Aligning Project Portfolio Management and Corporate Strategy: An Exploration

محاذاة ادارة محافظ المشاريع واستراتيجية الشركات : استكشاف

by

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Abstract

The persistence of this dissertation is to explore the challenges encountered with alignment of project portfolio management to corporate level strategy of a private sector business in construction industry; nevertheless, this does not contradict the likelihood of generalizing the outcomes of this paper to other comparable industries. This dissertation further considers success factors influencing the management of project portfolios along with achieving higher level of corporate strategy and competitive advantage.

The research findings are based on the inductive qualitative case approach with regard to management of a construction development in UAE who fails to achieve the alignment of corporate strategy with the project portfolio. These findings ascertain the effectiveness of project portfolio management and aligning it with the corporate strategy of the organization and further confirms that lack of each factor may have negative consequence on the success of the project portfolio and hence the organization development.

The review of literature suggests that management of project portfolios in a private construction division seeks existence and implementation of some success factors affecting the project portfolio. These factors consist of: effective selection and prioritization of projects, balancing of priorities, resource allocation, flexibility in allocating resources to maintain the balance, termination of unnecessary offered projects and unsuitable resources, effective planning and control, handling conflicts and pressures, linking the projects with portfolio's objectives, and alignment of the strategy with project portfolio goals. On the other hand, it also determines the success factors influencing implementation of corporate strategy that include: coordination, control, and competitive advantage through businesses, and organization. Success level of the alignment of project portfolio with corporate strategy depends on implementation of these factors and how well these factors are progressed.

The study values the challenges of project portfolio management in construction development and targets the managerial positions and leading teams as well as decision makers to reconsider their actions towards better management and success of the business.

KEY WORDS: Project Portfolio, Project Portfolio Management, Corporate Strategy, Corporate Strategy Alignment, Construction Development, Project Success, Project Failure, and Portfolio Challenges.

ملخص

الإصرار على هذه الدراسة هو استكشاف التحديات التي تواجه التخطيط لمشروع إدارة محفظة للاشتراك في مستوى استراتيجية عمل في قطاع خاص في صناعة المنشآت، ومع ذلك فإن هذا لا يتعارض مع احتمالية تعميم نتائج هذه الورقة على الصناعات الأخرى المشابهة. وتعتبر هذه الورقة أيضاً أن عوامل النجاح تؤثر في إدارة مشاريع المحافظ تحقيق مستويات عليا لاستراتيجية الشركات والفوائد المنافسة.

مراجعة الأدب تقترح أن إدارة مشاريع المحافظ في قسم إنشاءات خاص يتطلب وجود وإنجاز بعض عوامل النجاح المؤثرة في مشاريع المحافظ والتي تحتوي على اختيار فعال وتحديد أولويات المشاريع وموازنة الأولويات وتخصيص الموارد ومرونة المشاريع في تخصيص الموارد وتحقيق الموازنة وإلغاء المشاريع غير الضرورية المقدمة والموارد غير المناسبة وتفعيل الخطط وضبط المشاريع في حيز المحافظ وإدارة النزاعات وضغوطات التخطيط والضبط، وربط المشاريع بأهداف المحافظ، والتخطيط لاستراتيجية أهداف مشاريع المحافظ. من ناحية أخرى، فهي أيضاً تحدد عوامل النجاح التي تؤثر في إنجاز استراتيجية الشركة التي تتضمن التنسيق والضبط والفوائد المنافسة من خلال الشركات والمنظمات. مستوى نجاح التخطيط لمشاريع المحافظ باستراتيجية الشركات يعتمد على إنجاز هذه العوامل وكيف تتقدم هذه العوامل بطريقة جيدة.

ترتكز نتائج البحث على حالة النوعية الاستقرائية القريبة المتعلقة بإدارة تنمية المنشآت في دولة الإمارات العربية المتحدة والتي فشلت في تحقيق تخطيط مشاريع المحافظ باستراتيجية الشركات. تؤكد هذه النتائج على فعالية إدارة مشاريع المحافظ والتخطيط لها باستراتيجية شركات المؤسسة وتؤكد أيضاً بأن نقص أي عامل قد يكون له تأثير سلبي على نجاح مشاريع المحافظ وبالتالي على تنمية المؤسسة. هذه الرسالة تقدر التحديات ادارة محافظ المشاريع في التنمية العمرانية و تستهدف المناصب الادارية و فرق الطليعة و كذلك صناع القرار لاعادة النظر في افعالهم نحو ادارة افضل و نجاح الاعمال.

الكلمات الدليلية: مشاريع المحافظ، إدارة مشاريع المحافظ، استراتيجية الشركات، التخطيط لاستراتيجية الشركات، تنمية المنشآت، نجاح المشروع، فشل المشروع، تحديات المحفظة.

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Abbreviations

AHP: Analytic Hierarchy Process

CS: Corporate Strategy

GM: General Manager

P&C: Planning & Control

PM: Project Management

PMI: Project Management Institute

PPM: Project Portfolio Management

RA: Resource Allocation

S&P: Selection & Prioritization

SMART: Simple Multi-Attribute Rating Technique

UAE: United Arab Emirates

Chapter 1: Introduction

1.1. Study Background

In the majority of industrial sectors volatility in the business environment and need to enhance growth has led to pursuit of diversification strategies (Buckley & Casson, 2010; Paquin et al., 2015; and Grant, 2016). Such diversification strategy involves engaging in Project Portfolio Management (PPM) (De Reyck et al., 2005; Liesio & Salo, 2008). Project portfolio constitutes an assortment of projects that are collectively managed often with the aim of achieving benefits of the portfolio as well as realization of the organizational strategy (Sanchez & Robert, 2010). Increasing interest in project portfolio management has been attributed to the realization that this approach is more effective in driving project performance than engaging in portfolio management (Liesio & Salo, 2008). Rajegopal et al. (2007) in particular argue that high performance is not just about 'doing projects right' but rather 'doing the right projects' through PPM.

Despite the above benefits of project portfolios, their management presents a host of challenges such as governing and controlling the portfolios (Muller et al., 2008). These authors in their paper revealed that the various projects included in a portfolio often result into a complex environment in which case the organization must carefully select the set of projects to include in a portfolio. Archer and Ghasemzadeh (2004) define that complexity arises from the fact that the project pool must reflect the organization's investment and technological capabilities. Furthermore, they discuss about constraints in resources, technology and management capabilities that could affect the ability to achieve the desired balance. It is for this reason that project portfolio management has been advocated.

Project Portfolio Management (PPM) as defined by the Project Management Institute (PMI) is the "centralized management of one or more portfolios, which include identifying, prioritizing, authorizing, managing and controlling projects and other related work with the aim of achieving specific business objectives" (2008, pp. 226). Project portfolio management minimizes the overall business risk through maximization of organizational resources (Rank et al., 2015). It also makes collaborative decision-making easier and enhances value to the main stakeholders (Ramachandran et al., 2013). In PPM the prioritization and selection of projects is based on available resources

as well as the evaluation of running projects in order to determine their continuing fit with the portfolio (Kaiser et al., 2015). Depending on these writers other broader sets of activities that are included in PPM include continuous risk management, controlling and reporting. PPM is thus different from the managing multiple independent projects or large-scale projects with sub-projects as it involves managing projects that not only share the same resources but also the same goals (Kaiser et al., 2015). PPM unlike multiple project management (MPM) is also strategic in nature and involves long and medium term planning (Unger et al., 2012).

PPM in the construction sector: The construction sector constitutes one of the industries where management of multiple projects and project portfolios has become increasingly common (Aritua et al., 2009). Different firms are engaged in the management of project portfolios however distinctive organizational performances with regard to this management of diverse projects have been registered. Some firms as highlighted by Cheah and Garvin (2004) have achieved success along both market and geographical dimensions, however, a large number of other firms have however failed miserably and even forced by circumstances to file for bankruptcy. A research study by KPMG (2013) also indicated that less than 10% of project portfolios in the engineering and construction sector report consistent delivery with regard to time, budget and stated deliverables.

Prior research by Unger et al. (2012) suggests that firms, which fail to achieve the desired level of success in their projects, are often characterized by laxity in ensuring that these projects are well united thru strategy and they fail to understand that managing projects is not restricted to just the allocation of resources. Rather, it requires that projects be grouped in portfolios, engage in continuous monitoring of the process of each project and cyclically re-prioritize all projects in the portfolio (Kaiser et al., 2015). The aim should be to achieve balance and synergy across the portfolio as well as using the project portfolio to enforce the firm's corporate strategy (Unger et al., 2012).

Corporate strategy represents a crucial aspect of PPM as it has in this case been suggested that the ultimate goal of PPM should be to warrant that the portfolio is well allied by corporate strategy (Kaiser et al., 2015). In other words, project performance in PPM can be enhanced if there is a balanced and executable plan that is based on the need to achieve the set corporate strategy or goals (Unger et al., 2012). Meskendahl

(2010) further advices that firms should merely pursue project portfolios that are in accordance with the company's corporate strategy. It is however evident that in sectors such as construction there has been a trend in undertaking disparate arrays of projects that are not well associated to the business strategy and hence the high failure rates Meskendahl (2010).

From another perspective, Grant (2016) suggests that the lack of PPM alignment with corporate strategy can be attributed to the fact that in most cases strategic intents are formulated by top executives but projects start in the middle. More specifically, he proposes projects are budgeted by departments and thus the personnel working on them only see small pixels of the bigger corporate picture. There is however a dearth in research pertaining to how a strategic alignment between PPM and corporate strategy can increase project performance in the construction sector. This is an extent that the current study delves deeper into.

1.2. Problem Statement

The management of project portfolios has gained significant interest among researchers in the contemporary times. This is in part evident from ongoing research on portfolio decision analysis. Liesio et al. (2008) for instance advocates for robust portfolio modeling by project managers to consider multiple attributes during the process of making decisions especially under uncertain conditions. **Despite such research, there has been limited focus on the link between PPM and corporate strategy in construction projects in emerging economies such as the United Arab Emirates (UAE).** This represents a major issue towards a problem of projects failure among some UAE construction firms engaging in development of project portfolio specifically during the crisis.

Within the specific case of all the emirates, Dubai has become more popular with incredibly ambitious infrastructural and construction projects. In order to take advantage of the continued growth in the sector, contractors have been taking up multiple construction projects and managing them concurrently. However, a significant number of these projects have either completely failed or have stalled due to the financial crisis

period, construction projects such as Nakheel Tower and Burj Al Alam were started but later abandoned as the firms undertaking them suffered from financial and adequate management problems (Al-Hajj & Sayers, 2014). Thousands of other construction sites have over the years been abandoned leaving behind wastelands (Gunduz et al., 2015). The low rates of project performance in the sector in part suggests that construction firms have been less keen on managing the multiple projects as balanced portfolios which are not only aligned to the external environment but also the corporate strategy. *For these reasons, the current dissertation is concentrating on the problem of low performance of a construction organization that fails to align the corporate strategy of the business with its management of project portfolios.*

Accordingly, the present study also focuses on investigating how construction firms can manage their multiple projects within portfolios, which distinguishes the relationships amongst the distinctive projects and aligns them to the firm's strategy. Failure of undertaking the projects based on PPM approach and aligning the portfolio with corporate strategy can further be considered as a key-influencing dynamic of the low project performance in this sector. This aspect has also been highlighted by Price (2003) who noted that single and multiple projects undertaken by firms in the construction sector often fail due to overlooking of the need to align them with the long-term corporate strategy. The vast majority of construction firms fail to understand why PPM should be linked with corporate strategy and the resultant impact on project performance.

1.3. Study Aim and Objectives

This investigation seeks to analytically study the association of project portfolio management and corporate strategy in the UAE construction sector. As part of this investigation the aspects of managing projects portfolios that have an impact on single project performance are also assessed. The study is undertaken in the context of a construction company in UAE that engages in development of commercial and residential projects.

In consistence with the above aim of the research the following objectives will be pursued:

- To examine the linkage between project portfolio management and achievement of corporate strategy;
- To investigate the impacts of implementation of project portfolio on the single project success and assess the challenges;
- To investigate a framework that could be used in successful alignment of project portfolio with corporate strategy and portfolio success.

1.4. Research Questions

Depending on the objectives of the study answers to the following research questions will be sought:

- How does project portfolio management influence the achievement of corporate strategy?
- What is the impact of implementing project portfolios on the successful management of single projects?
- How can successful alignment between project portfolio, corporate strategy and project success be achieved in UAE's construction industry?

1.5. The Research Map

In the figure 1.1. below the research map is shown to formulate better image of what this study is including and what will be covered:

Problem Statement	Research Aim	Research Objectives	Research Questions	Underlying Theories
		To examine the linkage between project portfolio management and achievement of corporate strategy.	How does project portfolio management influence the achievement of corporate strategy?	• Project Portfolio Management Theory • Corporate Strategy Theory
		To investigate the impacts of implementation of project portfolio on the single project success and assess the challenges.	What is the impact of implementing project portfolios on the successful management of single projects?	• Project Success Theory
		To investigate a framework that could be used in successful alignment of project portfolio with corporate strategy and portfolio success.	How can successful alignment between project portfolio, corporate strategy and project success be achieved in UAE's construction industry?	• Project Success Theory • Corporate Strategy Alignment Theory

Figure 1.1. Research Map

1.6. Scope and Structure of the Study

The present study revolves around three main related themes: project portfolio management, corporate strategy and portfolio performance. These areas will be studied in relation to the construction sector in UAE. Specifically, a large construction firm based in Dubai and involved in a portfolio of infrastructure projects in UAE will be used as the study case. As a result of the focus on a single organization the data used in meeting the aim and objectives of the study is collected using a qualitative research design. In terms of structure the study is organized in to five main chapters as discussed below:

Chapter 1 – Introduction: This introductory chapter provides a background about the research issue on project portfolio management and corporate strategy. It also highlights the study aim, objectives and research questions.

Chapter 2 – Literature Review: In this division a theoretical background is developed by reviewing previous studies on the study's topic. The literature reviewed is used in the process of developing the research instrument used for purposes of data collection. Additionally, the theoretical views are used in the fourth chapter to aid in substantiation of the study's main findings.

Chapter 3 – Conceptual Framework: This section reviews the outcomes of the previous chapter and formulates a conceptual framework depending on the review of the literature in turn to support the problem of the study and investigate the underlying issues.

Chapter 4 – Research Methodology: The main contents of this chapter are the methodological reflections considered throughout data gathering and investigation. It further deliberates the research design, approach and data collection methods. In addition, measures undertaken to ensure a high quality and ethical study are highlighted.

Chapter 5 –Results and Discussions: The results from the investigation of the case study are offered, analyzed and discussed in this chapter. The problem of the study will be magnified in order to investigate the fundamental issues caused the study's problem to be generated. The discussion of the study outcomes based on the literature reviewed in the second chapter is also presented in this chapter. Furthermore, this section seeks to offer direct responses to the study's research questions.

Chapter 6: Conclusion and Recommendations: This chapter condenses key outcomes of the study and draws appropriate conclusions. In addition, recommendations for managerial actions and firms deliberations are suggested in this chapter. Moreover, research limitations and future considerations were also added.

Chapter 2: Literature Review

2.1. Overview

In the introductory chapter the aim and objectives of the present study were detailed out. It was in particular indicated that the study's main area of focus pertains to the management of project portfolios within the set corporate strategy and performance objectives. This chapter reviews relevant literature on portfolio project management, corporate strategy and project performance. Potential research gaps in extant studies are also identified. Notably, the contents of the literature review are used later in the study to substantiate findings from the study case in one of the UAE construction sectors.

The structure of the chapter is developed around the study objectives. It begins with a review of literature on the linkage between PPM and achievement of corporate strategy. This is followed by assessment of extant studies on the impact of implementing project portfolio on single project success. The third theme investigated pertains to challenges in the management of project portfolio. The final theme reviewed relates to strategies for ensuring success in project portfolio.

2.2. Project portfolio management and its effectiveness

2.2.1. Project portfolio

Harmsen (2010) describes a project portfolio as collections of projects are usually implemented under support and supervision of a specific association. Kodukula (2014) on the other hand defines project portfolio as comprising of a collection of value-generating projects that are strategically aligned in order to achieve the set organizational goals. In a more comprehensive definition, Martinsuo (2013) explains a project portfolio as: "A collection of projects that are managed concurrently under single management umbrella where each of the projects may be related or independent of others" (pp. 117).

Based on the above definitions several distinct aspects of project portfolios are identifiable. First, they comprise of a group or collection of projects. According to Kodukula (2014) this collection of projects may comprise of stand-alone projects or sub-projects of a larger or mega project. Second, there exists some relationship between

the projects. While the projects constituting the portfolio may be independent of each other they are related in the sense that they seek to create value by using the same pool of resources (Petro & Gardiner, 2015). Lastly, the portfolio comprises of only those projects that are aligned in such a way that they are capable of achieving the strategy set by the organization.

2.2.2. Project Portfolio Management

The term Project Portfolio Management (PPM) has been defined in various ways. Elonen and Artto (2003) consider it as the management of boundaries concerning projects and coordination of groups of projects in conformity with the available resources as well as other constraints. Patanakul and Milosevic (2009) on the other hand define PPM as the concurrent organization of the entire group of projects as a great being; these projects within the portfolio share and strive for rare resources. In this study the two definitions of PPM are adopted as they complement each other.

The term PPM is derived from project portfolio management, which is general management of multiple organizational activities such as products, programs and customers in a manner that is linked to business objectives (Jacobs & Swink, 2011). All forms of portfolio management such as project, customer and product portfolio management share three principle performance objectives (Muller et al., 2008). First, portfolio management seeks to attain strategic alignment, which is the transformation and direction of an organization's policy for a collection of activities in a mode that existing and forthcoming projects will be liable for ensuring that the corporate strategy remains viable (Muller et al., 2008). Second, portfolio management seeks to attain balance (Oh et al., 2012). The mix of projects should be such that the use of resources, the expected risks, and expected rewards are well balanced and can be handled by the firm (Oh et al., 2012). Lastly, portfolio management seeks to maximize portfolio value (Muller et al., 2008). In other words, the connection amongst capitals used and the takings from the portfolio should be optimized (Meskendahl, 2010; Oh et al., 2012; Jugend & da Silva, 2014).

From an effectiveness perspective, existing literature provides a strong rationale pertaining to the need for organizations engaging in project portfolio to make use of

PPM. According to Killen et al. (2012) organizations making use of PPM benefit from the use of a universal and methodical approach to project portfolio management. In other words, PPM provides clear guidelines pertaining to how project portfolios should be effectively managed. In support, Martinsuo and Lehtonen (2007) argue that PPM allows for successful execution of project portfolios due to open communication and decision making that is based on facts. Similarly earlier research by Kebdall and Rollins (2003) found that lack of project portfolio management leads to poor project outcomes due to conflicting objectives which in turn lead to resistance to change, loss of revenue and non-efficient use of resources.

While still on the above context, PPM has been shown to facilitate balance in the selection of projects to constitute a portfolio (Cooper et al., 1997). The balance aspect is critically important in PPM since it helps to ensure that the project portfolio comprises of a mix of projects of changing levels of risks and rational delivery of existing resources is achieved (Teller et al., 2012). Therefore, projects managers who utilize PPM are able to achieve a solid foundation for the portfolio thus minimizing chances of failure (Teller et al., 2012). From another perspective, PPM is also effective in providing a linkage between projects in a portfolio (Killen et al., 2008). Linkage has in this case been identified as one of the most important aspects of a project portfolio due to factors such as resource sharing and project interdependency (Killen et al., 2008). Killen et al. (2008) Without PPM the selection of projects is done on the basis of an individual project merit. Founded on a recent study by Martinsuo (2013) making portfolio decisions based on individual project merit is one of the leading causes of failure in execution of project portfolio management.

While the terms ‘portfolio’, ‘program’, and ‘project’ are related to each other they have a number of distinct differences that need to be taken into consideration (Prabhakar, 2009). From a time dimension, portfolios are permanent while projects and programs are temporary (Unger et al., 2012). According to Unger et al. (2012), a portfolio is considered as permanent in the sense that is it continually changing and being managed in order to be aligned with the firm’s strategic process. Project and programs are on the other hand temporary in that they must be completed in a specific duration of time (Turner & Müller, 2003; Muller et al., 2008). In regards to scope, portfolios have a strategic perspective that revolves around the whole organization

(Muller et al., 2008). In contrast, programs that a wide scope that keeps changing over time based on new requirements while projects have a narrow scope that should ideally not be subjected to changes (Muller et al., 2008; Killen et al., 2008). In terms of objectives, a portfolio represents an organization's total venture in the variations that are needed to achieve the set strategic intentions (Unger et al., 2012). Programs, on the other hand, reflect a single vision of change that is undertaken to achieve highly specific outcomes that are aligned to one of more of the organization's strategic objectives (Unger et al., 2012). Lastly, a project is a focused delivery of a single output that contributes directly to a specific strategic benefit (Muller et al., 2008).

2.2.3. Effectiveness of Project Portfolio Management

The level of success of a project portfolio is a key determinant of the effectiveness in obtaining value from the organization's investments (Patanakul, 2015; Heising, 2012). Success of a portfolio also helps in providing cues pertaining to the organization's direction and progression towards growth (PMI, 2008). Within this context, Sanchez and Robert (2010) argue that effectiveness of a portfolio should be measured against a set of key performance indicators. The indicators should be based on the organization's mission and vision (Heising, 2012). Some researchers such as Haponava and Al Jibouri (2009) have however advocated for measurement of effectiveness based on the traditional project success factors, which include cost, time, schedule and quality. These indicators have often been considered as ineffective as they are included to a short-term perspective (Muller et al., 2008). As a solution, Muller et al., (2008) have advocated for a comprehensive PPM effectiveness measurement system that encompasses three broad indicators: achieving results, achieving purpose and balancing of priorities (see Table 2.1).

Indicator	How to measure it
Achieving results	Customer satisfaction, financial results, scope, time, cost, quality and user requirements
Achieving purpose	Achieving the project and/or the program purpose
Balancing priorities	Resource retention, timely accomplishments and stakeholder satisfaction

Table 2.1. PPM effectiveness indicators, adapted from Petro (2012)

2.3. Challenges in the Management of Project Portfolios

2.3.1. Management of Project Portfolios Versus Management of Single Projects

Project managers managing both multiple and single projects within portfolio that share many characteristics (Heising, 2012). Prior research however indicates that portfolio and multiple-projects managers must develop additional competences compared to their counterparts who undertake only one project a time (Kaiser et al., 2015). According to Gutjahr et al. (2008) several factors related to project portfolio underscore the need for the additional competences. First, it has been acknowledged that one of the major roles in PPM pertains to linking of multiple concurrent projects; such a role does not exist during the management of single projects (Gutjahr et al., 2008). Second, PPM involves the project manager leading multiple teams who may are undertaking projects of different objectives (Gutjahr et al., 2008). In contrast, the manager of single project only leads one team (Brook & Pagnanelli, 2014). As such, managing of teams is relatively easier in single projects than in multiple projects. Another factor buttressing the need for additional competences in multiple projects pertains to the challenge of switchover (Heising, 2012). As Heising (2012) explains project managers implementing project portfolios are at times required to switch over from one project to another aspect that does not exist in the management of single projects. In the present study, it is important to assess the extent of problems posed by these unique aspects of PPM in the specific case of the construction sector.

Within the above context, there have been efforts to identify the specific traits or competences that project portfolio managers should possess. The study by Tullet (1996) underscores that project portfolio managers should exhibit an innovative thinking style. In this respect, the project manager needs to come up with novel approaches to planning and management of concurrent projects (Gutjahr et al., 2008). The innovative approach chosen should be in a way that it is well structured and systematic and hence minimal chances that conflicts will be encountered (Tullet, 1996). From another perspective, it has been argued that project portfolio managers must be adept in handling pressures and conflicts (Muller & Turner, 2010). The nature of the project portfolio environment should be in a way that portfolio teams must be led commendably and hence a high demand of effective management of time should be achieved (Muller & Turner, 2010). In the case of conflicts, project portfolios are often characterized by aspects such as frequent changes in priorities and presence of unlimited resources, which often lead to unstable relationships (Jonas, 2010). Consequently, project managers must be skilled in management of conflicts whenever they arise (Caniels & Bakens, 2012).

Extant literature (Kaiser et al., 2015; Levin, 2010) also emphasizes the importance of project portfolio managers possessing multi-tasking skills. They should be able to switch from one project to another as required (Kaiser et al., 2015). However, a more critical review of multi-tasking highlights a number of potential shortcomings. According to Levin (2010) multi-tasking for project portfolios should be approached carefully, because of its potential to become a source of stress as well as draining of productivity of the project manager and team. Concurring to this author, multi-tasking can often create an illusion of progress while in the real sense it robs people of time and important mental cycles. In agreement, Richardson (2010) underscores that multi-tasking in a project portfolio environment can be detrimental when done excessively. Conferring to this study, multi-tasking should be characterized by efficient work scheduling; specifically project portfolio managers should ensure that each project task is performed to its logical completion point before picking up other tasks in different projects, which constitute the portfolio. Whenever a project task is completed and its deliverable allocated to another individual it becomes possible to keep up with the organization's resource capacity (Richardson, 2010).

Previous researches (Petro, 2012; Martinsuo, 2013) further suggest that some organizations may be hesitant to engage in portfolio management due to the potential impact in cases of failure. In the case of single projects failure leads to financial losses that impact mainly the affected project (Petro, 2012). The scale of losses in project portfolio is on the other wide much larger with the potential of the organization incurring huge financial burdens (Martinsuo, 2013). In extreme cases, failure of project portfolio may lead to a complete wipeout of investments amounts and the organization's reputations (Petro, 2012). Despite the greater magnitude of portfolio failure compared to single project failure, it is argued that failure is not necessarily as a result of size or number of projects but inefficient management (Martinsuo, 2013).

2.3.2. Challenges of Project Portfolios

Traditional project management as stated by Atkinson et al. (2006) emphasizes the importance of planning and control as essential elements of achieving project success. Control involves with putting measures in place to mitigate all undesirable changes (Atkinson et al., 2006). In the case of relatively complex projects such as project portfolios planning and control as project management approach has been criticized in terms of its ability to ensure success of all individual projects that constitute the portfolio (Jonas et al., 2013). The underlying argument is that some projects undertaken in a complex environment that is characterized by high levels of uncertainty (Jonas et al., 2013). Consequently, the traditional approach of predicting and planning may be effective (Lenfle & Loch, 2010). Project managers are operating in unstable environments need to ensure flexibility in order for the entire project portfolio to be successful (Artto et al., 2008). Flexibility as defined by Artto et al. (2008) is the ability to adapt to uncertain and rapidly occurring environmental changes. Planning and control are thus deemed as necessary but not sufficient in unstable environments (Blomquist et al., 2010).

The above debate on planning and control has given rise to the issue of mechanistic and organic approaches to the management of projects (Osipova & Eriksson, 2013). Osipova & Eriksson (2013) further clarify in a mechanistic system project managers embrace high levels of control and adopt specialized differentiation

and hierarchical structures; such a system is advocated for projects managed in stable environments. They then add that in the environments where uncertainties are high a more flexible approach has been advocated. An organic system allows for such flexibility and is therefore considered appropriate in environments where conditions keep on changing (Osipova & Eriksson, 2013). Koppenjan et al. (2011) in their article justify the organic system as a network structure that is adopted with spread of commitment and the presence of informative communication. They advocate the use of the organic approach in complex environments in which case the management of uncertainty and complexity should be constantly shared.

Ahrens and Chapman (2004) through an empirical study of six project firms however advice that purely mechanistic or organic approaches in project portfolio management should not be pursued, instead, project managers should strive to combine the two approaches: the rationale is that a mechanistic approach minimizes the chances of chaos occurring while the organic approach helps in responding quickly to changes. Geraldi (2008) while confirming the importance of the combined approaches advocated for higher levels of an organic approach in portfolio management. This author in particular argues that portfolio management faces high levels of uncertainty. As a result, focusing purely on planning and control can easily lead to bureaucratization of chaos, which is a leading cause of high failure rates in project portfolios. The study further emphasizes that use of strict rules in this kind of an environment fails to represent the reality. It also posits that such views have been the basis of the contingency theory. The main proposition of this theory is that firms must ensure that they have an appropriate fit between the characteristics of their internal environment and the demands that are created by the external environment (Woods, 2009). The fit acts as the basis of achieving high levels of organizational effectiveness (Battilana & Casciaro, 2012). In the construction engineering, one of the zones of application of the contingency theory includes putting in place a contingency budget to help deal with uncertainties. According to Gunhan and Arditi (2007) preparing a contingency budget during the pre-construction stage is an effective way of ensuring that construction projects do not stall due to unforeseen financial problems.

Consistent with Obsorne et al. (2013) Project portfolios require the managers that ensure cost efficiency and operational efficiency are maintained. The multiple numbers

of projects increases coordination difficulties, which in turn affects the ability to achieve the desired efficiencies (Obsorne et al., 2013). Coordination problems are further exacerbated by the presence of multiple stakeholders with partially conflicting interests and objectives (Teller et al., 2012). A PPM approach has however been recognized as a potential and effective way of minimizing coordination difficulties (Killen & Kjaer, 2012). Killen and Kjaer (2012) argue that this approach to the management of portfolios in particular allows the project team to overcome coordination challenges related to use of the common pool of labor and other resources. They further advise that as part of the PPM approach managers are also advised to make greater use of portfolio decision-making tools. Such tools allow for easier identification of risks as well as distribution of the scarce resources over various projects (Chao & Kavadias, 2008).

Prioritization on the other hand is an effective method of ensuring that the selected project portfolio aligns well with the corporate strategy and also yields project success (Cooper and Edgett, 2009). Cooper and Edgett (2009) advocate for prioritization that is aimed at maximizing project portfolio value within the range of resource constraints. Under this innovative selection method the project team is required to simultaneously compare various projects of interest with the main aim of arriving at the most optimal ranking of the individual projects (Cooper, 2008). In terms of decision criteria, only the most highly ranked projects after the selection process should constitute part of the portfolio (Cooper, 2008). Some of the techniques for prioritizing projects include Simple Multi-Attribute Rating Technique (SMART) method and Analytic Hierarchy Process (AHP) (Ho et al., 2010; Saaty, 2006). The SMART technique involves distribution of points over the attributes of a project so that the points allocated to each project reflect its relative importance, while AHP on the other hand involves paired comparisons and the use of ratio scales in making preference judgments for various projects (Saaty, 2006; Brook & Pagnanelli, 2014).

Achievement of project success is in part based on the availability of adequate resources as Patanakul & Milosevic (2009) define in their study. They further identify that although the majority of projects are coupled with resource constraints the problem is more pronounced in project portfolios than in single projects. In a study of six large construction firms Patanakul and Milosevic (2009) found that having satisfactory resources is often extraordinary for most portfolio managers as these managers have to

deal with the issue of supply sharing and hence the threat of unmaintainable resources that are always looming around. Similarly, Klingebiel and Rammer (2013) report that the project portfolio managers tend to reallocate resources midway through a given project, this mainly occurs when a new project is included in the portfolio and becomes a priority. In such a case the resources are transferred to the prioritized project leading to difficulties in successfully completing all projects (Patanakul and Milosevic, 2009).

2.4. Corporate Strategy

Corporate strategy constitutes an important aspect of the present study, as it is the major issue of the study problem. Berner (2000) defines corporate strategy as: "The way an organization creates value through the configuration and coordination of its multi-market activities" (pp. 12). Corporate strategy has also been described by Ronda-Pupo & Guerras-Martin (2012) as a configuration of chief purposes or goals and crucial policies for the achievement of those goals, where the objectives are usually indicated in a way as to outline what corporations the company operates in and the intended direction of the company. It can also be noted that corporate level strategy is distinct from business level strategy, which involves building sustainable competitive advantage in the identified markets (Morris et al., 2015).

Within this context it can be noted that the essential concepts of strategic planning and corporate strategy are as a result of the work of management theorist Igor Ansoff (Moussetis, 2011). Notably, Ansoff concluded that a number of strategies are crucial in achieving long-term performance and goals (Veiga & Franco, 2015). According to this study the strategies include product development, which seeks to achieve growth through the introduction of new products in a firm's existing markets; diversification, which involves seeking growth through introduction of new products in new products; market development, which requires that a firm achieves growth through entering of latest marketplaces through standing merchandises; and market penetration in which growth is realized by enduring in current marketplaces with current endures (Veiga & Franco, 2015).

In the development of corporate strategy it has been argued that creation of value should be the ultimate goal (Payne et al., 2007). According to McCabe (2010) such

value does not come from the company as a whole but rather from the business units. In this case, unique corporate strategies that are capable of creating competitive advantage have been identified as important sources of value for the firm (McCabe, 2010). In the development of corporate strategy, decision-makers have to take into consideration five key questions (see figure 2.1.).

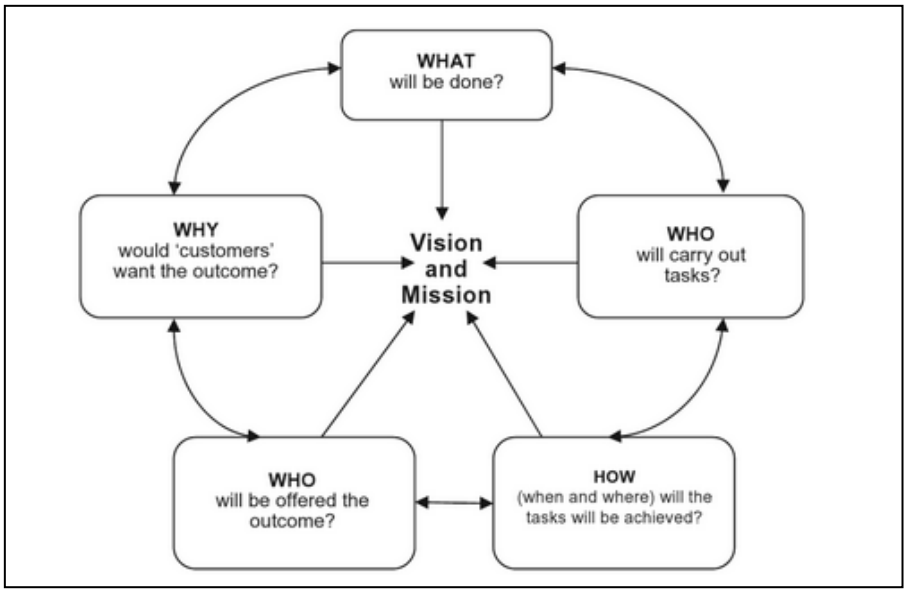

Figure 2.1: Key questions in development of corporate strategy by decision makers, McCabe (2010)

In terms of effectiveness, extant literature (Caldart & Ricart, 2004; Sehgal, 2010; Furrer, 2016) suggests that an effective corporate strategy comprises of three main elements that collectively lead to corporate advantage. The three elements include organization, businesses, and resources that are known as the triangle of corporate strategy (See figure 2.2.). The organization element of the triangle is further broken down into structure, systems and processes (Furrer, 2016).

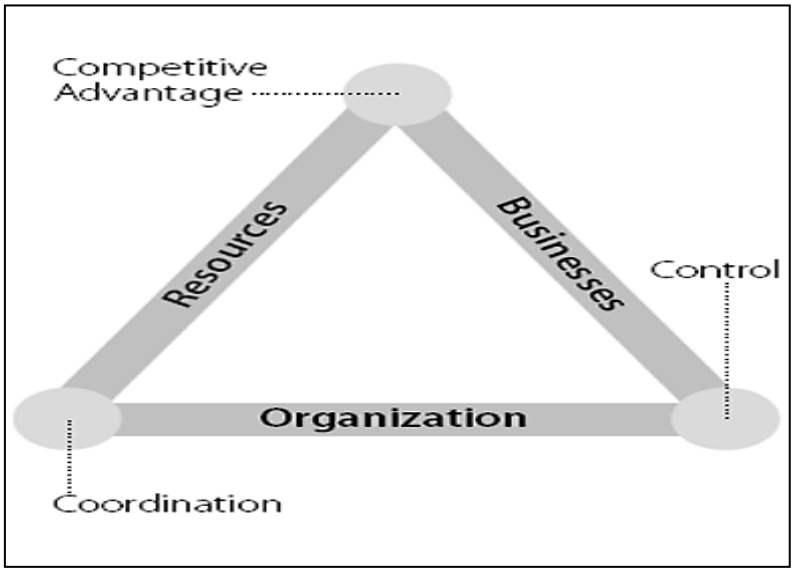

Figure 2.2: The corporate triangle, Furrer (2016)

In a research Caldart and Ricart (2004) suggest that in all great corporate strategies each of the three main elements of the triangle is aligned with one another. The basis of the alignment should be the organization's resources, which include skills, capabilities and special assets; for instance, an organization may for instance compete based on specialized technological expertise or superior management skills (Caldart and Ricart, 2004). From a project management perspective Furrer (2016) argued that achieving a fit between resources and businesses (projects) should be in a way that only a set of businesses, which are capable of creating value for the firm using the available resources, should be selected. With regard to the organization aspect in the triangle, an effective corporate strategy should be in a way that it articulates how the vision should be achieved Furrer (2016). Accordingly the right kinds of coordination and control must be identified in order to ensure effective deployment of resources Furrer (2016).

2.5. Project Portfolio Management in Corporate Level Strategy

2.5.1. Project Portfolio and Corporate Strategy

Management of portfolios has become increasingly popular in the current times. Carpenter et al. (2012) in particular highlights that portfolios and strategic alliances have become indispensable means for organizations to implement their business

strategies. Firms engaging in portfolios or alliances have further been found to significantly enhance their potential for future growth (Schilke & Goerzen, 2010). At the strategic level, portfolios have been considered to offer several performance benefits to the organization that include improved performance through creation of scale economies, sharing of risks, and improvements in flexibility and reduction in costs (Lavie, 2009; Oerlemans et al., 2013).

From a project management perspective, high levels of effectiveness have been argued to be achieved based on the extent to which the organization selects and prioritizes only those projects that have the largest impact on corporate strategy (Herfert & Arbige, 2008). In other hand, the most effective project portfolio comprises of only those projects that have the highest value for the firm. By choosing these projects it is argued that a firm can be engaged in the most economically effective use of scarce resources (Seider, 2006). Muller (2011) while also acknowledging the importance of project portfolio argues that firms must be keen on prioritizing projects that have the optimal contribution to strategic objectives.

From another perspective, Cooke-Davies (2002) through a study that sought to determine the dynamics that lead to consistently successful projects highlighted the importance of aligning portfolio management with corporate strategy and business projects. One of the chief discoveries of the study was that in the majority of organizations which have successfully achieved PPM, there were efforts to come up with project and portfolio metrics that provided a straight 'line of sight' criticism on existing project performance and the anticipated forthcoming success (Cooke-Davies, 2002). This practice makes it possible to align project portfolio with corporate strategy. Figure 2.3. demonstrates the link between project management practices and the ability to achieve both individual project performance and corporate strategy.

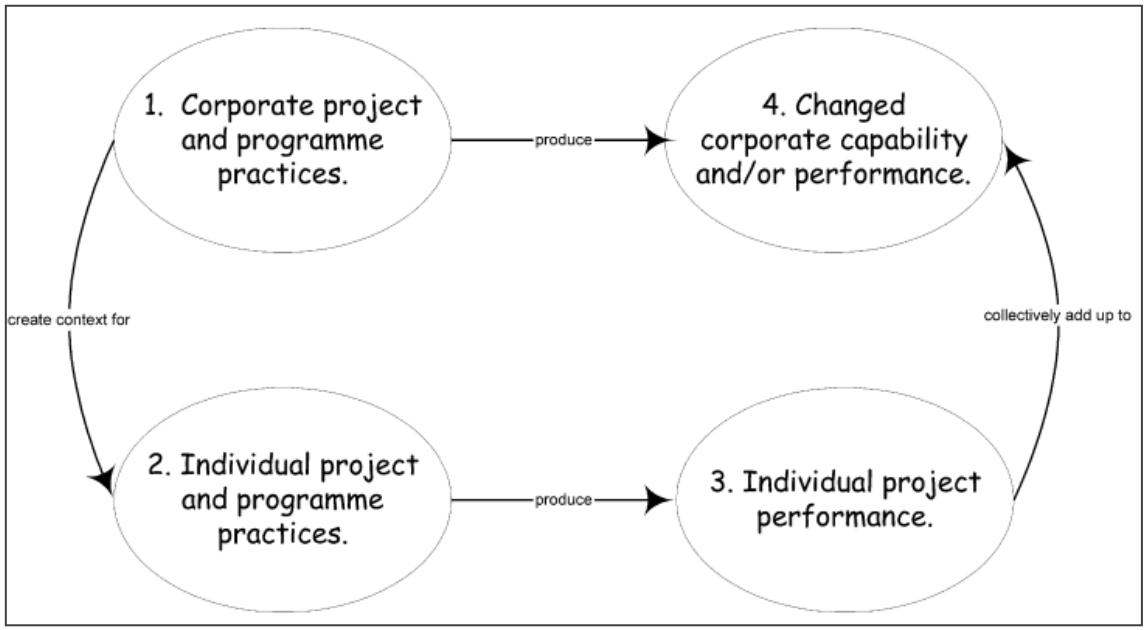

Figure 2.3: The corporate context for project success, Cooke-Davies (2002)

As evident from the above studies, corporate strategy is a critical aspect that guides an organization to its desired position (Herfert & Arbige, 2008). According to Seider (2006) the corporate strategy of a firm is made operational or is achieved through the decisions that it makes in regard to areas of investment. As an example, a firm whose corporate strategy pertains to achieving market leadership through leading edge product development must reflect the strategy through the number of new innovative projects (Teece, 2010). In this case, the chosen products have to be those that facilitate continuous growth as opposed to holding defensive positions in the market (Seider, 2006). In a project management context, it has also been underscored that firms intending to grow through multiple projects must ensure that such projects well aligned with the corporate strategy (Seider, 2006). Project portfolio management is therefore a vehicle to the implementation of policy in the sense that ventures and resources are barely delivered to the most relevant projects (Seider, 2006). Previous research by Cooper et al. (1997) notes that while most firms appear to have identified their strategic objectives a substantial number experience disconnects between the chosen strategy and areas where investments are made.

The extent to which portfolio management is linked with corporate strategy is in part influenced by how well portfolio balancing is undertaken (Meskendahl, 2010). Meskendahl (2010) describes portfolio balancing as the process of choosing an appropriate combination of projects that do not expose the organization to unreasonable risk. This requires the organization to consider a range of dimensions that are most likely to offer best value for the resources used as per stated by Meskendahl (2010). Prior studies by Chao and Kavadias (2008) and Chao et al. (2009) however indicate that there is lack of universal and consistent framework that can be used in choosing the dimension to take into consideration during portfolio balancing. Therefore, an organization has to take into consideration this context as well as the desired corporate strategy (Meskendahl, 2010). As an example, a firm that seeks to achieve growth through project portfolios involving new project development should balance between the short-term benefits to be realized through incremental project improvement and the long-term benefits that accrue from development of radically new projects and services (Meskendahl, 2010).

2.5.2. Achieving Strategic Alignment in Project Portfolios

Strategic alignment has been underscored in extant literature (Lycett et al., 2004; Cooper and Edgett, 2003) as an attainment standard for project portfolios. While expounding on this area Cooper and Edgett (2003) emphasize that strategic alignment or fit is achieved when a firm's distinct projects and thus the portfolio are consistent with the company's corporate strategy. Similarly, Meskendahl (2010) define strategic alignment of the project portfolio as the extent to which the total sum of projects being undertaken by an organization reflects its business and corporate strategy. It has been suggested corporations with qualitatively great portfolio management tend to succeed a greater level of tactical alliance (Lycett et al., 2004). Impliedly, firms seeking to achieve project portfolio success need to ensure the projects included in the portfolio are not only aligned with each other but also in line with the business strategy (Meskendahl, 2010).

An earlier study by Cooper et al. (1997) further highlighted the need to consider two broad areas while assessing whether the portfolio is linked with the firm's strategy

or not. The first area pertains to strategic fit in which case the management should assess the level of fit with business and corporate strategy; for instance, if an organization has outlined evident technologies or markets as the crucial parts of focus then an assessment should be conducted to investigate whether the projects fit into these areas. The second area pertains to spending breakdown Cooper et al. (1997). According to Cooper et al. (1997) the breakdown of the organization's spending should reflect its strategic priorities; as an example, a firm that seeks to pursue business growth through project portfolios should have a majority of its spending allocated in research and development activities. Fricke and Shenbar (2000) have also noted that there are several objectives that organizations seek to achieve through PPM which include increasing the overall value of the company's investments and balancing of the project portfolio. Notwithstanding, achieving a strategic fit constitutes an overriding goal of PPM (Fricke & Shenbar, 2000).

In the specific case of the construction industry, which is the focus of the present study, prior research by Kaiser et al. (2015) reveals the absence of adequate focus on strategic fit in PPM. Based on this study strategic management is in most cases considered a preserve of top management. They further argue that issues pertaining to project management on the other hand are left for the project management office. The study by Kaiser and colleagues further notes it is only till today that there has been an increase in awareness of pertaining to how strategic management can be incorporated with PPM. A key problem in this context as identified by Kaiser and colleagues is that management intensity often results into less time been allocated to strategic management. In an earlier study by Junnonen (1998) it was also highlighted that strategy formulation and application in selection of projects to invest in is highly critical given the cyclical nature of construction industry. In agreement, Price (2003) demonstrated that official progressions in the interpretation of long-standing strategies are required in the construction industry as it activates within a favorably stormy and competitive environment.

A study by Chinowsky and Meredith (2000) through a survey of 400 executives of construction contractors further noted that most construction firms tend to be aware of the need to select successful strategies and projects in the highly competitive industry. Despite such awareness strategic planning is only partly implemented and

hence the challenges encountered by most construction companies in the successful completion of project portfolios (Kaiser et al., 2015). Such findings were further affirmed by Warszawski et al. (2007) who found that an increasing number of construction firms are developing sophisticated methods of strategic management but are unable to effectively implement the identified strategies. The result is failure to achieve the desired goals since strategy and performance are two aspects that are strongly dependent on each other (Teare et al., 1998).

2.6. Project Portfolio Implementation and Its Impacts on the Success of Projects

2.6.1. Uncertainty in Project Portfolio Management

Previous research indicates that the uncertainty characterizes project portfolio decisions is likely to impact negatively on the successful completion of individual projects (de Reyck et al., 2005). The uncertainty inherent in such projects can be attributed to a variety of factors including selection constraints, the strategic nature of decisions to be made and variances in decision maker preferences (Salo et al., 2011; de Reyck et al., 2005). According to Salo et al. (2011) the uncertainty in project portfolio also makes it impossible to come up with accurate estimate of parameter values to guide individual projects.

In the light of uncertainty that characterizes project portfolios several measures have been suggested to reduce the impact on project performance (Kaiser et al., 2015). Sarabando and Dias (2010) suggest that project managers should make use of the preference programming approach to assist in capturing incomplete information. Liesio et al. (2008) illustrate that by using this approach various uncertain attributes are ranked in terms of their importance or impact on all projects; weights are then attached to each of the uncertain attributes with higher weights suggesting higher risks of uncertainty. Different portfolios are later compared in order to make judgments on the set of projects with least uncertainties (Liesio et al., 2008).

2.6.2. Alignment of Project Portfolio and Corporate Strategy with Market Dynamics

A review of literature from Warszawski et al. (2007) suggests that success for project portfolios can in part be achieving by aligning the organization and the portfolio to the external market environment. This study of the construction sectors by Warszawski et al. on developed countries has in this case shown that the success of projects is strongly influenced by several external factors including government spending, demographic trends and competition from foreign firms. In the specific case of Germany government subsidies were shown to create artificial demand for housing properties, which then fell after the subsidies ended (Kiesewetter et al., 2009). As a result, construction firms, which failed to take into account such government influence, were left with excess capacity as demand decreased. The shrinking and aging population was on the other hand shown to reduce the real demand for new housing (Kroll & Haase, 2010). Such dynamics necessitate the need for assessing market dynamics and identifying possible strategic implications before deciding on the type of project portfolio to invest in.

While on the above context several strategies have been suggested to help ensure successful PPM in dynamic market environments. Valence (2013) indicates that construction firms should begin with identifying the most suitable generic strategy. The three main generic strategies based on Porter's (2008) studies on competitive advantage include differentiation, low cost and focus or niche strategies. The low cost leadership strategy allows a firm to benefit competitive improvement thru consuming the least cost in the industry; this can be achieved through low cost manufacturing as well as ensuring the organization's workforce is committed to the low-cost strategy (Bauer & Colgan, 2001). It may also require the organization to outsource activities that it does not have a cost advantage to other more efficient firms (Ellram et al., 2008). Differentiation on the other hand involves providing the market with unique products or services that in turn drive higher levels of customer loyalty (Porter, 2008). Firms pursuing a differentiation strategy are able to charge premium prices through the superior value proposition (Hyatt, 2001). Lastly, Allen and Helms (2006) describe the focus strategy involves pursuing a fine competitive range in a given industry. Firms adopting this generic

strategy typically choose to focus their efforts towards a specific customer group, geographical area or product range (Allen & Helms, 2006).

In highly competitive markets adoption of a differentiation strategy has been shown to increase the chances of successfully managing project portfolios. Vives (2008) in particular notes that differentiation through innovation can help achieve competitiveness. As an example, firms, which have succeeded in the mature construction sectors in developed countries, have done so through developing of latest tools and know-how especially in challenging aspects of construction. This is as opposed to adoption of low-cost strategies, which cannot be sufficiently relied on due to high competition from international construction firms (Vives, 2008).

A niche strategy has also been advocated as part of PPM in which case construction firms should spread their projects along specialized areas such as particular types of buildings or infrastructure (Valence, 2013). According to Valence (2013) success in pursuing a niche strategy can be achieved through demonstrating to clients that the firm has a strong track record in such projects as opposed to solely relying on low prices to win tenders. Irrespective of the chosen generic strategy, literature in this area emphasizes the importance of conducting an extensive marketing analysis prior to constituting a project portfolio as well as ensuring a good fit with the firm's capabilities (Warszawski et al., 2007).

Empirical research by Zuo et al. (2014) also reveals how various construction firms around the world have managed dynamics in their markets to ensure that their project portfolios are successful. Zuo and colleagues in their paper, which interviewed 35 senior managers from various Australian construction firms, found that most of these firms were able to overcome the effect of the global financial crisis by concentrating on core business. In addition, most of the firms avoided aimless bidding, which would otherwise result into a project portfolio that does not reflect their resource capacity. A survey of the highly competitive Turkish construction sector also revealed that differentiation could help ensure success in PPM (Budayan et al., 2013). Based on the results of the study construction firms can assume differentiation on two levels namely quality and product variety. High quality construction leads to improved image among clients and hence potential for successful bids of projects suitable to be included in a portfolio. Product variety on the other hand ensures that the firm wins bids that would

be attractive for inclusion in a portfolio (Budayan et al., 2013).

2.6.3. Making Effective Termination Decisions

As part of the process of ensuring that the project portfolio is allied to the corporate strategy literature suggests that managers should keen on terminating projects that are characterized by low congruence to corporate strategy (de Brentani et al., 2010). Termination involves the withdrawal of resources from the particular project. As per de Brentani et al. (2010), the result is that resource competition is steered to the disadvantage of the unaligned projects to the improvement of projects that favor the strategic fit of the aggregate portfolio. Termination of unnecessary projects is supported from two main perspectives: first, it helps ensure that resources for the entire portfolio are not worn down in vain; second, it helps ensure that the identified strategy is executed in the most conscious manner (de Brentani et al., 2010). This is the case since only projects that have the best fit with the corporate strategy are given the go ahead decision (Lovallo & Kahneman, 2003).

Despite the ability of termination decisions to allow managers to align project portfolios with corporate strategy several managerial challenges have been identified. Cooper (2008) for instance notes that weaknesses and shortcomings in the portfolio are usually detected late in 77% of the firms. At advanced stages of the implementation process termination of one or more projects may adversely affect the manager's credibility and hence reluctance to terminate. Gomes et al. (2001) also notes that the missing of prerequisites for termination may hamper decisions for termination. The consequence is that a significant number of bad projects that do not contribute to the firm's corporate strategy linger on and ultimately reduce the overall effectiveness of the project portfolio.

Chapter 3: Conceptual Framework

3.1. Introduction

In the preceding chapter a theoretical study for the research was developed through the review of extant studies on project portfolio management and corporate strategy. The theoretical review is used in this chapter to further formulate a conceptual framework, which is then used as the basis for choosing the methodologies for collecting primary data from the case organization.

3.2. Conceptual Framework

Based on the literature reviewed in the preceding section, this chapter builds a conceptual framework of the study, which is presented next in figure 3.1. It suggests that various challenges are encountered in the management of project portfolios that may prevent the organization from the realization of the set goals and in turn to align the PPM with the corporate strategy of the organization. The conceptual framework for this study consists of three main parts. All of these parts are focused towards the achievement of the corporate strategy. In order to realize PPM success the challenges must be opposed through a set of PPM success factors. On the other hand, corporate strategy itself formulates sets of aspects so that the organization follows. The relationship between these aspects and linkage of the PPM with corporate strategy is further shown in the conceptual framework.

As mentioned earlier in the review of the literature PPM deals with managing of different projects within the portfolio, which share many characteristics (Elonen & Artto, 2003; Harmsen, 2010; Meskendahl, 2010; Martinsuo, 2013; & Kodukula, 2014). As it is shown in the figure, management of these projects within the portfolios and supervising the portfolios themselves based on the reviewed literature require some sets of elements and components in order to build a solid foundation of the PPM and better achieve the organizational goals. According to the previous chapter nine components were found that could help the management to control the project portfolio.

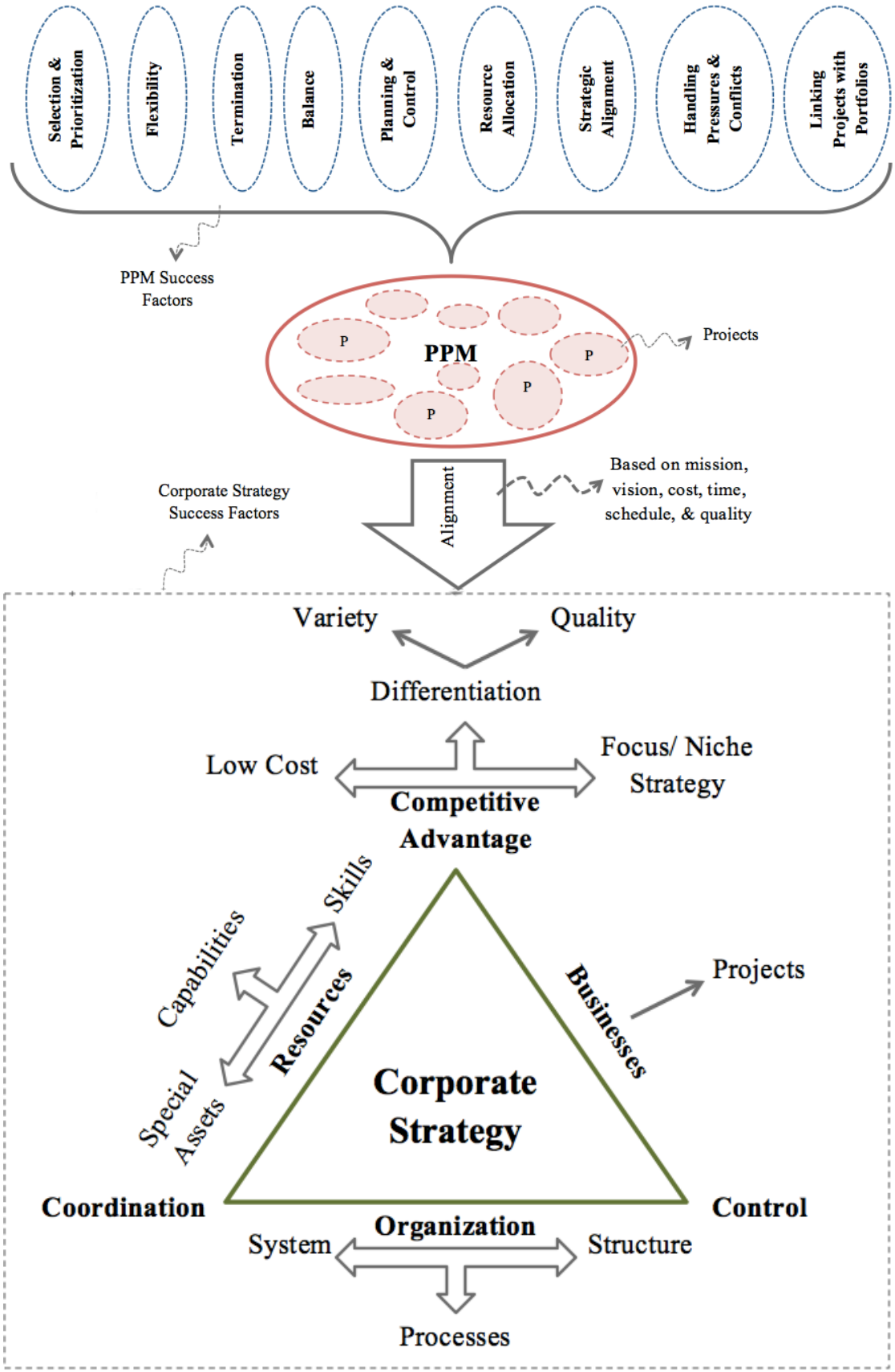

Figure 3.1: Conceptual Model

In the article from Muller et al. (2008) strategic alignment of the project portfolio goals was declared. This alignment should be based on the translation and coordination of the organization's strategy in a way that aims and purposes of the projects and portfolios are associated with the strategy so that the portfolio value will be maximized and optimized (Meskendahl, 2010; Oh et al., 2012; Jugend & da Silva, 2014). On the other hand, having some balance in the priorities, use of resources, expected risks, and expected rewards was added by Oh et al. (2012) as an effective element in managing the project portfolio. Essentially, the most effective project portfolio should comprise only of those projects that have the highest value for the firm. By choosing these projects it is argued that a firm can be engaged in the most economically effective use of scarce resources (Seider, 2006). Muller (2011) while also acknowledging the importance of project portfolio argues that firms must be keen on prioritizing projects that have the optimal contribution to strategic objectives. Moreover, selection and prioritization factor acts as a major key in managing the project portfolio since adding new projects to the portfolio has direct influence on the existing projects in the portfolio and many projects in the same portfolio change their position and priority based on an outer situation and environment or even the added new projects (Cooper, 2008; Caniels & Bakens, 2012; Kaiser et al., 2015). This prioritization of the projects and portfolios helps in enhancing the resources used and optimizing returns for the portfolio (Cooper & Edgett, 2009).

Flexibility as defined earlier in literature review by Artto et al. (2008) also plays an important role in PPM whilst some projects and portfolios need flexible environments in terms of resources and periodization so that the successful management of project portfolio will be achieved. Sometimes this flexibility can be included within planning and controlling the projects and portfolios since rapid and unexpected changes will occur due to the external environment and therefore, planning and controlling seeks some flexibility to enhance the portfolio value (Blomquist et al., 2010). However, planning and control element has itself two approaches that can be used in PPM as per explained in the literature review: mechanistic system with high levels of control in stable environments that minimizes chances of chaos; and organic system with high levels of uncertainty in unstable environments that seeks flexible approach and helps in responding quickly to the changes (Ahrens & Chapman, 2004; Koppenjan et al. 2011;

Osipova & Eriksson, 2013). Besides, Geraldi (2008) added that these two approaches could be combined together so that better controlling and planning will be applied.

Resource allocation is another factor that its effectiveness cannot be ignored, as it could be one of the most leading elements in successful achievement of PPM. Production and construction of projects within portfolios depends on the resource availability and limitation. Resources away from manpower, materials, or equipment's needed have to be well allocated according to each project and well observed as per many projects within one portfolio may share same resources (Patanakul & Milosevic, 2009; Klingebiel & Rammer, 2013). This is based on the linking projects and portfolios component in PPM since many resources are shared and hence some projects need their interdependency (Gutjahr et al., 2008; Killen et al., 2008; Heising, 2012).

On the other hand, project portfolio managers need to be skilled in multi-tasking and handling the pressures and conflicts aroused in order to better accomplish and cope with the ongoing situation (Muller & Turner, 2010; Jonas, 2010; Caniels & Bakens, 2012). Successful management of projects and portfolios pursue proficient and capable managers to handle well the conflicts provoked and understand the situation in which they should terminate new offered projects if needed or even dismiss and reduce some resources so that the portfolio value will be remained and the organization strategy will be obtained (de Brentani et al., 2010; Lovallo & Kahneman, 2003).

Above components of PPM were identified according to the preceding chapter, however, as it is clear from the figure 3.1. these components all should be aligned to the strategy of the organization in order to achieve result and purpose in successful PPM based on the vision and mission of that organization along with the traditional factors of cost, time, quality, and schedule.

The third construct of this study as per displayed in the figure is concerned with achievement of corporate strategy through PPM. Ultimately, all of the varied elements of PPM should contribute towards the achievement of corporate strategy for the organization. Corporate strategy provides the vision and goals of the company while also outlining the path to achieving them (Ronda-Pupo & Guerras-Martin, 2012). It also has to be noted that corporate level strategy is distinct from business level strategy,

which involves building sustainable competitive advantage in the identified markets (Morris et al., 2015).

Corporate strategy on the other hand includes its own components that need to be considered and are presented in the figure. Three components of competitive advantage, coordination, and control are presented based on the study by Furrer (2016) as per explained earlier in the literature review. Broadly, competitive advantage could be attained throughout low cost delivery or creation of niche products that capture great value for an organization. Patanakul (2015) and Heising (2012) argue that the level of success of a project portfolio is a key determinant of PPM's effectiveness in driving value for an organization. Success of a portfolio also helps in providing cues pertaining to the organization's direction and progression towards growth (PMI, 2008). Similarly, Sanchez and Robert (2010) argue that effectiveness of a portfolio should be measured against a set of key performance indicators. The indicators should be based on the organization's mission and vision (Heising, 2012). Other studies by Haponava and Al Jibouri (2009) have however advocated for measurement of effectiveness based on the traditional project success factors. This includes cost, time, schedule and quality. Muller et al., (2008) have advocated for more comprehensive measures of PPM effectiveness that encompasses three broad indicators namely achievement of results, achievement of purpose and balancing of priorities. In terms of the conceptual framework, the above will be considered as the mediator variables in determining PPM success.

Chapter 4: Research Methodology

4.1. Overview

This chapter in particular provides an illustration and discussion of the methodological considerations that were undertaken in order to achieve the study intentions and offer responses to the research questions. Research methodology literature is also used to justify the choice of the chosen methodologies. The main contents of the chapter include: research approach, the conceptual framework, the population framework, the research instruments, analysis techniques and ethical considerations.

4.2. Research Approach

Deduction and induction constitute two of the most common methods of reasoning during the research process (Saunders et al., 2012). This study on effectiveness of project portfolio management mainly makes use of an inductive qualitative approach and to a lesser extent the deductive approach. Qualitative research method for most of us refers to what is not numerical but is textual as defined by Ketokivi and Choi (2014); therefore, qualitative is whatsoever is not quantitative. They further stated in their article that qualitative researches examine theories by their interpretation and meaning in the specific situations and events. Consequently, qualitative researches are defined as inductive (Barratt et al., 2011). In brief, the inductive approach to reasoning involves moving from the more specific aspects of the research to broader generalizations, it is therefore a theory making process (Saunders et al., 2012). By contrast, the deductive approach involves working from the more general to the more specific aspects of the research study under consideration. A researcher adopting this approach aims to make conclusions logically from the available facts, as such; it is a theory testing process (Reichertz, 2004; Saunders et al., 2012). Accordingly, the quantitative research method defined as deductive approach assesses theories by their amount, frequency, and intensity (Ketokivi & Choi, 2014).

The choice of the inductive qualitative approach is based on several reasons. First, qualitative studies are instrumental in exploratory studies, which focus on understanding and interpreting the phenomena of interest (Ormston et al., 2014). In the present study, the researcher was mainly interested in understanding the nature of relationship that

exists between project portfolio management and corporate strategy in the context of the construction industry and the resultant influence on project performance in the long-term. Achieving this general aim requires one to obtain detailed information in the form of experiences, beliefs and thoughts from the social actors. The social actors in this respect are the organizational managers and project team members from an organization that has been undertaking project portfolios in the construction industry.

Inductive qualitative studies are also useful in research contexts where previous empirical research may not be adequate (Eriksson & Kovalainen, 2015). As noted in the literature review previous empirical studies on the study topic have been conducted in countries such as Turkey and Australia but are largely lacking in UAE. Contextual factors specific to the UAE such as the property crash in 2008 and market demand and supply factors may affect portfolio management practices of construction firms in different ways. As a result, there was need to obtain rich data from such firms as opposed to overreliance on quantitative data. The deductive quantitative approach has in this case been criticized for producing knowledge that may be overly intangible and overall for direct application to particular native conditions (Saunders et al., 2012).

4.3. Research Method of the Case Study

In consistence with the study's focus on project portfolios, organization's engagement in multiple projects was contemplated as the furthermost proper source of evidence to provide responses to the research issues posed in the introductory chapter. A case study method was utilized in which case an organization in UAE construction sector was chosen for purposes of evaluating the nature of the project portfolio management aligning the corporate level strategy of the organization and success of the business. Meredith (1998) designates a case research as collecting data by a direct observer(s) without investigational controls or manipulating, using multiple tools and methods from a number of individuals in a natural situation considering contextual and chronological features of the studied phenomenon. On the other hand, Yin (1989) in his article describes a case study method as thorough investigation and objective analysis of existing phenomenon where the researcher devours slight control throughout events. This definition has been further defined by McCutcheon and Meredith (1993) in their

study as they covered more noteworthy facts. First, case study method engages investigators in developing clearest feasible image of the phenomenon through investigating only one situation or several case studies with related situation by gathering data and information from an association. This information could be gathered from primary bases (interviews from involved people and direct observation) or secondary sources (records or documents). Second, the main focus of the case study method is on the current situations using historical information predominantly to comprehend and demonstrate the gathered data about the current situation. Third, the investigator has normally no competency or even little proficiency of influencing the events (dissimilar to action research, as the investigator is a contributor and counselor of the events in regular situation). Moreover, Bryman (2015) defines a case study as an empirical investigation in which the phenomena of interest (portfolio management) is studied within its context (UAE's construction firm).

Case study method is usually practiced for developing and creating new concepts or for investigating unaware situations due to its distinctive strengths (McCutcheon and Meredith, 1993). Nevertheless, case studies could correspondingly be used in expanding, supporting, or even raising doubts concerning presented theories (Lee, 1989). In terms of purpose, case studies are typically conducted with the core aim of attaining a rich consideration of the phenomena and the progressions been considered, this is in distinction to surveys, which pursue to clarify the numerical connection amongst variables of concentration (Bryman & Bell, 2015). However, Yin (1989) states the purpose of the case study as not only describing a situation but mainly to comprehend how or why the events happen. Therefore, the investigator evaluates the situations around the phenomenon to construct a reasonable clarification or determine a causal relation linking experiences to the results (Benbasat et al., 1987).

The use of a case study made it possible for the researcher to view the organization's synergistic existence as a whole based on the set corporate strategy versus the sum of its parts (i.e. individual projects and project portfolios) and the impact on overall organizational performance. The case study is also constant with the inductive approach. Eriksson and Kovalainen (2015) for instance explain that a case study is suitable in research contexts where current perspectives are inadequate due to insufficient empirical substantiation. As aforementioned, the relationship between

managing project portfolios in the construction sector and alignment of corporate strategy is documented in the case study. The use of a case study was also considered as appropriate in answering ‘how’ and ‘why’ questions as explanatory events (Yin, 1989) in relation to achieving project success in project portfolios based on the set of corporate strategy. Three exceptional strengths of case study method were identified by Benbasat et al. (1987): first, a physical practice can be observed which gains understanding of the generated relevant, meaningful theory and studied phenomenon in its regular situation. Second, a comparatively complete understanding of the environment and complication of the thorough phenomenon leads a case approach to allow considerably more meaningful of ‘why’ question rather than ‘how’ and ‘what’ questions. Third, the case approach contributes itself to initial, exploratory observations, as the variables are quiet unfamiliar and the phenomenon not humanly implicit.

From a critical perspective, one of the main criticisms of the case study approach is the potential for findings that score low in objectivity and vigor (Dul & Hak, 2008). They however note arrangement for a case study in exact mode can assist to overcome these inadequacies and deliver valued perceptions that other approaches for example survey cannot offer. Notably, the chosen organization as the case study is a construction and irrigation firm based in Dubai, UAE. The firm has in the past one decade been undertaking multiple projects in the form of portfolios across the UAE thus making it suitable for evaluation. Previously, the firm has also encountered problems in successful completing some of its projects in the portfolio thus further making it suitable for an investigation on challenges in managing project portfolios as opposed to single projects with regard to the corporate strategy. Yet from another perspective, Meredith (1998) defines some of the complications concerning case method as: direct investigation in the actual current setting (access obstacles, time, cost); need of various tools, methods, and individuals for triangulation; difficulties of situation and chronological undercurrents; and lack of controls.

In this study, the case approach identified by Barratt et al. (2011) was adopted. Their case approach involved following steps, which we articulate as follows:

4.3.1. Research approach justification

An essential deliberation for undertaking theory making research approach in case studies is to obviously express the logic behind the reason of conducting such research. The logic could embrace: (1) a gap in current theory, which does not satisfactorily clarify the investigated phenomenon (Benbasat et al., 1987; Barratt et al., 2011); (2) the investigation is exploratory hence demand for case research to construct theories (Yin, 1989; Meredith, 1998; Barratt et al., 2011); (3) the investigation is explanatory (questions of 'how' and 'why' being asked) and the practices of actors and the situation are analytical (Benbasat et al., 1987). For the purpose of this research, all the three reasons behind the logic of constructing this study are present.

Investigators should have an obvious concentration on gathering particular information in a methodical approach while struggling in constructing theory from case studies (Mintzberg, 1979; cited in Barratt et al., 2011). This concentration helps to identify the questions of the research and what sort of data needed to be gathered and also what category of organizations to be contacted (Leonard-Barton, 1990; Pettigrew, 1990; cited in Barratt et al., 2011). Furthermore, this concentration helps conserving consistency through collection of data and analysis, although questions of the research may change by time and theories may be improved (Eisenhardt, 1989; Voss et al., 2002; cited in Barratt et al., 2011). The unit of analysis is obviously identified when the concentration and the questions of the research have been identified and articulated (Yin, 1989; Dubé and Paré, 2003; cited in Barratt et al., 2011). The research questions and results may be affected if the unit of analysis is not clear (Yin, 1989).

To create new theories case studies are conducted. However, to conduct testable and applicable theories, investigators may use an inductive rationale employing range of technics to gather principally qualitative data (Voss et al., 2002; Eisenhardt & Graebner, 2007; Fisher, 2007; Roth, 2007; cited in Barratt et al., 2011). With regard to the existing theory role, the grounded-theory method is built on the pure inductive rationale, while the new theory is originated harshly from the data (Glaser & Strauss, 1967; cited in Barratt et al., 2011).

4.3.2. Case selection, study participants and sampling

Case researches employ a biased or theoretical sampling method where situations are chosen depending on theoretical purposes (Glaser and Strauss, 1967; Meredith, 1998; Eisenhardt, 1989; Yin, 1989; cited in Barratt et al., 2011). Due to the benchmarking reasons mostly leading organizations are selected to get more useful results (Choi and Hong, 2002; Fisher, 2007; cited in Barratt et al., 2011). Therefore the case studies selection should be cautiously considered instead of deriving them opportunistically (Benbasat el al., 1987). According to Voss et al. (2002; cited in Barratt et al., 2011) the less the amount of cases, the higher the chance for depth of inspection. However, greater number of cases could strengthen outer validity and assist securing against inspector bias. In theory building approaches, using several cases more likely creates strong and testable theory rather than solo case (Eisenhardt, 1989; Eisenhardt & Graebner, 2007; Yin, 1994; cited in Barratt et al., 2011).

From the case study the main population of interest were individuals engaging in the formulation of corporate strategy and facilitating the management of the various project portfolios. However to get three dimensional views and picture of the problem raised for this paper, individuals from competitor organizations, contractors, and few reachable clients were added to the population too. All potential individuals involved in these activities could not be included in the research due to their work commitment and time limitations and furthermore, some were not reachable since many have left. It was therefore necessary to engage in sampling as a way of selecting representative respondents. The purposive sampling technique was adopted. Purposive sampling is a non-probability based technique that involves selection of individuals to be included in the sample based on a variety of criteria (Amandeep, 2014). Such criteria in the present study involved specialist knowledge of the research issues (i.e. corporate strategy and project portfolio management), capacity, and willingness to take part in the research.

With regard to corporate strategy, four respondents were chosen including: the firm's General Manager (GM) and an assistant manager holding an executive position in the case organization, and two general managers of competitor organizations. The first two individuals are involved directly in the firm's strategic planning and therefore have adequate knowledge of the strategy formulation process and how it is aligned to

the choice of projects included in the portfolio. In the case of project portfolio management four respondents were included in the sample, involving: project portfolio manager, project manager, and two engineers from the case organization. For the purpose of investigating all aspects related to the case study and to get more involved with the problem of the present study, two of the managers from contractor and subcontractor organizations were also added to the interviewees as they were concerned of the partial projects situations and were aware of the ongoing issues in the organization. Moreover, two reachable clients that could help in thoroughly investigating the case likewise joined the group of respondents. All of these respondents were best suited to provide answers to research objectives on challenges encountered in managing project portfolios as well as strategies been undertaken to guarantee that the chosen projects are well united with the firm's corporate strategy. The experiences of these respondents in managing multiple projects increased their value to the present study.

In total a sample of twelve respondents were therefore chosen. The purposive sampling of these individuals allowed the research to increase the quality of the study findings by relying on the most resourceful respondents. However, the fact that purposive sampling is a non-probability based sampling method meant that the findings could not be adequately generalized beyond the case study and the organization.

4.3.3. Collection of data and analysis

Multiple sources of data are available for the purpose of data collection based on Barratt et al., (2011): interviews (structured or semi-structured), observations (i.e. meetings attending, plant tour), and sources that have been archived (i.e. records, documents, statistics, and charts). Various researchers use single method of data collection, while others may use several sources to 'triangulate' the data sources in different ways. However, according to Benbasat et al. (1987) and Voss et al. (2002) multiple uses of various data increases the data reliability and strengthens validations of theories and intentions. McCutcheon and Meredith (1993) defined other method of triangulation by using various researchers and investigators, which from Benbasat et al.

(1987) point of view it hints to more confidence in findings of the research and better handling of the fullness of the contextual data.

Crabtree (1999) however categorizes interviews in three different types: unstructured, semi-structured, and structured. DiCicco-Bloom and Crabtree (2006) on the other hand believe that there is no interview that can really be deliberated as unstructured, although particular ones are reasonably unstructured and are comparable to conducted discussions. These types of interviews are guided in combination with observational data collection. On the other hand, semi-structured interviews usually remain as the only source of data in qualitative method of research and are often organized beforehand (Crabtree, 1999). DiCicco-Bloom and Crabtree (2006) state that use of semi-structured interviews are mainly for qualitative research approach targeting individuals or groups and are prearranged based on open-ended questions and emerging questions from the conversation among interviewer and interviewees. They further specify that structured interviews are mainly used in survey type of research where the goal is to assure the same questions are presented in each interview, thus they often end up with quantitative information.

In consistence with the choice of qualitative research case study, interviews were selected as the main research instruments and meanwhile use of archived documents helped in triangulating the collection of data. Interviews in a research context are extensive conversations and discussions between the researcher and the respondents concerning a range of issues on the study's research topic (Easterby-Smith et al., 2012). DiCicco-Bloom and Crabtree (2006) define interviews amongst most known approaches in gathering qualitative information. According to Hammersley (2003) a wide variety of different ways of using interview by various scientists were identified as: (1) a source of observer explanations of the social domain. Interviews are used here in providing data about informants' profiles, about some observed events, about their familiarity with applicable constant features of settings, and/ or about the occurrence of single or multiple varieties of event in such settings. (2) A source of navel-gazing. Interviews are used here to redirect their personality, conduct, character, or attitudes, and their understandings are used. (3) An indirect source of indication concerning informants' evaluations or thoughts. The analyst here practices what informants' say as indication aimed at illustrating interpretations about their motivations, intentions, concerns,

thoughts, perspectives, preferences, etc. (4) A source of indication of constructional development. The interview here acts as an interactional spot for different types of expansive preparation, which may or may not be supposed to function elsewhere.

DiCicco-Bloom and Crabtree (2006) justify that the interviews are performed to better understand the interviewees and their attitudes; however, the purpose of that understanding differs depending on the questions of the research and the disciplinary view of the researcher. They further explain particular research is intended to assess a priori theories, usually using an extremely designed interviewing system with standardized questions and analyses; whereas other research pursues to investigate perceptions and importance to better understand and/ or create theories, this type of research seeks qualitative form of interviewing to support the interviewees to shell out prosperous explanation of phenomena though keeping the analyses to the researchers. According to these authors, the reason of conducting qualitative type of research interview is to provide a form of understanding that is theoretical and conceptual based on the experiences of interviewees.

In the current dissertation a semi-structured interview design utilizing open-ended questions was utilized. The semi-structured interview design involves the researcher conducting the interview around a core of standard questions. However, the interviewer expanding on any questions where more in-depth responses may be necessary enhancing flexibility. Further probing of the interviewees' responses was in particular achieved through the use of open-ended questions. While closed-ended questions are relatively easier to analyze they were not utilized. A closed-ended format of questions is based on the assumption that all major answers to the research questions are well known (Mitchell & Jolley, 2012). This was not the case in the present study as strategies to ensure that project portfolios are well aligned to corporate strategy may differ from one project to another. Several advantages were achieved from the use of open-ended questions. First, this question format made it possible for previously unknown information on project portfolio management to surface. Further probing was utilized to reveal more new information hence contributing to the development of new theory. In addition, open-ended questions tend to provide the respondents with a greater sense of involvement and control in the research process (Edwards & Holland, 2013); therefore, the outcome is more comprehensive responses.

The interviews were conducted at mutually agreed locations and time between the researcher and the respondents. Face-to-face interviews were preferred since they allow for more accurate screening and observation of important non-verbal cues (Saunders et al., 2012). Each of the interviews took approximately 50 minutes and was tape-recorded for ease of transcription during the analysis. As a measure to increase validity of the study findings, each of the respondents was given an opportunity to read through the transcribed interviews and confirm the accuracy of the responses.

DiCicco-Bloom and Crabtree (2006) clarify methods and technics used for qualitative interviews and recording the conversations for later analysis and documentation include audio recording. For the purpose of this study, the interviews were collected through mobile phone voice recording. Conserving records with high quality prevents latter problems in process of the research; recorder placement, extreme noise of background, low battery, and other problems all affect the quality of recordings (DiCicco-Bloom & Crabtree, 2006). The recorded interviews then transcribed into text for further analysis and investigations.

Based on Barratt et al. (2011) data analysis needs to happen in consistent with collection of data. Attaining correspondence between collection and analysis of data lets the investigators to capture the experience (McCutcheon & Meredith, 1993). While the data are collected, theories and their relationships may be modified if: cases were added to practice a specific emerging subject; and/ or questions were added to the protocol of the interview; and/ or data sources were added to the current cases (Barratt et al., 2011).

Data collected in this study using the interviews were analyzed through qualitative methods. Data analysis of qualitative research preferably happens parallel with collecting data, thus the researchers can create thoughtful development of sample questions and the questions being raised during the interview (DiCicco-Bloom & Crabtree, 2006). This constant development of collecting data and investigation, from the viewpoint of these authors, ultimately directs to a point in collection of data that no new types or themes arise, which this is considered as saturation; indicating that collecting of data is completed.

Specifically, the content analysis method was employed during the analysis of data. Content analysis is a popular research technique that involves the data analyst engaging in systematic procedures of examining the content of recorded information

(Elo et al., 2014). Using this method the analyst examines the collected data based on pre-determined themes of interest. In the present study, open coding was used as part of the content analysis process. Consequently, the researcher read through the data to identify distinct concepts and categories on the main themes of the study (i.e. project portfolio management, corporate strategy and organizational success).

Each time a particular theme was mentioned it was highlighted in the same color for ease of aggregation and comparison with responses from other respondents. Similarities and differences in the responses were also identified in order to evaluate any inconsistencies in regard to how the organization manages each project in the portfolio under consideration. The analyzed data were then substantiated using the literature reviewed in the second chapter of the study.

4.3.4. Results Organization and Outcomes Presentation

Demonstrating the process objectivity over developing field notes and data into conclusions is the major challenge of analyzing data (Eisenhardt, 1989; Miles & Huberman, 1984; Van Maanen, 1988; cited in Barratt et al., 2011). Within-case analysis is the leading stage in this process, where the emerging theories and their relations are defined within single offered case description. Comprehensive and descriptive write-ups are generated at this stage, which are essential in the formation of perceptions. Cross-case analysis as the second step is when comparing and conflicting the outlines developing from the comprehensive case write-ups. According to Barratt et al. (2011) two cases should be selected by investigators at a time and be compared logging similarities and differences and this procedure should be repeated till all cases have been studied.

The way of presenting outcomes of the research is one of the constant challenges of case study method, specially drawing and validating conclusions from analyzing of data (Eisenhardt & Graebner, 2007; Miles & Huberman, 1984; cited in Barratt et al., 2011). Presenting data and defending the process are not easy tasks for the investigators, as they have to well define how the research outcomes were identified from the data collection. However some technics have been proposed by Miles and Huberman (1984; cited in Barratt et al., 2011) to draw conclusions and establish outcomes. Yin (1989)

suggested that investigators establish a thorough description reinforced by questions from major informers and another forms of verification. Barratt et al. (2011) clarify that the challenge is more difficult and critical in multiple-cases, as it needs thoughtful constructing and establishment of data to build explicit conclusion to the readers. Visual displays and tables may be used to express and summarize practical verification in the case studies.

4.4. Ethical considerations

As evident from the discussions in the preceding parts in this chapter, the present study made extensive use of human subjects. Ethical issues were therefore bound to arise and hence the need to take necessary measures to ensure an ethical research. One of the ethical issues that arose pertained to confidentiality of the responses from the study sample. It was anticipated that some of the organization's strategies could be a source of competitiveness and therefore confidentiality. Accordingly, there was need to refrain from accessing and divulging such information. Refraining from asking intrusive questions pertaining to the organization's practices minimized access to confidential information. Therefore, the interviewees' information was protected and some of the organization's data were not collected due to confidentiality reason.

There was also the need to ensure that involvement in the study was voluntary and that the responses provided remained voluntary. These ethical measures were achieved by ensuring that each respondent voluntarily consented to take part in the study as well as ensuring that the identity of the respondents was anonymous. Anonymity was in specific achieved by ensuring the personally identifiable information such as names and contacts were not requested or used in the study. The name of the organization was also kept anonymous throughout the study.

The other issue concerned with the risk of unexpected harm. As DiCicco-Bloom and Crabtree (2006) explain in their article the interviewer's mission is to attain data while listening and embolden other interviewees to speak. This process may progress in unpredicted ways that ends in unintentional destruction to the respondent once the interviewer imitates subjective information in return to the interviewee.

Furthermore, assuring satisfactory interaction of the focused exploration may be another issue concerns the approach of the qualitative interviews (DiCicco-Bloom & Crabtree, 2006). As the researcher may not primarily identify what data and information will be uncovered through the interviews, thus there might be need for several interviews with same interviewees during the process. In this situation, it is the right of the participant to withdraw from the study at any moment. To avoid this situation, the interviewer may ask the participants for permission to contribute numerous times throughout the research process, which gives the participants the opportunity to reconsider their contribution.

Chapter 5: Findings and Discussions

5.1. Overview

The purpose of this chapter is to investigate and present the key findings on project portfolio management from the case study organization. As mentioned earlier, the data was gathered in qualitative form through interviews with respondents from the case organization. Accordingly, the findings in this chapter revolve around the responses that were provided by the interviewees. It begins with a brief description of the profile of the interviews and organization. This is followed by exploring interviews done with the participants with regard to: the challenges encountered by the case organization in implementation of its project portfolios and the success measures that were adopted with the impact on PPM success; factors affecting development and application of corporate strategy in the case organization; discussions and findings on how PPM alignment with corporate strategy enables successful achievement of the organization.

5.2. Case Study Organization and Interviewees' Profile

The case study organization (thereafter referred to as Company R) operates as a landscaping and construction firm. Company R was established in 1992 and has its location in Dubai, UAE, however, the problem of the case started when the region commenced and developed more in construction industry and numbers of buildings began to rise vertically in about 2002. This company outlines its strategy as achieving competitive advantage by providing superior landscaping and construction services. Competitive pricing and quality services have been identified as its market differentiation aspects. In terms of vision, the company envisions itself as a premier construction and landscaping contractor offering innovative services to customers while adhering to the highest standards and code of practice. Finally, the firm leverages varied methods and technologies to empower and professionally deliver on its mandate to customers.

This study interviewed twelve participants, ten of which are male with two females (figure 5.1.). The chosen participants were based on their reachability and contractibility since the case belongs to last years and many of individuals including the

leaders already left the organization and are not available. Six of interviewees have been chosen from R organization while other six are from outside the organization. In terms of roles within the company, interviewees included the General Manager who was the shareholder and now is the owner also with 20 years of experience, Assistant General Manager with 16 years of experience, Project portfolio Manager with 12 years of experience, Project Manager with 10 years of experience, and two Engineers who are senior architect and senior civil engineer with 8 and 5 years of experience respectively. Furthermore, there are two general managers of different competitor organizations by the same area of concentration with 19 and 15 years of experience in the industry. Alongside, two managers from a contractor and a subcontractor company that work with Company R also participated in this investigation. And at last, two clients that were found useful in collection of data and finding results participated in this research. In essence, all of the participants in this study presented in figure 5.1. operated at the highest levels within the firms. As such, they are deemed to be having full knowledge of the firm's PPM strategy, challenges, success, and failures.

The interview has taken place in the R company location with interviewing one by one in turn as the time and conditions of the participants could not been managed for the group interview. Sample of the questions have been provided as appendices at the end of chapters, whereas emerging questions during the interviews were also asked.

Interviewee Code	**Role**	**Gender**	**Tenure in the Company**
M1	General Manager	Male	20 Years
F1	Assistant General Manager	Female	16 Years
M2	Project Portfolio Manager	Male	12 Years
M3	Project Manager	Male	10 Years
F2	Engineer	Female	8 Years
M4	Engineer	Male	5 Years
M5	General Manager of a competitor company	Male	19 years

M6	General Manager of a competitor company	Male	15 years
M7	Contractor	Male	18 Years
M8	Subcontractor	Male	16 Years
M9	Client	Male	_
M10	Client	Male	_

Table 5.1. Interviewees' Profile

5.3. Findings and Discussions

Management of project portfolios differs from one company to another based on their vision, mission, time, schedule, cost, and quality. When interviewees were asked about how R Company managed its project portfolios, each replied with quite similar answers. Interviewee M1 responded as:

> *"Our company was implementing projects and portfolios based on the traditional factors of cost, time, and quality. However, to ensure the successful implementation of PPM you need to observe the ongoing situations of the company in order to select a new project or to prioritize it and allocate the suitable available resources."*

With regard to this response, interviewee F1 also enhanced that R Company tried to assured flexibility and balance of projects within portfolios in order to successfully manage the project portfolios, however, it did not work well. This respondent on the other hand added that previously the management team of the company lacked in organization and executing various projects within portfolios due to incapability of the manager. She further augmented that there were no exact factors in managing the portfolios and the management was basically employed the traditional factors to organize the projects and portfolios. Every single project was offered by the clients the management team would not refuse to undertake. Although there were few techniques used by the management to implement the project portfolios such as section and prioritization, planning and control, resource allocation, and flexibility of the management, conversely, these were not enough since successful PPM goes beyond such factors. This implies the literature reviewed in the second chapter where Muller et

al. (2008) defines the management of project portfolios as attaining the strategic alignment and balance in projects as well as clear objectives, open communication, and effective decision making of the management team as per Martinsuo and Lehtonen (2007).

Interviewees M5 and M6 who are from general managers of competitors organizations while reviewed their memories of past times of R Company replied with:

> *"The company aimed to grow more in the market and for that reason they even offered lower costs to the clients specifically governmental projects where they bid for winning the tenders and therefore, they were getting more projects. And of course that was because the region was fast developing in construction and there was a need for production and development."*

They then expressed that by that time company R was growing further and spreading its reputation, however, with their bad luck the crisis happened and it mostly affected the construction developments which R Company was one of them. M6 then added that if there would not be any crisis by that time company R was indeed one of the leadings in landscaping and constructions developments and of course the management was not successful in dealing with the dynamics of the market and controlling the situations outside and in. They are still recovering from that crisis and with the changes in the management and whole organization they are compensating and making it up. As reviewed previously in the literature, Woods (2009) mentioned that there should be an appropriate fit between internal and external environments of any organization to achieve high levels of effectiveness. Equally Ahrens and Chapman (2004) advice combining two approaches of mechanistic and organic to minimize chances of chaos and quickly respond to the changes, due to high levels of uncertainties in portfolio management as Geraldi (2008) confirms. Moreover, Gunhan and Arditi (2007) enhanced that preparing enough contingency budget would help the organization to better deal with uncertainties of the projects and portfolios if they are concerned with money issues.

On the other hand, interviewee M1 expressed that the management team should have well known and understood the goals and objectives of the company and should have set some success factors to achieve the alignment with the strategy of the company and incorporate with the outgoings. In very critical situations the manager should be

able to handle the conflicts and pressure arise from managing the project portfolios, since this management is different from managing single projects and requires special capabilities and knowledge as well as experience. Objectives of every single project should be aligned with the portfolio objectives and hence aligned with the strategy of the business. Managing project portfolios is very challenging as deals with corporate level strategy of the company. This is clear from the literature review also where Caniels and Bakens (2012) state that project managers must be skilled in managing the conflicts and dynamics of the projects and portfolios. Moreover, Killen et al. (2008) identified that there should be a linkage and alignment between project objectives and portfolio objectives as of their interdependencies and maximization of the portfolio values.

Interviewee M3 and M4 with quite similar responses added that the previous management team welcomed almost all offered projects with no concern of resource availability and environmental situations just to keep the firm engaged with more projects and hence receive more money intakes with pushing the resources. Respondent M5 explained that:

> *"I remember we were so under pressure due to undertaking of various projects and there was push to finish up the projects as fast as we could so that we can start with a new one. The management was even employing free lancers to cooperate with us so we can move forward to the next projects. It was that boom stage of the region in construction development."*

Respondent M6 also justified the need of success factors of PPM in organizing the project portfolios and enhancing the benefits alongside with alignment of the corporate level strategy of the firm.

The respondents from Company R were then interviewed with respect to the project portfolio management approaches used by the firm. Specifically, the respondents were asked whether the organization makes use of formal or informal approaches and the level of satisfaction with the chosen approaches. In agreement, interviewees M1 and F1 noted that it is part of the organization's policy to make use of explicit and well defined methods in managing all construction and landscaping related portfolios. Interviewee M1 in particular explained that:

"*Initially we had no formal rules and procedures for managing our portfolios. With time we recognized that the informal approach was impacting negatively on our performance and as a result the firm has been making use of analytical tools and models that allow the team to choose the optimal set of projects to constitute the portfolio*".

Interviewee M2 added that:

"*We tried to make use of explicit approach. It is for instance a requirement that all project portfolios selected are driven by the strategy of the business. This means that when allocating resources to our projects we have to take into account the business strategy such as the need to increase our presence in the landscaping market*".

Based on the responses from the two interviewees it is quite clear that formal portfolio management approaches are preferred as they are better linked to performance compared to informal approaches. In consistence with these views, an earlier study by Tullet (1996) as reviewed in this study noted that minimal chances of portfolio failure are experienced when well structured and systematic management approaches are utilized. Also Killen et al. (2012) defined that PPM benefits from the use of holistic and systematic approach where guideline are well cleared.

Within the above context, the portfolio managers were further requested to give their opinions regarding the level of satisfaction with the formal approaches used by the organization. Based on the responses, it is evident that all portfolio managers were not well contented with the formal portfolio management approaches. According to interviewee M3 and M4 the use of formal analytical methods meant that high levels of efficiency are experienced in selecting and allocating resources to various projects in the portfolio. In other words, use of formal methods reduces the wastage of time during portfolio decision-making. Chao and Kavadias (2008) also found that higher levels of effectiveness in PPM are achieved when the project team makes use of portfolio decision-making tools as opposed to relying on intuition, which R company lacked in. From yet another perspective, interviewee M4 noted that he was not satisfied with the use of formal approaches in portfolio management, as the rules and procedures were not well understood by previous senior management and the project implementation team. As a result there are minimal cases of disagreements. Research by Kebdall and Rollins

(2003) highlighted that conflicting objectives are one of the main causes of poor project outcomes in portfolios.

Lastly, interviewee M6 while also acknowledging satisfaction with the formal approaches that are based on business strategy suggested the need for some informality. According to this respondent, the construction sector is often dynamic in nature. As a result highly formal approaches may not effectively capture some key issues that need to be considered during the decision making process.

When further interviewed with respect to the causes of changes in the portfolio objectives, interviewee F1 explained that during the process of implementing construction projects emergent opportunities or limitations may arise and hence the need to make important changes in the portfolio that may not have been foreseen at the planning stage. These responses in essence highlight the need for portfolio management to be characterized by continuous planning based on events taking place in the portfolio environment. Within this context prior research has advocated for effective planning and control as a strategy that can help project managers to mitigate undesirable changes (Atkinson et al., 2006). However some studies (e.g. Lenfle & Loch, 2010; Blomquist et al., 2010) have advocated for flexibility especially in unstable environments, which are characterized by uncertainty in the market.

With regard to uncertainty the respondent noted that the mix of projects in the portfolio often increases uncertainty pertaining to the approaches of delivery that should be used. From this response it can be inferred that managing a construction portfolio is significantly different from managing single projects. Prior literature as reviewed in this study has for this reason suggested that using effective PPM to execute project portfolios increases the chances of success. This is because PPM facilitates open communication and decision-making as well as the efficient use of resources (Martinsuo & Lehtonen, 2007).

The aspects of resource allocation and balance of resources influence strategic fit. The mix of projects should be such that the use of resources, the expected risks, and expected rewards are well balanced and can be handled by the firm (Oh et al., 2012). At the same time, portfolio management should seek to maximize portfolio value (Muller et al., 2008). Two of the interviewees (M3 and F2) also highlighted that balancing of projects to constitute the portfolio was one of the major challenges not encountered

during the process of managing construction portfolios. According to interviewee M3 demonstrating tangible value does not constitute the only goal of effective PPM. The balance dimensions must be taken into account. The interviewee in specific explained that:

> "… *as a portfolio manager you have to coordinate with the rest of the team to ensure that the portfolio includes a mix of projects with varying degree of project risks and involves a reasonable distribution of the organizational resources. There were not enough coordination between the teams in the R company so that all to be aware of the situation and cooperate in handling the conflicts and pressures."*

Extant literature has in particular highlighted that the presence of multiple projects in the portfolio means that the risk of inadequate resources is always looming around (Oh et al., 2012; Teller & Kock, 2013; Klingebiel & Rammer, 2013). Per se, effective balancing of the projects to reflect the resource availability and acceptable levels of risks has to be undertaken. In this case study, R company was definitely in the risk of inadequate and unavailability of resources since interviewee M1 confirmed with his clarification that many projects have been undertaken with no concern of resources availability and being at the risk of failing in implementing the projects.

Muller (2011) argues that firms must be keen on prioritizing projects that have the optimal contribution to strategic objectives. The elements of prioritization and resource allocation also emerge in this case to help with identification and minimization of relationship risk through coordination, prioritization and prudent resource allocation (Killen & Kjaer, 2012). The success of project portfolio is principally dependent on prudent resource allocation (Patanakul & Milosevic, 2009). In support of interviewee M4, F2 added that undertaking construction projects using a portfolio approach contribute to an increase in structural complexity and uncertainty. The interviewee explained:

> "… *while managing a construction portfolio one of the things that you will note is that there is a significant increase in interdependence between the various elements that constitute the portfolio. This brings about structural complexity which is significantly higher when compared to undertaking of single construction projects*".

Under PPM approaches interviewee M3 also underscored for increased attention on methods of prioritizing projects in the portfolio. According to this interviewee one of the common and effective approaches to prioritizing projects is the use of three categories. The first category includes the projects that must happen or be undertaken. They may be prioritized because such projects provide significant opportunities for the organization, are important in realizing the organizational goals, or are highly time sensitive. The second category as explained by F2 pertained to projects that should be undertaken since they provide a compelling business case. As an example such projects can be characterized by attractive return on investments at a risk level that is reasonable for the company. The third category of projects to include in the portfolio is those projects that the company can handle but must wait. The reasons for waiting may include the need to ensure that resources are available or further investigation of the market conditions prior to commencing the execution process. The response by interviewee F2 is consistent with the view by Muller (2008) that effectiveness in PPM is in part achieved through rational balancing of priorities.

In a similar response to interviewee M3, interviewee F2 explained that the mix of projects in the portfolio should be in a way that it allows for realization of immediate goals while at the same time ensuring that the reputation and foundation for the future of the organization is also built. According to the two interviewees, this process of balancing the portfolios is not only time consuming but also requires high-level of competency. Implied from this responses on balancing the portfolios is that the selection of current projects to constitute the portfolio should also take into account the desired position of the organization in the future. Both short-term and long-term orientations are thus crucial in effective PPM. The responses from the two interviewees also support the assertion by Muller and Turner (2010) that the chosen project portfolio managers should exhibit innovative thinking styles. At the same time, the relative lack of clear portfolio balancing strategy echoes the previous studies by Chao and Kavadias (2008) and Chao et al. (2009) who argue that lack of a universal and consistent framework that can be used in choosing the dimension to take into consideration during portfolio balancing. In essence, portfolio balancing will continue to require competence and coordination to achieve.

Two of the respondents (interviewees M3 and F2) identified effective coordination as one of the factors that can be instrumental in achieving PPM success. Interviewee M3 posited that:

> "… *Construction portfolios are often characterized by unique complexities and interdependencies. Some crucial aspects may not be captured in the planning stage or well aligned with the corporate strategy. In the presence of an environment characterized by adequate coordination across the entire organization the unseen complexities can be identified and necessary actions such as adjusting of the portfolio can be undertaken*".

Interviewee F2 on the other hand added that project portfolios usually comprise of multiple teams responsible for project execution. In the absence of cross-functional coordination, it becomes likely that despite the same corporate objectives being pursued the implementation methods are disparate. The impact is an increase in the likelihood that the organization's resources will be drained. Obsorne et al. (2013) also previously noted that coordination difficulties are higher in project portfolios than in single project management. The difficulties arise from the presence of multiple projects and teams to manage. Killen and Kjaer (2012) however noted that the PPM could help minimize coordination difficulties.

The issue of portfolio risks was also considered as one of the most crucial challenges encountered during the management of portfolios in the construction sector. According to interviewee M4 one of the risks that are unique to project portfolios is relationship risk. This risk in general relates to how projects in the portfolio are related to each other. While providing additional perspectives to the issue of relationship between projects in the portfolio, interviewee M6 noted that it is common for the company to undertake some projects in expectation that some future projects may be dependent on them. Since the future dependent projects may not be fully understood in terms of their nature, the project team often encounters difficulties in evaluating the real worth of the initial projects. According to this interviewee, the difficulties in establishing the nature of future dependent projects is in most cases a source of additional complexities in the project portfolio selection and prioritization process. Resolving the difficulties is critical for the organization given that previous literature has shown that inefficient management of portfolios has the potential to completely wipeout a firm's investments as well as ruins the firm's reputation (Petro, 2012;

Martinsuo, 2013). This is especially important for the Company R as its mission is to adhere to the highest standards and code of practice in the industry as outlined in its strategic plan.

Linking of individual projects within a portfolio is what constitutes PPM. According to Meskendahl (2010), the extent to which individual portfolio projects are linked with other and with the overall corporate strategy in part influenced by how well portfolio balancing is undertaken. At the same time, linking presents several risks to the entire portfolio (Meskendahl, 2010). By their design, construction projects are implemented in an approach that one project can have an influence on the success or failure of other projects in the portfolio. By way of example, interviewee M4 noted that it is common for commencement of one project in the portfolio to be dependent on the completion of another projects. This is because specialized resources involved in the construction process may need to be shared. In addition, completion of one project may be necessary in order to release financial resources necessary to complete remaining projects. In consistence with these views, a recent research by Obsorne et al. (2013) underscored that the complex nature of project portfolios require the presence of managers who are able to maintain high levels of operational efficiency across the projects.

On the other hand, interviewee M4 and M6 highlighted linkage of projects and portfolios as an important success factor in the management of construction related portfolios. Based on the respondent's experience (i.e. interviewee M4), portfolios unlike a collection of organizational projects involve a high level of project interdependency. The projects also involve sharing available resources and are also characterized by interacting in categories such as benefits and outcome. In other words, the benefits and outcomes of one of the projects in the portfolio have implications on other projects in the portfolio. It is for this reason that interviewee M4 emphasized that:

> "*Making project selection decisions in isolation or on the basis of each of the individual projects is likely to lead to realization of sub-optimal results more especially in the construction sector where there is pressure to perform effectively in order to win tenders*".

This view by M4 fits well into the definition of PPM as the concurrent management of a collation of related projects under a single management umbrella

(Martinsuo, 2013). In other words, portfolio decisions should be made collectively in order for success to be achieved.

From yet another perspective on linkage, interviewee M6 offered detailed insights pertaining to achieving of linkage in construction related portfolios based on three dimensions. First, the respondent highlighted the need for congruence between the portfolio objectives and deliverables. In this case, portfolio deliverables should reflect the set of portfolio objectives in order to satisfaction by all stakeholders to be achieved. Second, portfolio objectives should be linked to organization's strategy. Put differently, there should be a strategic alignment between the portfolio objectives and the general organizational strategy. While on the same context, the interviewee noted that in the field of construction it is common for changes in the organizational strategy to be made. Accordingly, project objectives should be consistently monitored to ensure that they remain consistent with the existing strategy. This response thus supports the view by Osipova and Eriksson (2013) that flexibility is necessary in project environments where conditions keep on changing. It also corroborates the view by Gunham and Arditi (2007) that a contingency approach is necessary in the construction industry in order to help deal with uncertainties.

Third, interviewee M6 advocated for a social linkage. A social linkage in this context involves ensuring that through the process of implementing the portfolio adequate coordination is achieved between the team members and the rest of the stakeholders. Such coordination involves social interactions that are facilitated by the presence of effective communication as well as a shared understanding. Prior research (Brook & Pagnanelli, 2014) has within this context highlighted that one of the factors that different portfolio management from single project management is the multiple teams and thus the need for high levels of coordination efficiency.

One of the questions posed to the interviewees from the case study organization pertained on the challenges that have over the years being encountered during the management of constructing projects and portfolios. According to interviewee M1, one of the main challenges has been a manager in charge of project portfolios failing to ensure strategic alignment. The interviewee for instance noted that in 2004 due to the construction's boom stage of the region, a new manager was appointed and charged with ensuring success of all projects in the constructions related portfolios but failed to

manage them effectively despite initial success. More specifically, interviewee M1 explained that:

> "*… in the beginning he was doing well and everything was going on smoothly within the project portfolios. However, it seemed he did not understand well what the company goals were in determining the strategy and aligning the projects within the portfolio objectives with it. He was just following what was going on from the projects and was not engaged with the details of the projects from procurement to design, resources and supply*".

Interviewee M2 also gave important perspectives pertaining to how strategic alignment might pose significant challenges in successfully managing project portfolios. The respondent explained:

> "*For each of the construction or landscaping projects we undertake we must ensure that the project deliverables are consistent with portfolio's objectives, which are usually formulated based on the organization's strategy. A key challenge in this case is that portfolio objectives often have to change as the project unfolds thus making it difficult to achieve an alignment with the organization's strategy"*.

Project success goes beyond achievement of the time, budget and quality goals. It also involves achieving the set business outcomes by ensuring that the projects and therefore portfolios are well aligned with the business or corporate strategy. In line with this view, the study's respondents were interviewed with respect to measures being undertaken to ensure that the projects in the portfolios are well aligned with the organization's corporate strategy. A range of insightful responses was obtained with regard to this.

According to M1 who is responsible for overall management of the organization, the senior management of Company R is involved in the process of business planning, portfolio management and prioritization of project based on business strategy. In greater detail, the interviewee explained that:

> "*During the business planning process we usually make deliberate actions to ensure that the selected projects in the portfolio are aligned with strategic alignments. We then share our plans with the portfolio manager who is engaged in the actual project planning and execution*".

Based on this response, alignment of the portfolio with the corporate strategy is in part achieved through the management selecting and prioritizing only the projects that contribute towards the achievement of corporate strategy as well as stakeholder involvement. In consistence with the views by M1, Fuller (2016) noted that effectiveness in project management is only evident when the organization is able to select only the set of projects that are capable of realizing the corporate strategy.

Strategic alignment has been widely cited as a major driver of competitive advantage in PPM (Caldart and Ricart, 2004; Meskendahl, 2010, Lycett et al., 2004). According to Cooper and Edgett (2003), strategic alignment entails the right fit between individual projects and also with the firm's business strategy. Results from the interviews show that achieving strategic alignment is one of company R's goals; however, they continue to face problems on the same. Interviewee F1 gave important perspectives pertaining to how strategic alignment might pose significant challenges in successfully managing project portfolios. The respondent explained:

> "*… for each of the construction or landscaping projects we undertake we must ensure that the project deliverables are consistent with portfolio's objectives, which are usually formulated based on the organization's strategy. A key challenge in this case is that portfolio objectives often have to change as the project unfolds thus making it difficult to achieve an alignment with the organization's strategy"*.

Interviewee F1 on the other hand explained that strategic alignment at Company R was achieved through creating an enabling environment. The interviewee posited:

> "*Most organizations are often aware of the need for executing a project portfolio that is in line with the business strategy. However, several barriers are usually encountered which hinder the translation of the strategy into action. For example, portfolio managers may not be adequately involved in strategy development, communication may be inadequate or the senior management may lack in commitment. These are barriers that any organization should eliminate in order to ensure all our portfolios contribute to achievement of strategy*".

It can therefore be construed from this response that realization of the alignment of the portfolio with strategy is mainly hindered by the absence of an enabling environment in aspects such as communication, involvement of key stakeholders and management commitment. In this case, the organization recognizes the need to align the

portfolio with the corporate strategy but there is lack of a systematic approach. The outcomes of lack of link between the portfolio and corporate strategy as predicted in prior research are reduced opportunities to share risks, experience flexibility and lower costs (Oerlemans et al., 2013).

Interviewee M1 also added that the company makes use of strategy maps and project charter in ensuring an appropriate fit between the portfolios and the corporate strategy. The maps according to this interviewee allows for visualization of the relationship between each of the projects in the portfolio and objectives. Projects that represent a poor fit are either modified or dropped from the portfolio. In the case of project charters, interviewee M1 explained that they are useful instruments in identifying the various ways in which the portfolio will lead to the realization of the corporate objectives. A project charter within covers important aspects of the project such as the objectives of undertaking each of the projects, scope statement, the project execution plan as well as the relationship between various stakeholders.

Another question posed to the study's respondents pertained to the impact that strategic alignment of the construction portfolio has on the achievement of strategy and other business objectives. In response interviewee M4 argued that:

> "*It's a common occurrence for portfolios in the construction industry to be misaligned with the corporate strategy as we faced in this company. That's why there are high failure rates in the industry*".

Based on the experience of this respondent in the construction industry, there is need to use corporate strategy as the basis for making decisions about the choice of projects in the portfolio. While corroborating this view, interviewee F2 argued that for real performance benefits from portfolios to be achieved, the selected projects should represent a logical extension of the corporate strategy. Similarly, Seider (2006) and Muller (2011) argued that high value in implementing project portfolios is achieved when the most effective projects that add value to the firm are prioritized. Such projects lead to the most economically effective use of scarce resources (Herfert & Arbige, 2008).

According to interviewee M3 construction portfolios that were well aligned with the organization's strategy were characterized by better performance level, however, the company R was lacking this character.

> "*Typically, a good alignment leads to completion of projects within the budgetary and time limits… Portfolios that reflect the organization's corporate strategy in most cases provide over 20% more revenue compared to portfolios where full alignment has not been achieved*".

In addition to better returns in investments, interviewee M6 explained that being unable to ensure an optimal fit between the corporate strategy and the portfolios allowed Company R to increase project costs as well as expanding the overall risk of implementing the single projects rather than portfolios. It can therefore be inferred from this response that the alignment of a construction portfolio with the corporate strategy performs a useful role in balancing the portfolio risks and opportunities. In particular, a construction firm engaging in strategic alignment is better positioned to improve its portfolio performance over the long term.

Effective PPM combine with adequate corporate strategic alignment should enable a firm to create sustainable competitive advantages (Budayan et al., 2013). Firm R has outlined as part of it strategy that it seeks to differentiate itself on price and quality. In this regard, the researcher sought to understand how PPM enabled the achievement of the company's strategic objective.

Interviewee M4 and M6 highlighted linkage of projects and portfolios as an important success factor in the management of construction related portfolios. Based on the respondent's experience (i.e. interviewee M4), portfolios unlike a collection of organizational projects involve a high level of project interdependency. The projects also involve sharing available resources and are also characterized by interacting in categories such as benefits and outcome. In other words, the benefits and outcomes of one of the projects in the portfolio have implications on other projects in the portfolio. It is for this reason that interviewee M4 emphasized that:

> "*Making project selection decisions in isolation or on the basis of each of the individual projects is likely to lead to realization of sub-optimal results more especially in the construction sector where there is pressure to perform effectively in order to win tenders*".

This view by M4 fits well into the definition of PPM as the concurrent management of a collation of related projects under a single management umbrella (Martinsuo, 2013). In other words, portfolio decisions should be made collectively in

order for success to be achieved. In essence, PPM approaches if effective followed can enable a firm to become a competitive player in the market.

On the hand, M7 and M8 who worked in some projects with R Company as contractors conveyed that the manager in the company was always in pressure as he was eager in managing and ruling the projects but he was not communicating well with the team to keep them informed of the ongoing situations and update the project portfolios objectives based on those situations. While interviewees M9 and M10 as of the clients of Company R agreed with this view and added:

> *"Our projects got influenced by that failure of the organization due to improper management that he could not deliver the projects on time and lack of resources on site caused conflicts and issues with the management. They should not accept undertaking any projects until they are done with the existing projects and they should have been sure with the quality of the work handled to the clients, as that would affect their reputation."*

M9 then enhanced that his project got delayed for over 2 years but after the new management and changes in the organization administration things started to go well and since he was low in budget he did continue with the R Company. However, M10 who requested the cost of the loss transferred the project to another competitor organization.

In the following the detail of projects within portfolios that R Company was undertaking by the time that failing of the organization happened is presented and explained based on the meetings that the researcher had with the interviewees. According to the interviews done with the respondents in the R Company, by the time that the manager of the organization who was responsible for the situation of the company and was in charge of the heading, the company was undertaking 8 projects within one portfolio sharing similar objectives and resources. The entire situation was under control and every project had its smooth way of implementation until numbers of projects were increased gradually and new projects were introduced to the portfolio.

With increasing the number of projects, conflicts and projects' risks also increased and complexity of the portfolio and alignment of the strategy with portfolio objectives got disorganized. Every project that is added to portfolio of projects require lining up of the objectives and goals of that project to other existing projects and therefore the portfolio and hence necessitating sets of resources and requirements of the project to

successfully implement it. If the new added project is itself a huge one that needs more of the attention and availability of the resources that will also influence the portfolio outcomes. For this case organization, two new projects were added as it was BOOM stages of the region in construction development and hence the management team did not want to lose the opportunity of growing higher. The main project that has been

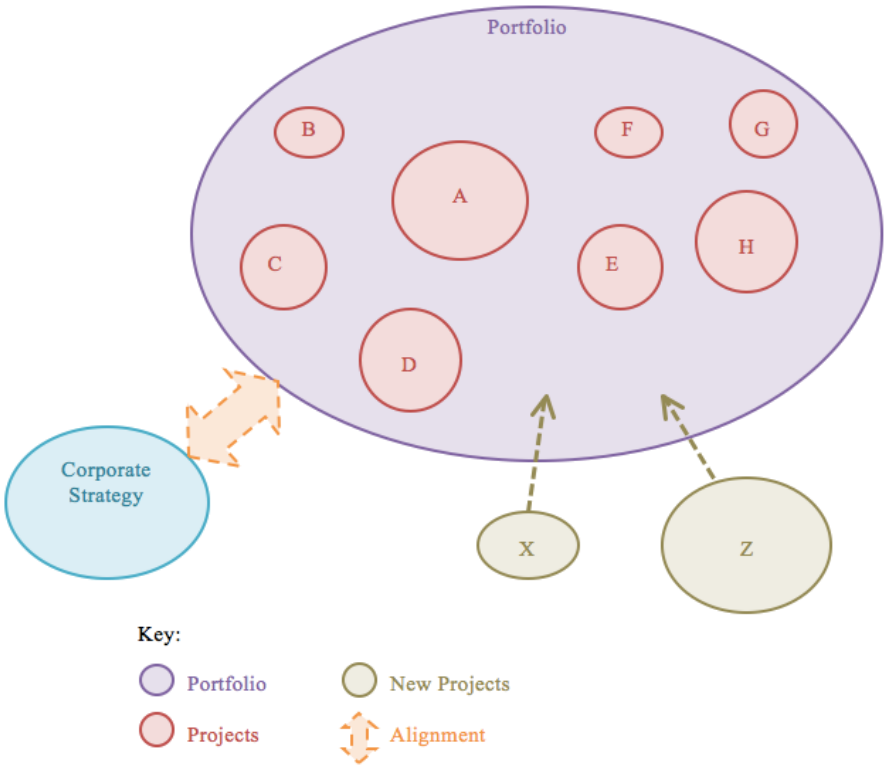

Figure 5.1. Company R approach

added to the portfolio was project Z, which was the biggest mistake of the management in accepting this project since it was a huge endeavor and required lots of time and resources management. This project along with another new added project X introduced more conflicts to the portfolio, which ended up with disorder of the strategy with the portfolio outcomes, however, the management could have terminate these projects until some of the other existing projects have been handed over or at least finished up to the last stages of the development.

When projects X and Z have been undertaken, the procedure of prioritization and selection of resources need to be reorganized and reconsidered based on the priorities. Every other project also needed to be flexible with allocation of resources and

requirements to set up the plan and control effectively with balancing the projects. Away from all these, the strategy of the company had to be enhanced with undertaking the new projects, nonetheless this was opposite in the case of R company that new added projects of X and Z not only diminished the competitive advantages of the organization, but also reduced the capabilities of the resources, skills, and special assets along with poor coordination and organization of the project team. Afterwards, the outer situation of the environment and economic setting of the industry also deteriorated the background of R Company since the crisis hit the industry in late 2006. When the company lacks in enhancing the success factors of PPM and corporate strategy due to the poor management and also when the environment of the industry worsen the situation, it leads to the failure of the organization as it did happened to the R Company.

Chapter 6: Conclusion & Recommendations

6.1. Overview

This division provides results and outcomes of the research with summary of conclusions derived from the literature reviewed and data analysis. It also presents recommendations and some future considerations for organizations that want to enhance their business level and achieve higher success points or even for those researchers and scholars who are interested in considering following conclusions in their study. Limitations and restrictions of this study also have been provided in this chapter.

6.2. Conclusion

This research presents numerous contributions to the project portfolio and understanding of this term so as efficient business strategy to be achieved by effective management of project portfolio. The study contributes with defining of project portfolio and management of project portfolio and how effective it can be in the success of a business unit. Challenges encountered in the management of a project portfolio have been presented then with identifying the management of portfolios versus single project management. Based on the reviewed literature some effective factors in successful implementation of project portfolio management away from traditional factors of time, cost, quality, and schedule have been classified that lack of each factor will have negative impacts on the success of PPM. These factors are defined as follows: selection and prioritization of projects, flexibility, balance, termination, planning and control, resources allocation, strategic alignment, linkage of projects with portfolios, and handling the conflicts and pressure. However, on the other hand strategic alignment of the project portfolios has been depended on the corporate strategy of the organization and how well this strategy is being identified and enhanced with the implementation of project portfolios. Corporate strategy of an organization also requires its sets of factors that affect the success of the business which have been contributed in this study as: control, coordination, and competitive advantage. This study further added a larger image of elements of corporate strategy as it demonstrates the effectiveness of the elements. To assure the coordination between teams and management, resources of

special assets, capabilities, and skills are needed within the organization so that the processes, structure, and system of the projects in the firm will be under control and competitive advantage with low cost and niche strategy and hence variety and quality of the projects will be achieved and enhanced. The alignment of the corporate strategy to the project portfolios has been further discussed in the study, which concerned main point and issue of this research.

The research then conducted a conceptual framework derived from the literature review that supports and explains the problem of the case study presented. This framework was further explained and investigated for the efficiency of collection and analysis of the data. The study employed inductive qualitative approach with case method analysis to investigate the case study and the data were collected via sources of recorded interviews and archived data. Since the organization was a small-scale business, the interviews were conducted among six of employees that were concerned in the time of organizational failure. Recorded interviews were then analyzed and assessed with regard to the success factors of PPM and corporate strategy and the alignment of the policy with project portfolios' objectives. Through this analysis it has been indicated that the alignment of the business strategy and its success factors with the PPM success factors strongly affects the achievement of the organization and hence improves the performance of the business in the industry.

6.3. Research Limitations

This study as many other studies has its own limitations and margins and thus delivers an encouraging theme for future analysis and discussions with regard to the terms of project portfolio, project portfolio management, corporate strategy and its alignment. Provided limitations open up the door for approaching investigations targeting the effectiveness of PPM and its alignment with the strategy.

Conducted investigation in this research with regard to the presented case study considered only small-scale private sector organization, therefore, sets of conclusions and thoughts provided could be used concerning related extents only. Another restrictions of this study provokes with the number of interviewees and respondents in the collection of data, since the organization was small-scale and the problem occurred

many years ago did not allow the researcher to go beyond the limit of selecting the respondents and get more information. Also the population framework of this study answers the questions in the construction and consultancy fields, although the consequences could be comprehended to other comparable industries, which itself presents another limitations to this research.

For the purpose of this study only one case organization could be investigated as other organizations that shared similar problems are already out of production and not operating anymore so the inaccessibility to the resources could not help the researcher to go beyond and further.

Since the issued problem was happened in the past the access to some data and sources were not available which influences the accuracy of the data collected, however, the researcher had done the impossible to evaluate and analyze the archived data. The collection of data also was itself an issue as the interviewees conserved attitudes in providing extra information due to political and value sensitivity.

Reviewing the existed literature and finding relevant references in the concerned industry also played another role in limiting the findings of the study, as there were not enough relevant references specifically in the Middle East region.

6.4. Recommendations

The objective of this paper is to investigate factors enhancing the productivity of corporate units in managing project portfolio and aligning it with strategy of the business in private division of construction industry. Management of project portfolios differ from management of single projects since the complexity arises and special skills needed to organize the situations well. Capability of the project portfolio manager improves the efficiency of portfolio objectives and hence the success of the projects and organization.

Through this study it has been indicated that management of project portfolios and achievement of the best in aligning corporate strategy with the objectives of the portfolio in the business require use of some studied success factors. Each factor influences the achievement of the project portfolio and accordingly the organization success as it has been investigated with the case study provided.

Selection and prioritization of every project should be based on the ongoing environment and dynamics of the portfolio as wrong assortment of project may lead to unavailability and lack of resources or even it may influence the productivity of other projects within the portfolio. When selecting a new project, allocation of resources may be transferred and modified based on the new setting of the portfolio. Consequently, there should be some sort of balance between the projects in the portfolio to assure the flexibility of resources. Any new project that may negatively affect other projects and portfolio outcomes may be terminated or delayed so that there will be no undesirable impacts on portfolio achievements. This termination may also include any unsuitable resources, which is not anymore progressing the project and may harm the results of the accomplishments to avoid the extra costs and risks endangering the success of projects. Planning and controlling the projects and portfolios itself also can be a challenge of management since it seeks knowledge, expertise, and capability in handling the conflicts arise from the project portfolios and control the pressures of risks. In case of conflicts and problems there should be a source of contingency budget in order to minimize the side effects.

To achieve the best in corporate strategy it is recommended for the managers to ensure the coordination between the team members and systematize the organization in structure and processes of implementing the projects so that better way of controlling portfolios will be attained. In terms of resources also managers need to be granted and to certify the skills, capabilities, and special assets in accomplishing the businesses. Furthermore, competitive advantage could be succeeded through corporate strategy with low cost, quality and variety in differentiation, and niche strategy of the organization.

On the other hand, the manager should be able to link the projects with portfolio and its objectives since many projects within a portfolio share similar aims but different outcomes. And foremost, alignment of the strategy to the project portfolio outcomes is hence critical while it should not only be based on the traditional factors of time, cost, quality, and schedule, but also mission and vision of the organization and success factors of PPM along with corporate strategy. Without critical factors of PPM and corporate strategy or deficiency of application of these factors, success of the organization will be at risk as it did happen in the case study organization with the failure of the businesses.

6.5. Future Research Suggestions

Future researches may take the advantages of this paper around the same focus of the study and further develop the existing gaps uncovered in the literature. Moreover, each factor influencing the development of PPM and corporate strategy with its alignments may open up the door for further exploration. Besides, the limitations of this study may be used too as guidelines to appropriately direct the upcoming researches towards following considerations:

- Examining the influence of job satisfaction of employees on the portfolio success factors;
- Investigating the effect of communication and coordination between team members on the success of project portfolio;
- Exploring the result of IT governance on the achievements of the project portfolio with strategy;
- Examining organizational structure and system in the effectiveness of project portfolio;
- Inspecting the measure of usefulness of project portfolio in the public sectors;
- Considering the efficiency of project portfolio management in governmental projects;
- Examining the consequence of strategy formation on the success of the project portfolio;
- Finding additional factors that may influence the development of corporate strategy and project portfolio management.

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Appendices

[redacted]

Tel: [redacted]

Attn : [redacted]

Project : **R1008 - PROPOSED G+1 RETAIL BUILDING ON PLOT NO.** [redacted]

Subject : **Revised Quotation for the** [redacted]

Dear Madam,

With reference to our previous quotation [redacted] and your verbal request for revise quotation, please find our revised final rates to carryout above said work.

Sl No	Description	Quantity	Unit Rate (AED)	Amount
1	Cycus Revoluta Palm (C/T=30cm)	9.00 nr	380.00	3,420.00
2	4m height Palm tree at parking	8.00 nr	1,600.00	12,800.00
3	Shrubs for planter box in patio(4 nos/m²) including fertilizing	30.00 m²	80.00	2,400.00
4	Ground cover for planter bed in parking (6 Nr/m²) including fertilizing	95.00 m²	42.00	3,990.00
5	Sweet soil	145.00 m³	42.00	6,090.00
6	60mm interlock(Buff colour, dimensions 100x100x60)	1,140.00 m²	63.00	71,820.00
7	80mm interlock(Black colour, dimensions 100x100x80)	4,370.00 m²	65.00	284,050.00
8	Kerbstone(Gray colour, dimensions 305x100x915)	670.00 m	105.00	70,350.00
9	Heel Kerb(75x150x600mm) Colour: Gray	100.00 m	55.00	5,500.00
10	Irrigation system for the above mentioned (Dwg Ref: P-WS(01/08)) plantation complete with controller, valve & irrigation pump(Lowara Italy, 2 hp)(Existing water tank to be used)	-	L/Sum	14,000.00
11	Supply & spreading pebbles. Colour: white, size: 20 to 40mm, Thickness: 10cm	- m²	90.00	Rate only
	[redacted]		**Total (AED)**	**474,420.00**

1 of 2

[redacted]

Project-1 Details

[redacted]

Below mentioned issues to be carry out by Main Contractor

1. NOC
2. Safety, Insurance
3. Required Laboratory Tests
4. Ducting & Sleeves
5. Demarkation of interlock area
6. Soil of existing ground to be levelled by Main contractor at the level required.
7. Planter bed to be provided by Main contractor
   Size of palm pit : 1.5x1.5x1.5m, Cycas pit: 1.0x1.0x1.0m
   Level of soil: Planter box(-50cm), Planter bed(-30cm)

Exclusion & Notes

1. Store and office to be provided by the Main contractor.
2. Water & Electricity of the work
3. Final invoice will be given as per actual quantity work done.
4. Any item not included in BOQ should be priced separately.
5. Preparation cost of shop drawing & as built drawing will claim separately.

Payment terms & conditions

1. Contract to be confirmed by LPO.
2. Back to back payment is not acceptable.
3. Payment to be paid against monthly invoice.
4. 20% Advance; Balance: cdc base on submitted invoice
5. Validity of Quotation : 30 days
6. Start date of project : 10 days after receiving advance payment.
7. Retention money to be released month after completion of our work.

We trust that you will find the above quotation on concurrence with your requirments base on qualified job with standard quality of material, and look forward to receiving your valuable order at your earliest convenience.

Kindly feel free to contact us for any further clarification.

Thanking you.

Yours [redacted]

(Signature & Stamp)

Received By:-

(Signature & Stamp)

Approved by Client:-

Name :

Title :

Date :

(Signature & Stamp)

[redacted] [redacted]

Construction Division

E11

INSTRUCTION TO SUBCONTRACTOR

Contract Name : [redacted]
Site Address :
Tel :
Fax :

Contract No : [redacted]
Date :
Issue No :

To : [redacted]
F.A.O. :
Address :
Tel :
Fax :

Please carry out the following works in accordance with the Terms and Conditions of your Subcontract Agreement / Letter of Intent [redacted]

Proceed with the adjustment of DEWA valve chamber cover work as detailed in the enclosed Engineer's Instruction [redacted]

- You are instructed to proceed immediately with production / work schedules, shop drawings, materials submittals etc.
- Should you consider that these works vary from your existing order and should there be a time or cost implication we request that you provide a notice along with detailed substantiation in accordance with the terms of your Subcontract.
- All costs will be subject to the approval of the Main Contractor, Employer and/or Engineer and will be valued in accordance with the Subcontract.

For and on behalf of [redacted] Engineering L.L.C

Name [redacted] Position: [redacted] Signature [redacted]

Replies should be sent to the **SITE ADDRESS** above.

For internal use only

Reference Documents : EI ref: PN1303-CP07-EI-098 dated 24th February 2016.
Other :

Prog No :
Prog Item No :

Distribution :

SPM	PM	QS				Site File

[redacted]

Project-2 Details

[redacted]nstruction Division

Attn : [redacted]

Project : [redacted]

Subject : **Revised Quotation for** [redacted]

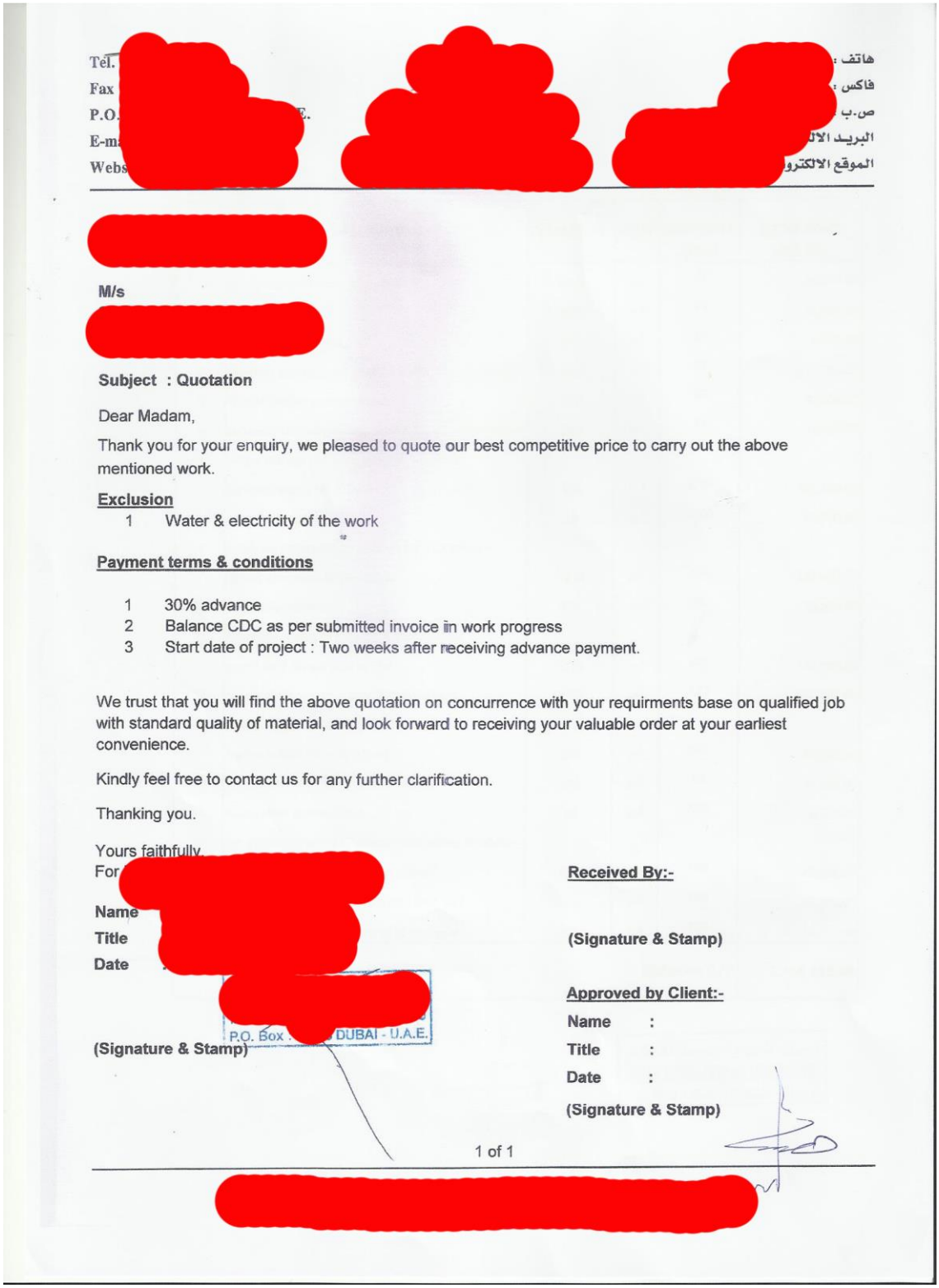
Dear Sir,

Further to [redacted] engineer instruction for the new Irrigation connection and attached drawing approved by [redacted] engineer, here we submit revised quotation included additional items of th work which it was excluded in our original quotation for your kind information and necessary approv

Sl No	Description	Quantity	Unit Rate	Amount
	Supply & Installation of			
1	100 mm dia uPVC high pressure class"D" pipe from the tap point to the water tank	198.00 m	75.00	14,850.00
2	100 mm dia uPVC high pressure elbow 90 degree with construction of thrust block as per DM standard	5.00 nr	580.00	2,900.00
3	100 mm dia uPVC high pressure Tee with construction of thrust block	1.00 nr	650.00	650.00
4	100 mm dia Basket Strainer	1.00 nr	4,500.00	4,500.00
5	100 mm dia D I Gate Valve	1.00 nr	3,200.00	3,200.00
6	100 mm dia Mechanical Flow Meter	1.00 nr	5,600.00	5,600.00
7	Pressure guage	2.00 nr	650.00	1,300.00
8	GRP Puddle flange and MEP fittings for the 2 chambers		L/sum	7,600.00
9	DM Irrigation follow up, shop drawing approval, request for shut down , dewatering and Tie in connection		L/sum	4,500.00
	TOTAL			**40,600.00**
	DISCOUNTED(5%) TOTAL			**38,570.00**

1 of 2

Project-3 Details



[redacted]

Tél. [redacted] هاتف :
Fax [redacted] فاكس :
P.O. [redacted] E. ص.ب :
E-m [redacted] البريد الال
Webs [redacted] الموقع الالكترو

[redacted]

M/s

[redacted]

Subject : Quotation

Dear Madam,

Thank you for your enquiry, we pleased to quote our best competitive price to carry out the above mentioned work.

Exclusion

1 Water & electricity of the work

Payment terms & conditions

1 30% advance
2 Balance CDC as per submitted invoice in work progress
3 Start date of project : Two weeks after receiving advance payment.

We trust that you will find the above quotation on concurrence with your requirments base on qualified job with standard quality of material, and look forward to receiving your valuable order at your earliest convenience.

Kindly feel free to contact us for any further clarification.

Thanking you.

Yours faithfully,
For [redacted]

Name
Title
Date

P.O. Box [redacted] DUBAI - U.A.E.

(Signature & Stamp)

Received By:-

(Signature & Stamp)

Approved by Client:-

Name :
Title :
Date :

(Signature & Stamp)

1 of 1

[redacted]

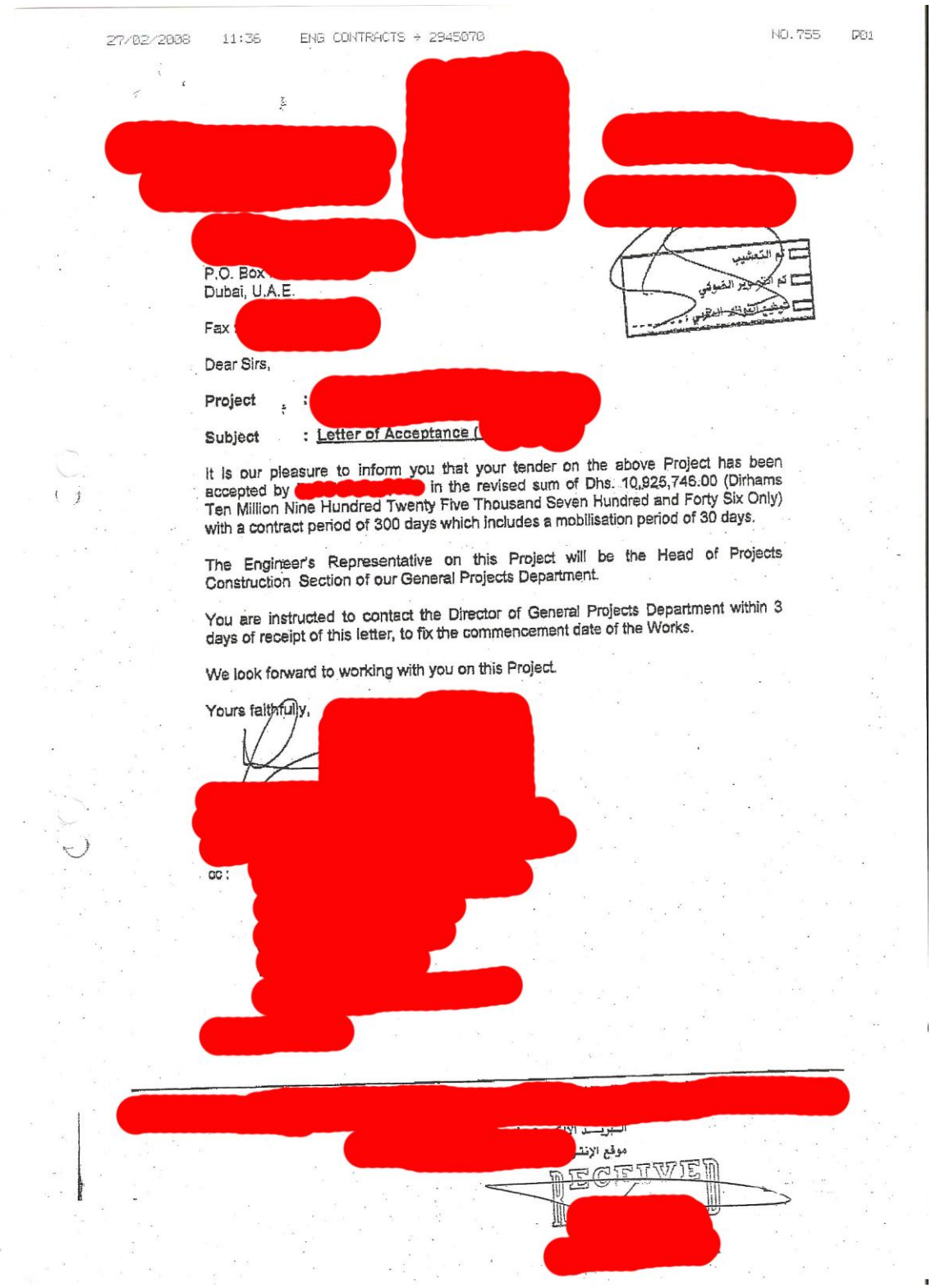
Project-4 Details

Sl No:	DESCRIPTION	QUANTITIY	UNIT	UNIT RATE (Dhs)	TOTAL PRICE UAE Dhs
1	Modification of existing landscape.	3495	m²	12	41,940.00
2	New grass area.	4100	m²	15	61,500.00
3	Grass for planter box.	550	m²	15	8,250.00
4	Interlock paving 200x200x80m buff colour at backyard	2850	m²	75	213,750.00
5	Flower garden around Majlis.	720	m²	65	46,800.00
6	Driveway landscape (both side) & backyard landscape.	980	m²	75	73,500.00
7	Water feature and pond including nozziles, light and whole MEP works .	165	m²	1100	181,500.00
8	Wooden pergola.	20	m²	1100	22,000.00
9	Driveway pavement to guarage 500x500x50mm granix pavement brown colour.	1410	m²	140	197,400.00
10	Vegetable garden.	450	m²	45	20,250.00
11	Driveway paving to the villa 200x200x80cm granix dark brown with border.	1110	m²	130	144,300.00
12	Granix paving beige colour 200x200x60mm .	1040	m²	125	130,000.00
13	Rock and stone retaining wall (varied height 30cm to 60cm)	130	m²	350	45,500.00
14	Trees and shurbs along with drive way	525	m²	65	34,125.00
15	Boxes plant around pond	35	m²	180	6,300.00
16	Car parking near the neighbour villa paving 500x500x 50mm granix pavement brown colour.	520	m²	140	72,800.00
17	Bushes and trees around parking (item 16)	135	m²	150	20,250.00
18	bushes along to the path way to backyard.	295	m²	150	44,250.00
				Balance C/F	1,364,415.00

Project-5 Details

	Balance B/F				**1,364,415.00**
19	Vollyball court beach sand including net & post	150	m^2	90	13,500.00
20	Retaining wall 30cm height.	225	m	250	56,250.00
21	Lake around majlis with water fall.	165	m^2	850	140,250.00
22	Guarage paving 500x500x50mm dark brown granix.	790	m^2	140	110,600.00
23	Automatic irrigation system including water tank, pump & irrigation controller.			L/sum	150,000.00
24	Suppply of sweet soil.	2700	m^3	35	94,500.00
25	Suppply & planting Date palm. (height =4m)	26	nr	1400	36,400.00
26	Supply & install of Granite 500x500x30mm black infront of villa and around pregola.	445	m^2	480	213,600.00
27	Wooden pergola at the parking area.	125	m^2	900	112,500.00
28	Street & light include cabling.	20	nr	5800	116,000.00
29	Garden light & floor up light include cabling.	60	nr	1500	90,000.00
	TOTAL				**2,498,015.00**
	Special Discount				**98,015.00**
	GRAND TOTAL				**2,400,000.00**

[redacted]
P.O. Box [redacted] DUBAI - U.A.E.



27/02/2008 11:36 ENG CONTRACTS + 2945070 NO. 755 P01

[redacted]

P.O. Box
Dubai, U.A.E.

Fax [redacted]

Dear Sirs,

Project : [redacted]

Subject : Letter of Acceptance ([redacted])

It is our pleasure to inform you that your tender on the above Project has been accepted by [redacted] in the revised sum of Dhs. 10,925,746.00 (Dirhams Ten Million Nine Hundred Twenty Five Thousand Seven Hundred and Forty Six Only) with a contract period of 300 days which includes a mobilisation period of 30 days.

The Engineer's Representative on this Project will be the Head of Projects Construction Section of our General Projects Department.

You are instructed to contact the Director of General Projects Department within 3 days of receipt of this letter, to fix the commencement date of the Works.

We look forward to working with you on this Project.

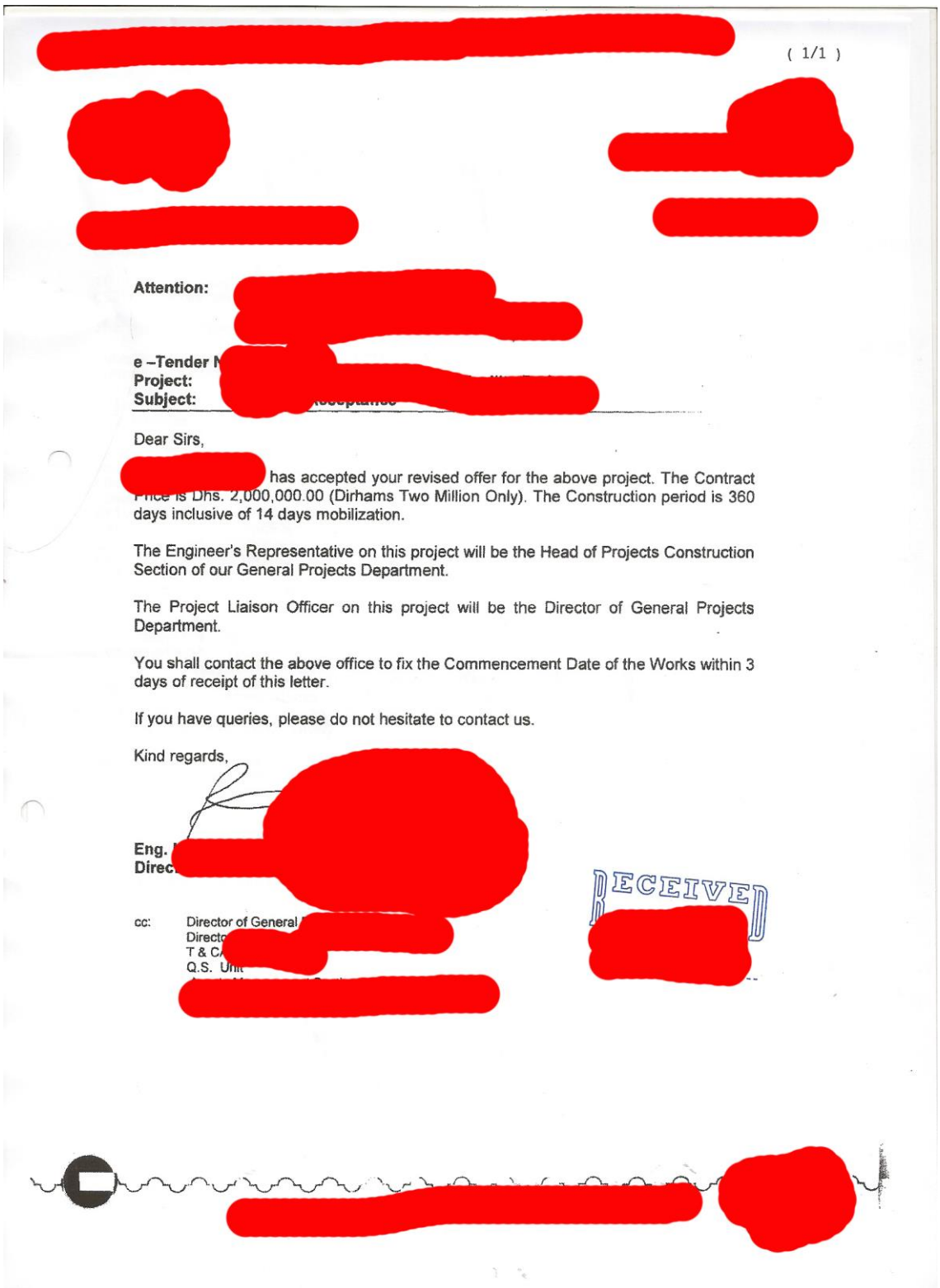
Yours faithfully,

[redacted]

cc :

[redacted]

Project-6 Details



(1/1)

Attention:

e –Tender
Project:
Subject:

Dear Sirs,

has accepted your revised offer for the above project. The Contract Price is Dhs. 2,000,000.00 (Dirhams Two Million Only). The Construction period is 360 days inclusive of 14 days mobilization.

The Engineer's Representative on this project will be the Head of Projects Construction Section of our General Projects Department.

The Project Liaison Officer on this project will be the Director of General Projects Department.

You shall contact the above office to fix the Commencement Date of the Works within 3 days of receipt of this letter.

If you have queries, please do not hesitate to contact us.

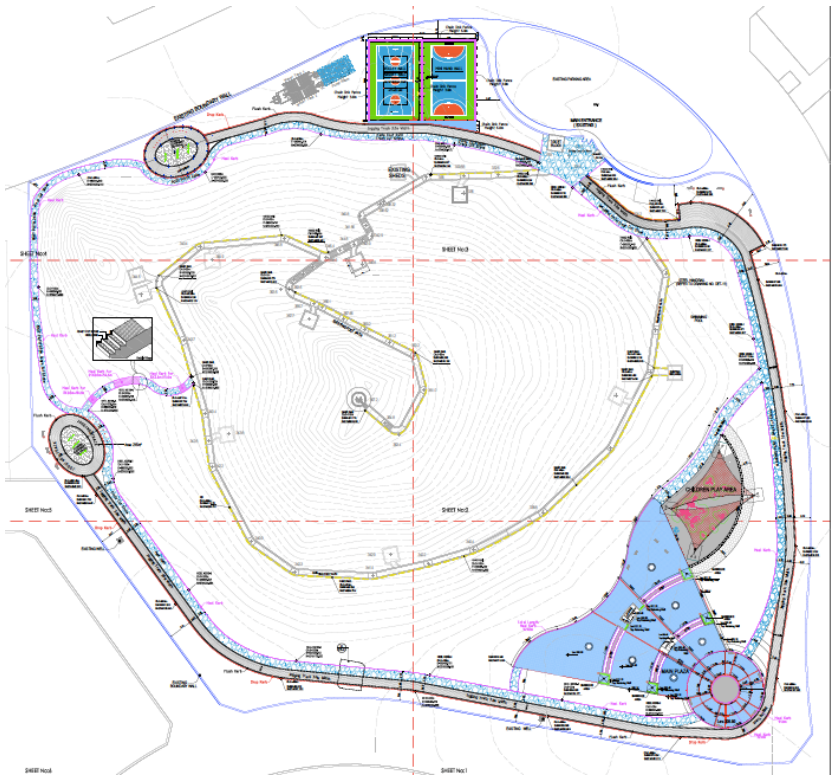
Kind regards,

Eng.
Direc

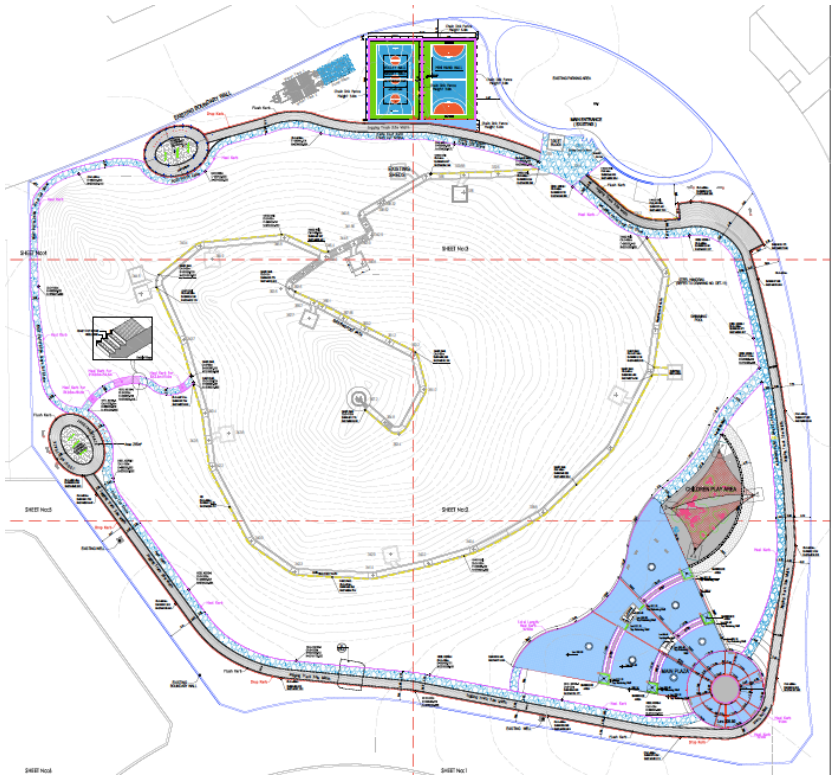
cc: Director of General
Directo
T & C
Q.S. Un

RECEIVED

Project-7 Details



LEGEND:-	
Jogging Track	2610.00m²
Sub Base for Jogging Track	2610.00m²
Asphalt for Jogging Track	2610.00m²
Interlock Pavement	3170.00m²
Crazy Cut Stone Pavement	3126.00m²
Heel Kerb	1715.00m
Flush Kerb	1558.00m
Drop Kerb	820.00m
Total Flush & Drop Kerb	2378.00m
Hand Rail	602.60m
Bench	19 Nos
Litter Bin	19 Nos
SPORTS AREA:-	
MULTIPURPOSE COURT	600.00m²
SUB BASE FOR MULTIPURPOSE COURT	600.00m²
ASPHALT FOR MULTIPURPOSE COURT	600.00m²
MINI HAND BALL	600.00m²
SUB BASE FOR MINI HAND BALL	600.00m²
ASPHALT FOR MINI HAND BALL	600.00m²
BENCHES	19 Nos
LITTER BIN	19 Nos
CHAIN LINK FENCE:-	
3.0m Height	90.0m
6.0m Height	80.0m
Double Leaf Gate	2 Nos
Tent	
Level	
Sand for Children Play Area & Fitness Equipment	
BARBEQUE AREA	



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ASPHALT FOR MULTIPURPOSE COURT	600.00m²
MINI HAND BALL	600.00m²
SUB BASE FOR MINI HAND BALL	600.00m²
ASPHALT FOR MINI HAND BALL	600.00m²
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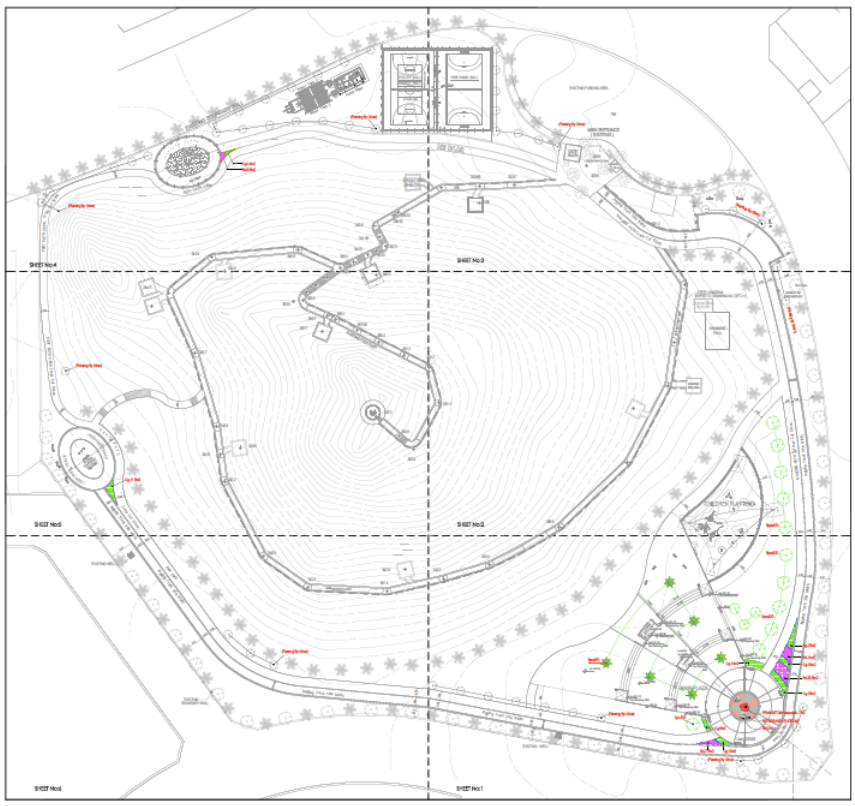
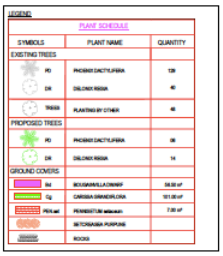
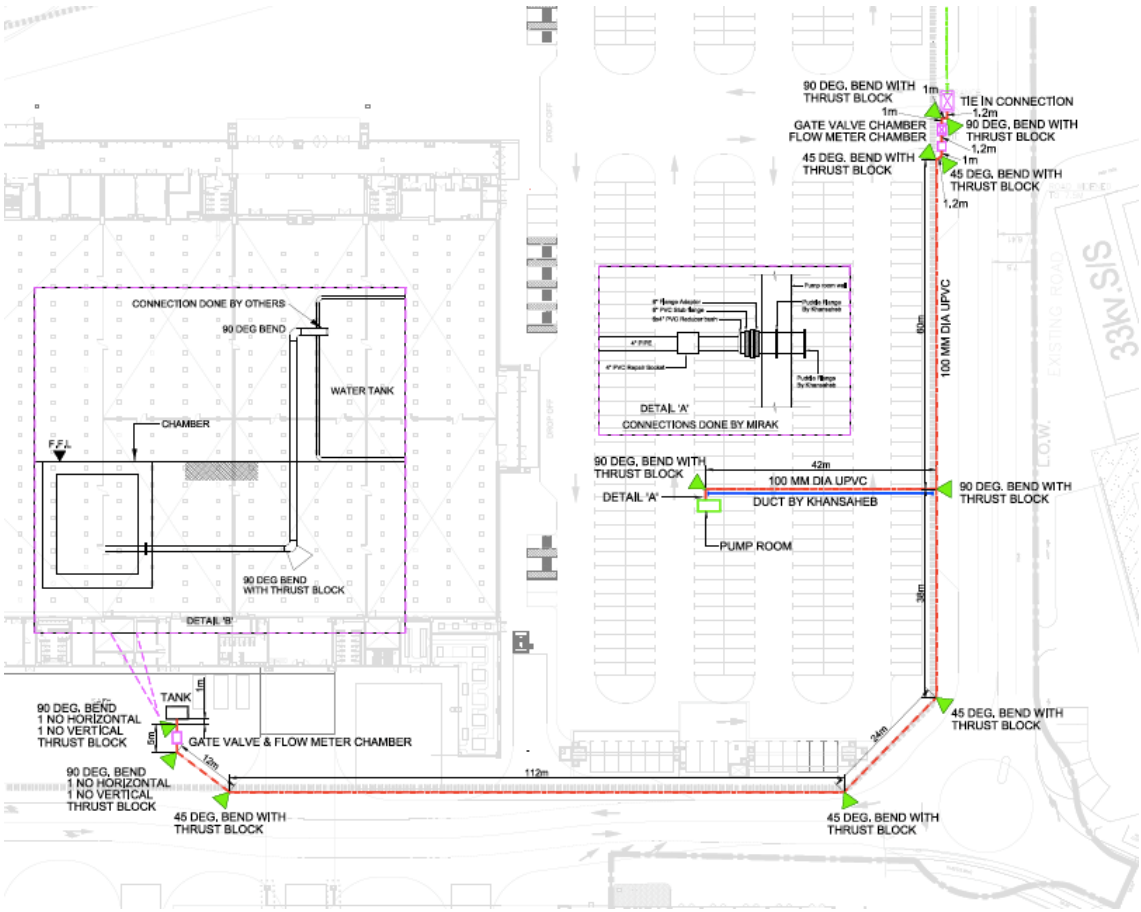
6.0m Height	80.0m
Double Leaf Gate	2 Nos
Tent	
Level	
Sand for Children Play Area & Fitness Equipment	
BARBEQUE AREA	

Project-1 Details

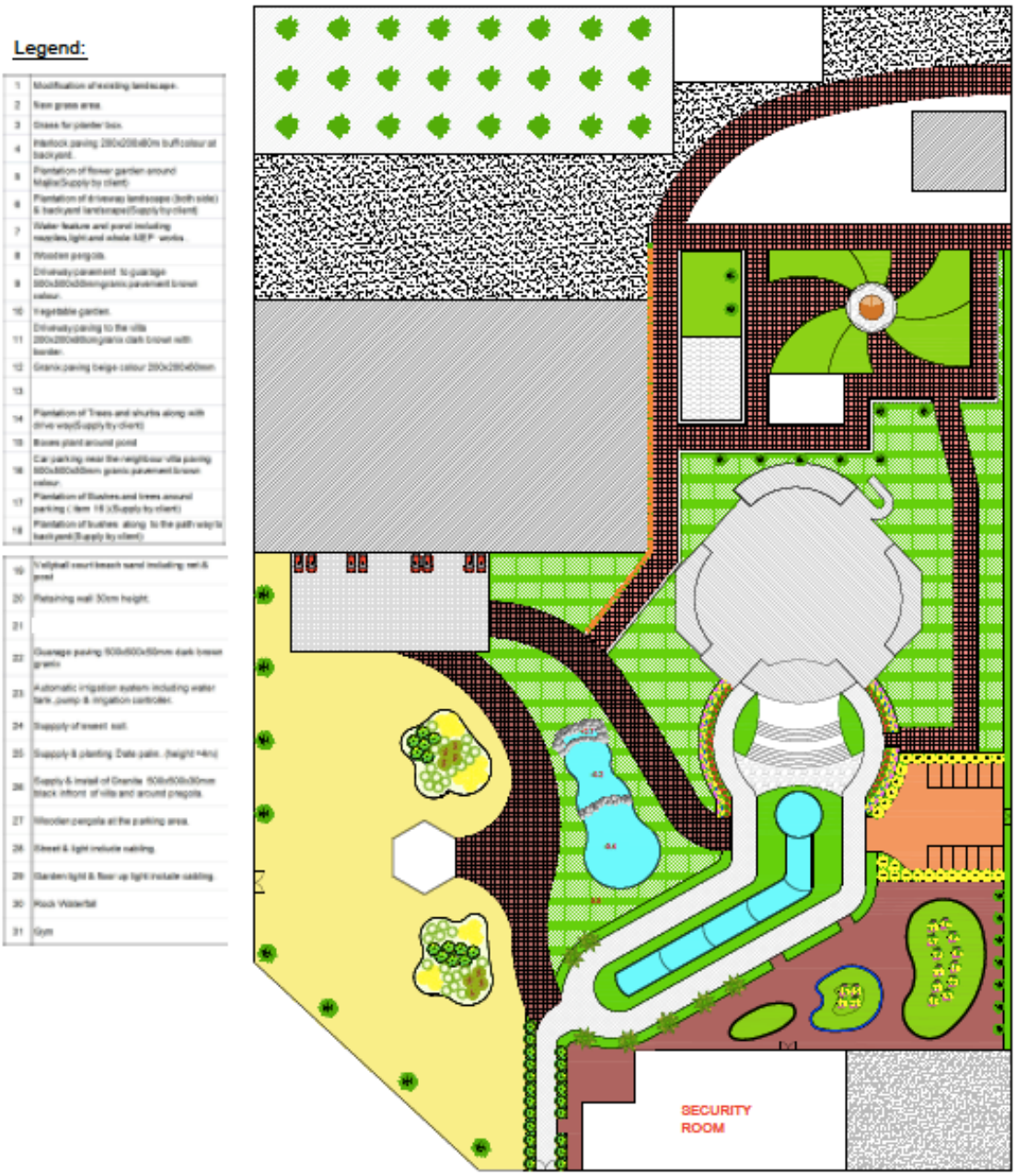




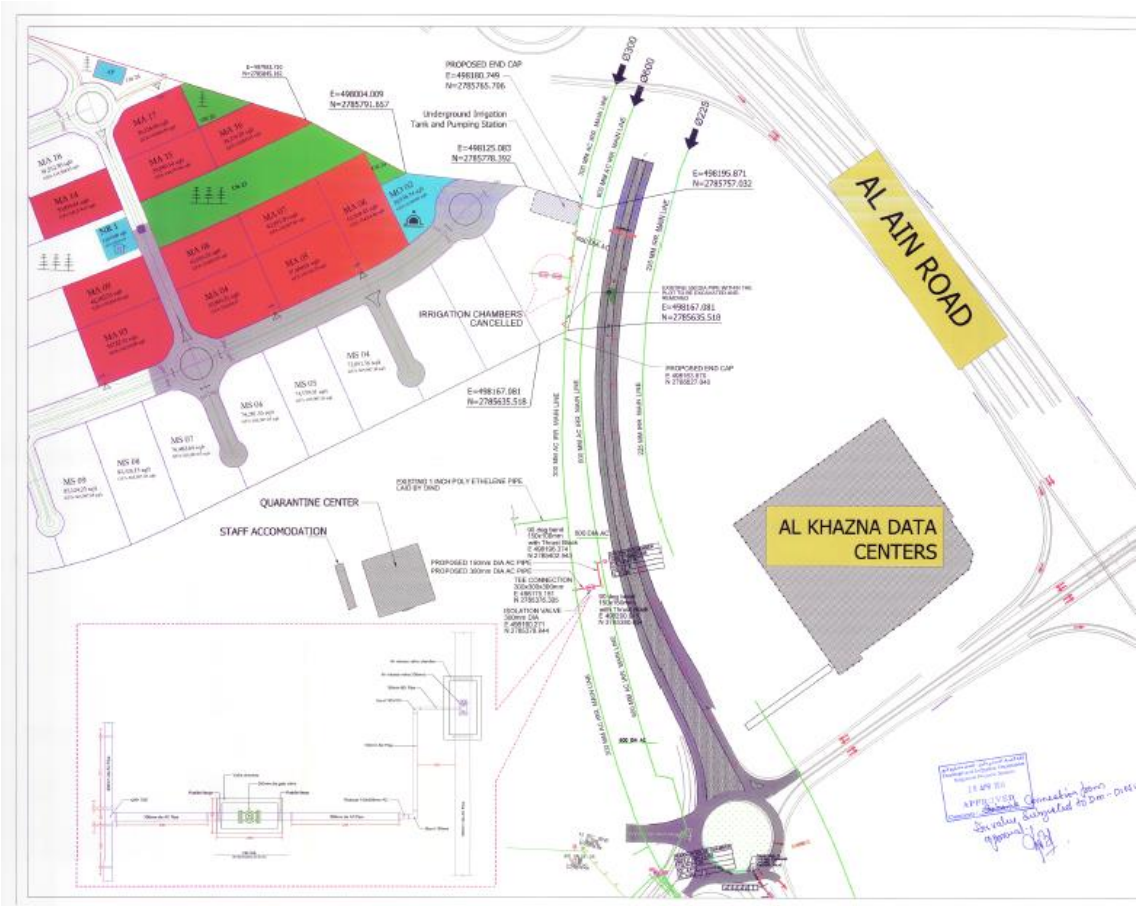
Project-1 Details



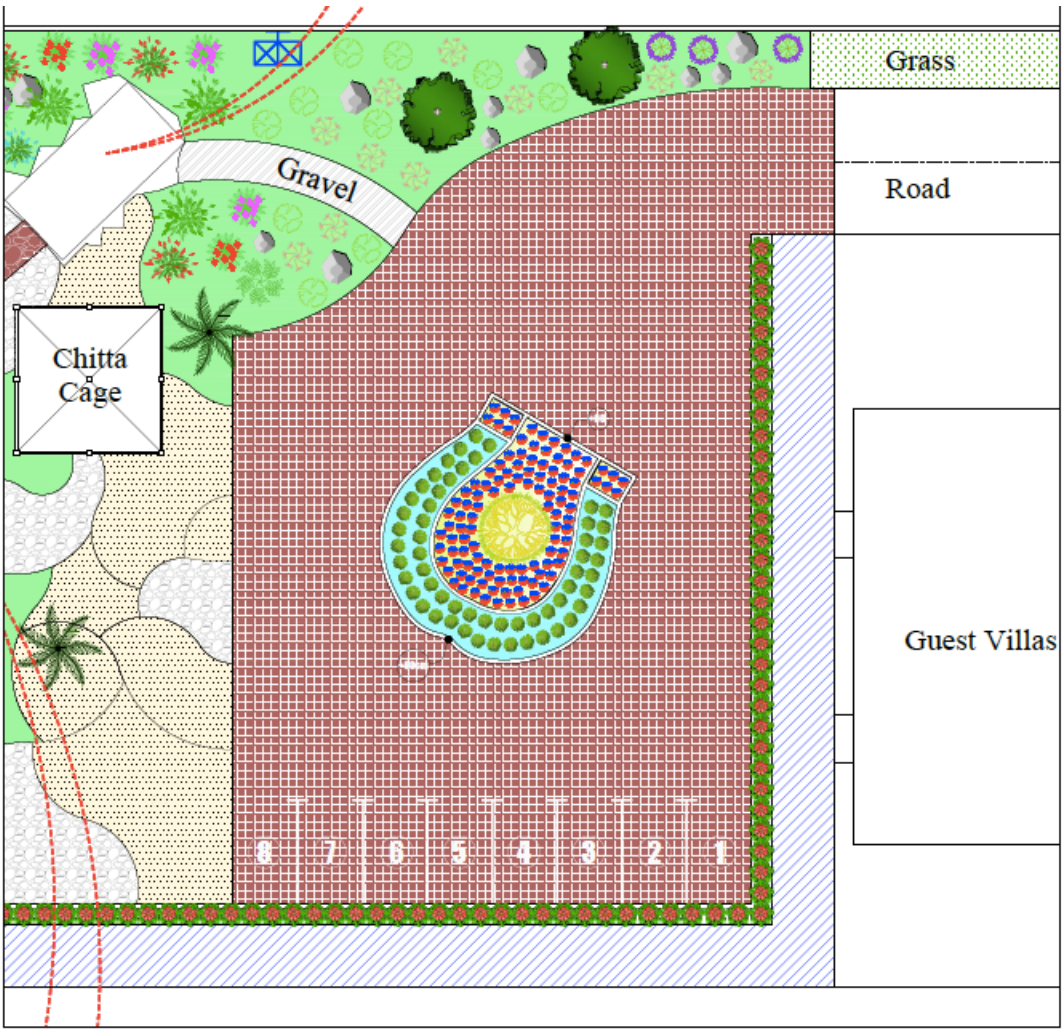
Project-2 Details



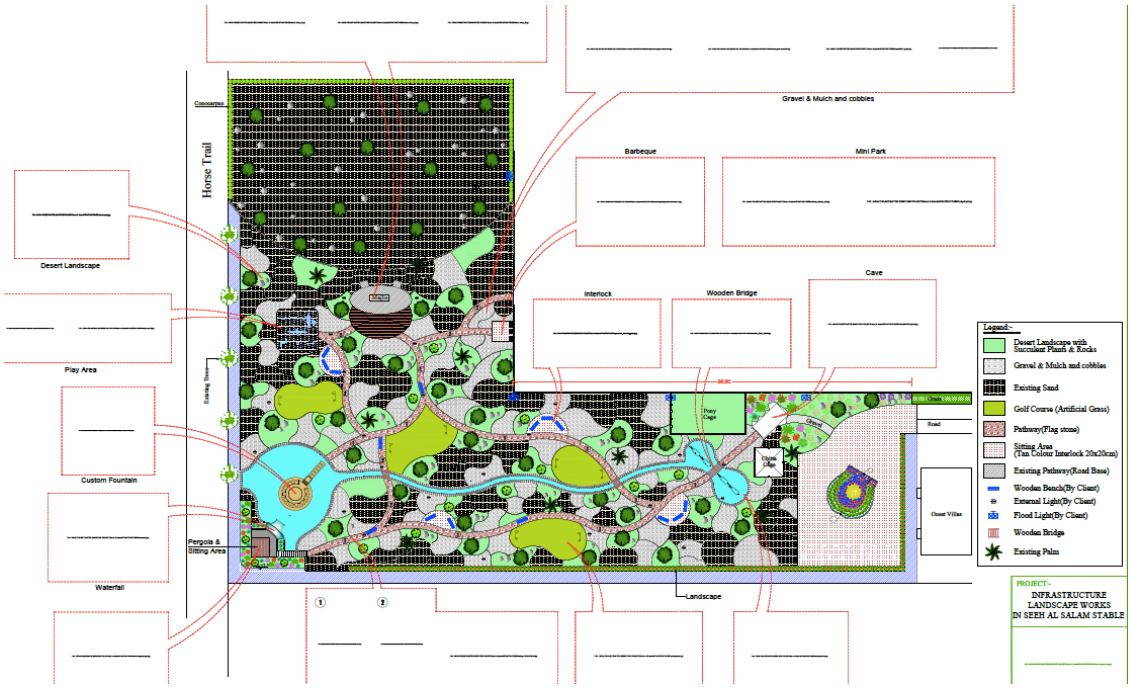
Project-3 Details



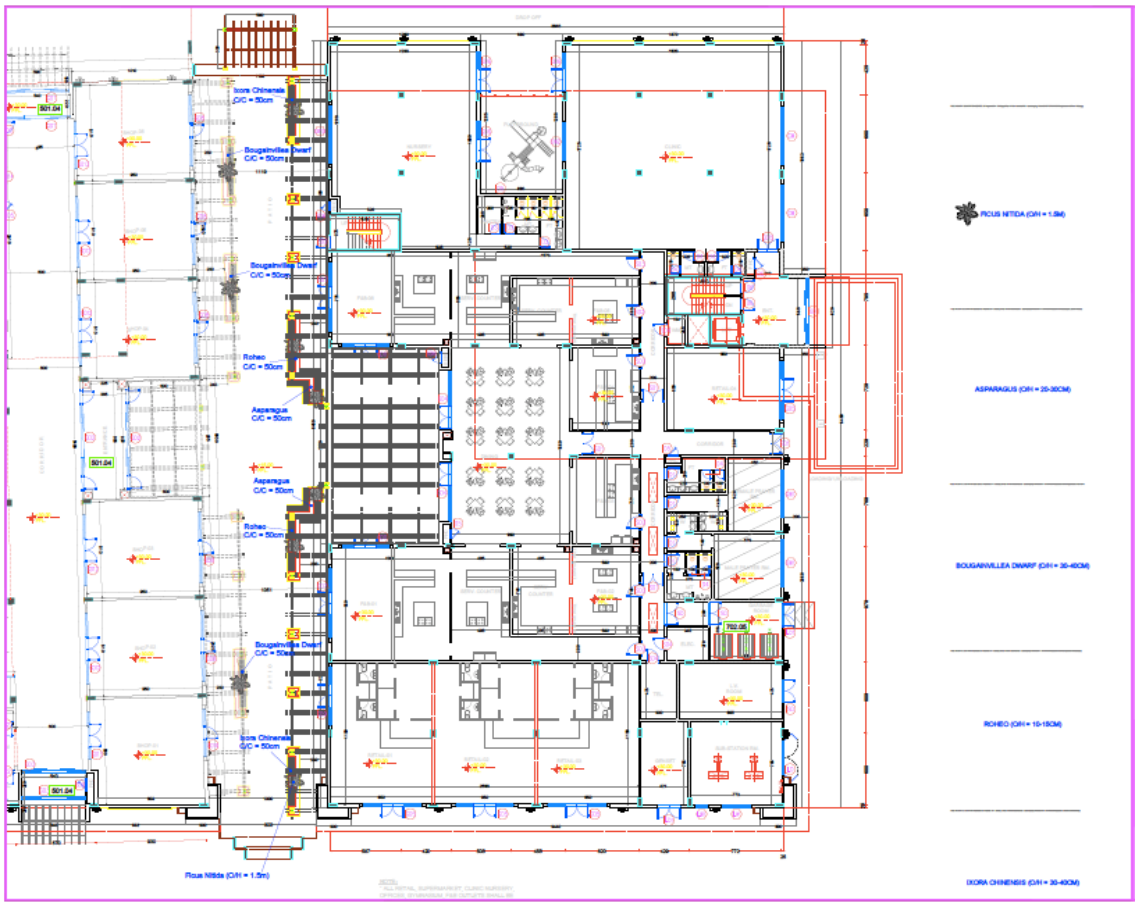
Project-4 Details



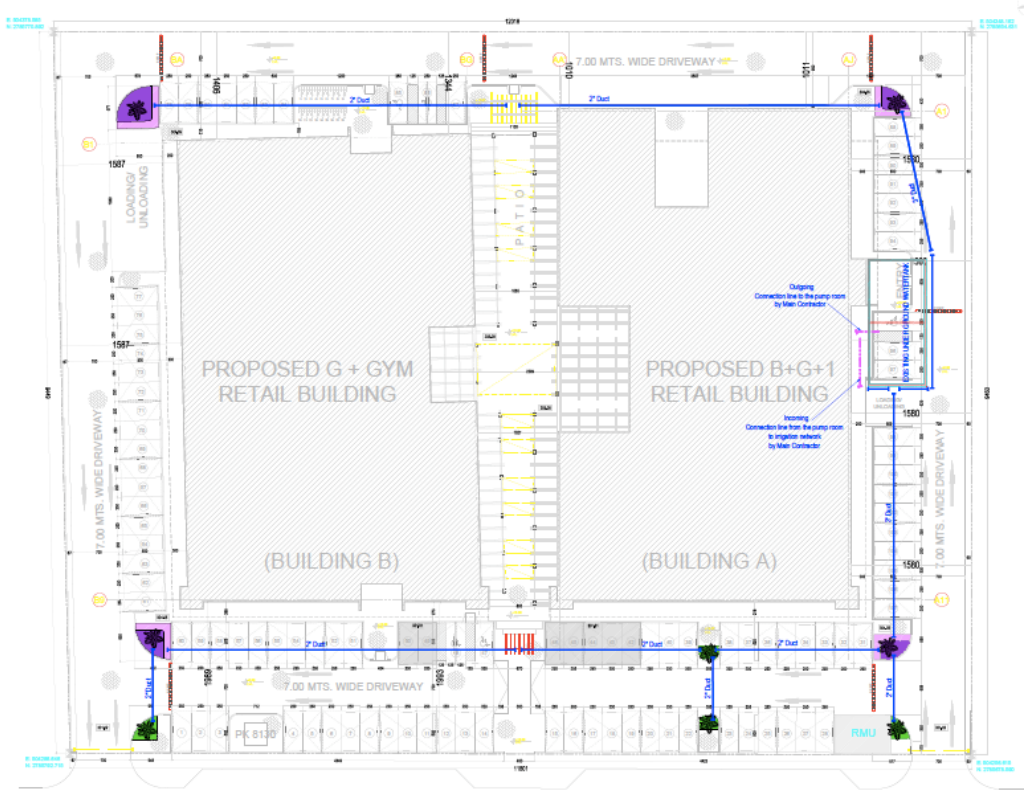
Project-5 Details



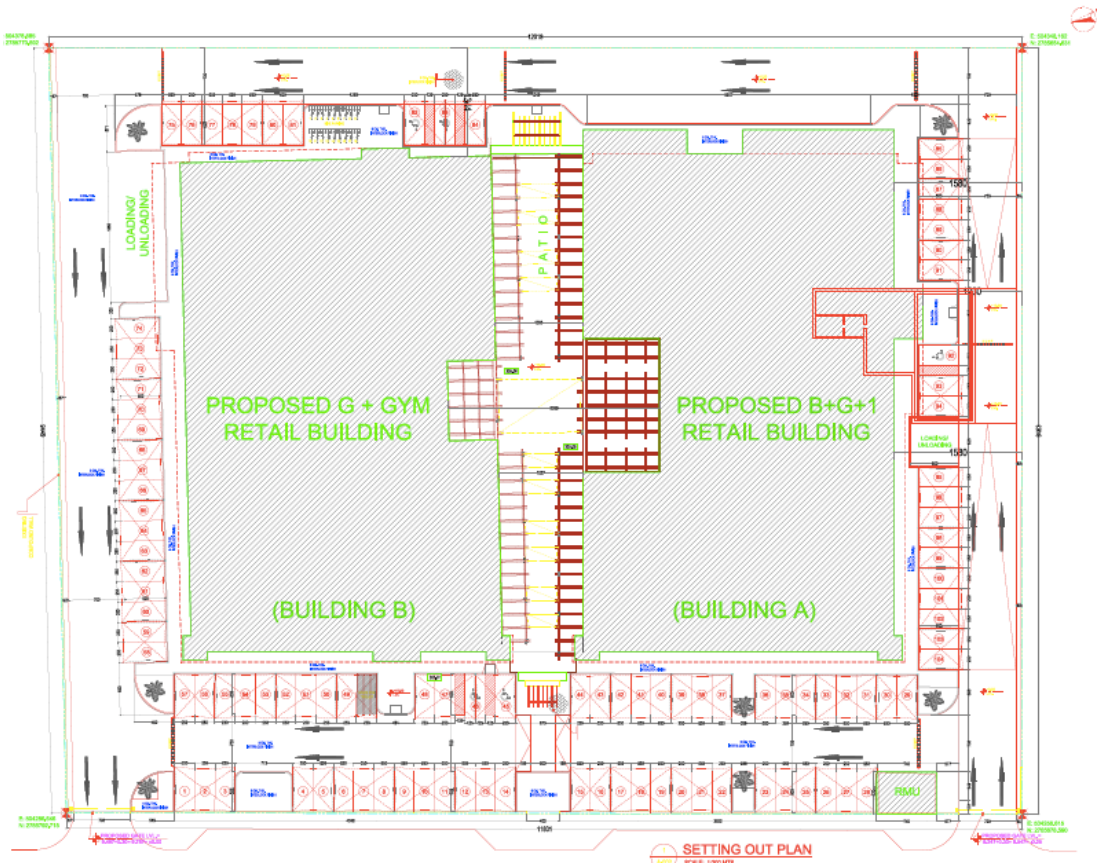
Project-6 Details

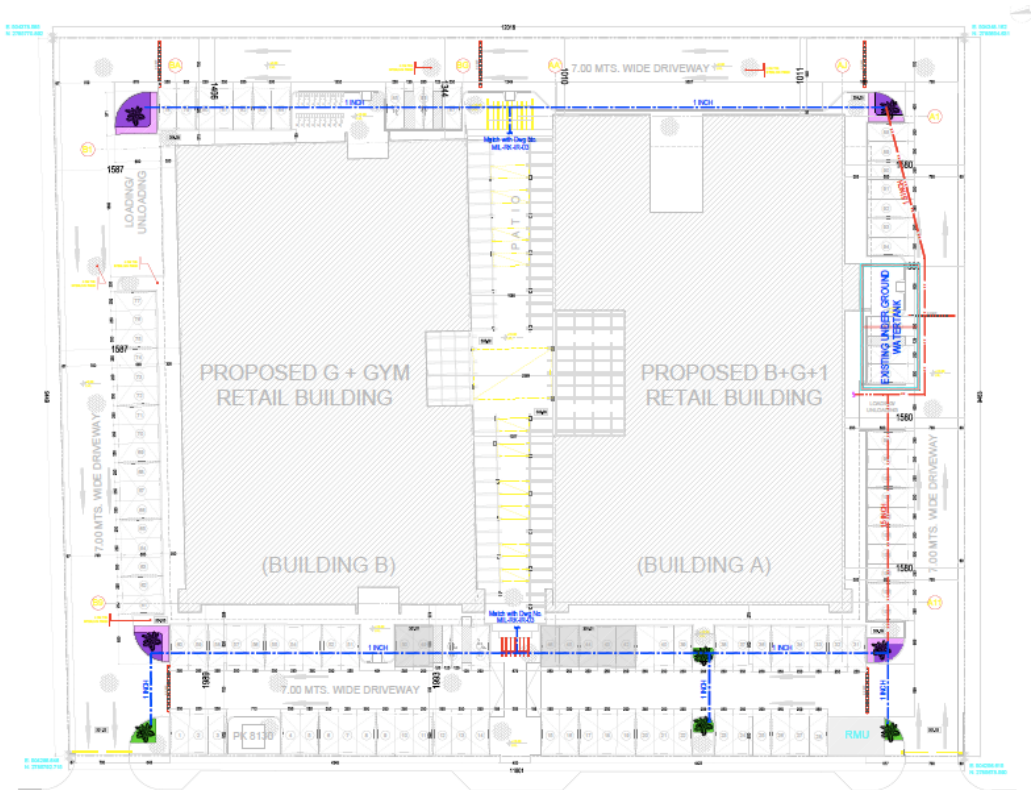


Project-7 Details

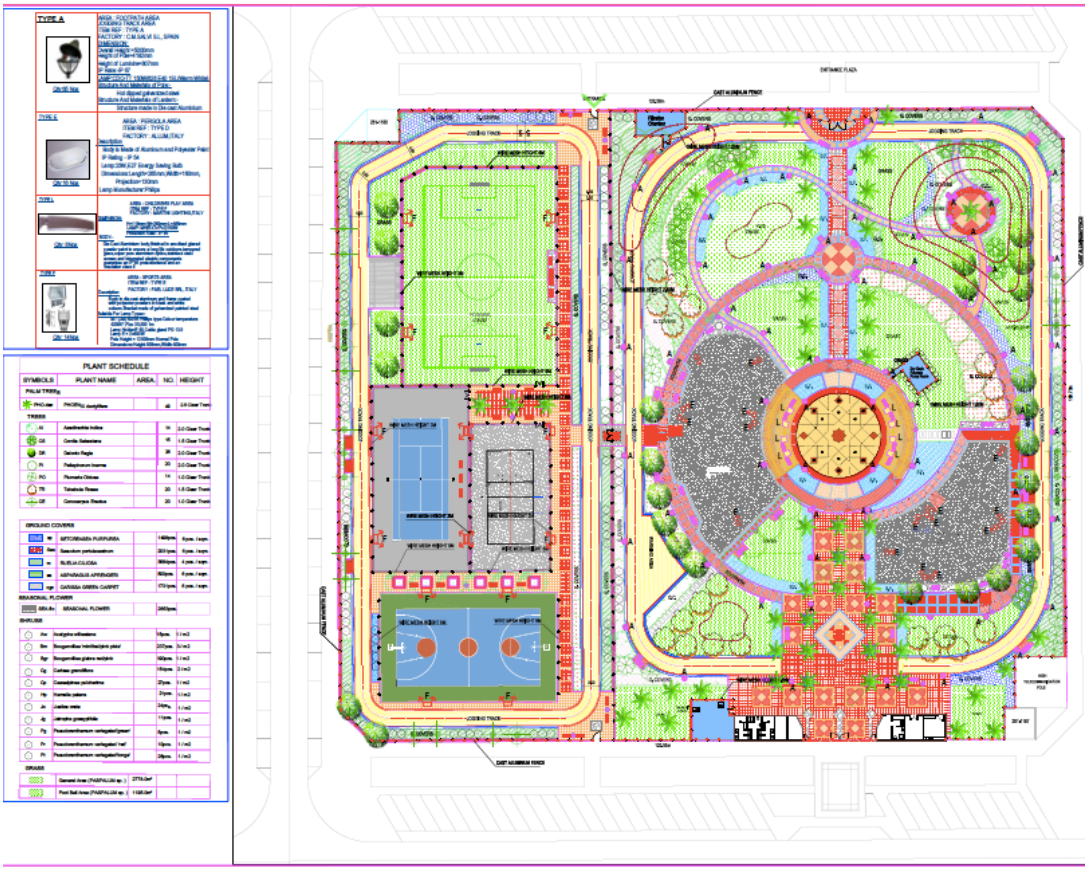


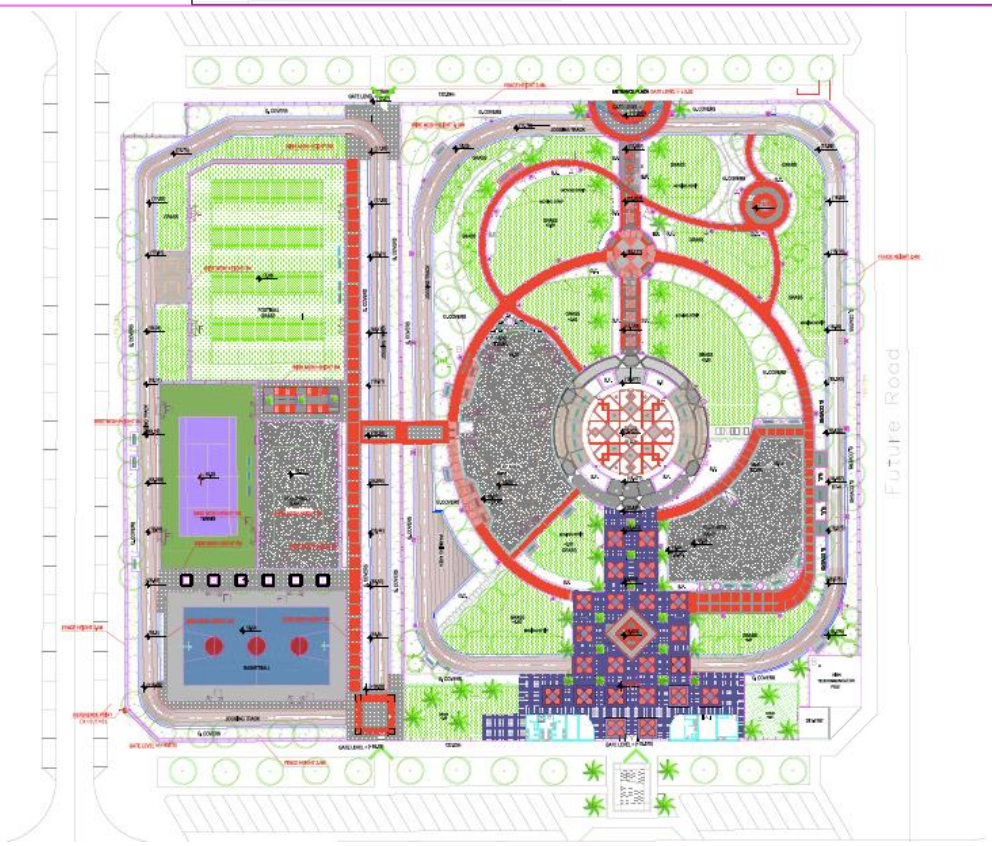
Project-7 Details



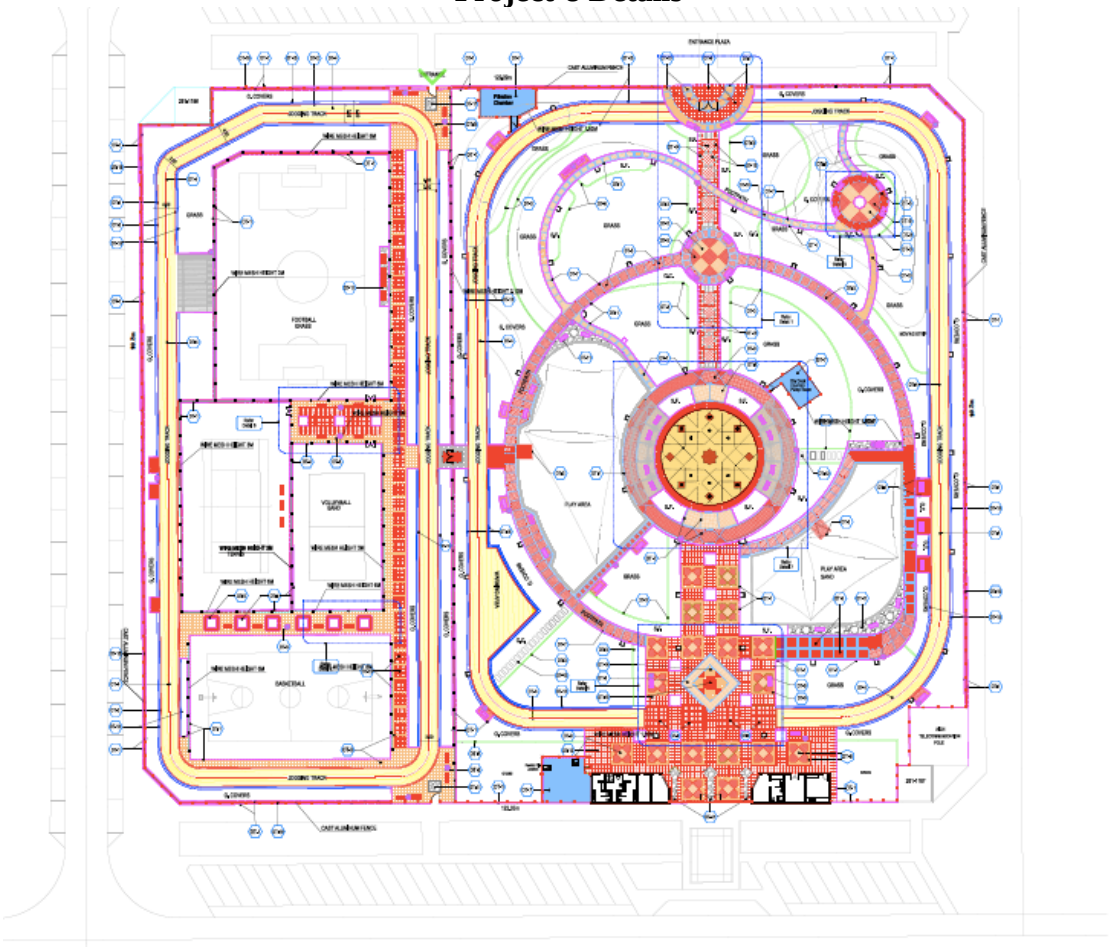


Project-7 Details


TYPE A
TYPE C
TYPE D
PLANT SCHEDULE
SYMBOLS
PLANT NAME
AREA
NO.
HEIGHT


Future Road

Project-8 Details



Project-8 Details

- What was the organization's strategy in developing the business?
- How the manager was managing the projects and portfolios?
- What was the management style of the organization? How were the skills of the manager?
- How was the team cooperation and management consideration in organizing team?
- What was the management technic in organizing the projects within portfolios?
- How often the management was ensuring of the work is done by the team members?
- How frequently the management and team were meeting with the client/s? How was the ability of the management in engaging the stakeholders?
- What were the weaknesses and strengths of the organization in the management of project portfolios?
- Was there any connection between the strategy of the organization and management of project portfolio?
- How was the personal development of the management in the organization?
- What are the knowledge areas that a manager should pay attention in order to handle the project and attain the outcomes?
- How was the management controlling the fluctuations of the organization? Crisis?
- How about the conflicts?
- What could the management do to avoid such issues and failure?
- How would a manager imply his/ her skills to better manage the project portfolios?
- Was there any type of organizational knowledge as source of competitive advantage?
- What were strategic capabilities and boundaries of the organization? And now?
- What were the values of the organization's corporate strategy?
- Were all employees aware of the organization's strategy?

Sample of Interview Questions