of link between the chosen research variables was established using comparative analysis using different literature sources on the research topic.

#### 4.2.1. Demographic Data

Even though demographic data was not part of the intention of this research study, this data was aimed to generally describe the research sample, and to evaluate how demographic factors impacted research findings. In this study, demographic data generally comprised of years of work experience, gender and education background along with age and management level respondents were from.

# 4.2.1.1. Participant's Age

The total number of respondents involved in this study was 63, and all these respondents answered the question on their age group (63 responses or 100%). Of all the respondents, 24% (15) of the respondents were in the 21- 30 age group, 43% (27) were in the 31- 40 age group, 22% (14) were in the 41-50 age group and 11% (7) were in the 51- 60 age group. The bulk of the respondents for this research sample were below 40 years, confirming the changing face of today's workplaces that has a young working population of between 18 and 40 years.



Figure 6: Participant's Age.

In this research study, the correlation between respondent's age and the research topic was that each age group has diverse perception on project planning and how it influences project success. With the older respondents reporting that with good project planning a construction projects is likely to succeed. The younger respondents however expressed their opinion that in the contemporary world project planning is just one among many other factors that would lead to project success.

# 4.2.1.2. Participants Involved

Of all the participants involved in this study 60% (38) were male and 40% (25) were female. The inclusion of this data was to analyse as well as understand the diverse views of different genders on the research subject. This is given the fact that individuals from different genders often have different perceptions of a similar issue such as how project planning is linked to project success.

In this study, male respondents indicated that a successful project definitely needs a comprehensive as well as well structured project plan, which is developed at the project planning stage. On the other hand, female respondents pointed out that project planning activities can lead to a number of situations that finally conforms to the project success measures.







Figure 8: Education Background

Of all the participants involved in this research study, none had high school certificate qualifications. On the other hand, 16% (10) of the respondents had college diploma, 60% (38) had a first degree academic certificate and 24% (15) had post graduate qualifications. This information is a clear indicator that all participants were literate enough to respond to the research questions.



# 4.2.1.4. Years Worked with Current Employer

Figure 9: Years Worked with Current Employer

Of all the respondents, 5 of them had worked with the company for less that one year, 25 had worked with the company for between 1 and 4 years, 19 had worked there for between 4 and 7 years, 8 had worked there for 7 to 10 years and 6 employees had worked with the company for more than 10 years. Generally, employees who had worked for a longer time in the targeted company were expected to display better understanding on how project planning leads to project success. Also, employees who had worked longer with the targeted company were more informed on measures used to assess project success. This is ostensibly because as employees continue to work in a given organisation, this increases chances for them to learn a lot of issues concerning company operations such as project planning and how it leads to project success.



# 4.2.1.5. Management Level

# Figure 10: Management Level

Of all the participants involved in this research study 8% (5) of them were from the top management level of the targeted organisation, 48% (30) were from the middle management level and 44% (28) bottom management level. It was established that senior and middle level project personnel were able to establish the relationship between project planning and project success, especially because they were largely involved in the day to day project planning activities. As for the lower level employees, it was established that they were mainly involved in the manual project activities and were equally able to correlate the research variables especially for those that have worked on a number of projects.

#### 4.2.2. Findings on Project planning

99% of the respondents indicated that a construction project involves activities of setting up and repairing of structures such has housing units, commercial buildings among many others. 1% of the respondents did not respond to this question. Further, 95% of the respondents pointed out that a construction project requires an experienced as well as professional team to design, approve and implement as well as evaluate a project. 94% of the respondents indicated that the major project team members for a construction project comprise of mechanical, civil and structural engineers, architects, quantity surveyors as well as the project leader not leaving out the unskilled workforce. With each of these team members' responsibilities in a project well drawn for every project phase, depending on the kind of project contracted to avoid cases of role conflict.

Equally, all respondents noted that, in all project activities there is usually a project manager also referred as the lead consultant. This lead consultant is mainly expected to effectively coordinate project activities for each project stage so as to ensure project goals are successfully accomplished. Further, all respondents indicated that their company has a well-structured project management framework that guides the execution of its various project undertakings.

In response to the major phases or processes of a construction project, 96% of the respondents noted that there are activities such as formation of business proposal, preparation and planning, control as well as procurement processes, which are crucial stages for every project. 4% of the respondents did not answer this question. In response to the question on project planning and what it involves in a project, 98% of the respondents indicated that project planning generally involves activities such as conceptualisation of project objectives, creation of project planning premises or options as well as the preparation of detailed project plans. 99% of the respondents rated project planning as an important stage of any given project, citing that this process basically defines the overall direction the project team ought to take once they embark of a given project.

In response to the project planning features, 89% of the respondents noted that project planning is a goal based process, is a continuous activity and looks at what will be done in the future as far as a project is concerned besides laying out groundwork for all other project activities. Further, 97% of the respondents noted that by its very nature project planning is simply to prepare the necessary project resources a project team needs to effectively carry out a project at a particular time in future. 3% of the respondents did not respond to this question.

In response to the question on the crucial elements of a construction project that the project team must encompass in project plans, 93% of the respondents identified the following elements; first is the project objectives, the anticipated outputs, the quality standards that must be adhered to and overview of the approach the project team will utilize to carry out a project. Also, the respondents pointed out project milestones along with project risks as the most critical elements that must be addressed during project planning. In return, 80% of the respondents noted that the above elements are utilized to set project deliverables such as detailed work plans, working procedures among many other deliverables.

In response to the question on documents prepared during the project planning stage, 91% of the respondents indicated that, some of the major documents generated during the project planning process include the project management plan, risk plan, human resources plan and detailed work schedules along with scope plan among many others, which are continually used as reference material as the project progresses. In response to what motivates the project teams to fully commit to the various project activities, 98% of the respondents pointed out factors such as a good working environment and supportive top management besides good rewards and overall support from the organisation. However, 30% of the respondents noted that some projects are strenuous and would discourage project team members especially when it comes to balancing of family and work issues.

When asked if their organisation insists on the formulation of project objectives, 99% of the respondents pointed that for every project the organisation undertook, project objectives have to be clearly defined and this motivates the project team to work on what they full comprehend. Also, 97% of the respondents noted that the project objectives always encompass major stakeholder interests, who from time to time evaluate a project to see whether it meets what they are looking for. In response to the question as to whether project activities are evaluated at every stage once it is completed, 99% of the respondents said yes. However, with regard to the techniques used to evaluate project activities in all stages, only 55% were able to identify some of the evaluation techniques, which they mentioned as to include S.W.O.T analysis as well as scenario and project stakeholder's satisfaction surveys.

#### 4.2.3. Findings on Project Success

In response to the question on criteria for describing a successful project, 90% of the respondents indicated that generally project success is viewed differently by the customer, the project team and the major stakeholders. Hence, the various measure depending on the above persons include how well the project quality and schedule while covering the required scope within a given budget limit. Also, 60% of the respondents indicated that project team as well as stakeholder satisfaction is crucial in evaluating project success. Further, 34% of the respondents noted that it is imperative for the project team to strike an equitable balance in addressing the success criteria mentioned above. This is simply because the criteria obviously represent diverse interests of parties directly involved in a project. In doing so, then project success can be said to be have been attained. 67% of the respondent noted that, even with the project success criteria, in reality project success is achieved if most of the elements in the above criteria have been successfully address.

With regard to the project success factors, 95% of the respondents listed a number factors of factors that they believe influences the success of a project in their organisation. They include the following; strong organisational support for the project, addressing major project components, good communication framework coupled with effective identification of success criteria, good planning and motivation of the project personnel. 87% of the respondents noted that project success can be assessed using measures such as S.W.O.T analysis, analysing how well project phases have been implemented and by making comparisons of that project to other successful projects in the surrounding.

Further, 91% of the respondents identified the following issues as ones that put pressure on the project team even as it strives to ensure their project is a success. One is the technological changes, severe communication breakups especially on project matters, excessive competition for project resources with other project teams and continuous revision of the project scope as well as weak project governance led by corrupt leaders. In response to these pressures, 77% of the respondents suggested the some of these techniques in order to increase chances of project success. The suggestions include improving organizational along with project communications systems, increasing project coordination accompanied with proper documentation of project information and embracing good management practices.

# 4.2.4. Project Planning and Project Success

In response to the question on the relationship between project planning and project success, 89% of the respondents indicated that the project planning phase is pivotal to attain project success. 70% of the respondents cited that it is in the project planning stage where most crucial project activities such as work schedules, management frameworks, detailed designs, resource plans and communications plans as well as the project budget are structured. 59% of the respondents indicated that, the various plans made at the project planning phase direct the project team on how to actualise project goals. Further, 89% of the respondents were in agreement that project success has a number of dimensions such as project management and products expected from a project that are all decided on during project planning. This is the case as number of project activities have to be full described at the project planning stage and overall project management methodology is established and procedures on how to put into action given. Hence, 89% of the respondents were in agreement that project planning has a direct impact on project success or even its failure. The following chapter 5 is on the summary and conclusions as well as recommendations drawn from this research study and its findings.

# CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1. Introduction

The major focus of this study was to establish the link between project planning and project success taking the case of a construction project. A survey research design was adopted involving the use of primary along with secondary information on the research topic. A primary research involved a total of 63 respondents, 5 interviewed and 58 issued with research questionnaires, precisely employees of Bechtel Corporation, an engineering and project management firm in Dubai that is extensively involved in project activities in Dubai and other various parts of the world. As for secondary research, a comparative analysis was made on relevant secondary sources on project planning as well as project success.

To fulfil this purpose, a number of objectives were identified focusing on project planning as well as project success. This was done in order to establish how these two variables connect to one another, with the two taken as the major research variables. Two survey instruments, that is personal interview and questionnaires were developed and utilised to carry out a primary research taking the case of a construction project. A random sampling technique was utilised to administer the data collection instruments with the permission of the targeted company. The respondents were requested to offer information that touched on project planning as well as project success and offer their personal suggestions. This chapter basically reports the conclusions along with the summary and recommendations of this research study.

#### **5.2. Summary of Findings**

The major purpose of this dissertation was to establish how project planning leads to project success taking the case of a construction project. From the study, it emerged that project planning as one of the primary stages in the project management process. A stage which involves activities that lay out how the rest of the project activities will be carried out, contingent on an assessment of fundamental information linked to the project. In other words, at the project planning stage, the project scope along with objectives, responsibilities for the project team and the manner in which project activities will be carried out is determined, making project planning take a significant place in the project lifecycle.

Based on the research findings, the major output of a project planning stage is a detailed project plan that is meant to guide the project team in its efforts to ensure a project is successfully implemented. This point is supported in Bender (2009) that project planning is supposed to be done after the project proposal is given authority to continue, and before the project activities commence. This stage simply lays down an all inclusive project plan for all the project activities touching on aspects such as deliverables, risks, resource allocation, schedule and management strategies among many other project aspects.

More importantly, from the research study it was found that establishing projects to attain desired objective in the opinion of respondents is a decisive aspect of a project manager's job, who should actively involve a professional project team. Also, the respondents noted that project planning calls for combined efforts from the project team such as engineers, architects and surveyors as well as the major stakeholders to structure project activities. This point is supported by points noted in Camilleri (2011), that the project leader who in most cases is the project manager together with the rest of the team members should combine their efforts to work on a project. This is essentially to create an elaborate project plan of all aspects of a given project undertaking, from milestones, project risks and scope and to all other aspects then to the final scope.

Further, from the research study and as pointed out in Turner and Zolin (2012) it was established that the expected outcome of project planning is include; one is coming up with a well laid out direction for the implementation of project activities that is also referred to as the detailed project plan. Two is an agreement on the project purpose and decision-making authority as well as communication among other crucial project activities. Three is the description of the project team's roles and project control among many other project documents.

When assessed in relation to project success, it emerged that project planning is an inescapable stage of a project management process, which generally encompasses establishing a number of plans to enable the project team effectively carry out and complete a project. This view is supported in Reiss (2007) which indicates that given the fact that the project planning stage helps in managing the critical project factors of cost, time and quality as well as risk and other pertinent factors, which are also determinants of project success by influencing the success or failure of a project. This suggests that there is a significant relationship between project planning and project success.

It was found that, effective project planning is supposed to involve parties such as the major stakeholders, project team members, project leader and other critical decision makers. It was also found that by setting up a project vision along with objectives and a detailed project plan among other fundamental project details, project planning aids in the minimizing the major difficulties linked to project failure. This point is supported in Jonas (2010) that argues that some of the difficulties associated with project failure include poor selection of project objectives, failure to address key project elements, external business environment factors and communication inefficiencies as well as poor implementation strategies among many others.

Equally important, from this research study it was established that laying down project tasks, quality plan, resource plan and project scope among many other plans enables the project team to comprehend their responsibilities as well as the client's expectations. And with that, Turner and Zolin (2012) argue that the overall effort put into project planning can significantly redeem the time wasted in reworking in the rest of the project phases. Hence, the overall time utilised effectively planning project activities will lead to reduced project duration likewise costs, and improved project quality for a given project.

The logic behind the hypothesis was that project planning is a major factor for project success irrespective of the field of a given project and that project planning heightens possibilities for effectively integrating project activities, an aspect that is pivotal for project success. Following the analysis of the research variables it emerged that there is a strong relationship between the research variables, hence the hypothesis was proved to be true.

# 5.3. Areas for Future Research

In future, further research is needed on this research topic using different project planning and project success models majorly to examine the research topic from diverse perspectives. Also, the models employed in this study can be expanded further to encompass more research variables other than project planning as well as project success. Another possible avenue for future research focusing on this research topic is extending the current study using a different population likewise sample size and population in a different geographical setting. Also, for future research, there is need to analyse another kind of project, given the fact that projects differ on a number of aspects such as scope, costs and nature of undertaking among many other differentiating factors.

# 5.4. Research Limitations

Just like it is with most research studies, there are a number of features of the research methodology that influenced the outcome of this study. First of all, this research was carried out within a period of three months that was essentially not adequate time for the researcher to critically analyze research variables in the chosen research setting, as most of the variables require more time to be analysed. Secondly, there were high costs involved in carrying out this study and preparing the final research document. The cost factors compelled the researcher to utilise a smaller sample size, hence could not effectively establish in-depth relationship between the research variables as most statistical tests demand a larger sample size so as to ensure adequate representation.

The third limitation encountered while carrying out this research was the challenge of getting reliable primary data from targeted respondent to establish a trend as well as meaningful association between the research variables. This is ostensibly because most respondents were very careful on the information they offered even after they had been assured the information was chiefly for research.

The fourth limitation was the some difficulties in getting the most recent secondary sources on the research subject, and even those available were few to allow for extensive comparisons. The sixth limitation was that with the data collection instruments used in this study – personal interviews along with the questionnaire, they could comprehensively cover the research topic as a number of aspects on the research topic cannot be written. Finally, some level of subjectivity was inescapable in this research study given that the entire research was carried by one researcher

# 5.5. Implications of the study

The findings put forward in this research study have a number of implications to three major groups. The first group business organisations engaged in various project activities, which will benefit by gaining information on how project planning makes or breaks the ultimate outcome of a project. This will hence enable organisations to carefully carry out their project planning activities if they indeed want their projects to succeed. This would also be used by organisations to assess their project activities especially the complex phase of planning.

The second group is the research community, which will receive a detailed analysis of the one of the contemporary issues in the business world that will go a long way in offering decisive recommendations to issues of project failure. The third group that will benefit from this research work is the students, especially those undertaking technical and business related courses. Generally, this study will act as a guide to future academic research on the project planning and how it contributes to project success and other related topics.

#### 5.6. Recommendations

From the research findings above, project planning undeniably influence the final outcome of a project. Whereby, good project planning is most likely to lead to project success, while poor planning will definitely lead to project failure. Some of the recommendations to boost project success, particularly through project planning are listed below. As change in the project management field is inescapable, the project leaders should adequately prepare to embrace change as project activities do not always turn out as planned (Belout and Gauvreau 2004). To ensure project success, the project leaders should efficaciously deal with change by upholding the appropriate level of mastery and check the baseline plan as well as preparedness to embrace project plans to conform to customer expectations (Martin 2011).

The project team should ensure that project plans encompass activities that will ensure a project is evaluated at each stage, so that deviations can be addressed early enough and avoid adverse effects on project success (DiTullio 2011). Also, the team should seek to have sufficient description of project tasks in the detailed yet summarised manner and seek sufficient organisational support. This would call for active involvement of the project team in all major project planning activities. Encourage Cooperation among parties involved in a project by easing project team bureaucracies and offering coherent and crucial project activities updates (Heinemann 2009).

Organisations should investment in project management programs, specifically project planning, and regularly train its project teams on good project planning practices before embarking on a project (Camilleri 2011). Project teams ought to embrace better project organisation by creating project team with competent personnel and carry out extensive project organisation involving major stakeholders. Equally, there is need for the project leader to optimize the usage of project resources and incorporate the project team to ascertain project objectives (Roberts 2011). More importantly, project leaders should take time to understand the planning activities, to better comprehend how to lead the project team in planning as well as implementing project activities (Holmes 2001).

There is great need for organisations undertaking projects to get the right human resources who fully comprehend project management activities and their impact on project success. This leads to more accountability as well as responsibility among project team members, accountability that is believed to significantly contribute to project success (Wysocki 2011).

Also, it is critical for the project team to embrace use of detailed project management framework to all its construction projects, with tools such a resource allocation and Gantt chart along with Work Breakdown Structure used for project planning as well as project control (Belout and Gauvreau 2004). This will ensure the project team gets to comprehend how to undertake project activities so that communications throughout the project are efficient and productive. In the like manner, the project leader should ensure that all assumptions about a project and the meaning of success are dealt on early in the project life, as they serve as reality checks for project activities needed for projects to come out successful (Turner and Zolin 2012).

There is great need for the project team to embrace the idea of contingency planning for project activities, which as noted in Holmes (2001) involves preparing for unpredictable happening for the entire project life. This is simply because; in reality project outcomes along with results cannot be perfectly guaranteed with the ever changing business scene. Lastly, once a project is completed it is good practice to officially end a project and validate its deliverables before embarking on other projects. This will enable the project stakeholders to extensively evaluate project deliverables and learn from past projects as such projects information will serve as a point reference (Vater 2012).

# 5.7. Conclusions

As pointed out in Gattiker and Carter (2009), excessive project planning activities may impair effectively project delivery as it tends to toss of the creativity of the project team, that notwithstanding planning significant level of project planning increases chances of project success. It is important to note that project planning does not guarantee project success, but without planning there are high chances that a project will fail.

Unfortunately, a number of projects may rigorously adhere to project planning, but still fail simply because the various needs along with expectations of the project stakeholders are disregarded. Without doubt, project planning is an essential component of a project as far as its management is concerned. This point is supported by Heinemann (2009), who points out that organisations must focus and invest in their project management processes, and pay special attention to the planning stage as it can make or break the entire project.

The conclusion to this study was that on the project as well as its deliverable requirements there ought to be significant level of effort. This
research work reasserts previous studies linked to project management process and project process; indicating that there is a strong positive connectedness between the extent of project planning and the overall final outcome of a project. Where, the ultimate project measure is based on a number of standards such as project stakeholders' satisfaction and attainment of project goals among many other measures (Holmes 2001).

Nevertheless, this research focuses basically on project planning and project success, so in future further research should encompass more research variables other than the ones analysed in here. More importantly, no project planning effort should be downplayed and project goals along with deliverables well defined in early stages of a project. It is equally important to ensure the emotional aspects of project team member expectations; their way of working, personal aspirations for the project and their assumptions on how the project will unfold are managed (Martin 2011).

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# **APPENDIX A - Questionnaire**

### Dear Participant,

I am-----, a student from ------, undertaking my final year research work on "**the relationship between project planning and project success, taking the case of a construction Project**" This research work is a university requirement, critical for the award of a degree in management. In line with this, I humbly ask you to participate by responding to the research questions below, which will significantly contribute towards responding to the research question hence present credible likewise valid findings.

**<u>NOTE</u>**: All the information you shall provide in response to the research questions below will be specifically for research purposes, and nothing otherwise unless with your consent.

## SECTION 1: GENERAL DEMOGRAPHIC INFORMATION

| Age Group     | Tick where appropriate |
|---------------|------------------------|
| 21 – 30 Years |                        |
| 31 – 40 Years |                        |
| 41 – 50 Years |                        |
| 51 – 60 Years |                        |

#### A). Respondent's Age group

#### **B).** Gender

Male ...... Female.....

# **C). Education Background**

| Education Background | Tick where appropriate |
|----------------------|------------------------|
|----------------------|------------------------|

| High School Certificate     |  |
|-----------------------------|--|
| College Diploma             |  |
| First Degree                |  |
| Postgraduate Qualifications |  |

D). How many years have worked with your present employer

| Years worked with current employer | Tick where appropriate |
|------------------------------------|------------------------|
| Less than 1 Year                   |                        |
| 1–4 Years                          |                        |
| 4 – 7 Years                        |                        |
| 7 – 10 Years                       |                        |
| More than 10 years                 |                        |

E). Kindly indicate the management level you fall in?

| Management Level        | Tick where appropriate |
|-------------------------|------------------------|
| Top Management Level    |                        |
| Middle Management Level |                        |
| Bottom Management Level |                        |

## **SECTION 2: PROJECT PLANNING**

Define a construction project and the project team members.

······

In your organization, who is in charge of ensuring that project objectives are met?

Does your organization have a project management framework? If yes, Please identify some of the major phases or processes of a construction project.

······

Generally, what is the project planning stage all about? Please tick activities below as applicable.

| Activities                                 | Tick where<br>appropriate |
|--|---------------------------|
| Formulation of project objectives          |                           |
| Creation of project planning premises      |                           |
| Selection of alternative strategies        |                           |
| Preparation of derivative plans            |                           |
| Seeking support for project implementation |                           |
| Appraisal of the entire process            |                           |
| Any other<br>activity                      |                           |
| Any other<br>activity                      |                           |

How would you rate the significance of project planning stage in project management?

RatingTick where appropriate

| Very Important  |  |
|-----------------|--|
| Important       |  |
| No Idea         |  |
| Less Important  |  |
| No significance |  |

Please give a reason for your rating.

. . . . . . . . . . . . Identify some of the features of project planning and their significant in a construction project? ..... ..... . . . . . . . . . . . . For every project are crucial elements that must planned for? Point out some of the crucial elements in a construction project that the project team must deal with during project planning? ..... ..... What are some of the crucial documents generated during project planning process? ..... ..... What motivates project team members to commit the project activities? ..... Does your organization insist on setting project objectives for its projects? If any ..... ..... 

Do project planning activities take into consideration the major project stakeholder's interests?

······

Are project activities at every stage evaluated? If yes, what are some of the techniques used to evaluate projects?

······

## **SECTION 3: PROJECT SUCCESS**

What are some of the measures / Criteria that describe a successful project?

..... ..... What are some of the project success factors that your organisation applies for its projects? ..... ..... In what ways is project success measured in your organisation by the project stakeholders? ..... ..... SECTION 4: PROJECT PLANNING AND PROJECT SUCCESS In your opinion, how do you think project planning leads to a successful project? ..... .....