

School of architecture and built environment

**Dissertation Title:** A strategy for improving effective organisational performance in the construction industry in the Sultanate of Oman.

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**January 2017 Starters**

**Module Code:** 7ET023

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Acknowledgements

All praise to God, the Greatest that gives perfection and facility in applying all tasks and responsibilities. I am deeply indebted to my supervisors Dr Angela Nash. I feel honoured and lucky to have had the opportunity to do this research so, as she is all experienced, patient, supporting and sincere in supervising me throughout the whole process of the research. I will always remember her coaching, support and sharing of knowledge during the research process. In fact, my research knowledge and self-confidence have increased. I have become more outspoken and brave in giving my opinion as well as sharing ideas with others. A million sincere thanks from the depth of my heart, to the sponsors of my studies at University of Wolverhampton, UK. These are the Ministry of Transport and Communications in the Sultanate of Oman. Without them, I probably would not be here. Apart from that, I would also like to give a big thanks to my friends in the School of architecture and built environment. Some of them have completed their studies and some are still studying for their master level. Thanks indeed for their assistance, moral support and guidance during the research as well as my life in Wolverhampton city .

# Executive summary

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The improving effective organisational performance in the construction industry in the Sultanate of Oman is a huge concept which has been explained in numerous contexts. The aim of this research is to identify an excellent strategy that can develop effective organisational performance in the construction industry in the Sultanate of Oman. A literature review was conducted to demonstrate the different tools and modals that can improve and develop effective organisational performance in the construction industry. Also it cover several aspects, such as the importance of improving the performance of an organisation, the challenges related to this factor and the issues pertaining to organisational performance in the construction industry in the Sultanate of Oman. Subsequent to this, the methodology of this research was carried out and information was collected in the form of the interviews and a case study. Interviews and a case study used to identify the system and strategy appropriate regarding performance improvement as well as to investigate the issues that will persuade government departments in the Sultanate of Oman to apply a new strategy concerning improving organisational performance. Consequently, the finding of this research will assist the government of Oman to develop organisational performance in future planning and it will help teams working in the construction industry to implement an excellent strategy that can enhance effective organisational performance. In addition, the recommendations from this research will assist organisations in the construction industry and other institutions in Oman to improve effective organisational performance by using the appropriate strategy. There would therefore appear to be a definite need for more research in relation to consider on different elements related to improving organisational performance, for example customer perspectives and partnerships which could make the framework more comprehensive and the details used by different businesses.

Table of Contents

Contents

[Chapter 1: Introduction 8](#_Toc503727156)

[1.1 Introduction: 8](#_Toc503727157)

[1.2 Research background: 8](#_Toc503727158)

[1.2 Aim of research: 10](#_Toc503727159)

[1.3 Objectives: 10](#_Toc503727160)

[1.5 Research Questions: 11](#_Toc503727161)

[1.6 Research Philosophy: 11](#_Toc503727162)

[1.7 Beneficiaries of this thesis: 12](#_Toc503727163)

[1.8 Outline of the methodology: 12](#_Toc503727164)

[1.9 Structure of the thesis: 13](#_Toc503727165)

[1.10 Conclusion: 14](#_Toc503727166)

[Chapter 2: Literature review 14](#_Toc503727167)

[2.1 Introduction: 14](#_Toc503727168)

[2.2 The issue of organisational performance in the construction industry: 15](#_Toc503727169)

[2.2.1 The challenges related to improving organisational performance: 16](#_Toc503727170)

[2. 2. 2 The advantages of improving organisational performance: 17](#_Toc503727171)

[2.3 Definition of improved and developed organisational performance: 18](#_Toc503727172)

[2.4 Construction of organisational performance strategy: 21](#_Toc503727173)

[2.5 Performance improvement in the construction industry: 22](#_Toc503727174)

[2.6 Organisational performance in the construction industry in the United Kingdom: 24](#_Toc503727175)

[2.7 Organisational performance in the construction industry in Oman: 24](#_Toc503727176)

[2.8 Improving effective organisational performance: 27](#_Toc503727177)

[2.9 The tools and models to improve and develop effective organisational performance in the construction industry: 28](#_Toc503727178)

[2.9.1 The EFQM Excellence Model (European Foundation for Quality Management): 30](#_Toc503727179)

[2.9.2 The Malcolm Baldrige National Quality Award (MBNQA): 31](#_Toc503727180)

[2.9.3 The Performance Pyramid: 31](#_Toc503727181)

[2.9.4 Sink and Tuttle Model: 32](#_Toc503727182)

[2.9.5 Balanced Scorecard (BSC): 33](#_Toc503727183)

[2.9.6 Integrated Performance Measurement System (IPMS): 33](#_Toc503727184)

[2.9.7 The Quantitative Model for Performance Measurement System (QMPMS): 34](#_Toc503727185)

[2.9.8 Performance Prism: 35](#_Toc503727186)

[2.9.9 Project Management Performance Assessment (PMPA) Model: 35](#_Toc503727187)

[2.9.10 Comparison between the balanced scorecard (BSC) and the EFQM Excellence Model: 36](#_Toc503727188)

[2.10 The importance of improving organisational performance in the construction industry: 37](#_Toc503727189)

[2.11 The relationship between improving organisational performance and strategy development in the construction industry: 39](#_Toc503727190)

[2.12 The criteria for consideration when selecting the appropriate tools and models to improve organisational performance: 40](#_Toc503727191)

[2.13 Conclusion: 43](#_Toc503727192)

[Chapter 3: Design Methodologies 44](#_Toc503727193)

[3.1 Introduction: 44](#_Toc503727194)

[3.2 Research design and strategy: 45](#_Toc503727195)

[3.3 Data collection method: 56](#_Toc503727196)

[3.4 Data processing and analysing: 59](#_Toc503727198)

[3.5 Ethical considerations: 59](#_Toc503727199)

[3.6 Research Limitations: 60](#_Toc503727200)

[3.7 Conclusion: 60](#_Toc503727201)

[Chapter: 4 Data analysis 61](#_Toc503727202)

[4.1 Introduction: 61](#_Toc503727203)

[4.2 Interviews: 61](#_Toc503727204)

[4.3 Data acquisition from Oman: 61](#_Toc503727205)

[4.4 Discussion on data obtained from the interviews: 64](#_Toc503727206)

[4.5 Key findings from the interviews: 71](#_Toc503727207)

[4.6 Case study: 72](#_Toc503727208)

[4.6.1 The Vision: 73](#_Toc503727209)

[4.6.2 Communication: 73](#_Toc503727210)

[4.6.3 Organisational structure: 74](#_Toc503727211)

[4.7 Key findings from the case study: 74](#_Toc503727212)

[4.8 Conclusion: 75](#_Toc503727213)

[Chapter 5: Conclusion and recommendations 76](#_Toc503727214)

[5.1 Introduction: 76](#_Toc503727215)

[5.2 Research overview: 76](#_Toc503727216)

[5.3 Research conclusion: 79](#_Toc503727217)

[5.4 The Strategy: 80](#_Toc503727218)

[5.4 Recommendations for further research: 84](#_Toc503727224)

[5.5 Limitations of the study: 85](#_Toc503727225)

[5.6 Conclusion: 86](#_Toc503727226)

[References: 87](#_Toc503727227)

[Appendix 101](#_Toc503727228)

Contents of figures

[Figure 1 Eigh criitical success factors essential to achieve the mission of master plan 27](#_Toc503702498)

[Figure 2 Quantitative and qualitative research 46](#_Toc503702499)

[Figure 3 Types of interview 55](#_Toc503702500)

Contents of table

[Table 1 Definitions of improved and developed organisational performance 21](#_Toc503704252)

[Table 2 Perceptions of quantitative and qualitative approaches 48](#_Toc503704253)

[Table 3 Quantitative and qualitative approaches 50](#_Toc503704254)

[Table 4 Participants background 64](#_Toc503704255)

[Table 5 Strategy for improve organisational performance 83](#_Toc503704256)

# Chapter 1: Introduction

## Introduction:

According to the Oxford Dictionary cited in (Farrell, 2011, p.20), an introduction can be defined as “an explanation section at the beginning of a book”. The introduction chapter provides an overview of the purpose and the focus of the study which includes several aspects such as research issue, aim, objectives, an outline of the methodology and structure of the research (Farrell, 2011). Therefore, this chapter is designed to cover these aspects. It is important to start this chapter with the research background. Therefore, this chapter will demonstrate the challenges of improving effective organisational performance in the construction industry in the Sultanate of Oman.

## 1.2 Research background:

Performance organisational management is an instrument for achieving enhanced results and teamwork within an organisation. Performance management is understood and managed within the planned goals, standards and competencies (Wagnerova, 2011). Thereafter, performance management could be characterised as a process by which an organisation integrates its performance with its corporate and functional strategies and objectives (Bitici et al., 1997). However, it is believed that performance management is a strategic approach to management which provides managers, employees and stakeholders at different levels with the instruments required to regularly plan, continuously monitor, periodically measure and review the performance of an organisation.

In the past couple of years, effective organisational performance management has become a key issue in the construction industry due to complex internal and external factors. Consequently, reports and recent initiatives by major construction organisations have identiﬁed the improvement of organisational performance as a key issue (Latham, 1994; Egan, 1998). Moreover, the previously published studies recognised the necessity for continuous organisational improvement in the construction industry, though they emphasised the role of innovation (Fairclough, 2002). It is important to improve organisational performance in the construction industry for a few reasons. This includes both internal and external factors, such as the need to follow future strategies, complete projects successfully and moreover, to remain competitive and innovative to achieve organisational objectives. It should be noted that traditional organisational performance is no longer sufﬁcient for understanding the performance of organisations in a dynamic business environment (Kagioglou et al., 2001).

In the Sultanate of Oman, several organisations have the same functions and perform the same work, such as building houses and roads. In detail, Muscat Municipality implemented several strategic projects for roads and bridges to enhance the efficiency of traffic that will connect regions across Oman with each other. Services are provided by the establishment of roads and streets, bridges and roundabouts. Additionally, the road and land transport sector in the Ministry of Transport and Communications establishes essential infrastructure for the Sultanate of Oman by facilitating the means of communicating. The constructing, paving and maintenance of roads are the priorities of this sector. It should be noted that the Ministry of Transport and Communications and Muscat Municipality have built roads in the country over the last 2-3 decades. In addition, several organisations in the construction industry have never changed their organisational structure since it was established. For example, the Ministry of Transport and Communications was established by a royal decree (15/1973) together with the first set of ministries in the Sultanate of Oman. The Ministry had the role of implementing the government’s plans in the fields of transport and communications. The administrative body in relation to State Law (No26/75) indicated the ministry’s tasks as (Ministry of Transport). It is evident that the Ministry of Transport and Communications has been working with the same organisational structure since 1973 (ministry of Ministry of Transport and Communications 2016) . As a result, it can be assumed that it is directly influencing the government’s performance in the construction industry, in addition to the country’s budget. Nevertheless, regarding Oman Vision 2040, the government has a plan to improve organisational performance management in the construction industry (Appendix 1).Recently, the authorities of several organisations in Oman are looking for specific aspects, which have an impact on organisational performance (Appendix 2). Therefore, this research offers several significant insights into the government of Oman with the aim of finding an appropriate strategy for developing organisational performance (Appendix 3). Moreover, it will provide an important opportunity to understand organisational performance in the construction industry.

## Aim of research:

The aim is “the ultimate goal of the study”, as stated by (Farrell 2011). It is ideally written in one sentence only and highlights the ultimate goal (Naoum, 2007). The aim of this research is to identify an excellent strategy that can develop effective organisational performance in the construction industry in the Sultanate of Oman.

## Objectives:

Different variables have been ascertained to be related to research objectives. The primary function of the research objectives is to ascertain the issues to be analysed, which should be clearly stated and specific in nature (Kumar, 2014). In addition, Kumar (2014) indicates that the research objectives determine the issues to consider and should be clearly stated and specific in nature. Similarly, Naoum (2007), argued that the objectivesare prepared for the research aim.

Therefore, there are several objectives pertaining to this research, which are as follows:

1. To investigate the principal causes and effects, which prevent the development of organisational performance in the construction industry in Oman by collecting information to obtain the principal factors related to this subject.
2. To undertake a literature review to demonstrate the challenges regarding organisational performance across all levels in different organisations, for instance the Government and private sector.
3. To determine an excellent strategy that can develop and improve organisational performance in the construction industry in Oman.
4. To critically evaluate the performance of construction organisations in the construction industry in Oman to improve performance.
5. To analyse and summarise the data that is collected via interviews and case study by means of various software programs.

## 1.5 Research Questions:

The following questions have been developed to be answered at the end of the research. According to Davens (2011), research questions are questions, established with a view to evaluating a problem or an issue that is of interest to the researcher.

* What are the causes and effects of organisational performance in the construction industry in the Sultanate of Oman?
* What are the challenges of improving effective organisational performance in different organisations, such as Government organisations and the private sector?
* What is an appropriate strategy that can help to develop organisational performance in the construction industry?

## 1.6 Research Philosophy:

A research philosophy is a belief concerning the way in which data about a phenomenon or situation should be gathered, analysed and used. Research philosophy deals with the source, nature and development of knowledge (Crewel, 2013). In most cases, the researcher collects secondary and primary data and engages in data analysis to answer the research question. This answer marks the creation of new knowledge. Addressing research philosophy in this dissertation involves being aware and formulating beliefs and assumptions. Each stage of the research process is based on an assumption regarding the sources and nature of knowledge. The philosophy of a study will reflect the author’s important assumptions and this assumption serves as the basis for the research strategy. Based on this, the following assumptions were held to guide this study.

1. The respondents will cooperate with the researchers and give their candid opinions on the issues addressed in the study.
2. Respondents’ responses will provide valid information for genuine decisions on the causes and effects of organisational performance in the construction industry.
3. The use of a case study and oral interviews will be sufficient for the collection of data that is required for the study.

## 1.7 Beneficiaries of this thesis:

It is obvious that there are many benefits from this research. Firstly, the additional information from this research might assist the government of Oman to develop organisational performance in future planning. Secondly, the research could help teams working in the construction industry to implement an excellent strategy that can enhance effective organisational performance. Furthermore, the finding from this research will support organisations to avoid any weaknesses. Recommendations from this research will assist organisations in the construction industry and other institutions in Oman to improve effective organisational performance by using the appropriate strategy. In addition, the information which has been gathered in this study will support the researcher by updating information concerning the construction industry which could help the researcher in his development and career path.

## 1.8 Outline of the methodology:

In this thesis, the research methodology was selected to achieve the aim of the dissertation. In addition, the literature review, interviews and case study were conducted by means of the methodology. Additionally, the literature review critically focused on several aspects, such as the importance of improving performance, the challenges of developing organisational performance and the tools required to improve performance. Moreover, case studies have been utilised to review the performance of organisations in the construction industry in Oman. Meanwhile, interviews will be conducted with project managers in the Government and the private sector in the construction industry in Oman to determine significant points which impact on improving organisational performance in the construction industry.

## 1.9 Structure of the thesis:

One of the greatest challenges in a research project is time management. It is important that time management is used sensibly to meet the target of the dissertation, using an action list and daily planner (Hunt 2005). To ensure the programme and all the required tasks have been covered, the dissertation works have been shown to the module leader on a weekly basis for approval, in order to ensure that the work is in line with the research standards (Appendix4). By and large, this dissertation is composed of 5 chapters which comprise the following:

Chapter 1: Introduction: This chapter presents the general overview of the work carried out including the research background, aim and objectives, the outline of methodology, and the structure of a dissertation.

Chapter 2: Literature review: This chapter seeks to demonstrate the different tools and models that can improve and develop effective organisational performance in the construction industry. Moreover, this chapter will cover several aspects, such as the significance of improving organisational performance in the construction industry and the challenges to this.

Chapter 3: Research methodology: The purpose of the methodology is to set out the research design and strategy, data collection procedures and data processing and analyses, in addition to the limitations and ethics of the study.

Chapter 4: The purpose of Chapter 4 is to analyse data obtained from the interview questions and the case study. Subsequently, the findings have been presented to evaluate the result.

Chapter 5: This chapter includes the outcomes of the study. It has a relationship with the primary and secondary information which has been collected and specified in the literature review, the interviews and the case studies. The secondary information enables the research aim and objectives to be undertaken. Moreover, this chapter will include some essential recommendations for the construction industry in Oman.

## 1.10 Conclusion:

This chapter has outlined the research background and has provided an overview of the research issue with the intention of investigating the research problem at hand and the methodology to be followed to achieve the objectives, besides the aim of the study. The following chapter goes on to the literature review.

# Chapter 2: Literature review

## 2.1 Introduction:

The literature review has been established to cover several aspects that are related to the research aim and objectives. There is a growing body of literature that recognises the significance of improving organisational performance in the construction industry. It is extremely important that the organisation develops a performance strategy and is effective. This chapter of the dissertation seeks to demonstrate the different tools and modals that can improve and develop effective organisational performance in the construction industry. Moreover, this chapter will cover several aspects, such as the importance of improving the performance of an organisation in the construction industry and the challenges related to this factor. Moreover, this chapter will also include issues pertaining to organisational performance in the construction industry in the Sultanate of Oman.

## 2.2 The issue of organisational performance in the construction industry:

The construction industry in developing countries is becoming more of a risk, as many construction companies have recently been failing in their business (Luu et al., 2008). The need to improve the performance of organisations has principally been overlooked. However, the present situation needs to be assessed and the course the construction industry will follow next needs to be identified. Changes in the economy make it difficult for improvements in organisations and considerable effort is required. As such, it is advisable that construction companies improve their performance so that relevant steps can be taken to achieve their aims and targets (Luu et al., 2008). Construction organisations must strive for continuous improvement in their performance, as it is believed that processes, tools, models and techniques can evaluate performance improvement (Marr, 2007). In addition, it is stressed in modern concepts of organisation management that continuity in the improvement of organisational habits and tendencies can be effective in leading organisational performance to succeed (Marr, 2007).

Nowadays, it is necessary for companies in the construction industry to improve their organisational performance, in order to attain the next level in business. An important issue within the business community is performance improvement, which is a critical factor concerning effective management (Wegelius-Lehtonen, 2001). Performance development can act as a driver of organisational change and renewal, which can ultimately benefit the organisation (Elg and Kollberg, 2009). Performance should not be ignored by the industry as it is a way that can assist companies to achieve success (Lee et al., 2000). In addition, it can be introduced at all levels in an organisation to identify problems, improve the efficiency of specific tasks, assess customer satisfaction and furthermore, to disseminate strategic objectives. It can also act as a means of controlling improvement initiatives and can facilitate the decision-making process (Sousa and Aspinwall, 2010).

Improved performance management is valuable in assisting organisations to move forward to a better phase (Neely, 1999; Beatham, 2003; Robinson et al., 2005). In addition, performance improvement is part of the important conditions in management that need to be begun by large size organisations, as well as medium and small size enterprises. The improved performance of organisations will be used to create and develop strategies. The ability to improve the performance of organisations is based on what has been completed already. The initial stage of developing performance management involves examining what has been achieved already, which includes the process of creating and developing strategies (Sulaiman and Hashim, 2003). Only a few construction organisations have adopted formal processes to devise strategies, even though making long-term business strategies is vital to the strategic management process, which assists businesses to compete in markets (Price, 2003).

## 2.2.1 The challenges related to improving organisational performance:

Implementing strategy to improve organisational performance has several challenges, which include not only knowledge and experience of the organisation regarding performance improvement or understanding the use of appropriate tools or approaches, but also finding the correct sources of information or data on performance improvement (Hubbard, 2006). Hence, an organisation must be aware of all sources and data that might be useful to enhance its overall performance. A company in the construction industry has to have a clear idea about which type of tools or models it might rely on to improve its performance and keep this on record, seeing as it will retain and use the results to create and develop strategies for the organisation. An excellent performance benefits those who implement it for purposes such as evaluation, control and improvement of organisational operations (Wongrassamee et al., 2003). Nevertheless, the number of organisations using this specific method remains on the low side (Verweire and Van Den Berghe, 2003; Sousa and Aspinwall, 2010). The factors that cause this low level of maturity are employees lack of interest and lack of knowledge that can prevent an organisation from working well and making progress. Conversely, these factors can be utilised to elevate an organisation at the medium or higher maturity stage. Achievement of the highest level of maturity requires reasons for implementation, as well as the appropriate approach regarding implementation of the performance plan (Sousa and Aspinwall, 2010). However, strategic direction can change and learning the requirements of an organisation should constantly be accounted for in order to achieve a rapid and effective implementation of the formulated strategy. Therefore, changing other elements is more significant than tools or models (Araujo and Martins, 2009).

## 2. 2. 2 The advantages of improving organisational performance:

Performance improvement in the construction industry is used by organisations as a management tool in the process of formulating corporate strategy (Yu et al., 2007). It is known that strategy intensively involves performance (Luu et al., 2008). The process of creating the goals and objectives of an organisation not only depend on the long-term achievements of the organisation, it also needs to include the important fundamentals of performance improvement, as a way of making goals more genuine and attainable in the future. Every strategy developed needs to be assessed and evaluated critically, which will confirm that it is appropriate for implementation by the organisation. Additionally, a strategy has to be formulated and developed for an organisation in order to achieve the goals and objectives which are also compatible with the current performance of the organisation (Yu et al., 2007).

In order for performance development plan and strategy implementation to succeed, performance development plans and strategies must be managed and implemented appropriately. The cooperation of team members in the organisation results in the best implementation of strategy. Additionally, team members must be aware of their responsibilities and tasks to ensure that an effective performance plan is successfully implemented. According to Barr et al. (2005), construction organisations must have the best assets together with the most appropriate people and processes in order to compete successfully. Bititci et al. (2004), moreover state that how the performance strategy of an organisation is implemented and used can be impacted upon by organisational culture and management styles; thus, affecting its success or failure. Similarly, Sousa and Aspinwall (2010), agree that the most important factor in the use of strategic performance systems is culture. Franco and Bourne (2003), assert that organisational culture encouraging action and improvement which implements the performance plan is also exceedingly important. However, in the absence of appropriate culture, the system might never be able to achieve a level of good performance.

Although the notion of effective performance improvement is established to develop the performance of the organisation in the construction industry, it can occasionally give an inappropriate impression regarding management. This occurs because if inappropriately designed and implemented for any organisation, it can be of no use and occasionally becomes a risk in relation to organisational operation. This can be more significant in construction organisations as they use complex supply chains with different clients attaining their own goals. In order to control these complex relationships appropriate strategies are required (Nudurupati et al., 2007). With an increasing number of organisations implementing and practicing performance development in organisations, it is necessary to look for suitable methods to implement it, that can create better outcomes for organisations, which in turn will not only benefit organisations, but the people who work in them.

## 2.3 Definition of improved and developed organisational performance:

Organisational performance research is constantly being undertaken by diverse groups of people from various disciplines (Neely, 1999). Organisational performance is not exclusive to a single party or discipline, for example human resource managers, accountants, operation managers, business strategists or civil engineers. The organisational performance approach has been adopted since it first appeared in the construction industry in the mid-1950s (Bourne et al., 2005; Neely, 2005). The scholarly efforts of the past have made way to contemporary innovation, exploration and development in performance systems (Franco and Bourne, 2003; Bassioni et al., 2004; Debusk and Crabtree, 2006), in addition to the formation of new approaches related to organisational performance practices (Parida and Chattopadhyay, 2007; Butcher and Sheehan, 2010). However, as Neely et al. (2005), suggest that organisational performance is regularly discussed but rarely defined. Furthermore, it is an integral part of management and thus, it has been implemented for as long as management has been in existence (Bassioni et al., 2004).

The concepts of management accounting procedures and techniques besides management control systems have dominated this field of organisational performance for a lengthy period (Sinclair and Zairi, 1995). It started when Drucker (2007), suggested that in order to quantify performance and the unanticipated consequences of quantification, balanced performance systems should be developed. Moreover, it allows an organisation to estimate its financial development and to plan for the future. The procedure is conducted by simply examining the current innovation and learning processes of an organisation and its achievements in business (Lehtinen and Ahola, 2010).

There is ambiguous evidence on how to define improved organisational performance in the construction industry. The table (1) below illustrates definitions of improved and developed organisational performance from a diverse range of researchers in different disciplines. The definitions are different as are the perspectives of accountancy, development strategy, human resources, operations and construction.

|  |  |  |
| --- | --- | --- |
| NO | Source | Definitions |
| 1 | Mbugua et al., (1999) | The inputs and outputs in construction activities should be regulated. It is considered a means for continuous improvements. |
| 2 | Kagioglou et al., (2001) | The way of attaining objectives and strategies by successful organisations or individuals through performance development using the strategic and operational processes as outputs and their improvements should also be checked in a quantifiable form to monitor the organisation in detail, both internally and externally. |
| 3 | Wegelius-Lehtonen (2001) | To meet customer expectations and to fulfil strategic objectives. Information and feedback on the activities of construction companies must be gathered. |
| 4 | Cain (2004) | Any improvement process has an initial stage that benefits the users, as well as the organisation. |
| 5 | Ankrah and Proverbs (2005) | It is the process which ensures that the strategies pursued by an organisation lead to the achievement of the goals and objectives of the organisation. |
|  |  |  |
| 6 | Hampson and Best (2005) | The process of undertaking assessments through the effective use of resources, and the policy goals and objectives. |
| 7 | Neely et al., (2005) | The process through which the effectiveness of past actions can be quantified. |
| 8 | The Training Resources and Data Exchange (TRADE) (2005) | The quantitative basis is encompassed by it through which establishments of goals and objectives are made. Similarly, assessment of performance is completed. Performance objectives and conditions, performance indicators and any other means which can evaluate the success of achieving a specified goal are included in this. |
| 9 | Santa et al., (2006) | Quantifies action methodically, selects what activities need to improve and what performance standards are to be referred to. |
| 10 | Kulatunga et al., (2007) | Evaluation of the effectiveness of actions. This can also determine how stakeholder satisfaction can be achieved and the factors which influence this attainment are identified. |
| 11 | Elg and Kollberg (2009) | The process which collects, computes and presents quantified constructs for managerial purposes. The managerial purposes include follow up, monitoring and improvement of organisational performance. |
| 12 | Ali and Rahmat (2010) | An evaluation process related to organisational performance and is relative to a definite goal. |

Table 1 Definitions of improved and developed organisational performance

Mbugua et al. (1999), define organisational performance development system as an organised way of evaluating the inputs and outputs in construction actions, which is also a tool for continuous improvement. Elg and Kollberg (2009), concurred with this stating that the process that involves collecting, computing and presenting quantified constructs for managerial purposes, which includes following up, monitoring and improving activities pertaining to organisational performance is referred to as improvedorganisational performance.

## 2.4 Construction of organisational performance strategy:

Ankrah and Proverbs (2005), define organisational performance strategy as the process of ensuring that an organisation follows strategies that assist in the achievement of the overall goals and objectives. It is a key aspect in providing support and guaranteeing the successful implementation of an organisational strategy. The Training Resources and Data Exchange (TRADE) (2005), describe organisational performance strategy as a general term which incorporates the quantitative basis by which objectives are established and performance is assessed and evaluated. It contains performance objectives and criteria, performance indicators and any other means that evaluate the success of attaining a definite objective. This is akin to the definition offered by Kagioglou et al. (2001), that organisational performance strategy is the process of determining how effective organisations or individuals have been in achieving their goals and strategies. Furthermore, Hampson and Best (2005), specify organisational performance strategy as a procedure to facilitate evaluations as a result of the actions of the effective use of resources and the degree to which actions meet policy aims and objectives. Both definitions mention that performance strategy is in relation to the processes or actions that happen in accomplishing objectives and goals. Ali and Rahmat (2010), offer a similar definition which states that organisational performance strategy is the process of evaluating performance relative to a defined goal. Added to that, Wegelius-Lehtonen (2001), remark that it is an approach to meeting customer expectations and strategic objectives by understanding whether units or departments in organisation are doing the right thing, and whether they are doing all the things in the appropriate way. This definition is similar to that stated by Kagioglou et al. (2001), in addition to Hampson and Best (2005), that performance strategy is about achieving objectives. Therefore, organisational performance strategy is a vital part of the management planning and control system of the organisation (Bourne et al., 2003).

## 2.5 Performance improvement in the construction industry:

Most large construction companies use and implement performance improvement, given that its implementation can help to improve their business performance (Khalfan, 2001; Nudurupati et al., 2007). It should be noted that business processes, products and the management of people for the purpose of facilitating continuous improvement are included in business performance (Robinson et al., 2005; Sullivan et al., 2008). Construction organisations are increasingly aware of the importance of performance systems in the monitoring and controlling of performance (Ankrah and Proverbs, 2005). Furthermore, the increasing complexity of construction projects require the improvement of performance in the construction industry besides appropriate development tools and models, which can help to improve performance along with the development and challenges of construction project management and construction technology (Lin and Shen, 2007). Cain (2004), maintains that the scope of improvement and achievement of an organisation is one of the six goals of Construction Best Practice in the construction industry. Hence, improved performance is enormously important and is acknowledged as one of the important conditions with regards to Construction Best Practice.

There are two types of performance development: ones employed during development projects and ones used to monitor day-to-day activities (Wegelius-Lehtonen, 2001). Performance development in construction companies is traditionally approached in two ways: in relation to the product as a facility and regarding the creation of the product as a process. A common approach in assessing the success or failure of construction projects, is to evaluate the performance to an extent, so that client objectives, for instance cost, time and quality are achieved (Kagioglou et al., 2001; Chan and Chan, 2004; Ali and Rahmat, 2010). Cost refers to financial cost, time refers to project duration and quality refers to project performance (Chan and Chan, 2004). These three factors are the indicators of improved project performance used in the construction industry in the UK (Kagioglou et al., 2001; Ali and Rahmat, 2010). Additional indicators, such as health and safety, functionality and satisfaction are therefore gaining more attention (Chan and Chan, 2004; Ali and Rahmat, 2010). In addition, high performing teams, learning, cultural issues and team integration are all input factors (Butcher and Sheehan, 2010).

The level of success in construction project development activities depend greatly on the quality of the managerial, financial, technical and organisational performance of the respective parties. In this situation, the associated risk management, business environment, in conjunction with economic and political stability should also be taken into consideration (Takim and Akintoye, 2002). Each of these can be achieved from performance development. Bassioni et al. (2005) and Kagioglou et al. (2001), ascertained that performance improvement in the construction industry has principally been focused **o**n as the primary product of the construction industry. Additionally, according to Wegelius-Lehtonen (2001) the construction industry is a project-oriented industry.

Organisations in the construction industry improve financial and non-financial aspects just like other industries and disciplines. Cost measurement, safety schedule, customer satisfaction and productivity are common aspects related to improvement (Sullivan et al., 2008). Financial aspects in the constructions industry are the most important criterion, which is similar to most other industries. The term ‘profitability’ is higher than customer satisfaction’ (Yu et al., 2007). Aras and Crowther (2010), suggest that profitability is defined as an adequate return for the level of risk undertaken, or that profitability can also be considered as a reward for entrepreneurship. Examples of financial aspects related to improvement in an organisation’s performance are profitability, return on investment (ROI) and utilisation (Beatham et al., 2004).

Menches and Hanna (2006), maintain that several approaches concerning performance development are mostly adopted by organisations. For instance, profitable projects, customer satisfaction, good work relationships, safe worksites, schedule performance, budget performance, functionality, contractor satisfaction and project manager or team satisfaction are some of the factors of performance development. Furthermore, it should be mentioned that Key Performance Indicators (KPIs) and Construction Industry Institute (CII) Benchmarking and Metrics (BM & M) focus on the performance development of the existing project. For example, organisation-level performance development systems are not completely defined by the Construction Industry Institute (CII) benchmarking (Yu et al., 2007).

Based on ten identified parameters related to improving project performances, the UK construction industry’s response to Egan’s Report are known as KPIs. These indicators comprise seven project performance indicators and three organisational performance indicators; specifically, construction cost, time, cost predictability (design and construction), time predictability (design and construction), defects, client satisfaction with the product and service are the seven project performance indicators; safety, profitability and productivity are the three organisational performance indicators (Takim et al., 2003). Various performance development tools have been implemented since being introduced into the industry in the late 1990s (Yu et al., 2007); consequently, the benchmarking method was developed for performance purposes, (Lin and Shen, 2007; Yu et al., 2007).

## 2.6 Organisational performance in the construction industry in the United Kingdom:

The Egan Report was initiated by the government of the United Kingdom (UK) in 1998 and suggested an improvement in organisational performance in the construction industry. It can be considered as an additional way for construction companies increase profits and also be sustainable in the long term. Since then, more businesses associated with the construction industry in the UK are aware of performance improvement and its significance (Khalfan et al., 2001; Robinson et al., 2005; Lin and Shen, 2007). Continually acquiring and applying new knowledge improves performance. Both the industry and construction organisations depend on this aspect for long-term success (El Masheleh et al., 2007). Additionally, the complex process of project management and technological growth encourage business improvement and help to keep organisations on the right track, which is to achieve their goals.

## 2.7 Organisational performance in the construction industry in Oman:

Effective organisational performance in the construction industry plays a vital role in the case of all industries in Oman. The concept of organisational performance improvement has increased rapidly since the Council of Ministers announced the objective of declaring Oman a developed country in 2020 (Mohamad, 1991). Many businesses have become conscious of performance development, believing it can bring organisations to an international level consistent with Oman vision 2040. This could be achieved through involvement with international projects, which encourages the growth of businesses and growth in markets. It can be assumed that there are no standards, specific tools, modals or guidance in the industry pertaining to the implementation of performance improvement. For this reason, many organisations in Oman do not consider developing effective organisational performance to improve business and reduce the risks associated within the industry. Nevertheless, performance development is being implemented by those companies that recognise the benefits of adopting this process. From time to time, construction organisations have implemented and are implementing performance improvement as an additional way to improve and sustain business in the long-term.

The Construction Industry in the Sultanate of Oman has Master Plan (CIMP) 2015 – 2025, which is an initiative established by the Construction Industry Development Board (CIDB) that is focused on improving the performance of the construction industry in Oman over a ten-year period. The CIMP charts the path of government agencies and the private sector, directly or indirectly involved in construction. More importantly, it will accommodate a procedure regarding self-evaluation and performance evaluation of the industry with respect to some of the key performance indicators, as outlined therein. The CIMP has been developed with the intention of correcting faults, such as the low productivity of organisations competing to gain international projects and improve their ability to commence international projects and moreover, to enhance the industry’s performance and its image (Sundaraj, 2015; Chan, 2009).

The Construction Industry Development Board (CIDB) champions the construction industry in the Sultanate of Oman. This government agency was established to promote and stimulate the development, improvement and expansion of the construction industry. The CIDB represents the construction industry in dealing with the government and the public. Construction organisations in the Sultanate of Oman are classified into seven grades (G1 to G7), according to their financial status, technical capabilities and track record and are required to register with the CIDB (Chan, 2009). A 10-year master plan was published by the CIDB that was implemented in 2015. The plan will last through to 2015 with the goal of transferring the strategic position and charting the future direction of the industry. The fact that the industry had recorded an average annual growth of only 0.7% between 2000 and 2007 compared to an average annual gross domestic product growth of 5.5% over the same period was the main consideration for the strategic plan. There were concerns that the construction industry was not performing at its best; hence, it might not be able to face the dual challenges of open markets and greater global competition. The Master Plan was therefore introduced in order to establish an innovative, sustainable, professional, profitable and world-class construction industry (CIDB website).

The identification of eight critical success factors that are important to the success of the mission and the promotion of seven strategic pushes would help to achieve the aim (Chan, 2009). Organisations employ performance improvement to determine whether they have achieved their targets and plans according to the Master Plan. Organisations can identify their current situations in business, including both the financial and not-financial aspects by means of performance development (Hoque, 2004). Furthermore, it helps businesses to take action to make improvements based on the results from performance development, which were undertaken within the organisations (Sousa and Aspinwall, 2010). The eight critical success factors related to the Master Plan are illustrated in the figure 1 below.

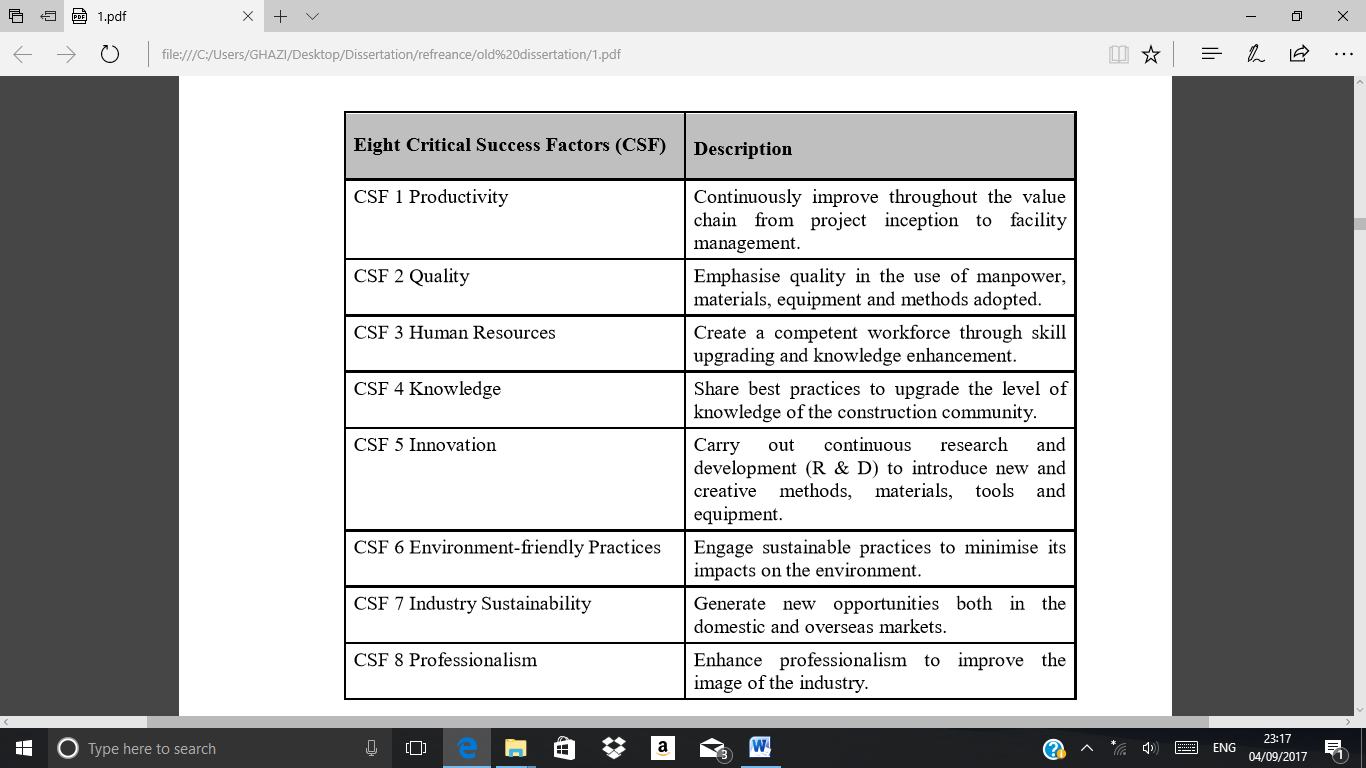


Figure 1 Eigh criitical success factors essential to achieve the mission of master plan

(Chan, 2009)

## 2.8 Improving effective organisational performance:

Effective organisational performance improvement in the construction industry can be identified as the process of calculating the efficiency of past actions (Neely et al., 2005). Efficiency might reduce the costs incurred by the business through decreased field failure and warranty claims. Hence, the level of performance attained by a business is a function of the effectiveness of the actions undertaken by it. It can also be described as the process of quantifying action, which incorporates a variety of activities or operations that need to improve, why and what the performance standards are and the benchmarks that should be referred to (Santa et al., 2006).

The improvement of effective organisational performance has been defined by Kulatunga et al. (2007), as evaluating the efficacy of efficiency and actions. Additionally, it can be applied to ascertain the satisfaction of the stakeholders. It is dependent on the speed of change and the quantification of performance (Bourne et al., 2005). Cain (2004), states that the initial stage in the improvement process is the effective improvement of organisational performance, which is of benefit to users as well as organisations. Effective organisational performance improvement is a process that identifies efficiency by undertaking a critical evaluation of all aspects of management, such as leadership, planning, human resources, finance and workers. By the end of the process, it will help management to formulate strategies that help in achieving organisational goals. The intention is to accurately explore the implementation of performance improvement actions. In doing so, all aspects and criteria must be considered that may reflect and contribute to the overall performance of an organisation in a systematic way. The tools and models to improve effective organisational performance in the construction industry are required to assist an organisation to achieve results from the activities for improvement purposes (Cain 2004).

Numerous tools have been developed to fulfil the needs of organisations and have been claimed to overcome weaknesses by improving performance. Nonetheless, this has not stopped researchers from developing new tools and models of performance improvement. Additionally, the environment, technology and innovation, design, quality, cost and time will influence researchers to develop and create new models (Sullivan et al., 2008). For long-term success, both construction companies and the industry rely on improving performance by constantly obtaining and applying new knowledge (El Masheleh et al., 2007). The complexity of managing projects and the fast growth in technologies will create ways to improve business and keep organisations on the right track to achieving their goals.

## 2.9 The tools and models to improve and develop effective organisational performance in the construction industry:

Any study on performance improvement in construction companies is incomplete without performance tools or models which can be used to develop the organisations (Neely et al., 2003). Since the 1980s, performance improving tools and models have been developed by a variety of researchers in different areas (Bassioni et al., 2005; Lin and Shen, 2007). Different types of performance development have been used to describe systems, particularly in reduction, distribution and inventory systems (Wu and Song, 2005). The creation and use of effective organisational performance tools and models started when people began to evaluate financial performance. Since the 1980s, many tools and models have been developed by researchers (Lin and Shen, 2007; Bassioni et al., 2005), which have coexisted despite their different approaches (Bassioni et al., 2005). Moreover, the tools of the early 1990s included activity based cost, activity based management, free cash flow analysis and shareholder value analysis (Wegelius-Lehtonen, 2001; Marr and Schiuma, 2003; Neely et al., 2003).

Choosing an appropriate tool and model to improve organisational performance is a critical task. Robinson et al. (2005), comment that several things need to be considered in the implementation of performance development tools, such as strategic planning, operating process and review. A crucial part of organisational performance is strategic planning, seeing as it is extremely important for defining the organisation’s objectives. Tangen (2004; 2005), mentions that successful performance tools are a set of performance development preconditions (metrics used to quantify the effectiveness of action), which helps to manage, control, plan and perform the actions of an organisation by providing the organisation with useful information. The tools must retrieve accurate and relevant information and provide them at the correct time, whilst the information retrieved must also be easily accessible for the person who requires it. The design of the tools should reflect the most important features of the organisation that also influence the productivity of the different processes of the organisation. However, the construction company must not only have the best assets, but also the best people and processes in order to implement the tools and models to improve and develop effective organisational performance in the construction industry (Barr et al., 2005). Furthermore, organisations must utilise teamwork to manage the performance tools and implement them in a smooth and well-organised way.

In order to encourage organisations to focus on business performance issues relating to processes, people and product, organisational performance development tools are increasingly being used (Carrillo et al., 2003) with the intention of organisational actions (Neely et al., 1996). Bourne et al. (2005), state that other factors that can influence the use of a performance tools and models are economic constraints and regulatory regimes. Economic constraints indicate what the condition of the economy is, and regulations are those made by organisations and stakeholders, such as clients or customers. This means the popularity and establishment of a tool should be considered so an organisation can improve its performance.

Toni and Tonchia (2001), suggest that there are five types of main tools and models of performance improvement. These are outlined below:

1. Strictly hierarchical (or strictly vertical) models which are categorised by cost and non-cost performance, must be monitored until they ultimately become financial. Gold was the first hierarchical model. It also connects productivity.
2. Models that resemble a well-adjusted scorecard, where improvement of several separate performances are recorded can match up to various perspectives (financial, internal business processes, the customer, and learning and growth), and are independently considered.
3. Models which are able to differentiate between internal and external performances.
4. Value chain related models. Unlike others, such as Sink and Tuttle’s model, this considers the internal relationship of the customer or supplier.

Each category in this section has been explained, whilst several examples of each category are also included:

## 2.9.1 The EFQM Excellence Model (European Foundation for Quality Management):

The EFQM Excellence Model recognises the deserving organisation which outshines other organisations in terms of practices of quality management (Hellsten and Klefsjo, 2000; Lee and Quazi, 2001). Additionally, it has been established by EFQM, based on the hands-on experiences of organisations across Europe. Since its initiation in 1991 (Yang et al., 2001; Bryde, 2003), the excellence model has been used by thousands of European organisations as a framework for evaluation of their performance (Lee and Quazi, 2001; Yang et al., 2001). It is important to note that the EFQM Excellence Model has predominantly been used as part of total quality management (TQM) activities (Hellsten and Klefsjo, 2000; Yu et al., 2007). TQM is a management method for an organisation, centred on quality, based on the contribution of all its members and aims for long-run success by way of customer satisfaction and moreover, benefits all members of the organisation and society (Hellsten and Klefsjo, 2000). The EFQM Excellence Model can be used for self-assessment with the purpose of improving organisational performance (Hellsten and Klefsjo, 2000; Lee and Quazi, 2001; Yang et al., 2001; Williams et al., 2006). Additionally, the Excellence Model is based on the concept that customer satisfaction, people (employee) satisfaction and impact on society are achieved through leadership, driving policy and strategy, people management, resources and processes, leading ultimately to excellence in business results (Lee and Quazi, 2001). It summarises complete and all-inclusive management models and provides a mechanism for quantifying an organisation’s current state with regards to TQM development by means of a point score (Williams et al., 2006).

## 2.9.2 The Malcolm Baldrige National Quality Award (MBNQA):

The MBNQA is used in the United States as a national quality award (Lee and Quazi, 2001; Saunders et al., 2008). It was developed and used pre-1997 (Lee and Quazi, 2001) to improve the quality of performance by Western businesses in order to create greater competition with high quality Japanese competitors at that time. The Deming Award was established by the Japanese which encouraged quality improvement (Williams et al., 2006). It is structured on similar principles and processes to the EFQM Excellence Model (Williams et al., 2006), which was used in self-assessment. It supports many core foundations (Hellsten and Klefsjo, 2000; Yang et al., 2001) and is a tool of total quality management (TQM) (Williams et al., 2006). Hellsten and Klefsjo (2000), assert that the MBNQA includes the most inclusive list of actions needed to achieve world-class quality. There are seven criteria; specifically, leadership, strategic planning, customer and market focus, information and analysis, human resource focus, process management and business results (Lee and Quazi, 2001).

## 2.9.3 The Performance Pyramid:

The hierarchical view of business performance improvement is tied with the business process view. How objectives are communicated down to the troops are communicated through it (Anderson and McAdam, 2004). Tangen (2004), also remarked that it links the strategy of an organisation with its operations and that it interprets goals from top down and helps to develop them from the bottom up. The performance pyramid is valuable for examining performance at the corporate, strategic business unit (SBU) and department and work centre levels of the organisation (Anderson and McAdam, 2004). The performance pyramid is an attempt to assimilate corporate objectives with operational performance indicators (Tangen, 2004). Moreover, the performance pyramid attempts to assimilate corporate objectives with performance indicators which are operational (Tangen, 2004).

## 2.9.4 Sink and Tuttle Model:

This model is a traditional approach to performance improvement systems. According to this model, the performance of an organisation is a complex interrelationship between the many different performance criteria which are as follows:

1. Effectiveness, which means “doing the right thing, at the same time, with the right quality”. In reality though, the ratio of actual output to expected output is expressed as effectiveness.
2. Efficiency refers to “doing things right” and it is a ratio of resources expected to be consumed to resources actually consumed.
3. Productivity is the traditional ratio of output to input can be defined as productivity.
4. Quality of work life is an essential factor which contributes to a well performing system.
5. Another key element is innovation, which sustains and improves performance.
6. Profitability or budget ability is the main goal of any organisation.

(Tangen, 2004)

Furthermore, Tangen (2004), reveals that performance criteria are still important even though the industry has changed considerably since the model was first introduced. Additionally, it has several major limitations. For example, the need for flexibility is not considered, and furthermore, it does not consider the customer’s perspective (Tangen, 2004).

## 2.9.5 Balanced Scorecard (BSC):

It is built to balance improvement of past performance with the drivers of future performance (Nudurupati et al., 2007). The BSC includes financial performance giving the consequences of actions already taken and also balances the financial performance with more operative non-financial performance, which is considered a driver of future financial performance (Tangen, 2004; Jusoh and Parnell, 2008). The scorecard is recognised as being part of an organisation’s vision and strategy (Nudurupati et al., 2007). It translates an organisation’s vision and strategy, and reflects the framework for a strategic development and management system (Jusoh and Parnell, 2008). The BSC allows managers to examine a business from four important perspectives: financial, internal business, innovation and learning, and the customer (Kagioglou et al., 2001; Kaplan and Norton, 2002; Anderson and McAdam, 2004; Tangen, 2004). It can be used as a tool to focus the aims of the organisation, improve communication, while it can also set organisational objectives and provide feedback on strategy (Anderson and McAdam, 2004). Neely et al. (2000), clarify that although the BSC is a valuable outline and it suggests important areas in which performance might be beneficial, it provides scant direction on how the appropriate improvement can be identified, introduced and ultimately used to manage business.

## 2.9.6 Integrated Performance Measurement System (IPMS):

The IPMS project investigated the arrangement and relationships within performance measurement systems and developed a reference model along with an audit method for IPMS. The formation of this reference model is grounded on a feasible business structure, which was developed from viable system theory (Bititci et al., 2000). An audit method is proposed to evaluate the reliability and positioning of the performance measurement system. The IPMS that had been proposed in 1997 claims that the performance management process is a closed loop and the organisation manages its performance through it. These performances are in line with its corporate and functional strategies and goals (Taticchi and Balachandran, 2008). Furthermore, it is known as a reference model to categorise the structure of an organisation at four levels: the organisation, organisation units, organisation processes and activities. At each level, the model places more importance on developing the purposes based on stakeholder requirements and external monitoring (of that level), which are exceptionally important in unstable business environments.

## 2.9.7 The Quantitative Model for Performance Measurement System (QMPMS):

According to Bititci et al. (2000), the QMPMS emerged from the IPMS project. The QMPMS uses a logical hierarchy process to quantify effects of aspects on performance (Bititci et al., 2000; Suwignjo et al., 2000; Nudurupati et al., 2007). It involves three principal steps: identifying the factors which affect performance and the relationships between them, hierarchically structured factors and the effect of the factors on quantifying performance (Suwignjo et al., 2000; Bititci et al., 2001). Additionally, it should be noted that cognitive maps, cause and effect diagrams, tree diagrams and the analytical hierarchy process are included in the model (Suwignjo et al, 2000; Bititci et al., 2001; Nudurupati et al., 2007).

In general, the QMPMS categorises the relationships between factors which affect performance into direct (vertical) effect, indirect (horizontal) effect and self-interaction effect (Suwingnjo et al., 2000; Bititci et al., 2001). The cognitive mapping technique to identify factors is used in stage one of the QMPMS model. Performance is affected by this and their relationship with one another is also affected. In step two, transformation of the cognitive maps into a more formalised structure occurs. Moreover, the use of cause and effect diagrams initially as a discussion tool to bring the factors into a structure can affect the organisation performance hierarchically. Structure diagrams are then used to formalise the performance measurement system. The final step or step three states that the relationship of each factor is quantified with the others via the analytical hierarchy process with respect to overall performance (Bititci et al., 2001). An important advantage gained from the QMPMS is that the communication of the factors can be clearly identified and expressed in quantitative terms. This identification will move businesses one step forward in considering the dynamic behaviour of factors affecting performance. A further advantage is that the QMPMS also benefits by facilitating a decrease in the number of performance measurement reports (Suwignjo et al., 2000; Bititci et al., 2001).

## 2.9.8 Performance Prism:

The Performance Prism is a comprehensive development framework that addresses the key business matters to which a wide variety of organisations, profit and not-for-profit, will be able to relate (Neely et al., 2001). The performance prism was developed to overcome the inadequacies in the balanced scorecard method and purposefully takes a broader view of stakeholders (Neely et al., 2001; Nudurupati et al., 2007; Taticchi and Balachandran, 2008). It consistsof five individual questions related to performance.The top and bottom questions pertain to stakeholder satisfaction and stakeholder contribution respectively. The other three questions are related to strategies, processes and capabilities (Neely et al., 2002; Neely et al., 2003; Tangen, 2004; Nudurupati et al., 2007; Taticchi and Balachandran, 2008). The Performance Prism has a much more comprehensive view of different stakeholders, such as investors, customers, employees and suppliers in contrast to other models (Tangen, 2004). It includes a new dimension in identifying the stakeholder contributions required in order to keep and develop these capabilities (Neely et al., 2003; Nudurupati et al., 2007). Additionally, the Performance Prism offers a stable picture of the business (Anderson and McAdam, 2004), and new stakeholders, for instance employees, suppliers and alliance partners who are usually neglected are considered during performance improvement (Tangen, 2004). Even then it has constraints, such as it provides little to no direction on the places where improvement can be introduced and ultimately used to manage business (Anderson and McAdam, 2004; Tangen, 2004).

## 2.9.9 Project Management Performance Assessment (PMPA) Model:

The Project Management Performance Assessment (PMPA) Model conforms to the European Foundation for Quality Management Business Excellence Model (EFQM Excellence Model), provides a tried and tested framework, an accepted structure for evaluation and the means to facilitate both internal and external comparisons. Project Management (PM) activities can be divided into six specific areas: PM leadership, PM staff, PM policy and strategy, PM partnerships and resources, the project life cycle management process and PM key performance indicators. Activities are reflected in the first five enablers which need to be followed to deliver high levels of PM performance. It should be pointed out that PM key performance indicators are the final part of the PMPA which focuses on practices that bring improvement of performance (Bryde, 2003). Furthermore, there is an addition to the five PMPA enablers resulting in six enablers. Din et al. (2010), explained that the additional enabler was based on their research which was conducted on the relationship between ISO 9000 and performance in construction project environments. Consequently, the sixth enabler which is incorporated leading to improved PM performance, is financial management practices. It has been modified to be suitable for the construction environment and is termed Project Management.

Overall, choosing the appropriate tools for improvement in organisational performance is dependent on the company’s understanding and their ability to use the tools. In conjunction with the relevant dimensions and increments, these tools should be selected by organisations on their own, rather than using any typical one-size-fits-all tool. In this way, more attention can be paid to developing their own business models and strategy (Williams et al., 2006). Furthermore, all tools will have the same objective and intention, which is to help identify areas in the organisation in need of improvement.

## 2.9.10 Comparison between the balanced scorecard (BSC) and the EFQM Excellence Model:

The BSC is widely accepted to improve performance (Bassioni et al., 2005; Nudurupati et al., 2007), whereas the EFQM Excellence Model is well established and well known with respect to performance development (Bassioni et al., 2005). A framework was developed by Kagioglou et al. (2001) to improve performance based on the BSC and also on the perspectives of the added project and supplier. However, factors considered in terms of using the appropriate tool to improve the performance of a company are what the organisation achieves based on the outcomes of using the tool, in addition to ease and suitability of use to improve criteria in organisations, as well as the requirements and suggestions from the client.

## 2.10 The importance of improving organisational performance in the construction industry:

Improving organisational performance has been recognised and there are reasons why it is significant in the construction industry. Over the past few years, several organisations have been forewarned of the importance of performance in relation to their business (Neely, 1999). One reason is that it understands the need for performance strategy to assist the organisation to realise its business potential and the importance in continuing long-term competitiveness. Similarly, the nature of work keeps changing, such as increasing competition, specific improvement initiatives, national and international quality awards, organisational role changing, changing external demands and information technology driving all types of businesses to establish approaches they can use to monitor and improve performance (Neely, 1999; Beatham, 2003; Robinson et al., 2005; Santa et al., 2006). Additionally, they help to achieve uninterrupted improvement within organisations (Mbugua et al. (1999). Improvement in an organisation’s performance allows managers to move in the right direction, to review the business goals and to re-engineer the business process if needed. It also plays a role in improving customer satisfaction and the reputation of businesses (Kulatunga et al., 2007; Aspinwall and Sousa, 2010), while it can increase productivity and improve business for a better future (Kulatunga et al., 2007). In addition to the points mentioned above, it is also known as an improvement system for organisational management as well as a control system for management (Bititci et al., 2004). Development of performance can be both the driver of organisational change and renewal, besides the means to establishing new organisational forms (Elg and Kollberg, 2009).

Understanding performance improving strategy can assist organisations to comprehend the importance of achieving business profitability and upholding a long-term competitive advantage. The reason behind this is the intention of performance strategy to be used and implemented to guarantee that businesses perform effectively. Apart from that, the strategy of performance improvement is a business tool for managing organisational performance evaluation, human resources management and corporate strategy formulation (Baldwin et al., 2001; Yu et al., 2007; Kulatunga et al., 2007).

Acceptance of effective performance improving in the strategy development process is a technique to confirm that organisations assess their own effectiveness and concentrate on each part of the company, both internally and externally, when developing their objectives and goals (Kagioglou et al., 2001; Luu et al., 2008). Jusoh and Parnell (2008), state that the lack of performance strategy in organisations results in a failure to render strategy into action. Furthermore, organisational management is unable to gather the appropriate information in order to observe progress towards the organisation’s strategic goals. Improvement of performance in construction organisations is enormously important, given that it enables the evaluation of actual goals against predefined objectives. This is also essential to ensure their performance in the competitive environment (Kagioglou et al., 2001).

Performance improvement is acknowledged as a way to improve internal as well as the external facets of a construction company, such as finance, people and processes and can lead to success. Sousa and Aspinwall (2010), state that improving performance can be a means of controlling improvement enterprises, which means it can be used to improve an organisation in the way that the organisation wants with the competences that the organisation has for success. Excepting that, it is seen as an imperative way of keeping an organisation on the path to achieve its objectives and as a monitoring mechanism for the owner of an organisation (Tapanya, 2004). In today’s complex and ever-changing environment, organisations are looking to improve performance as an extra way of increasing profits, expanding markets and strengthening existence in the industry (Theeranuphattana and Tang, 2008). It also replicates “organisational culture and philosophy and describes how well work is done in terms of cost, time and quality” (Lukviarman, 2004). Furthermore, improving performance is used to assess the success of organisations (Kennerley and Neely, 2003).

Improving and developing performance is a way of creating and developing robust competitive strategies for an organisation. Moreover, it is a crucial administrative obligation to make sure that performance is implemented and functional in the organisation. Managers have to understand what the key resources are, identify the drivers related to performance improvement, while they also need to recognise their organisational values (Marr et al., 2004). To use performance improvement fully, the contribution of all parties is required. Performance activities should assess a group and not separate work (Tangen, 2005). Additionally, an awareness of improving performance will create opportunities for the organisation to operate competitively in other market environments.

## 2.11 The relationship between improving organisational performance and strategy development in the construction industry:

As defined previously, improving performance can be used to create organisation’s strategy and it plays a significant role in confirming that the organisation objectives and goals can be achieved (Kulatunga et al., 2007; Yu et al., 2007; Luu et al., 2008). Therefore, there is a connection between performance improvement and strategy development. Lehtinen and Ahola (2010), comment that the most widely stated purpose for improving performance is that it supports the implementation of strategy. The use of performance improvement is seen to guide and help senior management in formulating strategy and disseminating it to individual employees. An integral part of the strategic operations is improved performance. Without it managers or leaders cannot guarantee the achievement of their business objectives (Neely et al., 1996). It is commonly acknowledged that strategy comprehensively involves performance to achieve goals (Luu et al., 2008; Elg and Kollberg, 2009). The creation of an organisation’s goals and objectives not only relies on what the organisation wants to achieve in the long-term, but also requires elements of performance improvement as an extra way to make goals more realistic and achievable in the future. Furthermore, it is targeted to improve strategy that has been poorly executed (Jusoh and Parnell (2008).

It has to be understood that every strategy developed must be evaluated and assessed critically to guarantee that it is appropriate for a company to implement. The balanced scorecard is an example of a strategic management instrument used to simplify and interpret vision and strategy, to communicate and connect strategic objectives and to improve strategy. It is used to plan, set targets and align strategic initiatives and to improve strategic feedback and learning (Kueng, 2000). The development of tools to assist businesses or individuals to improve performance can be used to recognise their ability in accomplishing their objectives, targets or strategy. The use of the tools and models affects the implementation of strategies (Neely et al., 1996). Additionally, improved performance is used to improve business performance by examining the conditions to be assessed to acquire the results; this will be a guide for what organisations need to plan and do in the future. It is also important to state that action should be taken based on the results of evaluation.

Based on the literature, performance improvement is used in developing strategy. In the early stages, performance improvement is involved in identifying what can be achieved and what can be considered to accomplish the objectives and goals of the organisation in relation to a project or the business as a whole. Moreover, the internal and external aspects (internal and external resources) of the organisation are identified to make sure that the strategy that will be developed is appropriate and relevant to the current abilities of the organisation. The strategy evaluation process is created solely with regards to performance improvement, and only after gaining the evaluation results can plans be made and the type of action be identified.

## 2.12 The criteria for consideration when selecting the appropriate tools and models to improve organisational performance:

Performance improvement must be performed in a way that it is easily understood by the employees whose performance is being assessed. Furthermore, improvement should also deliver a timely, relevant and accurate response and be a part of a closed management loop. Besides the investors, other stakeholders, such as employees, customers and suppliers should also be considered by organisations when selecting a performance improving system. However, not all requirements are always in agreement with each other, which makes cooperation inevitable. An example of this is that performance development should be designed to be as precise as possible to meet the requirements of businesses, which may result in an extremely complex formula which is difficult to understand by certain people in the organisation. Performance improvement systems on the other hand, should be easy both in the process ofcreating and in the process of comprehending. These arguments are also raised for using simple processes and/or formulas (Tangen, 2005).

Apart from that, selecting the appropriate tools is dependent on which improvement an organisation should accept and the ones most relevant to the organisation that can be adjusted over time. Kueng (2000), states that the suitability of performance improvement tools to an organisation depends on the support for a process-orientated view and the needs of the organisation. Furthermore, Hall and Davis (2006, suggest there are certain aspects that need to be considered when selecting an appropriate tool for improving organisational performance in the construction industry. These are as follows:

1. Consistency of performance improvement (if the tool to be used for the organisation’s performance evaluation is efficient)
2. The time issue (How long will the entire process take?)
3. Frequency (How frequently can this tool be used to acquire information on whether the organisation’s performance has improved?)
4. Data collection cost (the total cost of data procurement in relation to improvements in the organisation)
5. Being vulnerable to error and false information. (Applicable to a percentage of the results which are logical and relevant to the performance improvement of the organisation)

The characteristics of performance improvement reveal the aspects related to performance in a business that requires improvement. Performance improvement requirements demonstrate elements of performance improvement that need to be taken into account by organisations in selecting the appropriate tools to enhance performance. Designing such a tool is not easy and what can be considered the ideal tool will also change from case to case (Tangen, 2005). Otley (1999), talks of five principal issues which must be considered in the process of developing a tool in order for organisational performance to be managed. These are characterised as a set of questions. The questions appear to remain continuous, nevertheless, organisations need to continually develop new answers for them, as the background in which the organisation is set is constantly changing. In order to cope with new operating environments, new strategies need to be developed. These issues very closely relate to several of the issues pertaining to modern management. The questions are as follows:

1. What are the key aims for the overall success of an organisation and how each of these objectives are evaluated?
2. What are the strategies and plans adopted by the organisation and what are the processes and activities required for their successful implementation?
3. What level of performance is needed by the organisation to achieve each of the issues mentioned in the previous two questions and how it can set appropriate performance targets for the organisation?
4. What rewards will managers and other employees acquire by accomplishing performance targets? Conversely, what penalties will managers and employees have to accept if they failed to accomplish the targets?
5. What feedback is needed in order for the organisation to be able to learn from past experiences and to modify its behaviour in light of that experience?

In order to develop the tools of performance improvement, five main issues need to be tackled; specifically:

* 1. The objectives of an organisation and how each objective will be measured.
  2. Strategies including the plans or processes for performance improvement.
  3. The principal aims of the organisation related to attaining the previously mentioned plans and objectives.
  4. Staff at managerial levels and other employees should be rewarded when they successfully achieve targets.
  5. Having information about the experience of others and making appropriate use of it in the implementation of certain tools.

To choose the correct tools to improve performance, organisations have to think through many aspects, such as how the tool can develop stakeholders’ needs and contributions, in addition to what strategies, processes and capabilities are required. Performance improvements are not necessarily all-inclusive, but should signify the critical success factors essential for enduring organisational success or minimal failure (Otley, 1999; Bititci et al., 2005). The tools offer a base to develop strategy for sustaining long-term business objectives. Moreover, construction companies will adopt such ground-breaking tools to enable continuous improvement, as the business benefits become evident (Robinson et al., 2005).

The correct mixture of performance improvement tools will give the organisation an advantage. It will show the value of projects to the organisation, improving investment as soon as possible and ensuring the strategic nature of initiatives and projects in a timeframe, resolution and reach that make sense. Additionally, it brings together the proper basics of finance, strategy and operations to perform effectively, provide a timely response to the right people and enable performance improvement (Barr et al., 2005).

Various tools and models can be developed which are classified into two groups: self-assessment emphasising group and improving business processes by way of helping managers. Ritchie and Dale (2000), suggest that self-assessment is an inclusive, methodical and regular view of an organisation’s activities and results against a model of business excellence. Its process allows the organisation to distinguish visibly its strengths and areas in which improvements can be made, and moreover, concludes in planned improvement actions which are monitored for development. Self-assessment suggests the use of a model on which to base the evaluation and diagnostics. Some instances of self-assessment, as mentioned above, are the European Foundation for Quality Management (EFQM), the Excellence Model (extensively used in Europe) and the Malcolm Baldrige National Quality Award (MBNQA) in the US (Ritchie and Dale, 2000; Lee and Quazi, 2001; Wongrassamee et al., 2003; Williams et al., 2006). Several examples for the second category are Capability Maturity Matrices, the Performance Pyramid, Effective Progress and the Balanced Scorecard (BSC) (Wongrassamee et al., 2003).

## 2.13 Conclusion:

This chapter has provided an overview of definitions pertaining to performance improvement and development in a wider context. Improving effective performance in construction organisations, as mentioned in the early part of the chapter, is being used by companies as a process to determine how successful organisations have been in attaining their objectives and strategies (Kagioglou et al., 2001) and for quantifying the effectiveness of past actions (Neely et al., 2005). The review also reveals the importance of performance improvement to organisations and the benefits gained from implementing it as part of organisational management. Improving performance in the construction industry is used to help companies to achieve their targets and goals and is also important in formulating their strategy.

Most researchers have agreed that performance improvement can enable organisations to develop their business in all aspects, such as leadership, profit margins, planning processes and policy goals**.** Based on the literature, although implementing performance develop strategy has a positive impact and benefits for organisations or individuals, failure related to its implementation can create difficulties for the users. The causes of the problem and failure of the performance development process arise from a lack of understanding of what improving performance can bring to organisations. Knowledge and understanding of this valuable approach can be increased and difficulty in implementing the process can then be corrected via communication in the organisation, where the staff (senior managerial level and others) understands what they need to do with respect to improving performance. The following chapter will be about design methodology.

# Chapter 3: Design Methodologies

## 3.1 Introduction:

The purpose of the methodology is to set out the research design and strategy, data collection procedures, data processing and analyses, in addition to the limitations and ethics of the study. The research methodology is the principles underlying the methods by which research can be carried out Creswell (2007), Fellows and Liu (2008) and Silverman (2008a), state that it is a general approach to studying research topics. The research methodology thus covers the entire process of the study. It demonstrates how research can be performed and how data can be gathered and analysed to achieve its aims and objectives. It refers to the principles and procedures of logical thought processes, which are applied to a scientific investigation (Fellows and Liu, 2008). A description of the research methodology allows people to comprehend the research methods and techniques employed in any research project. In addition, the research methodology is the opinion of the writer that the most appropriate one is the process connected with the aims of the investigation (Holt and University of Wolverhampton, 1998). According to Hawkins and Allen (1991) and Walliman (2011), research can be a systematic investigation into the study of materials, sources, etc., to establish the facts and reach new conclusions. This chapter will establish a research methodology to achieve the research aim and objectives related to improving effective organisational performance in the construction industry in Oman.

There are several types of research depending on the researcher’s topic, aim and objectives. Research can be classified as historical, comparative, an investigation, descriptive, experimental, an evaluation, so on and so forth (Walliman, 2011). This research will suggest an excellent strategy for improving effective organisational performance in the construction industry in the Sultanate of Oman.

## 3.2 Research design and strategy:

3.2.1 Research design:

The most significant elements in relation to research design are data collection and analyses, which answer the project questions (Knight and Ruddock, 2008). The research design as stated by Kumar (2014, p.122), is “the road map to follow during the research journey to find answers to the research question as validly, objectively, accurately and economically as possible”. The research strategy should be in two categories: quantitative and qualitative (Holt and the University of Wolverhampton, 1998). The table below shows a comparison of quantitative and qualitative methods, as reported by (Stainback and Stainback, 1984).

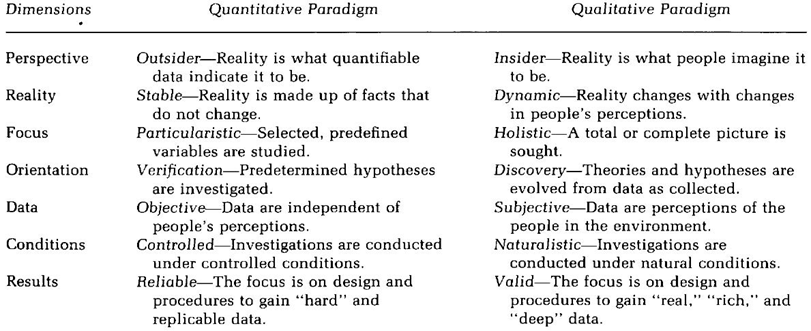


Figure 2 Quantitative and qualitative research

Source: (Stainback and Stainback, 1984)

3.2.2 Quantitative approach:

The quantitative approach studies relationships between facts and how such facts and relationships agree with the theories and findings of any research completed previously (reported in literature). Scientific techniques are used to obtain measurements and to collect data as well as to analyse the data that is produced, quantified results and conclusions are derived from their evaluation in the light of the theory and literature (Fellows and Liu, 2008). Quantitative research is predominantly used as a synonym for any data collection technique such as a questionnaire or a data analysis procedure, for example graphs or statistics, that generates or uses numerical data (Fraenkel and Wallen, 2006; Saunders et al., 2007). Quantitative research requires imagination, patience and discipline at the planning and design stages. Data collection may present technical problems and requires tenacity; nevertheless, it is frequently straightforward, whereas the tasks related to data analysis and write-up are largely, although not entirely, determined by the way the project was set up (Davies, 2007).

**3.2.3 Qualitative approach:**

In contrast, the qualitative approach seeks to gain an insight into people’s perceptions of the world and to understand them whether as individuals or groups (Davies, 2007; Fellows and Liu, 2008). Dainty (2004), describes qualitative research as research that produces descriptive data such as an individual’s own written words or observable behaviour. In qualitative research, the beliefs, understandings, opinions, views, etc., of people are investigated. In other words, qualitative research is used predominantly as a synonym for any data collection technique, such as an interview or data analysis procedure, such as categorising data that generates or uses non-numerical data. Additionally, analytic techniques for qualitative data may be highly laborious, involve transcribing interviews and analysing the content of conversations (Fellows and Liu, 2008). Qualitative can therefore refer to data other than words, for instance pictures and video clips (Saunders et al., 2007). Certain researchers are drawn to the qualitative research approach by practical considerations, given that they see it as smaller scale, more manageable in a limited time frame and offering the temptation of ‘conducting research’ without having to ‘undertake measurements’ or learn about statistics. There is an undeniable tendency for qualitative methods to be perceived as more human and even, perhaps, more in tune with contemporary social thinking (Davies, 2007). More perceptions and understanding by other researchers of these two approaches, quantitative and qualitative, are shown in the table below. Added to that, the characteristics of the approaches are shown in Table (2).

|  |  |  |
| --- | --- | --- |
| Authors/Researchers | Quantitative | Qualitative |
| Greene et al., (2005) | Quantitative proponents aspire to realism, objectivity, causal explanation and universal truth. | Qualitative advocates emphasise the interpretive, value-laden, contextual and contingent nature of social knowledge. |
| Barbour (2008) | Quantitative excels at identifying statistically significant relationships between variables and frequently produces diagrams, which reveal the distribution and strength of this association. | Qualitative can be seen and unpick mechanisms, which connect particular variables by examining explanations or accounts provided by those involved. |
| Kumar (2005) | To quantify variation in a phenomenon, situation or issues. Information is gathered using predominantly quantitative variables with analysis geared to ascertain magnitude of variation. | To describe phenomenon or situation or issues. Information is gathered through use of variables measured on nominal or ordinal scales (qualitative measurement scales). |
| Holliday (2007) | Quantitative research is concerned with accounting. | Qualitative research develops from aspects of anthropology and sociology. Represents the broad view that to understand human affairs it is not sufficient to rely on quantitative survey and statistics and necessary, instead, to go deep into subjective qualities that govern behaviour. |
| Allan and Skinner (1993) | Quantitative research assumes interval or ordinal data amenable to statistical manipulation. | Satisfactory explanations of social activities that require substantial appreciation of perspectives, culture and ‘worldviews’ of actors involved. |

Table 2 Perceptions of quantitative and qualitative approaches

The table (3) reveals that most researchers agree that quantitative research involves statistics and accounting elements. Qualitative research is sociological, and involves obtaining textual information and has been used for social activities, opinions, views, phenomena and perceptions related to the research question.

|  |  |
| --- | --- |
| Quantitative | Qualitative |
| **Activities**  Counts occurrences across large population. | Comprehensively examines the quality of social life. |
| **Uses**  Statistics and reliability to validate generalisation from survey samples and experiments. Attempts to reduce contaminating social variables. | Locates a study within particular settings, which provide opportunities for exploring all possible social variables and set manageable boundaries.  Social setting leads to further, more informed exploration as themes and focuses emerge. |
| **Criteria**  Conviction about what it is important to look for. Confidence in established research instruments. Reality not so problematic if research instruments adequate and conclusive results feasible. | Conviction that what it is important to look for will emerge. Confidence in ability to devise research procedures to fit a situation and the nature of people in it, as they are revealed. Reality contains mysteries to which the researcher must submit and can do no more than interpret. |
| **Process**  First, decide research focus (for example; testing specific hypothesis).  Subsequently, devise and pilot research instruments (for example, survey questionnaire or experiment).  Then, go into the field. | First, decide subject is interesting (for example, in its own right or because it represents area of interest.  Go into the field to see what is happening.  Let focus and themes emerge.  Devise research instruments during process, such as interview or observation. |
| **Rigour**  Disciplined application of established rules for statistics, experiment and survey design. | Principled development of research strategy to suit scenario being studied as it is revealed. |

Table 3 Quantitative and qualitative approaches (Holliday, 2007)

Leavitt (2001), states that there are several characteristics, which differentiate the qualitative approach from the quantitative and are as follows:

* Qualitative research designs are much less structured than quantitative. Research questions, data collection strategies and data analysis evolve as the researcher learns more about what is being studied.
* Quantitative researchers use the same subjects for an entire study. Qualitative researchers deliberately pick subjects to help them focus on the relevant issues and change subjects to extend, test and fill in information. They may pick extreme or deviant cases, typical cases or politically important cases. Samples are usually small, and size is not predetermined.

* Although both qualitative and quantitative researchers observe and describe. The latter emphasise contextual details, such as the physical setting, non-verbal communication, pauses and word choices. They may note their feelings, reactions, prejudices and emotional states. Their goal is not just to hear the subjects’ answers but to see the world through the subjects’ eyes.
* Qualitative researchers regard data analysis as an ongoing process. Unlike quantitative, qualitative researchers typically work in teams and use several data sources, more than one method for gathering data and different perspectives for interpreting it.

Qualitative data is employed in research with the aim of analysing the facts comprehensively and in a critical way, so that the issue can be revealed and described to the reader. Quantitative data is applied to analyse the research issue and change it into numbers (Hair *et al.*, 2005). Furthermore, utilising a descriptive approach together with qualitative and quantitative data will provide ways to describe, study and analyse the issue. This will help make the research reliable (Zikmund *et al.*, 2010). By way of considering the aim, objectives and research questions regarding this specific research it is believed that both the qualitative and quantitative approaches are applied. This is because these methods will help with the understanding of the study based on current case studies and the literature review that was conducted. In addition, mixed method design has the most appropriate techniques to identify the excellent strategy that will help to improve effective organisational performance in the construction industry in the Sultanate of Oman. Moreover, mixed method is related to the aim of this research, which can be achieved by means of theoretical information acquired from practitioners.

3.2.4 Research strategy:

The research strategy explains the principal functions of research which consists of: investigation, testing out and problem solving (Phillips and Pugh, 2000). Scandura and Williams (2000), stated that there are several methods available to put a research strategy into effect. These can comprise: formal theory/literature review, sample survey, reproductions of experiments, laboratory experiments and a field study: primary data, field study: secondary data, field experiment, computer simulations and moreover, judgment task. There are several categories of projects, which generate various types of research. The projects have been separated into three distinct categories that include: traditional project, literature review project and work-based project. The selection criteria regarding the type of project are dependent on the research topic, research question frame and furthermore, who or what organisation is sponsoring the study (Hart, 2005).

Choices pertaining to the research strategy will be guided by the research questions and objectives (Saunders et al., 2007; Fellows and Liu, 2008), the extent of existing knowledge, the amount of time and other resources available, as well as researchers’ own philosophical position (Saunders et al., 2007). Various research strategies can be used to achieve the aim and objectives of the research. Research strategies are classified by Saunders et al. (2007) into seven types: experiment, survey, case study, action research, grounded theory, ethnography and archival research. Fellows and Liu (2008), identify action research, ethnographic research, surveys, case study and experiments as research strategies. Yin (2003a), agrees with them, as there are five common research strategies in the social sciences: surveys, experiments, archival analysis, histories and case studies. Willis et al. (2007), mention that ethnography, interviews, case studies and historical are forms of research strategies. The following discussion covers all the above types of research designs.

3.2.5 Case Study:

The case study is a common research strategy employed in a variety of fields, such as psychology, sociology, social work, business, economics and even in engineering (Yin, 2003a). The case study is the method of choice when the phenomenon under study is not readily distinguishable from its context. Such a phenomenon may be a project or programme in an evaluation study (Robson, 2002; Yin, 2003b). It encourages in-depth investigation or rich understanding or particular instances within the research subject (Saunders et al., 2007; Fellows and Liu, 2008). Creswell (2007), defines the case study as a qualitative approach in which the researcher explores a case or cases over time, through detailed, in-depth data collection involving multiple sources of information such as observations, interviews, audio-visual material, documents and reports. The case study has considerable ability to provide answers to the questions of ‘why’, ‘what’ and ‘how’ and moreover, is most frequently used in explanatory and exploratory research (Saunders et al., 2007). Additionally, it should be mentioned that case study research may combine a variety of data collection methods, with the vehicle or medium of study being the particular case, manifestation or instance of the subject, such as a claim or a project, (Fellows and Liu, 2008). It generally involves multiple forms of data of quantitative and qualitative components (Gibson and Brown, 2009), that may include, for example, interviews, observations, documentary analysis, questionnaires (Yin, 2003a; Saunders et al., 2007), audio-visual material (Creswell, 2007), archival records and physical artefacts (Yin, 2003a). The strength of the case study is that it can take an example of an activity and use multi-methods and data sources to explore and analyse it. The weakness of the case study is that it is not possible to generalise statistically one or a small number of cases to the entire population (Stark and Harry, 2005).

3.2.6 Interview strategy:

The interview strategy is an approach used in qualitative research (Wolcott, 2009). An interview refers to any person-to-person interaction between two or more individuals with a specific topic in mind (Kumar, 2005; Saunders et al., 2007). According to Marshall and Rossman (2006), interviews involve personal interaction and participants’ cooperation is essential. Interviews can help researchers to gather valid and reliable data relevant to their research questions and objectives (Saunders et al., 2007) and also allow other people to enter into the other person’s perspective. Moreover, it is a way that a researcher can explore someone else’s experience (Patton, 2002; Richards, 2009). Based on several definitions, an interview can be understood as a performance involving a two-way encounter (two parties). It is essential that the researcher has his or her own questions, which enables the interview to work in a way similar to regular conversation. It is also important to state that interviews can be very flexible, and an interviewer has the freedom to formulate questions related to the issue under investigation. It also can be inflexible, when the interviewer has to keep strictly to the questions previously decided (Kumar, 2005). An interviewee (or participant) is invited to comment on the relevance of the questions posed and is encouraged to expand at length on the chosen topics or issues (Barbour, 2008). This can be done either in one-to-one or face-to-face conversation with a person in any form or format of group interviewing (Silverman, 2008b; Richards, 2009). The selection of which method reflects the questions that are going to be asked, types of people to be involved in the interview and their number (Richards, 2009). The use of this approach is closely related to the advantages (Kumar, 2005):

* More appropriate for complex situations: This is the most appropriate approach for studying complex and sensitive areas.
* Suitable for collecting in-depth information: An interviewer can obtain in-depth information by probing.
* Information can be supplemented: An interviewer is able to supplement information obtained from responses with that gained from observation.

There are various types of interviews, which depend on the types of information the interviewer is attempting to obtain and the degree of flexibility. They can be categorised as unstructured, semi-structured and structured (Kumar, 2005; Willis et al., 2007; Gibson and Brown, 2009), as shown in the figure below.

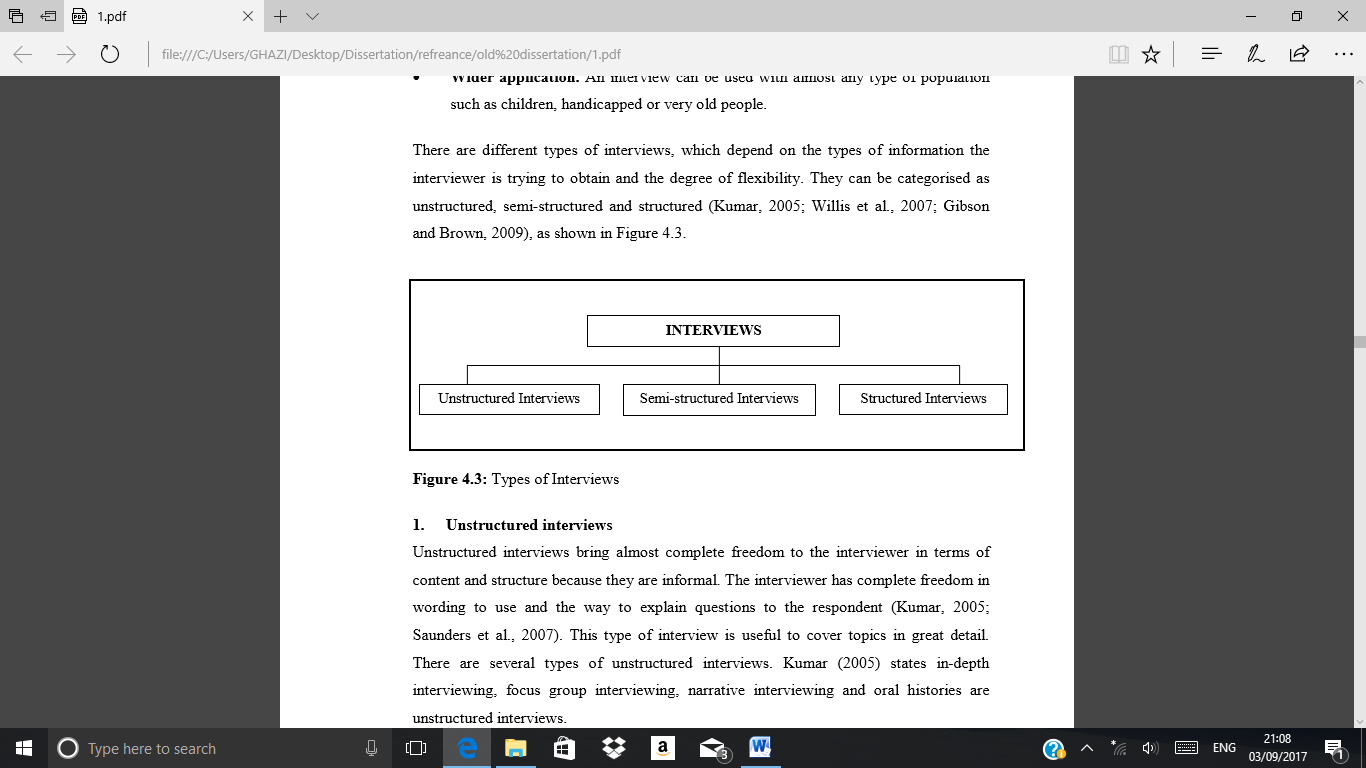


Figure 3 Types of interview

Source (Kumar, 2005; Willis et al., 2007; Gibson and Brown, 2009)

1. Unstructured interviews:

Unstructured interviews bring almost complete freedom to the interviewer in terms of content and structure because they are informal. The interviewer has complete freedom in relation to what wording to use and the way to explain questions to the respondent (Kumar, 2005; Saunders et al., 2007). This type of interview is useful to cover topics in great detail. There are several types of unstructured interviews. Kumar (2005), states that in-depth interviewing, focus group interviewing, narrative interviewing and oral histories are unstructured interviews.

2. Semi-structured interviews:

Semi-structured interviews consist primarily of open-ended questions based on topics that need to be covered. The interviewer has the opportunity to explore answers more extensively or other areas of discussion introduced by the interviewee (participant) (Barbour, 2008). Some probing or additional questions may be required to explore research questions and the objectives of researchers, given the nature of events within particular organisations (Saunders et al., 2007; Silverman, 2008a). This approach might involve a sample involving from six to twenty people. The questions should not be of a sort which invite simple ‘Yes’ or ‘No’ answers, while the aim of the researcher is to stimulate reflection and exploration. This approach is regularly concerned with people’s feelings, such as about living in the flight path of a planned new airport runway. At its best, the method can lead to significant advances in our theoretical understanding of social reality; more routinely, it is particularly good at enabling the researcher to learn, at first hand, about people’s perspectives on the subject chosen as the project focus (Davies, 2007).

3. Structured interviews:

According to Kumar (2005), structured interviews mean the use of a predetermined set of questions, using the same wording and order of questions as specified in the interview schedule. An interview schedule is a written list of questions, open-ended or closed-ended, prepared by an interviewer for the purpose of interaction (this may be face-to face with participants, by telephone or by other electronic media such as video conferencing). Structured interviews provide uniform information and require fewer interviewing skills than unstructured interviews (Kumar, 2005). Additionally, structured interviews are used to collect quantifiable data; hence, they are also referred to as quantitative research interviews (Saunders et al., 2007). Whatever the strategies that are going to be employed for research, researchers have to consider the relevance of all the strategies around them. Factors related to time, cost, the capabilities of the researcher in handling respondents and respondent behaviours need to be considered in choosing the appropriate strategies for obtaining data for the research (Fellows and Liu, 2008). Furthermore, it is dependent on whether what a researcher chooses as the most suitable and appropriate strategies can meet her or his research objectives.

## 3.3 Data collection method:

Data collection is a communication process, which involves the transfer of data from one person to another (from researcher to respondent) and data gathering (vice versa) (Fellows and Liu, 2008). There are many ways to obtain information for research, such as consulting experts, reviewing books and articles, asking people questions or observing colleagues with relevant experience (Fraenkel and Wallen, 2006; Schmuck, 2006; Gibson and Brown, 2009). The most important aspects to be considered in choosing the method of data collection is whether they are appropriate to the research topic and how each method can be used. Most research methods are based on either qualitative or quantitative approaches (Silverman, 2008a). It should be noted that research is a type of information and data system which comprises two sorts of information known as input and output. Input information is information which has been gathered by means of the literature review, along with primary data that has been classified and administered via a conversion method. The conversion method is an organised system applied to the input data so that the required data can be chosen for the research. It involves several functions including sorting, filtering, analysing, synthesising, testing and storing data. Output data can be described as data that signifies the findings, results and recommendations in relation to the research (Fellows and Liu, 2008).

Data can be two sources, specifically: primary and secondary sources. The primary data collected for the research purpose under study, comprises observations, interviews and questionnaires. Meanwhile, secondary information is the information or data that is collected from different resources, for example books, journal articles, webpages, conferences and others (Farrell, 2011). The literature review, interviews and case study are part of primary and secondary sources and it is valuable for this research. In this research, both primary and secondary data is suitable for achieving the aim.

3.3.1 Primary data:

According to Kumar (2014, p.176), the interview is “a person-to-person interaction, between two or more individuals with a specific purpose in mind”. Thus, the interview is regularly used at the Master’s level (Fisher, 2004). Schmuck (2006), states that interviews are oral conversations, which relate to the aim of the interviewandpose questions to interviewees. Patton (2002) mentions that interviews are open-ended questions and probes, which yield in-depth responses about people’s experiences, perceptions, pinions, feelings and knowledge. The purpose is to research the other person’s world (their views, behaviour and characteristics), attempt to describe in-depth and moreover, to reveal details of other people’s experiences. Interviews differ in how informal and formal they are (Schmuck, 2006). They can be structured, semi-structured and unstructured. Differences in all of them are the constraints placed on the respondent and the interviewer (Fellows and Liu, 2008). A recorder is required to record interview sessions, seeing as it can be an instrument to assist researchers in saving data collected from interviewees (Schmuck, 2006; Fellows and Liu, 2008); however, the consent of the interviewee is needed.

Structured interviews mean that the interviewer administers the questionnaires, perhaps by asking the questions and recording the responses. Nevertheless, the interviewer has little scope for probing those responses by asking supplementary questions to obtain more details and to pursue new and interesting aspects. Semi-structured interviews involve some probing of a list of topical areas on which the respondent’s views are recorded. In unstructured interviews, the interviewer introduces the topic briefly and records the replies from interviewees or respondents (Fellows and Liu, 2008; Gibson and Brown, 2009).

In this research, the interviews will be conducted at the Ministry of Transport and Communications in the Sultanate of Oman to determine significant points which impact on improving organisational performance in the construction industry. In fact, a semi-structured interview is used as part of the primary data gathering process for this research. There are several advantages with regards to using the interview method which explains the question in-depthand is appropriate for complex research. Besides, there are a few risks or disadvantages. For example, more time may be required, interviews may be expensive to carry out and finally, data quality depends upon the interviewer and the interaction (Kumar, 2014).

3.3.2 Secondary data:

The literature review is fundamental to any project research. It has been defined as the explicit, systematic and existing body of completed secondary data (Abdulai and Owusu-Ansah, 2014). The aim of the literature review is to demonstrate a comprehensive background that will help with understanding the excellent strategy required to develop organisational performance in the construction industry in Oman. Additionally, the literature review will present information and argument pertaining to the issues on organisational performance. By and large, the literature review will contribute to describing the objective of the study with respect to improving effective organisational performance in the construction industry. To write the literature review for this research, several resources, such as books, e-books, organisational webpages, articles, journals, magazines articles, government official reports and reports were consulted. Consequently, the literature review will identify both the information and argument for the obstacle of the organisational performance in the construction industry in Oman. In addition, the literature review will be conducted to demonstrate the challenges related to improving effective organisational performance in the construction industry. Those challenges will provide some suggestions to guide the researcher toward the aim of this research. The research will be constructed primarily by gathering information from up-to-date academic journals. The literature review for this research is described in Chapter 3.

The case study is the second method employed to gather data. The principal function of the case study is that it helps to create excellent understanding of the topic. Case study research is related to its strengths (Yin, 2013). In this case, the case study is a combination of qualitative and quantitative research, which is appropriate for examining current and significant issues. One of the principal characteristics of case study research is its ability to manage an assortment of documents, interviews, observations and artefacts that are being used as evidence (Yin, 2013). Moreover, the results of the case study in this work have meant new information for the writer of this research. The case study employed in this research will investigate the issues that will persuade businesses and government departments to apply a new strategy concerning organisational performance. An advantage in relation to the study is that the case study and interviews can be conducted electronically in addition to manually, which should help reduce the time restraints (Kumar, 2014). Consequently, to complete this research, the case study research method will be employed and described in Chapter 4.

## 3.4 Data processing and analysing:

The choice of data sampling should occur once the research data has been gathered. Data sampling can be defined as the element for collection of sampling or units obtained from a specific population that is applied to reach a conclusion (Adams and Schvaneveldt, 1991). Additionally, Holt (1998, p.91), defines the sample as “a limited number of items selected from a population”. There are various sampling techniques that can be employed, for instance cluster, judgemental, convenience, multistage, systematic, stratified and simple random sampling (Singleton, 1988). This research will utilise simple random sampling. This is “samples in which all elements or groups have the same chance of being included” (Adams and Schvaneveldt, 1991, p.179). In mixed method design, it is important to process the research data prior to the analysis. There are five steps to processing research data: editing, coding, data entry, cleaning and data modification (Singleton, 1988). The significant step after the collection of the research data from the interviews and case study is to verify information, which will ensure that the information has a relationship with the research objectives. Editing and rewriting is necessary if the data are not related to the research objectives. Subsequently, coding steps to identify the information which has a relationship with the project aim. Overall, the data analysis begins after information coding is completed. In fact, two methods are utilised after analyses: manual analysis or the use of a software program.With regards to mixed method data analysis, there are several types of software programs, such as Nvivo, Atlas Ti, SPSS and Max QDA (Littell et al., 2008).

## 3.5 Ethical considerations:

It is important to note that ethical permission is a necessary step that is required prior to data collection. Moreover, ethics can be defined as “the study of questions about what is morally right and wrong” (University of Birmingham and COBUILD, 2001). In general, the researcher must complete an ethical form provided by the university prior to undertaking his/her research and gathering data from participants. Furthermore, it is essential that the researcher avoids any bias in research, which Kumar (2005), stated was “a deliberate attempt either to hide what you have found in your study, or to highlight something disproportionality to its true existence”. However, this study will be conducted by means of the literature review which does not require the completion of an ethical form, given that no individual will be harmed and/or experience any negative consequences because of the research.

## 3.6 Research Limitations:

One of the restraints in relation to this research project is the difficulty related to obtaining information, given that construction companies, particularly in Oman do not like to share facts and information pertaining to their projects and operations. The second restraint is related to data analysis. In fact, it is difficult to identify suitable software programs which can be utilised to analyse data. Finally, it is worth noting that time can also be a restraint, particularly when the government and businesses deliver information late. The dissertation will take place in the second semester which is from September to December. In fact, to gain more in-depth knowledge concerning organisational performance, information is required from different models. This model will briefly explain organisational management at various stages in the construction industry. Because of this, it is important to participate in workshops related to organisational performance during development week at the university. One of the obstacles in relation to this research is the brief time available to collect information from different resources, since some journals and books cannot be found in the library. Therefore, it will be necessary to borrow some books and journals from external sources and contacts.

## 3.7 Conclusion:

The primary goal of the current study was to determine the methodology that should be followed with regards to this research study. The aim and objectives are formulated directly with the research design and strategy. If the debate is to be moved forward, a better understanding of the aim and objectives needs to be developed within the literature review. Moreover, the following data collection methods have been decided upon; specifically, a comprehensive literature review, interviews and case study methodology to investigative the research approach. The subsequent chapter presents the data analysis.

# Chapter: 4 Data analysis

## 4.1 Introduction:

The purpose of this chapter is to analyse data that are obtained from the interview questions (Appendices 5) and case study. Subsequently, the findings have been presented in order to evaluate the result. To date various types have been developed and introduced to analyse data. In the most recent studies, different techniques are used to analyse the data such as as “Nvivo”, “SPSS” and “Excel”. Critical data analysis has been undertaken and the results discussed in this chapter.

## 4.2 Interviews:

In this research, in order to address the issue and to obtain information, the interview technique is used. The interview is a common method employed in research at postgraduate level (Fisher, 2004). Additionally, the interview approach was chosen because it is less expensive and provides more effective privacy. Interviews took place at the Ministry of Transport and Communications in the Sultanate of Oman to identify the system and strategy appropriate regarding performance improvement. It is identified to understand in-depth, improved effective performance in the construction industry. All participants involved in the study are managerial staff employed in the Ministry of Transport and Communications in Oman.In the interview questions, data include respondents’ backgrounds, the current approach of performance development within organisations, performance improvement processes, and performance improvement models, the role of strategy and furthermore, potential improvements.

## 4.3 Data acquisition from Oman:

Current data on improving effective organisational performance in the construction industry in Oman was collected. These were based on interviews in different departments in the Ministry of Transport and Communications in the Sultanate of Oman because all the departments have either recently attempted to implement performance improvement systems over the last two years.

In fact, several departments have since become aware of performance improvement as they believe it can assist organisations to accomplish an international level in line with Oman Vision 2020 (Vision 2020 explained in Chapter 1). This world-class organisational status could be attained due to involvement with international projects, which encourage increased business and growth in markets. Even though industries are aware of it, there is no standard or guidance for the Ministry of Transport and Communications concerning its implementation of performance improvement. For that reason, the Ministry of Transport and Communications and other organisations in the construction industry do not consider improving performance to improve business and mitigate risks. However, several departments in the Ministry of Transport and Communications are implementing performance improvement as an additional method to improve and sustain business in the long term. Furthermore, for the purpose of the current study on performance improvement, invitations were given personally to potential participants in the Ministry of Transport and Communications in the Sultanate of Oman and the interviews were conducted face-to-face**.** All participants involved in the study are managerial staff in the Ministry of Transport and Communications in Oman. They have had experience in improving performance for many years (the individual with the least experience has three years’ experience). These senior managers are responsible for the improvement of performance development in their respective organisations. They are also involved directly in arranging, managing, implementing and evaluating organisational performance.

In detail, (OM1) is the assistant general manager in the Planning and Studies department at the Ministry of Transport and Communications. He has a bachelor’s degree in civil engineering from Sultan Qaboos University and a Masters from Cardiff University. (OM2) is assistant manager in the Design department at the Ministry of Transport and Communications. She has 7 years’ experience in this particular department and graduated from Sultan Qaboos University as an architectural engineer. (OM3) is head of the Project Department at the Ministry of Transport and Communications and is responsible for carrying out all ministry projects successfully. He has 10 years’ experience. The final participant (OM4) is the manager of improving management in the Quantity Surveying department. Brief information on the participants’ backgrounds is shown in Table (4).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Organisation | Discipline | Role | Experience (years) |
| 1 | OM 1 | Planning and Studies department | Assistant general manager in Planning and Studies department | 18 |
| 2 | OM2 | Design department | Assistant manager in the Design department | 7 |
| 3 | OM3 | Project department | Head of the Project department | 10 |
| 4 | OM4 | Quantity Surveying department | Manager of improving management in the Quantity Surveying department | 3 |

Table 4 Participants background

Semi-structured interviews were conducted with the participants to assess their experience of working in a construction organisation and understanding of performance improvement. One-to-one semi-structured interviews using a set of questions, developed from the existing literature, took place with each of the participants in their offices. The interview questions can be referred to in the Appendices. Most of the interviews lasted at least an hour and a half and were recorded by agreement. Each interview was transcribed for data analysis. The information gathered from the interviews was subsequently analysed, evaluated and presented to produce accurate findings relevant to the objectives of the research.

## 4.4 Discussion on data obtained from the interviews:

The interviews were used to investigate the knowledge and understanding of organisations in Oman on improving effective organisational performance in the construction industry. Data from the interviews on these aspects are now discussed in the following sections.

Part 2: Current approach to performance development within the organisation:

The aim of this part is to identify knowledge and understanding in relation to improving performance and assessing current practices and the effectiveness of performance improvement in the organisation. Generally, all participants shared a similar understanding that performance development aims to 'improve business' and 'maximise profits'. Improving business was used in the sense of making improvements in the process of projects and overall organisational business.

OM 1 stated, “I was responsible for proposing a method to improve organisational performance when I was working in the design and construction stages. However, it is important to say that improving performance in the organisation is a way to develop the organisation’s businesses in different aspects, such as planning, reviewing processes and operations. Additionally, improving performance is an opportunity to identify weaknesses in the organisation”.

OM 3 said, “I have been involved in performance development through my work with the Design and Construction department. From my experience, improved performance is a plan and direction with respect to future business. Similarly, it can improve each process in an organization from the inception phase until the completion phase.

OM 4 mentioned “It is important to improve performance in organisation, although it really does not matter how you improve it. It is providing knowledge about where the organisation is, the level of performance you need to be delivering and documenting it all in an action plan”.

Furthermore, each of the participants also agreed that improving performance in the Ministry of Transport and Communications will be beneficial for the organisation. The benefits gained from improving the performance of participants are listed below and are based on the experience of the performance improvement process in organisations:

1. Identifying potential areas to be improved by organisations.
2. Improving productivity in work.
3. Assisting in managing projects, knowing what can help to deliver projects.
4. Managing resources by means of providing guidance in planning resources to be used in undertaking projects, running the business, as well as for future business plans. Resources here mean finance, staff and materials.
5. Reflecting the passion of staff in committing to their organisations.

Apart from that, all participants mentioned that resources are allocated for implementing the performance improvement process. Examples of the resources are people and finance, in addition to technology. The purpose of planning resources in relation to performance improvement is to make sure that the process of implementation will run smoothly.

MO 2 stated that “Technology is used to implement performance improvement and its use increases every year in order to develop the organisation. In addition, technology supports the Ministry of Transport and Communications to improve performance and furthermore, the staff who are able to understand and undertake performance improvement”.

PART 3: Performance improvement processes:

The aim of this part is to obtain information on performance improvement processes from participants and evaluate the performance improvement processes applied in the Ministry of Transport and Communications. Additionally, the participants mentioned that the performance improvement process could be delegated and divided at an organisation, department or unit level, as well as into small groups or teams. As mentioned earlier in this dissertation, performance improvement implementation in an organisation requires the cooperation and accountability of each employee in the organisation. Wegelius-Lehtonen (2001), asserts that performance improvement can be instituted at a national, organisation and team level, and involves senior management, middle management, besides foremen and workers. A statement on this issue was written by participants as follows:

OM 1 said, “In the last few years, the Ministry of Transport and Communications, has proposed several excellent methods to improve the process of project management**.** However, no official performance improvement process is adopted; thus, it cannot be described. However, I can say it is a top-down approach that comes with aims and direction, which organisations need to achieve. Moreover, each department manager should act in order to achieve the aim, the directions and objectives of the organisation. The action must be based on their responsibilities. And the staffs helping the organisation to accomplish the aims and objective’’.

OM 4 maintained, “I have been involved in performance development via work with the ministry and specialised committees during those years; however, no process has been implemented to improve organisational performance since I started my work. We have taken the processes and rules from other organisations and attempted to implement them in my department. I think it is easy to set the standard and to monitor if we use the same procedures and rules that we used before, in different departments”.

However, OM 2 said, “Regarding the process of performance improvement, as a leader, firstly I give my staff clear instructions in order to assist them to take the action based on the work. It involves note taking and writing reports during the process of performance development. This is making easy decisions and action that will be taken later”.

These answers illustrate that the Ministry of Transport and Communications does not use clear processes in implementing performance improvement. The processes being applied currently make it easier for the organisation to take decisions and actions based on results gained from the processes. To make the process a success, all parties must understand their roles and responsibilities in handling and implementing performance improvement and communication and reporting must be better. The word ’better’ here means it must be clear, simple, regular, honest, and as robust as formal communication and reporting processes. Franco and Bourne (2003), claim that these ‘better’ elements provide better management understanding. It means that leaders such as managers of departments and organisations must be informed of the improvements that are communicated. Additionally, the improvement must be available and understood by everyone. Furthermore, Franco and Bourne (2003), assert that the process of improving performance is completely wasted unless the performance data produced are used for management’s actions. Therefore, information is crucial in the performance improvement process.

PART 4: Performance Improvement Models

The aim of this part is to evaluate the performance improvement tools and models used in the Ministry of Transport and Communications. Every participant agreed that performance improvement tools and models are needed to improve performance. They mentioned that the types of tools and models are important as long as they can definitely improve things in the organisation. It also depends on what organisations need to see in the results of performance improvement. Tangen (2005), mentions that successful performance improvement tools provide an organisation with valuable information that helps to manage, control, plan and perform activities. Furthermore, the tools must also be designed to reflect the most important factors influencing the productivity of the different processes that can be found in the organisation.

OM 1 said, “No particular performance development model is achieved through personal involvement. In terms of what tools and models we want to use, firstly, I guess it is important to find out what the benefits are from the tools and if it they are suitable for my department, and how easy they are to use. However, the tools and models related to improving performance should be understood by staff, seeing as this will help to enhance performance’’.

OM 2 said, ‘‘It is not easy to know the performance improvement models due the lack of a well-documented system of performance development. In my department, we never use any excellence models. Recently, I was informed of a suitable tool by the Ministry Council, which can improve department performance”.

OM 3 and OM 4 mentioned that “Performance improvement models are mainly resources directed towards appointing additional staff, though efforts are made to extend training programmes, although these are still not covering the targeted staff. Three years ago, we used a tool to improve department performance, but we really do not have any plan to change or replace it. Also, we don’t have any background or knowledge on how to use it; so, in my department, all staff keep learning about various tools on short courses to establish them as soon as possible”.

It should also be mentioned that all the participants stated that the best and most appropriate tools and models used to improve performance must be best suited to the organisation’s business. They added that the tools and models should be simple to use. Additionally, the participants mentioned that the government should decide what type of tools or models will be used to improve performance in their organisations. Other factors influencing the selection of tools and models are the requirements of the government.

Participants OM 1 to OM 4 revealed that they were considering the use of any performance improvement tool or model to improve performance even though it has not been made compulsory by the government. They believe that if they want to grow, they have to improve organisational performance, and the appropriate tools and models can help. When the participants were asked whether they have a plan to change the tools and models they use, all of them were of the same view that nothing more needs to be changed. Furthermore, they stressed that they need to determine what they have to establish first rather than thinking about using different types of tools and models. They need to fully utilise the existing tools and models and be confident enough to use what they have now. They prefer to explore the existing tools as well as to learn to use these and understand their procedures rather than thinking of changing or exploring different tools or models.

Based on information regarding performance improvement tools and models used, performance improvement tools and/or models are applied to obtain results regarding organisational performance**.** The selection of tools and models to be used depends on several factors: the types of performance improvement results organisations want to see and the characteristics of the tools or models. Additional factors include, decisions from managerial levels and proposals from clients in choosing the most suitable tools and models in relation to performance development.

PART 5: Role of Strategy

The aim of this part is to identify the connection between strategy development and performance improvement. Each of the participants shared their views about the relationship between improving performance and strategy development. They believe that there is a direct relationship between performance improvement and strategy development. Performance improvement appears in the phase of strategy formulation and in the implementation and evaluation stages. They all had similar thoughts that performance improvement influences strategy development at all levels of the process. It involves everything, from the planning stage or where their project should go, to what the organisation needs to do in the implementation and evaluation stages. Lehtinen and Ahola (2010), state that performance improvement is necessary with regards to creating strategy and it supports the implementation of strategy.

OM 1 said, “Usually strategies will set general targets that will benefit from development tools**.** The strategy development is aligned with performance improvement in the construction organisation. The strong connection between these two relates to the organisation’s mission and vision. In order to develop a suitable strategy, performance improvement is generally used to ascertain what needs to improve in an organisation.The excellent connection between strategy development and performance improvement will assist the organisation make sure to produce the best strategy’’.

OM 4 said, “In theory, there is no connection between improving performance and strategy development, and in my organisation, I can’t identify the connection because we have never established the strategy yet”.

Every single participant is aware that an organisations’ strategy needs to be revised, even though several of the participants have made long-term strategic plans lasting more than three years. One participant (OM 4) expressed the belief that performance improvement does not have any relationship with strategy development. The participant understood that performance improvement is required to obtain information on what needs to be improved by the organisation. Added to that, the participant does not see that performance improvement has been involved directly in developing strategy. Even though only one participant does not believe that there is any connection between performance improvement and business strategy, all the participants agreed that performance improvement is one of the key success indicators for organisations to achieve their objectives and strategy.

PART 6: Potential Improvements

The aim of this part is to identify the barriers and challenges to improving performance in organisations. The interviews revealed that there are barriers and challenges to implementing performance improvement in the construction industry in the Sultanate of Oman. The participants all agreed that its implementation is not as easy as they had initially thought. The most challenging part is changing people’s mindset about performance improvement.

One participant, OM 3, said, “In my experience, one of the barriers to implementing performance improvement is people’s behaviour, and it is not easy to change people’s thinking. Similarly, there is no background in some departments that can help them to accept performance improvement”.

This illustrates that changing the way people think about performance improvement and then encouraging them to accept it as an organisation’s every day management, is challenging. Performance improvement can be easily ignored by staff, especially those who pretend not to understand the benefits of implementing it within the organisation. They tend to follow an organisation’s regulations on performance improvement; however, they occasionally carry out the activities of performance improvement mechanically without any genuine interest and enthusiasm.

OM1 stated, “The challenges are that staff in my department still do not understand the performance improvement process. Even though in my department we implemented performance improvement, the process has not been undertaken correctly. In addition, the staffs do not understand the process of performance improvement. Moreover, they never know what they should do with performance improvement and how to improve organisational performance. Plus, they don’t know what performance improvement means”.

For organisations new to performance improvement, one of the challenges is to genuinely understand in-depth the performance improvement process of the organisation they work in. It will be a challenge to make it easy enough to implement and be followed by all the staff, and to align it with the existing management practices in the organisation.

Based on the experience of OM 3 and OM4, “Unclear performance improvement is one of the main challenges to its implementation. It is easy for managerial staff to create a list of criteria that the organisation needs to improve. Although they might not have any problem or difficulty in understanding what needs to be improved, it can be a problem especially for new employees whom are not familiar with performance improvement. Making mistakes in improving performance and fully understanding the criteria required to improve, will reflect different points of view on the relationship between these two”.

Ankrah and Proverbs (2005), suggest that one of the causes that has been attributed to the inadequacy of improving construction organisations is claiming to have difficulties in identifying and selecting adequate performance improvement related to strategies and critical processes. All the participants agreed that performance improvement is one of the key success indicators related to organisations achieving objectives or targets and strategy. Nevertheless, organisations struggle to transform their performance information into precise understanding that is translated into effective actions. Managers may become swamped with improvements and information and spend their time increasing performance improvement activity rather than improving management decisions and actions (Franco and Bourne, 2003).

## 4.5 Key findings from the interviews:

Organisations are practicing improving effective performance in the construction industry, given that it is an important way of improving and sustaining business in the long-term. The selection of the appropriate and necessary criteria to be improved has a massive impact on an organisation achieving its aims, objectives and strategy in relation to achieving success in the future. Studies of performance improvement in Oman revealed the important points as follows:

1. Improving performance in the construction organisation is being practiced in organisations to help improve business and increase profits. Every single participant agreed that performance improvement is one of the key success factors for organisations to achieve objectives or targets, in addition to strategy.
2. Staff with a wide spectrum of responsibilities are involved either directly or indirectly in the performance improving process.
3. Knowledge and understanding of leaders and staff on performance improvement are important in implementing performance development strategy and activities.
4. Selecting the appropriate tools and models for improving performance of an organisation is important as long as the organisation can improve things that need to be developed correctly. It also depends on what organisations want to see in the results regarding performance development.
5. Performance improvement shows an organisation which areas need to be improved, and enhances organisational reputation and market position. However, it is difficult for organisations to implement if the understanding and awareness of performance improvement is lacking. Employees perceive performance development as a difficult task which involves a lengthy process and is time consuming to implement. They also believe that it may take a while before any results can be seen.
6. Duration of implementing performance improvement: Organisations have formally implemented performance improvement for a much longer time.
7. Tools and models used in improving organisational performance: Different performance improvement tools and models are used to enhance performance in the performance development process. In the construction industry in Oman, organisations employ different types of tools and models to improve their performance; however, Omani organisations do not use the excellence model.

## 4.6 Case study:

The case study is the second method employed to gather data to complete this dissertation. Moreover, the results of the case study have meant this research has obtained new information. The case study employed in this research will investigate the issues that will persuade government departments in the Sultanate of Oman to apply a new strategy concerning improving organisational performance. Consequently, the case study will focus on and study the situation at the Ministry of Transport and Communications because it has many sectors, such as road projects, local ports, telecommunications and development. In fact, this section will demonstrate the vision, communication and organisational management related to improving performance in companies in the construction industry in Oman. The findings which will be explored through this case will be utilised to develop the objectives of this research.

It should be noted that the Ministry of Transport and Public Services was established by way of Royal Decree (15/1973) with the first set of ministries in the sultanate. The Ministry implements the government’s plans in the transport and communications sectors. The administrative body of State Law (No26/75) indicated the Ministry’s tasks as the Ministry of Transport. In addition, the transport and communications sector receive attention and support from the government, due to its role of holding the pillars of infrastructure in relation to social and economic development in the Sultanate. This attention is shown by constructing and paving roads between the governorates, establishing airports and maintaining them, in addition to drafting general policy for the communications sector as well its regulatory legislations. The Ministry implements the plans which the government has drafted and works on developing the level of services in the entire sector which it oversees (Ministry of Transport and Communications website). The following are extremely important elements related to improving performance at the Ministry of Transport and Communications:

## 4.6.1 The Vision:

Organisational vision is a fundamental part of a business case. Allen (1995), remarks that it is essential to produce an organisational vision, seeing as that will assist the organisation to model strategic plans and produce a touchstone in relation to setting goals. In recent years, organisations have begun to make sure that creating a vision is a significant part of their strategic planning process. Therefore, the vision of the Ministry of Transport and Communications are (Appendix 6):

1. To improve performance to the highest levels of institutional excellence.
2. Adopt international standards and work accordingly.
3. Promote Management and Supervision Systems.
4. Develop and maintain Human Resources.
5. Ensure persistent improvement of the Ministry’s performance.

## 4.6.2 Communication:

Communication is an integral element within industries and requires a significant level of attention in order for it to be successful. Cherry (1978), reported that communication is a process that involves interaction between people which can be developed and distributed. In the construction industry, communication is pivotal because a substantial amount of information is transmitted, particularly at a rate of intensity and efficiency to meet the demands that many construction businesses require (Tam, 1999; Chen and Kamara, 2008). During the daily work in the Ministry of Transport and Communications, senior management takes responsibility for the organisation and provision of information for all other professionals associated with the organisation. As part of these responsibilities, there is a requirement to develop a communication plan, so that each department recognises what channels must be used and which professionals can be contacted at what times. The Ministry of Transport and Communications will comprise only one type of effective communication (Appendix 7):

* Oral communication – spoken messages (face-to-face, telephone, presentations, meetings).

## 4.6.3 Organisational structure:

In the construction industry, managers might have the required experience to develop organisational structure which considers the size and complexity of work over the course of a month or year. Additionally, the organisation is created for a specific purpose and helps achieve the organisation’s goals. Typically, an organisation needs to develop organisational structure to improve the construction industry (Latham, 1994). Most construction organisations have an organisational structure concerning line and staff type, which has been used for many years. In line and staff organisational structure, managers are responsible for production. Thus, they convey instructions and information down the hierarchy and monitor what happens (Fryer, 2004, p42). In the Ministry of Transport and Communications, the structure of the Ministry is issued by means of Royal Decree (19/2008) in (17/2/2008) (Appendix 8 ).

## 4.7 Key findings from the case study:

1. There are no specific performance tools and models that can achieve the Ministry’s vision.
2. It is clear that the Ministry of Transport and Communications does not define the time period in order to attain its vision.
3. It can be noticed that in the Ministry of Transport and Communications, does not have a clear process to develop and improve the organisation’s performance.
4. The organizational chart has not changed since 2008. This could prevent organisational performance being improved and furthermore, it is not effective.
5. Regarding the communication element, the Ministry of Transport and communications should use more effective communication tools that can improve organisational performance tools such as emails, electronic correspondence, memos, plans, legal documents and reports.

## 4.8 Conclusion:

The main goal of the current chapter was to analyse the data from the case study and interviews. Moreover, this chapter demonstrates important points obtained from the interviews and highlights significant elements related to improving effective performance in the construction industry that can be employed to alleviate issues within the construction sector. The next chapter (Chapter 5) consists of the conclusion and recommendations.

# Chapter 5: Conclusion and recommendations

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## 5.1 Introduction:

This is the final chapter in this dissertation and comprises the outcomes of the study. It has a relationship with the primary and secondary information which has been specified and collected in the literature review, interviews and the case study. The secondary information enables the research aim and objectives to be carried out. Moreover, this chapter will include several essential recommendations for the construction industry in Oman. This chapter concludes the research by discussing how the aim and objectives of the research were achieved. It also presents the contributions and achievements of the research, discusses its limitations and makes recommendations for future research.

## 5.2 Research overview:

Studies pertaining to improving effective organisational performance in the construction industry are always interesting to discuss. They are beneficial for organisations, which are keen to increase profits and be in a better position in business. The implementation of performance improvement can be conducted smoothly and effectively if organisations realise the importance of performance improvement and if they have the knowledge and skill to implement the process. In Oman, organisations that have implemented performance improvement also experienced challenges and barriers. However, these obstacles can be reduced by improving the process of implementation. Based on that, this dissertation can suggest that there is a strategy to improving effective organisational performance in the construction industry in Oman. The purpose of the strategy is to assist and guide organisations in the construction industry in the country to improve organisational performance in a structured and orderly manner. By way of considering the aim, objectives and research questions regarding this specific research, it is believed that both the qualitative and quantitative approaches are applied. This is because these methods will help with the understanding of the study based on current case studies and the literature review that was conducted. In addition, mixed method design comprises the most appropriate techniques to identify an excellent strategy that will help to improve effective organisational performance in the construction industry in Oman. Moreover, mixed method is related to the aim of this research, which can be achieved through theoretical information acquired from practitioners.

The objectives of the research are presented as follows:

Objective 1: To investigate the principal causes and effects, which prevent the development of organisational performance in the construction industry in the Sultanate of Oman by collecting information to obtain the major factors, related to this significant topic.

This first objective has been achieved by means of a review of the causes and effects of improving performance in organisations in the construction industry (as presented in Chapter 2), which was discussed comprehensively as well as the issues pertaining to organisational performance in the construction industry in Oman. Factors such as leadership, knowledge, culture, people, resources and systems that are appropriate for implementing performance improvement are crucial for the implementation to be successful. Additionally, barriers to implementing performance improvement are influenced by these factors. When industries and organisations became aware of the importance of improving organisational performance, the tools and models were created to improve those specific aspects. Some examples of the tools and models are the EFQM Excellence Model, IPMS and BSC.

Objective 2: To undertake the literature review to demonstrate the challenges with respect to organisational performance from a senior level down in different organisations, for instance the government and private sector.

This second objective has been achieved via the review of performance improvement tools and models (as presented in Chapter 2), which discussed the usability of several models, such as the Balanced Scorecard and the European Foundation for Quality Management (EFQM) Excellence Model. The review showed the challenges related to organisational performance in the construction industry. It also demonstrates current studies pertaining to developing the organisational performance approach within organisations. Based on the literature review (as presented in Chapter 2), both tools and models are used to drive organisational improvement from a senior level down. Therefore, to complete this objective, semi-structured interviews were conducted to obtain information on the extent of its use by organisations. Based on the interviews, challenges perceived by staff regarding the implementation of performance improvement in organisations were the problems related to implementing it. Some examples of the difficulties are as follows: negative perceptions of performance improvement and a lack of knowledge about it.

Objective 3: To determine an excellent strategy that can develop and improve organisational performance in the construction industry in the Sultanate of Oman.

Achievement of this third objective was through the development of a model which can suggest 5 levels to improving effective organisational performance in the construction industry in Oman.

* Level 1: Awareness of performance improvement.
* Level 2: Develop a performance improvement strategy.
* Level 3: Implement performance improvement.
* Level 4: Evaluate performance improvement.
* Level 5: Expand performance improvement.

Each level comprises several key aspects that need to be addressed. The strategy was developed based on information gained from current studies in the construction industry in the Sultanate of Oman.

Objective 4: To critically evaluate the performance of construction companies in the construction industry in Oman in order to implement performance improvement.

This objective has been achieved through the case study and the semi-structured interviews with construction practitioners in the construction industry in the country. Interviews took place at the Ministry of Transport and Communications in Oman, in order to identify systems and strategies that are most suitable for performance improvement. All participants involved in the study are managerial level staff in the Ministry of Transport and Communications in the Sultanate of Oman. In the interviews, data obtained includes respondents’ background, current approaches to performance development within the organisation, performance improvement processes and performance improvement models, in addition to the role of strategy and potential improvements.

Objective 5: To analyse and summarise the data that is collected via the interviews and case study by utilising different software programs:

The purpose of this chapter is to analyse data that are obtained from the interview questions and the case study. Subsequently, the findings have been presented in order to evaluate the result. To date, various types have been developed and introduced to analyse the data. In recent studies, different techniques have been used to analyse the data. Critical data analysis has been undertaken and the results discussed in this chapter.

## 5.3 Research conclusion:

The purpose of this dissertation was to suggest an excellent strategy for improving effective organisational performance in the construction industry in the Sultanate of Oman. In this research, the aim was to identify an excellent strategy that can develop effective organisational performance in the construction industry in Oman. The research demonstrates that the main drivers related to the implementation of improving performance within the construction industry have been identified. A top-down approach is used in undertaking performance improvement activities in organisations. Additionally, the commitment of senior management and functional levels in an organisation is required, either directly or indirectly regarding implementing performance improvement (Bar et al., 2005). It is the responsibility of senior management in an organisation to make the implementation a success and achieve the targets that have been planned (Marr et al., 2004). Effective performance improvement has been evaluated and tested in the construction industry in Oman to identify its effectiveness and usability in organisations. It is important to note that it gives a structure to performance implementation. Moreover, established performance improvement tools and models, BSC concepts and elements of the EFQM Excellence Model, were used for the implementation process of performance improvement in the construction industry in Oman.

## 5.4 The Strategy:

It can be suggested that there are 5 levels to improving effective organisational performance in the construction industry in Oman. These comprise the following:

* Level 1: Awareness of performance improvement.
* Level 2: Develop performance improvement strategy.
* Level 3: Implement performance improvement.
* Level 4: Evaluate performance improvement.
* Level 5: Expand performance improvement.

Each level comprises several key aspects that need to be addressed. Level 1 is the initial and the lowest level for the model. At this level, the willingness of the organisation to employ performance improvement in its management is identified. The highest level, Level 5, is where an organisation has the awareness to develop performance improvement to other business units and offices. Details of all levels are shown in Table (7).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No of levels | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| Theme | Awareness of performance improvement | Develop strategy for performance improvement | Implement performance improvement | Evaluate performance improvement | Expand performance improvement |

Table 5 Strategy for improve effective organisational performance in the construction industry in the Sultanate of Oman

Each level needs to be assessed to make sure that the model’s purposes can be achieved. An organisation can be considered to be at a particular level in the model only if all the key aspects are deemed complete at that specific level. A set of assessment questions was prepared for this purpose. It is important to note that no level can be disregarded or not committed to, as the purposes of the model cannot then succeed. Each level contains different characteristics to achieve success at each level. Different organisations require different time scales to accomplish each level, seeing as every organisation has a different time period for the implementation of performance improvement, diverse plans, strategies, and the aims and objectives it needs to achieve.

LEVEL 1: Awareness of performance improvement:

The first level of the strategy focuses on how to increase awareness related to the implementation performance improvement in the organisation. At this level, the organisation will answer questions on ‘How can performance improvement be practised in the organisation and benefits gained from practising it?’ The organisation at this level has to understand that it is preparing for performance improvement to be implemented in the organisation. To increase knowledge and prepare for undertaking performance improvement, leaders and staff, besides other parties, such as partners involved with businesses must undertake training related to performance improvement. Training is also essential for staff that are new to performance improvement.

# LEVEL 2: Develop strategy for performance improvement:

In this case, a performance improvement team is created to carry out the performance improvement process. At this level, the organisation has established performance improvement goals. All staff involved must be aware and understand their responsibilities in the process, from the beginning to the end. A cordial environment is built among staff to make sure that they understand and accept performance improvement and that the process can be easily adopted by others. At this stage, interaction at all levels is imperative (managerial with functional units). Additionally, at this level, the organisation has to:

1. Understand the business strategy, and the aim and objectives for staff is to recognise their roles and responsibilities in achieving the organisation’s goals. Staff understanding of the organisation’s target and future plans can help to attain its targets and make it easy to manage.

2. Refine the business aims and objectives necessary to accomplish the organisation’s target, if the present aims and objectives are difficult to achieve, or the organisation is having a problem achieving them.

3. Establish resources (internal resources such as staff and equipment, external resources for instance support from other organisations and an expert in the area of performance improvement). The organisation has to recognise the opportunities that can be taken advantage of in the global market and the support it may gain from other parties (government and competitors).

# LEVEL 3: Implement performance improvement:

This level is where the organisation implements performance improvement based on the strategy and plans it has produced. The organisation has to make sure that all strategy and plans are implemented by all parties involved in the performance improvement process. For example, members of the performance improvement team have to carry out their tasks and responsibilities to make certain the plan can succeed. Managers need to ensure that all activities pertaining to performance improvement are implemented by parties such as staff and business partners. At this level, the organisation must:

1. Establish a support system to make it easy to implement performance improvement throughout the organisation.

2. Increase cooperation and interaction during the performance improvement process between managerial levels and functional level staff in the organisation, as well as between the organisation and its partners.

3. Establish criteria that need to be improved and targets for monitoring the impact on a potential increase in profits and opportunities for the organisation in local and global markets.

4. Identify how best to improve organisational performance.

# LEVEL 4: Evaluate Performance improvement:

This is the level where senior managers assess performance improvement activities. In this case, the organisation has to:

1. Improve or evaluate activities involved in the process of performance development. The selected criteria to be improved must be evaluated to identify the performance of organisations in the process.
2. Assess the efficiency of improvement tools or models, such as the BSC and the Excellence Model. Results will be used to identify ways of improving the activities.
3. Act to improve or evaluate results.
4. Identify actions to be taken to generate results. Actions taken in relation to results must be achievable and match the organisation’s capabilities in all aspects (resources and strengths).
5. Refine performance improvement strategies or plans and link them to organisational targets.
6. Give marks for every piece of work completed with respect to performance evaluation. These must be recorded for reference.

# LEVEL 5: Expand performance improvement:

This level focuses on expanding performance improvement implementation to other units of business within the organisation. At this stage, the organisation plans to introduce awareness of performance improvement to other business units and offices. This will be a way to increase the scale of performance improvement processes. As performance improvement becomes institutionalised, the sustainability of performance improvement appears in each level of its cycle in the strategy.

## 5.4 Recommendations for further research:

Evaluation of what is concluded from the study should lead to any recommendations concerning implementation. The what, how and why of implementation must be noted (Fellows and Liu, 2008). In undertaking the research, a few gaps not addressed. Therefore, this section makes recommendations for further research derived from this research, based on self-evaluation and comments by evaluators. These consist of the following:

1. Consider further research on different elements related to improving performance, for example customer perspectives and partnerships. There are other elements that can be considered in relation to improving organisational performance, which could make the framework more comprehensive and the details used by different businesses.
2. Test the capability of the framework with other staff or members of the organisation to look at the efficiency and usability of the framework from the perspective of different people or staff. For example, non-managerial staffs who are also involved in the process of performance improvement should participate in the test. The performance improvement process would not be successful without the commitment and cooperation of both parties, senior management and functional levels. For this purpose, it requires additional time to conduct the research and the time could be expanded.
3. If required, undertake further tests and re-modify the capability of the framework for small and medium sized organisations in the construction industry. The use of the framework can be expanded by these types of organisations as several are expanding their business and growing on a daily basis. Many organisations of their size are alerted to the importance of performance improvement for their businesses. This research project targets only large organisations, as the implementation is much more extensive in this type of organisations in both countries. In terms of the duration regarding implementation, large organisations are more established in implementing performance improvement in contrast to others.
4. Improving effective performance management shows the direction for organisations in the process of implementing performance improvement and what organisations need to do to move in the direction suggested. What the framework does not show is how organisations are going to move towards the direction given and what needs to be done by organisations to succeed at one level and subsequently, move to another. For this purpose, it is recommended that the framework show not only elements of what organisations need to do to move in the performance improvement process, but also demonstrate how to do it.

## 5.5 Limitations of the study:

In this dissertation, the biggest challenge was choosing an appropriate resource for research. It was necessary to find a resource that would contribute a novel idea to the field, and yet, it needed to be inspired by the literature and existing research. This is because it is important to develop an achievable topic. Therefore, the literature review was valuable, where an extensive review of the literature was conducted. From the literature, it was determined if the selected significant points have value in the current research world and furthermore, if it is possible to achieve using the available resources.

To complete the chapter effectively, focused reading was undertaken in the appropriate field. The purpose was to determine a theoretical basis to support the selected topic. Fortunately, this researcher has always been a thinker; however, in order to complete this task, he needed to improve his critical analysis skills. This is because the task was based on critically reviewing performance management within various areas of academic literature, where several research papers where reviewed and compared with other projects. The information was collected from journals, books and trusted websites. The review has demonstrated that there is a definite need for more research in a significant area of the selected field, which is the development of cost control during the construction process.

Once the research topic was selected, the challenge was to identify the appropriate methodology to conduct the research and which was mentioned in Chapter 3. It was important to understand various types of methods and strategies and their significance in conducting different types of research projects. In the methodology chapter, a definition of the research methodology was presented along with several known methods referenced to several trusted authors. In light of that, a set of appropriate strategies were described with the rationale of selecting them for the research. These methods were chosen because it is believed that they will contribute comprehensively to achieving the research objectives. Consequently, methods such as mixed research design, was suggested, seeing as it provides the most appropriate techniques to suggest a strategy for improving effective organisational performance in the construction industry in Oman. It was also important to identify the research restraints and limitations and consider the possible risks that might occur throughout the lifecycle of this research project. These were addressed briefly through this dissertation.

On reflection, it can be said that throughout this semester, the researcher has gained reasonable experience on how to critically review the literature and analyse it. Additionally, the author of this work has gained extensive skills in English academic writing. Overall, the chapters have allowed the researcher to test himself with regards to conducting effective research and suggesting appropriate methods which demonstrated the best of his ability in producing excellent work.

## 5.6 Conclusion:

This chapter has focused on the conclusion and recommendations for improving effective organisational performance in the construction industry in the Sultanate of Oman. In fact, the findings have revealed that the construction industry should undertake serious steps in order to improve effective organisational performance. As a consequence, the construction industry is addressing the development of effective organisational performance in a balanced way. In addition, this research project has found the most important recommendation which has contributed to organisational performance.

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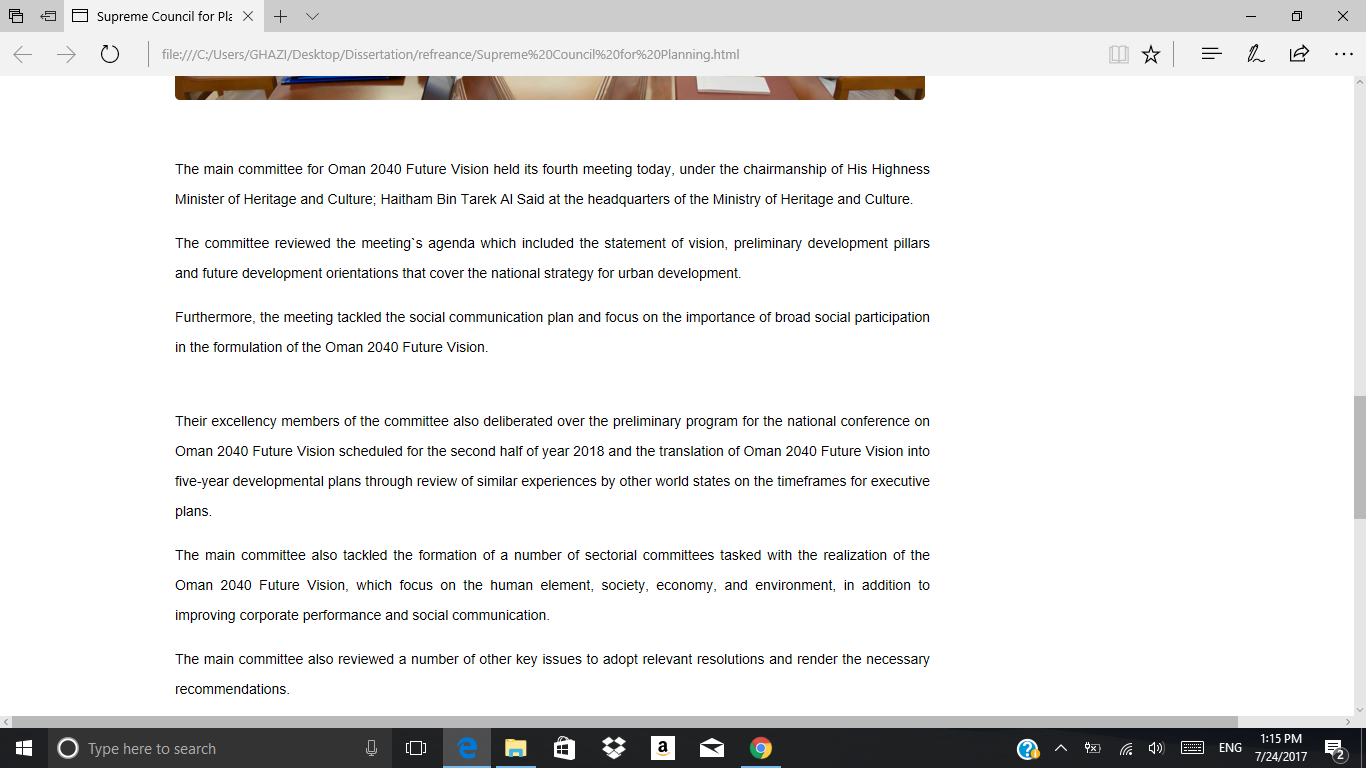
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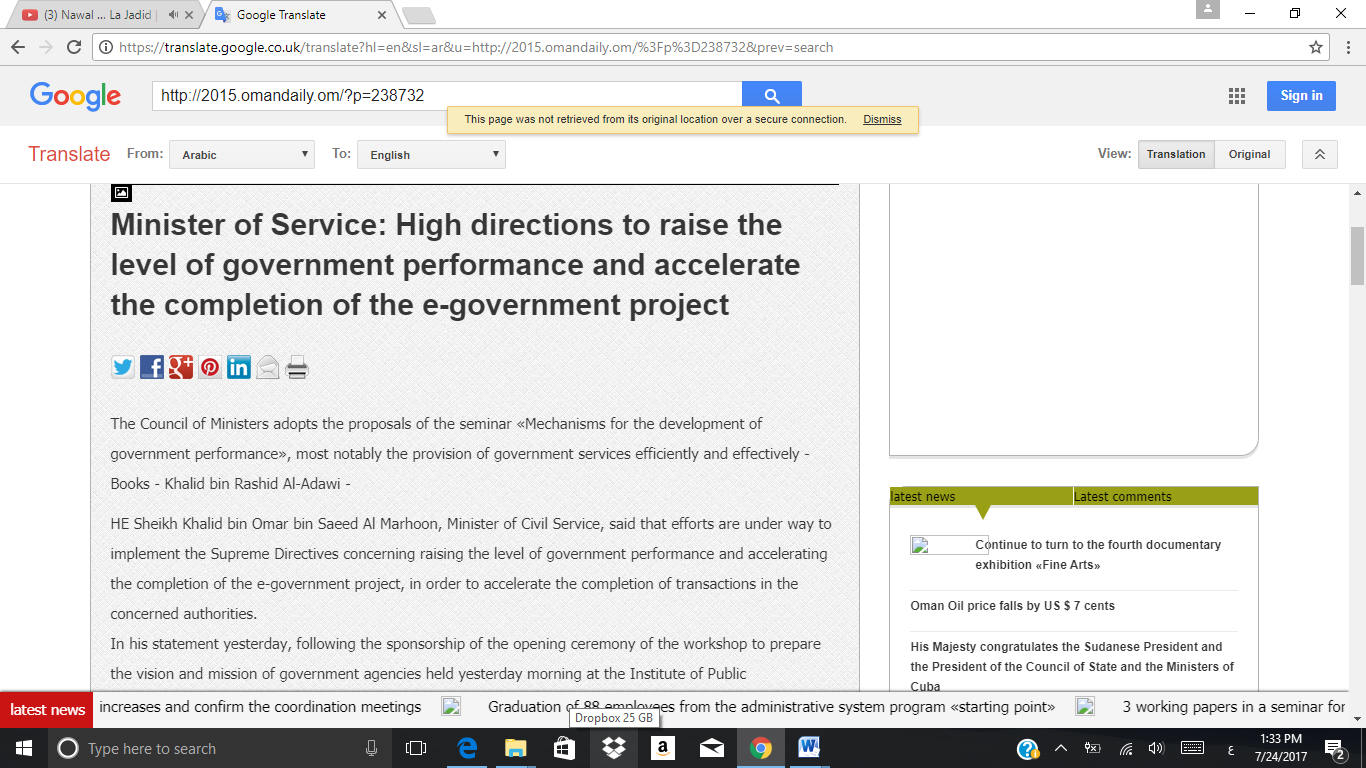
# Appendix

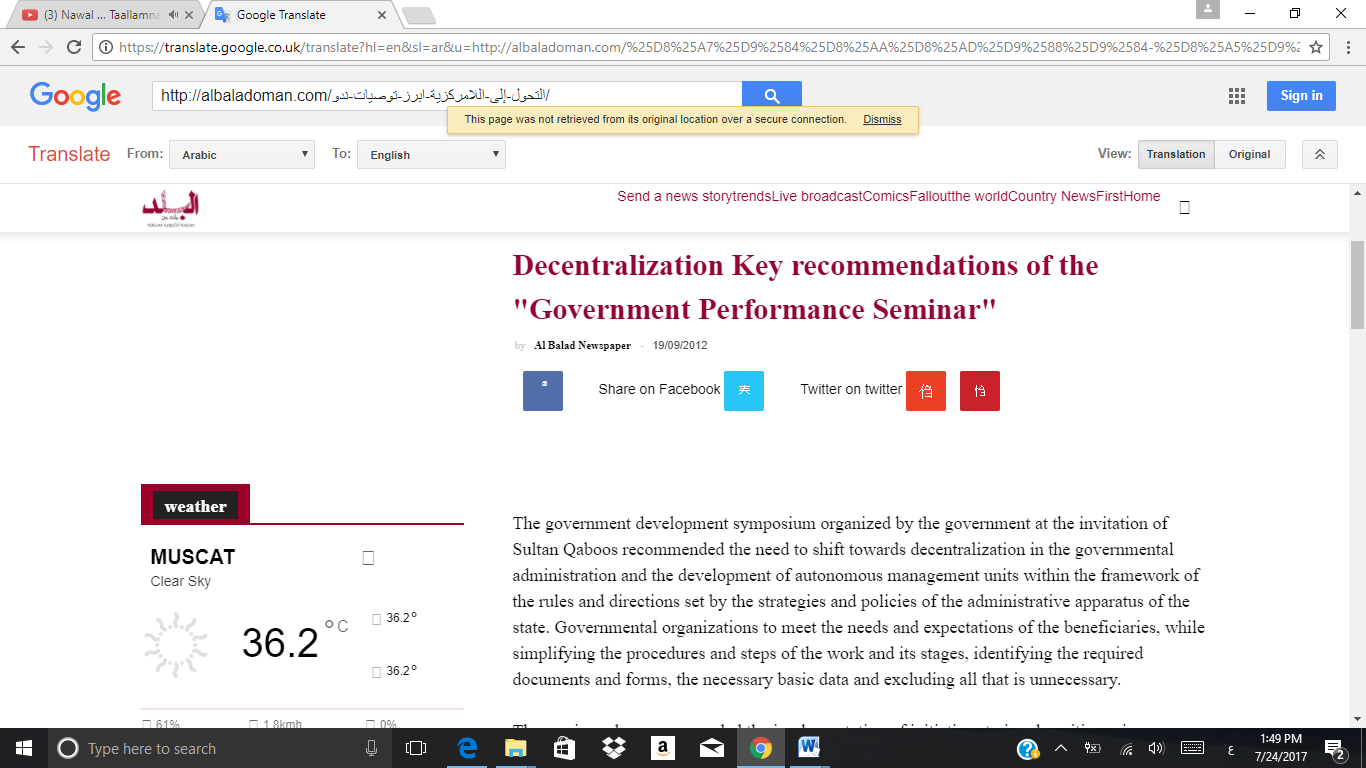
**Appendix 1:**

The main committee for Oman 2040 Future Vision held its fourth meeting on 16/01/2017

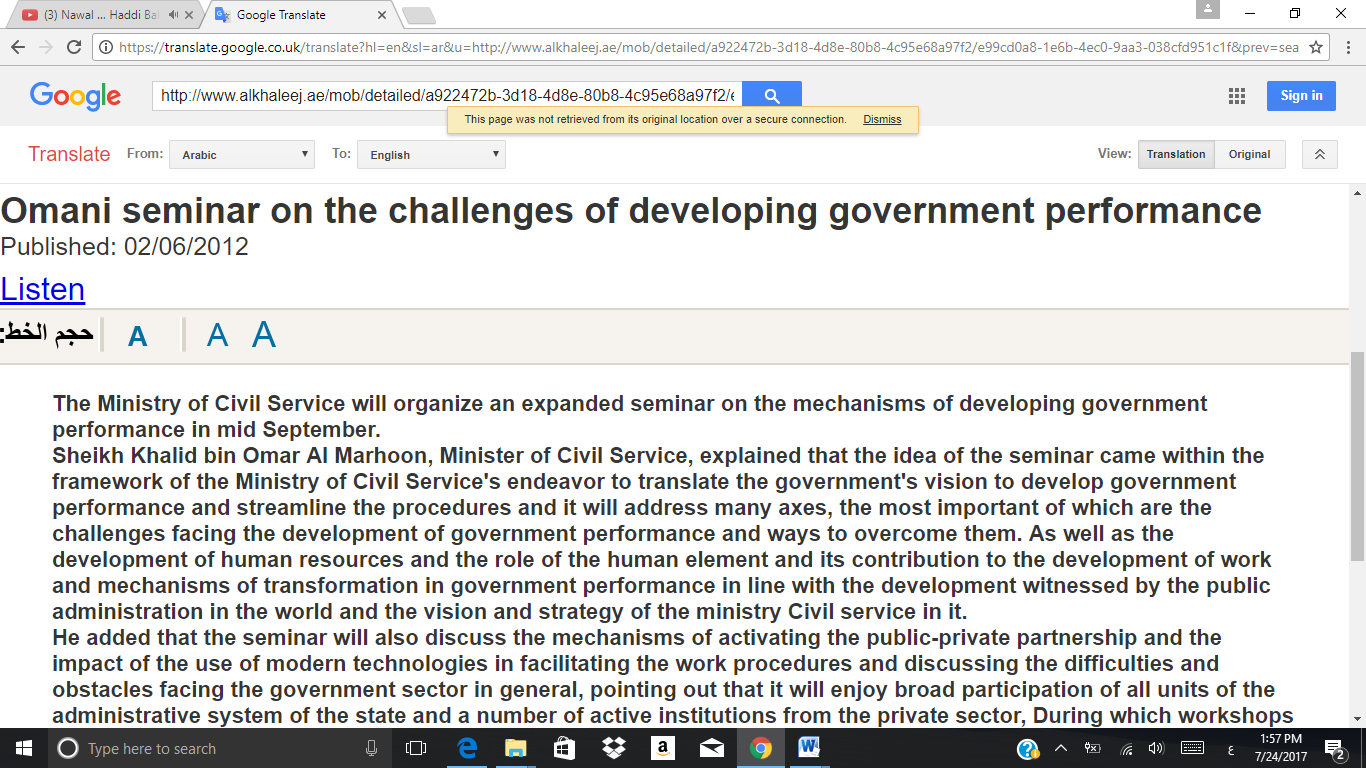


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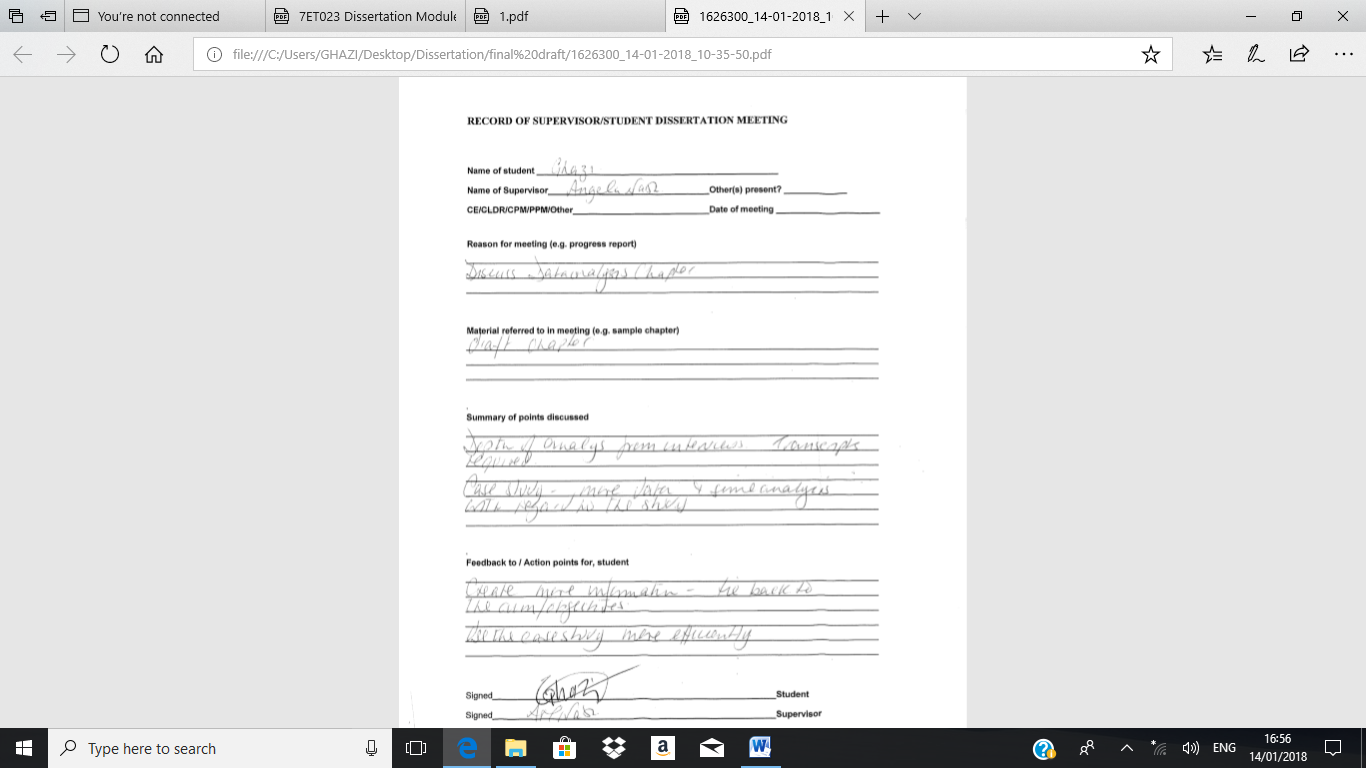


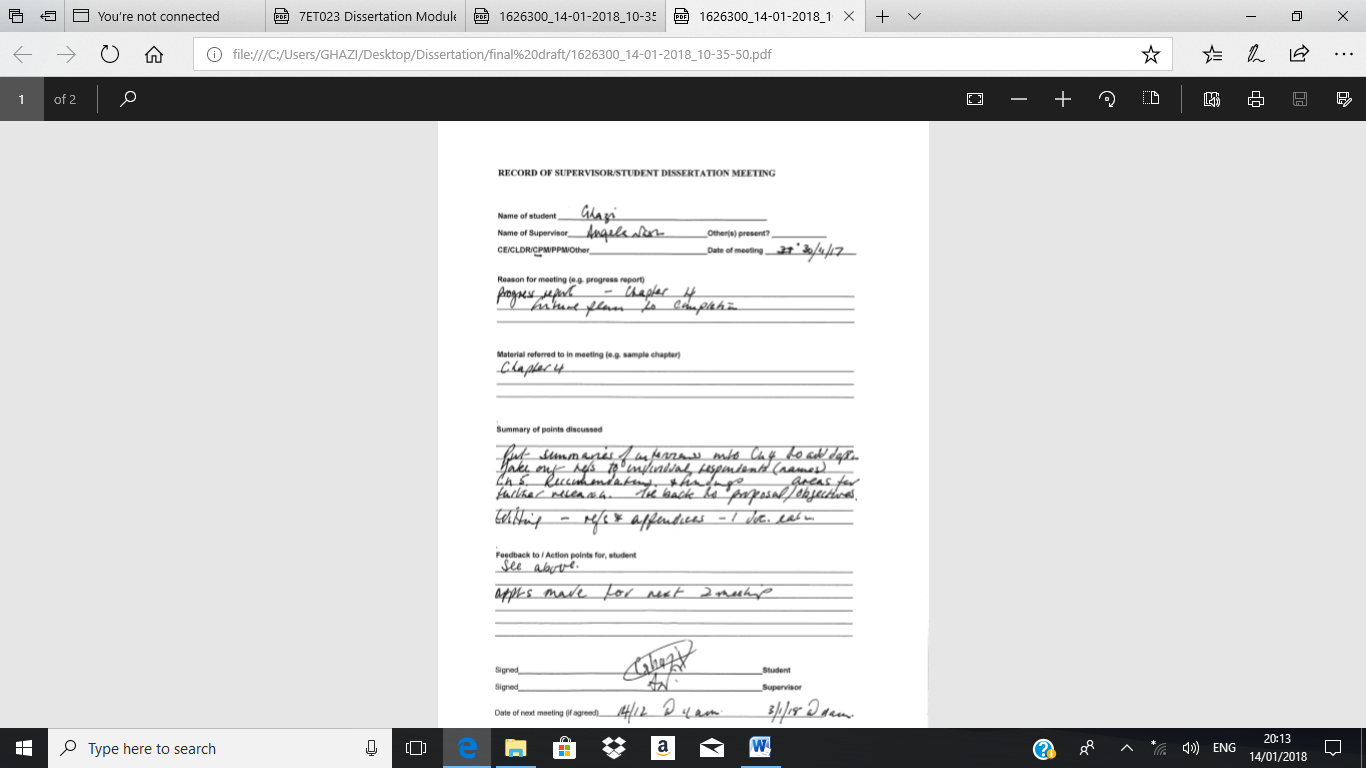


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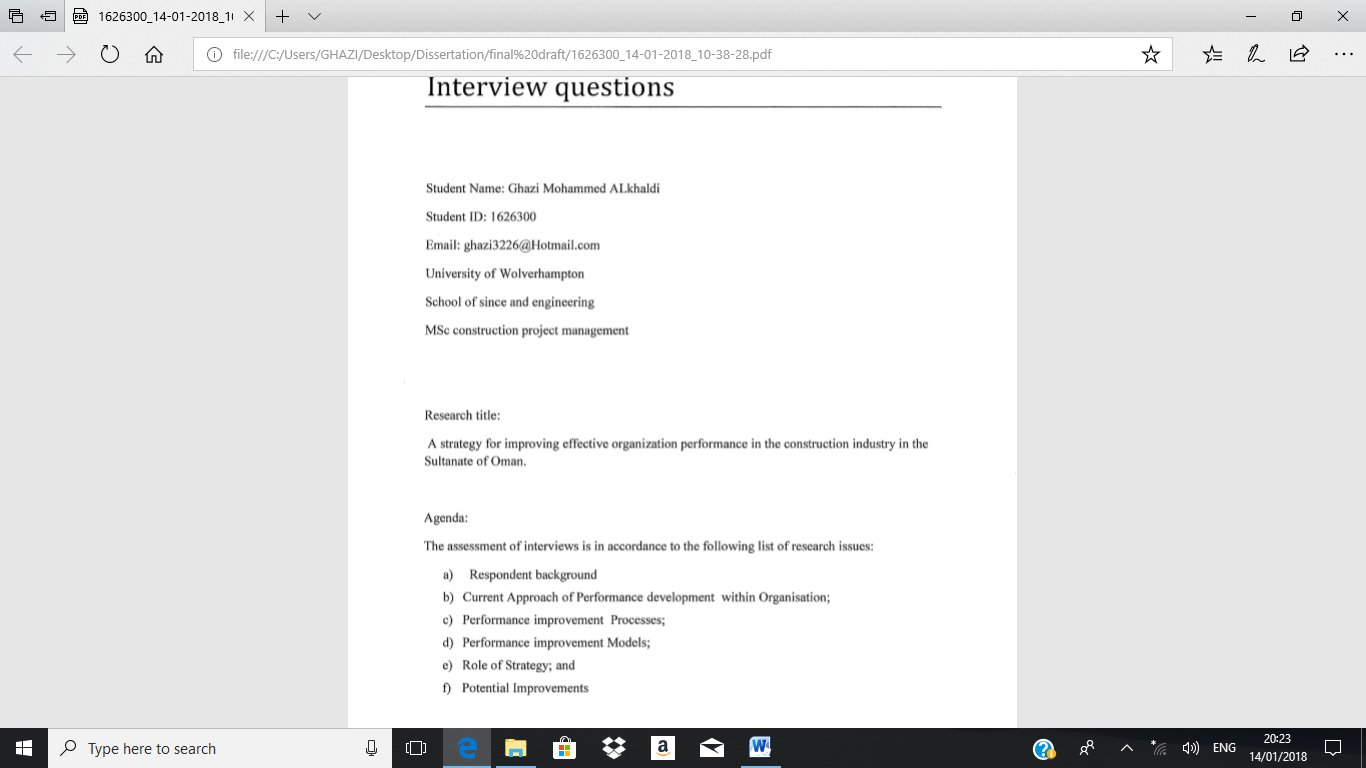


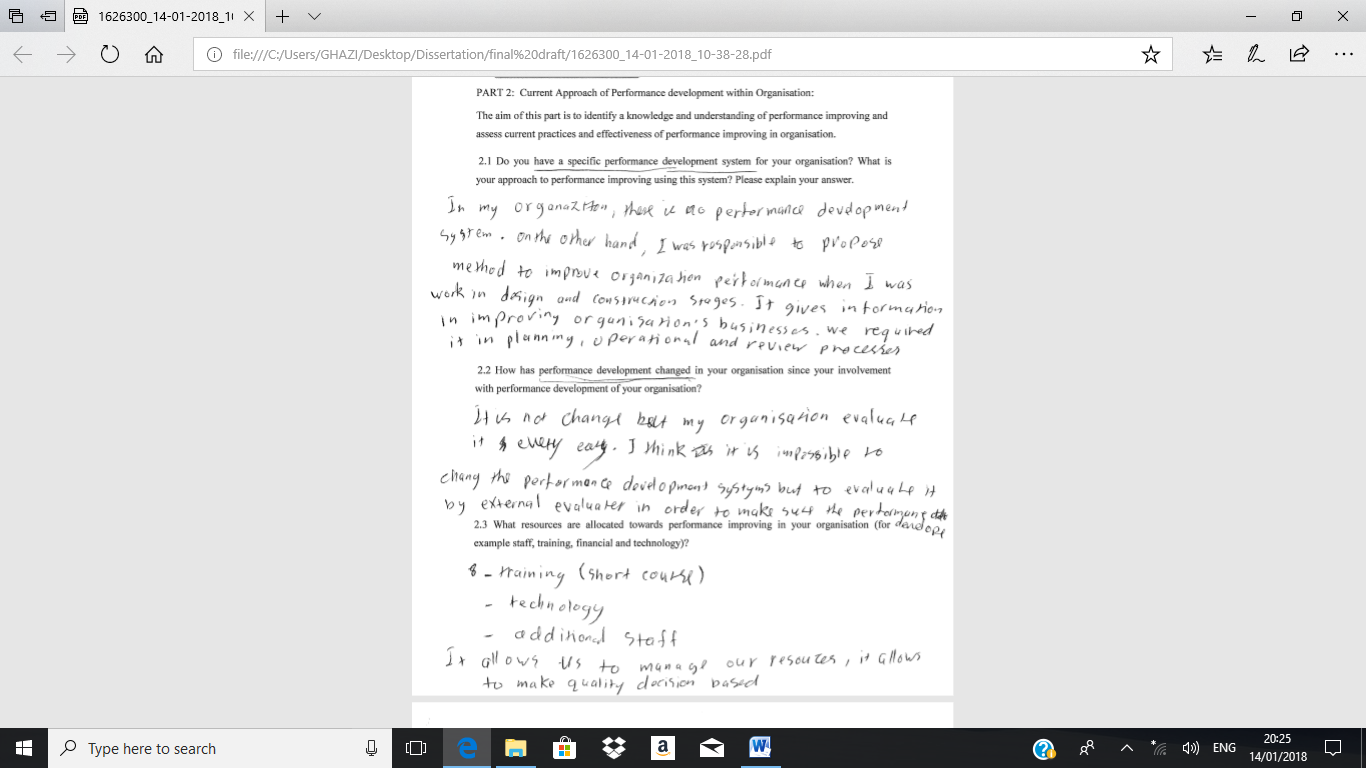
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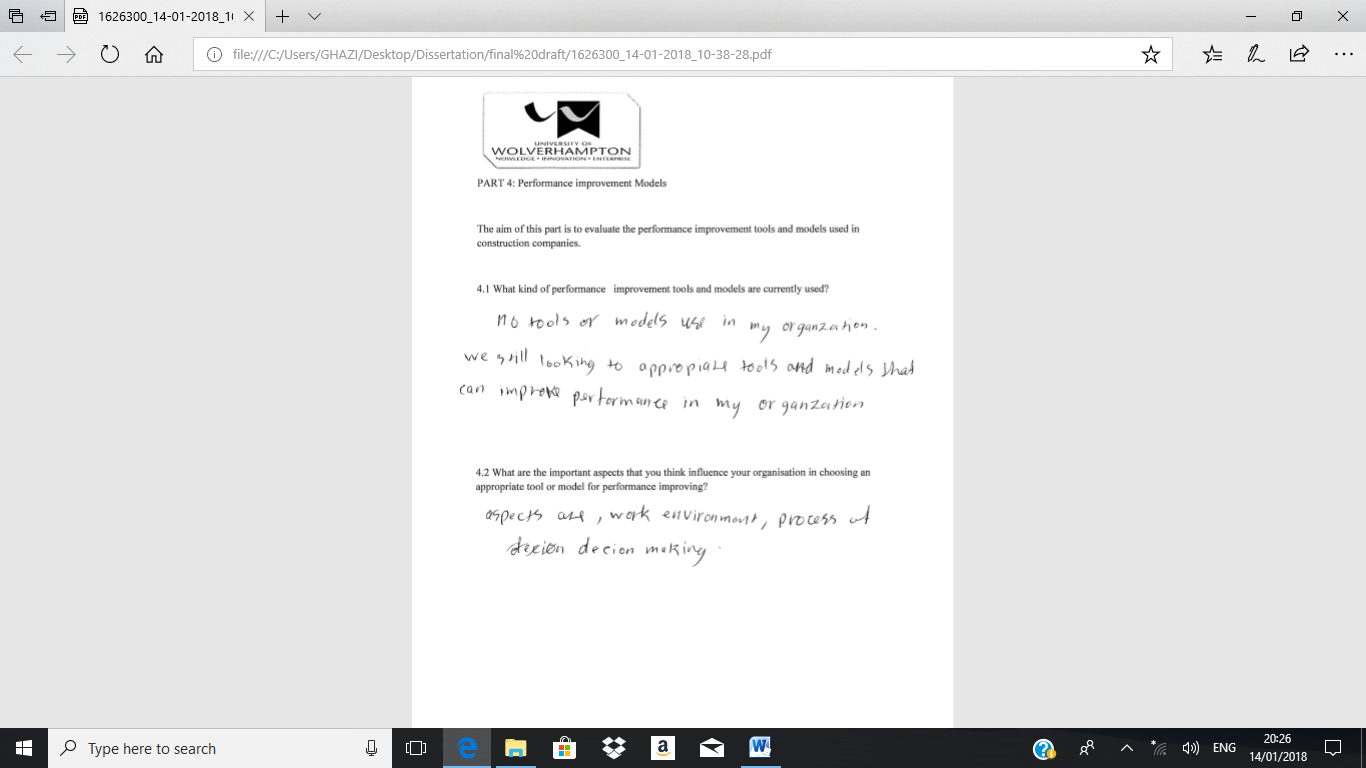


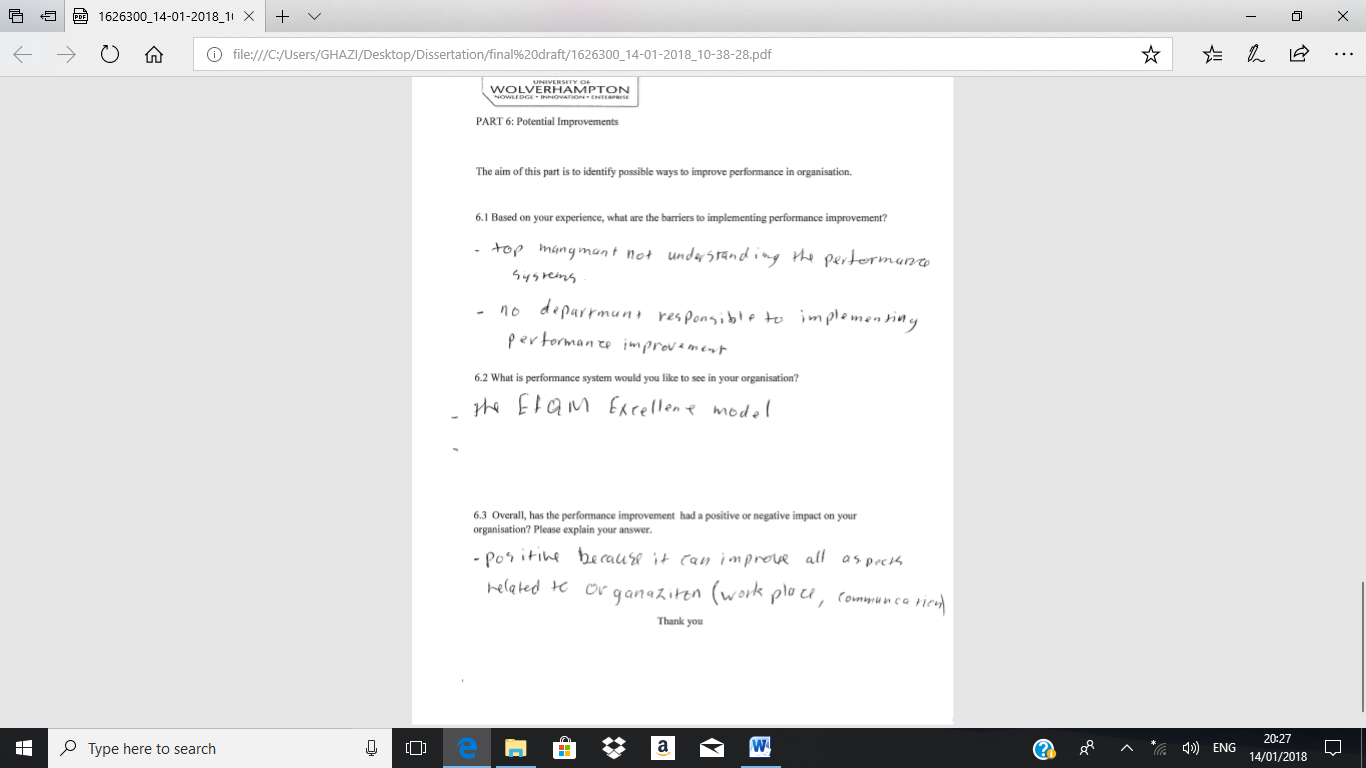


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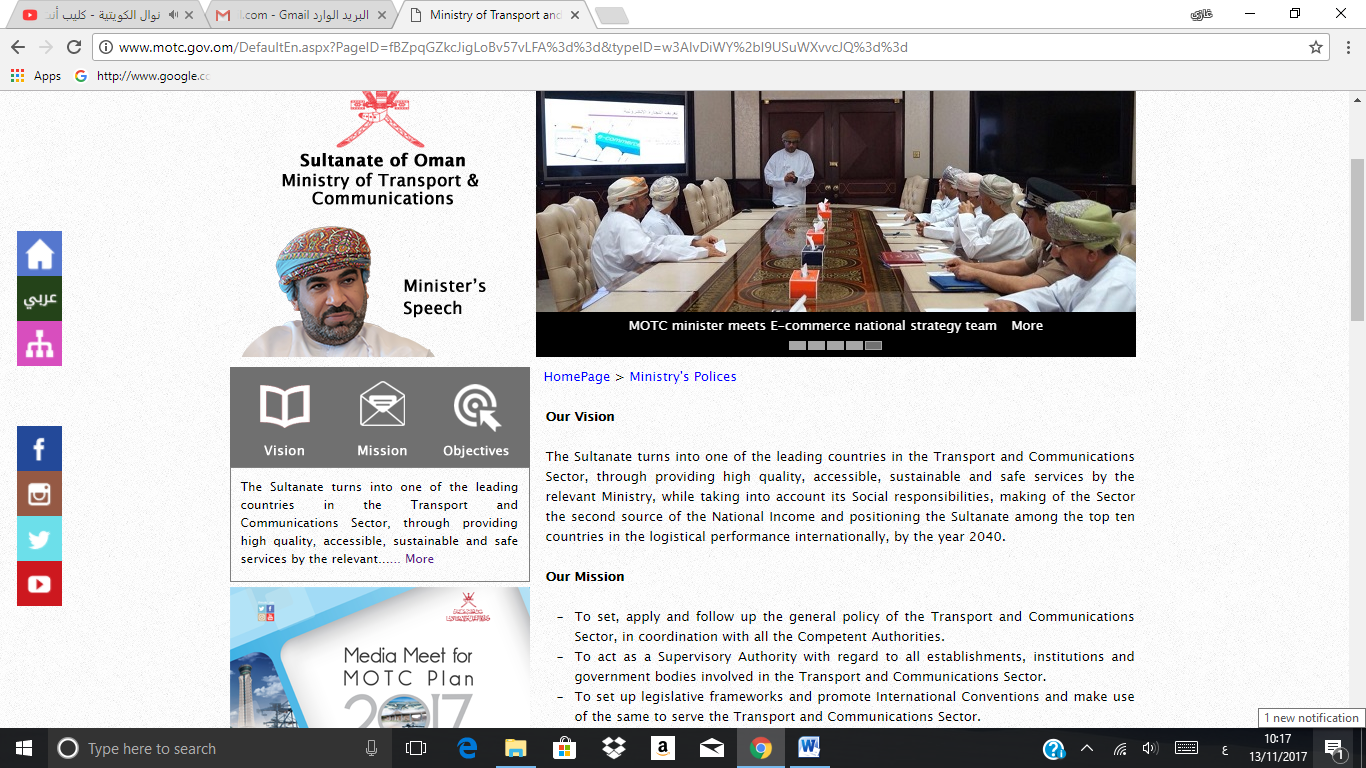




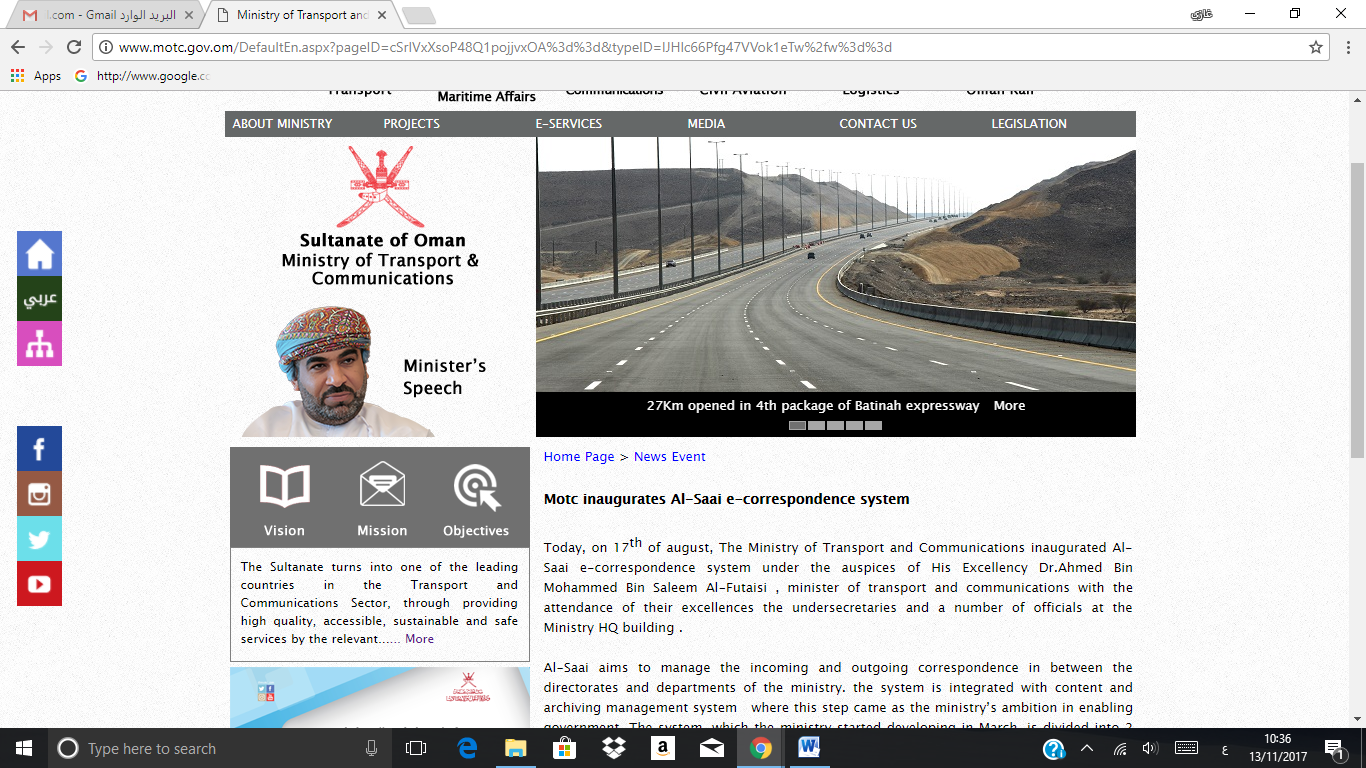




Appendix 6 :



Appendix 7 :



Appendix 8:

