

**Investigating the effects of power relations  
on the implementation of Enterprise  
Resource Planning through the lens of Actor  
Network Theory: the case of MESAIR**

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# List of Abbreviations

ANT	Actor Network Theory
CAS	Corporate Administrative Support Department
CAS SME	Nominated employee from Corporate Procurement Services (CPS) Department who co-jointly represented the whole General Support Services Division on the SAP ERP implementation project workshops
CBS	Contracting and Bidding Services Department
CBS SME	Nominated employee from Contracting and Bidding Services Department who co-jointly represented the whole General Support Services Division on the SAP ERP implementation project workshops
CPS	Corporate Procurement Services Department
CSFs	Critical Success Factors
DP GSS	Deputy President for General Support Service
DPs	Deputy Presidents
EBS	Executive Business Sponsor
ERP	Enterprise Resource Planning
ERP Mgr. Org.	The Project Manager of the Enterprise Resource Planning (ERP) from the organisation's side
GMs	General Managers
GM CAS	GM for Corporate Administrative Services Department
GM CBS	General Manager for the Contracting and Bidding Services Department
GM SMD	General Manager for Space Management and Development Department
GM 1	The General Manager for Space Management and Development (GM SMD) who had been switched to



	become the General Manager for Contracting and Bidding Services (GM CBS)
GM 2	The General Manager for General Manager for Contracting and Bidding Services (GM CBS) who had been switched to become the General Manager for Space Management and Development (GM SMD)
GSS	General Support Services
GSS IT	Information Technology Specialist for General Support Services
HR	Human Resources
IS	Information Systems
IT	Information Technology
Jarmair	Another organisation that had previously gone through privatisation process
MESAIR	The name of the organisation under study
MM	Materials Management
MRP	Material Requirement Planning
PAHO	Organisation that implemented Enterprise Resource Planning (ERP)
PAHO PM	The Project Manager of Enterprise Resource Planning (ERP) from the implementer's side
P01	Subject Matter Expert (SME) from the Corporate Administrative Services Department
P02	Subject Matter Expert (SME) from the Contracting and Bidding Services Department
P03	Subject Matter Expert (SME) from the Contracting and Bidding Services Department
P04	ERP Implementation Consultant, Material Management Module
P05	Team Leader of the organisation's side for ERP implementation project workshops - Materials Management Module
P06	ERP Manager from the IT Department of the organisation under investigation

P07	SME - Real Estate SBU
P08	SME - Human Resources
P09	SME - Human Resources
P10	SME - Human Resources
P11	SME - Real Estate SBU
P12	SME - Human Resources
P13	SME - Real Estate SBU
P14	SME - Real Estate SBU
P15	SME - Human Resources
P16	ERP General Manager - IT Department
P17	SME - General Support Services Division
P18	SME - Human Resources
P19	SME - Real Estate SBU
P20	SME - IT Department
P21	SME - Real Estate SBU
P22	ERP Module Leader - IT Department
P23	SME - IT Department
P24	SME - IT Department
SAP	Organisation that develops Enterprise Resource Planning (ERP) solutions
SBU <sub>s</sub>	Strategic Business Units
SD	Sales and Distribution
SMD	Space Management and Development Department
SME	Subject Matter Expert
SMS	Space Maintenance Services Department
SoN	Statement of Needs
SRM	Supplier Relationship Management
To-Be	The approved business process that was configured in Enterprise Resource Planning (ERP) for the organisation under study

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I would like to dedicate this PhD thesis to my parents and to my two children, Judy and Ameen.

# Abstract

The aim of this research was to investigate the effects of power relations on the implementation of Enterprise Resource Planning (ERP) in an organisation in Saudi Arabia. The researcher adopted a qualitative, interpretive research perspective using a single explanatory case study paradigm, which was generalised to a concept. As one of the objectives of this research was to analyse the case study by using Foucault's analysis of power embedded within Actor Network Theory (ANT), the concept of *ANT-Foucault* was developed. This concept could provide valuable insights for the body of knowledge by proposing an alternative way of analysing IS and ERP implementation projects in organisations. Although, the outcome of the research was limited to deploying a single case of an ERP implementation project in an organisation in Saudi Arabia to investigate the effects of power relations on the ERP implementation project under study, the researcher believes that the ANT-Foucault concept is capable of being adopted into other ERP implementation projects provided that careful consideration of the context is taken. Future research could be aimed at further examining the application of such concept with a view of developing a new theoretical framework. Such framework would be capable of assisting IT project managers to follow and analyse the manoeuvres of power during the course of IS or ERP projects.

# 1. Introduction

## 1.1. Introduction

This chapter starts by providing the rationale for conducting the research followed by introducing Enterprise Resource Planning (ERP) implementation in organisations. Next, the research question, aim and objectives are introduced, followed by the research context, motivation and boundaries.

## 1.2. Rationale

Enterprise Resource Planning (ERP) systems are capable of improving the efficiency of business process and increase productivity for organisations. However, sufficiently implementing ERP systems in organisations usually requires getting involved in complex projects (Ko, 2014; Ngai *et al.* 2008; Swan *et al.* 2000). In addition to the high complexity of such projects, research on ERP implementation demonstrated that such projects can be very costly (HassabElnaby *et al.* 2012; Su and Yang, 2010) as well as being associated with the risk of running over budget and/or over planned time-frame (Aloini *et al.* 2012; Kanaracus, 2013).

The literature on ERP implementation reports that there is a high rate of failure in terms of not being able to deliver the desired efficiency as far as organisations are concerned (Koch and Wailgum, 2007). The reported high rate of failure in the literature, which was mainly determined in terms of projects' deliverability, demonstrated that well over half of ERP implementation projects failed to deliver their desired outcome. Some research even stated that gaining less than half of the benefits out of a costly project should be considered as a failure (Aloini *et al.*, 2012; Kanaracus, 2013).

Due to the high rate of project failure and given its degree of complexity, some research on ERP implementation adopted a variety of theories mainly incorporated from social science in order to sufficiently analyse the complexity aspects of running such projects (Jones and Karsten, 2008). Actor Network Theory (ANT) had been widely adopted in this field (Elbanna, 2010) due to its uniqueness of including non-human artefacts in a particular social setting and that they are considered to be active entities that have the capability of making certain change to the social setting in which they are engaged in (Mitev, 2009). A good example of adopting ANT for analysing ERP implementation projects is the work of Lyytinen and Newman (2015).

Given the criticism that had been associated with ANT for paying little attention to power related issues (Walsham, 1997; Winner, 1993), and with the capability of Foucault's analysis of power to complement ANT by providing the necessary tools to respond to such criticism (Law, 2009; Mathewman, 2013); this research contributes to knowledge in that respect. It investigates the impact of power relations on the implementation of ERP in a specific organisational context.

As it had been reported in the ERP implementation literature that power related issues require further investigations (Horton 2003; Dhillon 2004; Doolin 1999; Maguire *et al.* 2010). Taking into account the similarities between Foucault's analysis of power and ANT (Elbanna, 2012; Law, 1992) and given the fact that scholars like Underwood (1999), Fox (2000), and Mathewman (2013) have incorporated Foucault's analysis of power within ANT, while their work have not investigated power related issues in ERP implementation projects; this research contributed to knowledge on that respect. That is by incorporating Foucault's analysis of power within ANT in order to investigate the impact of power relations on an ERP implementation project in a specific organisational context.

The main aim of this research was to investigate the effects of power relations on the implementation of Enterprise Resource Planning (ERP) in an organisation in Saudi Arabia through the lens of Foucault's analysis of power



embedded within Actor Network Theory (ANT). The first objective of this research was to introduce a case study of an ERP implementation project in an organisation in Saudi Arabia. The second objective was to embed Foucault's analysis of power within the Actor network Theory (ANT); whilst the third objective was to apply Foucault's analysis of power embedded within Actor Network Theory (ANT) in the case under study in order to investigate the effects of power relations on the implementation of Enterprise Resource Planning (ERP) in the organisation under study.

This research was approached in an inductive manner with a subjective viewpoint. The researcher adopted a qualitative, interpretive research perspective using a single explanatory case study paradigm, which is generalisable to a concept. As one of the objectives of this research was to analyse the case study by using Foucault's analysis of power embedded within Actor Network Theory (ANT), the concept of *ANT-Foucault* was developed.

The collected data from interviews, documents and archival records were analytically themed in order to discover the research findings. From the developed themes, the researcher drew out nine findings. The research findings provided insights into the case under study which were capable of laying out the groundwork for the application of the concept on the case under study. The developed concept was applied on the case under study to investigate the effects of power relations on the implementation of ERP in an organisation in Saudi Arabia.

The application of the concept of *ANT-Foucault* on the case under study demonstrated its appropriateness in terms of explaining the power relations and its impact on the ERP implementation project, and was capable of providing valuable insights into the case. The concept of *ANT-Foucault* is thus capable of providing an alternative way of analysing power related issues that are usually associated with ERP implementation projects in particular and with IS implementation projects in general. In principle, the researcher believes that the concept is capable of being adopted into other ERP implementation projects provided that careful consideration of the context is taken.

Investigating power related issues that are associated with IS and ERP implementation projects using the *ANT-Foucault* concept is also capable of helping IS and ERP implementers understand the social complications that they face during the course of the implementation process. In addition, the developed concept has the potential of being developed further in order to gain a more robust theoretical stance. However, the outcome of the research was limited to deploying a single case study; future research could be aimed at further examining the application of such concept with a view of developing a new theoretical framework.

### **1.3. ERP implementation in organisations**

ERP systems are capable of improving the efficiency of business process and increase productivity for organisations. However, sufficiently implementing ERP systems in organisations usually requires getting involved in complex projects (Ko, 2014; Ngai *et al.* 2008; Swan *et al.* 2000). In addition to the high complexity of such projects, research on ERP implementation demonstrated that such projects can be very costly (HassabElnaby *et al.* 2012; Su and Yang, 2010) that are usually associated with the risk of running over budget and/or over planned time-frame (Aloini *et al.* 2012; Kanaracus, 2013).

Even though there were some successful ERP implementation projects in organisations such as those of Cisco Systems, Eastman Kodak and Tektronix (Bicknell, 1998; Boudette, 1999), the literature reports that there is a high rate of failure in terms of not delivering the desired efficiency as far as organisations are concerned (Koch and Wailgum, 2007).

The literature on ERP implementation reports a high rate of failure in terms of the deliverability of ERP implementation and that well over half of ERP implementation projects failed to deliver the desired outcome of ERP systems. Some research reported that gaining less than half of the benefits from a project that is very high in cost should be considered as a failure (Aloini *et al.*, 2012; Kanaracus, 2013).

Due to the high rate of project failure, research had been mainly devoted to the development of Critical Success Factors (CSFs) for ERP implementation projects (Huang and Yasuda, 2016; Saade and Nijher, 2016). However, CSFs had been criticised for its lack of practical applicability (Françoise *et al.* 2009)

Although CSFs for ERP implementation had been widely cited in the literature on ERP (Huang and Yasuda, 2016), other scholars questioned its applicability when put in practice (Françoise *et al.* 2009) while other scholars questioned their critical and crucial stances when put in practice (Ram *et al.* 2013). Other research on ERP implementation focused on investigating the impacts of organisational context on ERP implementation projects; as it had been reported in the literature that organisational context is capable of directly influencing the efficiency of the process of a particular ERP implementation project (Huang and Yasuda, 2016).

Many research on ERP implementation investigated the impact of contextual issues on ERP implementation projects (Morton and Hu, 2008) such as the impact of the organisational structure (Hong *et al.* 2010) and the organisational culture (Rabaai, 2009) on ERP implementation project as well as on investigating the impact of misaligning the organisation structure with the ERP's business process (Ahmadi *et al.* 2015; Kerr and Houghton, 2010).

Other research investigated the importance of developing mutual trustworthy relationship between ERP implementers and users (Ko, 2014), which was seen as a major contribution to delivering a more effective outcome out of ERP implementation projects; while other research emphasised the importance of establishing continuous monitoring and assessment techniques on ERP implementers throughout the different phases of ERP implementation projects (Tiwana, 2010; Tiwana and Keil, 2009; Chang *et al.* 2013).

Some research on ERP implementation adopted a variety of theories mainly incorporated from social science in order to make sense of the complexity of running ERP implementation projects (Jones and Karsten, 2008). Actor Network Theory (ANT) had been widely adopted in this field (Elbanna, 2010)

due to its uniqueness of explaining a social phenomenon by including non-human artefacts as active entities that have the capability of making certain change to the social setting in which they are engaged in (Mitev, 2009).

A great example is the work of Lyytinen and Newman (2015) that adopted ANT to investigate the alienation of users in two ERP implementation projects. Their research involved the formation of different networks as well as introducing a range of alliances which provided in-depth case study analyses.

Given the criticism that had been associated with ANT for paying little attention to power related issues (Walsham, 1997; Winner, 1993), and with the capability of Foucault's analysis of power to complement ANT by providing the necessary tools to respond to such criticism (Law, 2009; Mathewman, 2013); this research contributes to knowledge in that respect. It investigates the impact of power relations on the implementation of ERP within an organisational context.

As it had been reported in the ERP implementation literature that power related issues require further investigations (Horton 2003; Dhillon 2004; Doolin 1999; Maguire *et al.* 2010), and taking into account the work of scholars like Underwood (1999), Fox (2000) and Matthewman (2013) who have incorporated Foucault's analysis of power within ANT, and given the fact that their work have not investigated power related issued in ERP implementation projects. This research contributes to knowledge by incorporating Foucault's analysis of power within ANT in order to investigate the impact of power relations on an ERP implementation project in an organisational context.

#### **1.4. Research question, aim and objectives**

The researcher was keen on finding out the relationship between power relations and ERP implementation together with investigating the effects of such power relations on directly influencing the unfolding of events that occurred during a particular ERP implementation project. The research question and the research aim were developed to that respect.

**Research question**      What is the relationship between power relations and ERP implementation within an organisational context?

**Research aim**            Investigate the effects of power relations on the implementation of Enterprise Resource Planning (ERP) in an organisation in Saudi Arabia through the lens of Foucault's analysis of power embedded within Actor Network Theory (ANT).

In order to achieve this aim, it is necessary to break it down into a set of objectives that ultimately contributes to achieving the overall aim.

**1<sup>st</sup> objective**            Introduce a new case study of an ERP implementation project in an organisation in Saudi Arabia.

**2<sup>nd</sup> objective**            Embed Foucault's analysis of power within Actor Network Theory (ANT).

**3<sup>rd</sup> objective**            Apply Foucault's analysis of power embedded within Actor Network Theory (ANT) to the case study in order to investigate the effects of power relations on the implementation of Enterprise Resource Planning (ERP) in an organisation in Saudi Arabia.

### **1.5.      The research context**

The organisation under study had been operating in the airline industry since the 1940s. Throughout this research, the organisation under study is called MESAIR. As it stands, MESAIR's fleet contains a range of 115 aircraft operating domestic and international flights to a range of destinations in the Middle East, Africa, Asia, Europe and North America. It also owns a fleet of cargo aircrafts that operate globally.

MESAIR was originally established as a government firm and it had been run in a government fashion ever since it was established. All employees, prior to the initiation of the privatisation project, had held various types of jobs in the

Saudi government job scheme, which offers their occupiers extreme job security whilst benefiting from working fewer hours as opposed to semi-government or private sector jobs.

Employees of MESAIR had always manually conducted their day to day business activities. Paper-based information systems were predominant across the organisation until 2006. This meant that official electronic communication between different departments was almost non-existent. Some departments developed stand-alone electronic archival systems to keep track of the incoming and outgoing letters for their respective departments. MESAIR's IT Department developed some stand-alone digital information systems for finance and Human Resources, mainly to support their paper-based system. However, once the privatisation project was well under way, MESAIR signed a multimillion pound deal to implement SAP ERP solutions across its business functions in order to integrate different business process into one shared system.

#### **1.5.1. Research motivation**

The idea of this PhD started when the researcher became involved in an ERP implementation project in an organisation in Saudi Arabia. While the ERP implementation in that organisation was in full force, the researcher realised that original implementation plans can change during the implementation process due to many factors. One of these factors was that certain power exercises impacted the direction of the implementation process.

The researcher also realised that certain relationships that had developed during the Enterprise Resource Planning (ERP) implementation process amongst human and/or non-human actors directly impacted the overall implementation process. The experience gained from being involved in that particular ERP implementation project brought in the realisation that such power relations during a particular ERP implementation project were well worth researching for a PhD, which had been one of the researcher's ambitions.

### **1.5.2. Research boundaries**

This research was based on a single case study of an ERP implementation project in an organisation (MESAIR) in Saudi Arabia. It pays specific attention to the activities that were being carried out in the General Support Services (GSS) Division during the ERP implementation project. In addition, specific attention was given to the SAP ERP Materials Management (MM) module, because the GSS Division had been involved heavily in the implementation process of that module. The case under study covers the duration of the 1<sup>st</sup> and the 2<sup>nd</sup> phases of the ERP implementation project which together lasted for around sixteen months (from November 2007 until March 2009).

### **1.6. Organisation of the thesis structure**

This PhD thesis has been organised into eight chapters. The first chapter is the Introduction Chapter, describing the gap of knowledge that this research was intended to explore. The research question, aims and objectives are presented subsequently, followed by explaining the research context, including the motivation behind conducting it as well as explaining the boundaries of the research.

The second chapter is the Literature Review Chapter. It provides the necessary background knowledge on ERP systems and their implementation in organisations. This includes reviewing the literature on the factors influencing ERP implementation projects in organisations as well as the organisational context and its impact on ERP implementation projects.

The third chapter is the Theoretical Framework Chapter which is aimed at providing the theoretical aspects related to the research. It provides the necessary background knowledge on Actor Network Theory (ANT) and its adoption in IS and ERP research. It also provides the background knowledge regarding power analysis whilst paying specific attention to Foucault's analysis of power. In addition, it provides the necessary background knowledge on research on Foucault's power analysis in IS and ERP research.

The fourth chapter is the Research Methodology Chapter which is aimed at describing the research methodologies adopted for this research. This includes explaining the variety of research methods and techniques that were used for conducting this research. The chapter proceeds by identifying and justifying the ontological approach that was adopted for this research. It follows on by identifying and justifying the epistemological paradigm that was adopted for this research. Subsequently, the chapter explains how this research was approached. It follows on by explaining the differences between carrying out a qualitative research study as opposed to a quantitative one. It then describes the adopted research strategy as well as explaining the reasons for adopting such strategy. The chapter continues by justifying the research reliability, validity and validation; followed by describing the techniques that were used for collecting data. Finally, it explains the modes of analysis that were adopted for this research.

The fifth chapter is the Case Study Chapter which introduces the case study of an organisation in Saudi Arabia. For the sake of fulfilling the ethical requirements to conduct the research, the organisation was given a coded name in the form of MESAIR. The case study was developed with a view to explaining thoroughly the most relevant issues that would serve this research well. It starts by providing general background information about the organisation under study. It follows on to explain its organisational structure prior to introducing and explaining the privatisation project.

Next, the legacy information systems and the organisation culture are explained. The Information systems requirements and the ERP selection process deployed by the organisation are also explained. Subsequently, the strategy and approach of the ERP implementation project are explained, as well as providing insights into the business blueprint workshops and how issues developed regarding the ERP implementation project. Next, the focus of the case study in the General Support Services Division (GSS) and the Materials Management (MM) module were explained by describing incidents that had occurred during that particular ERP implementation project.



The sixth chapter is the Research Findings Chapter which provides the research findings that were drawn out of the data analysis. As the research findings were based on thematically analysing the collected data, the chapter begins by explaining the mechanisms and the techniques that were used in order to develop the themes. The chapter follows on to explain nine developed themes as well as drawing out the research findings derived out of the themes.

The seventh chapter is the Discussion Chapter which explains the procedure undertaken to embed Foucault's analysis of power within ANT which is then applied to the case under study in order to explain the power relations that were formulated during the ERP implementation project under study. This includes introducing the most influential actors that were involved in the case under study. It also includes explaining the enforcement of power from one actor over another as well as explaining the different alliances that were formed during the course of the project under study. The researcher also explains the network of power relations that were formed during the course of the project under study, as well as explaining the shifts of power from one actor and/or group of actors to other actors and/or groups of actors.

The eighth chapter presents the Conclusion Chapter; starting by addressing the research objectives, aims and question. It follows on by providing the evaluation of the research which includes reviewing its capability of contributing to knowledge, the appropriateness of the methodological choices, and relevance of the research findings to the application of the developed concept (*ANT-Foucault*) on the case under study and the relevance of the conceptual development to its application on the case under study. Finally, the research limitations and recommendations for further research are presented.

## **1.7. Summary and conclusion**

This chapter introduced the research; it started by providing the rationale behind conducting the research followed by brushing through the necessary literature on ERP implementation in organisations. Next, the research question, aims and objectives were introduced, followed by the research

context, motivation and boundaries. The organisation and the structure of the thesis were also presented.

The next chapter presents the necessary background knowledge on ERP systems and their implementations in organisations. This includes reviewing the literature on the factors influencing the ERP implementation projects in organisations as well as the organisational context and its relationship with ERP implementation projects.

## **2. Literature Review**

### **2.1. Introduction**

The previous chapter presented the introduction for this research. It started by providing the rationale behind conducting this research followed by introducing ERP implementation in organisations. Next, the research question, aim and objectives were introduced followed by presenting the research context, motivation and boundaries. The organisation of the thesis structure had been presented.

This chapter provides the reader with the necessary background knowledge on ERP as well as reviewing the literature on its implementation in organisations. This includes reviewing the literature on the factors influencing the ERP implementation projects in organisations as well as on the organisational context and its relationship with ERP implementation projects.

### **2.2. Information systems and Enterprise Resource Planning (ERP)**

Over the last two decades, the number of Information Systems (IS) that have been implemented in organisations has increased dramatically (Wagner and Monk, 2008). Some organisations opt to develop their own Information Systems in-house. However, research showed that such organisations are very likely to struggle with managing their legacy systems (Alshawi *et al.*, 2004, Davenport 1998). In addition, such in-house projects might not be able to deliver the desired results, especially in large organisations.

Alternatively, organisations can opt for purchasing off-the-shelf solutions such as Enterprise Resource Planning (ERP). The adoption of ERP software packages in organisations has been noticeably increasing during the last two decades (Huang and Yasuda, 2016). Throughout the last thirty years, ERP

systems were regarded as the best IT solutions for organizations (Huang and Yasuda, 2016; Fuß *et al.*, 2007).

ERP systems are packaged software that can be thought of as a set of integrated systems that introduce the right information for the relevant functional area of business. It is a management information system which consists of a set of integrated systems to manage all business functions in a particular organisation (Wagner and Monk, 2008; Yen *et al.*, 2002). This means that ERP systems are shared knowledge-base for the main, if not all, organizational functions such as logistics, accounting, sales and distribution, and human capital management (Wagner and Monk, 2008; Krumbholz and Maiden, 2001).

ERP software packages are intended to provide computerised support for most of organisations' standard processes (Shanks, *et al.*, 2004). They provide global solutions (Rajapakse and Seddom, 2005) by integrating all major processes of a particular organisation into one common system that supports all levels of management (Al-Mashari and Al-Mudimigh, 2003).

They are meant to sufficiently manage the flow of information that needs to be shared across all supply chain processes (Al-Mashari and Zairi, 2000). In addition, ERP systems are capable of efficiently enhancing the management of inventory, as well as aiding in minimising the working capital whilst providing the ability to manage suppliers, alliances and customers in an integrated and more efficient manner (Austin *et al.*, 1999).

ERP systems “*promise the seamless integration of all the information flowing through the company – financial and accounting information, human resources information, supply chain information and customer information*” (Davenport 1998, p. 121). ERP is an application software that is designed to support all functions and departments in a particular organisation to manage almost all its business tasks and processes (Wagner and Monk, 2008; Huang and Palvia, 2001) such as sales, manufacturing, human resources and finance (Holland and Light, 1999); using a common, shared and standardised system (Olson *et al.*, 2005). In simpler words, ERP can be thought of as one common database that

is used across all departments in a particular organisation, so that all departments can share information with one another (Rosemann and Wiese, 1999).

Davenport (1998) explained ERP further by plotting it into a diagram (See Figure 2.1.), which showed that the main function of ERP is a centralised database. Because it is a centralised database, the information that it holds is meant to be shared by all departments within a particular organisation. All departments are meant to use the same database, so that they can share each other's information.

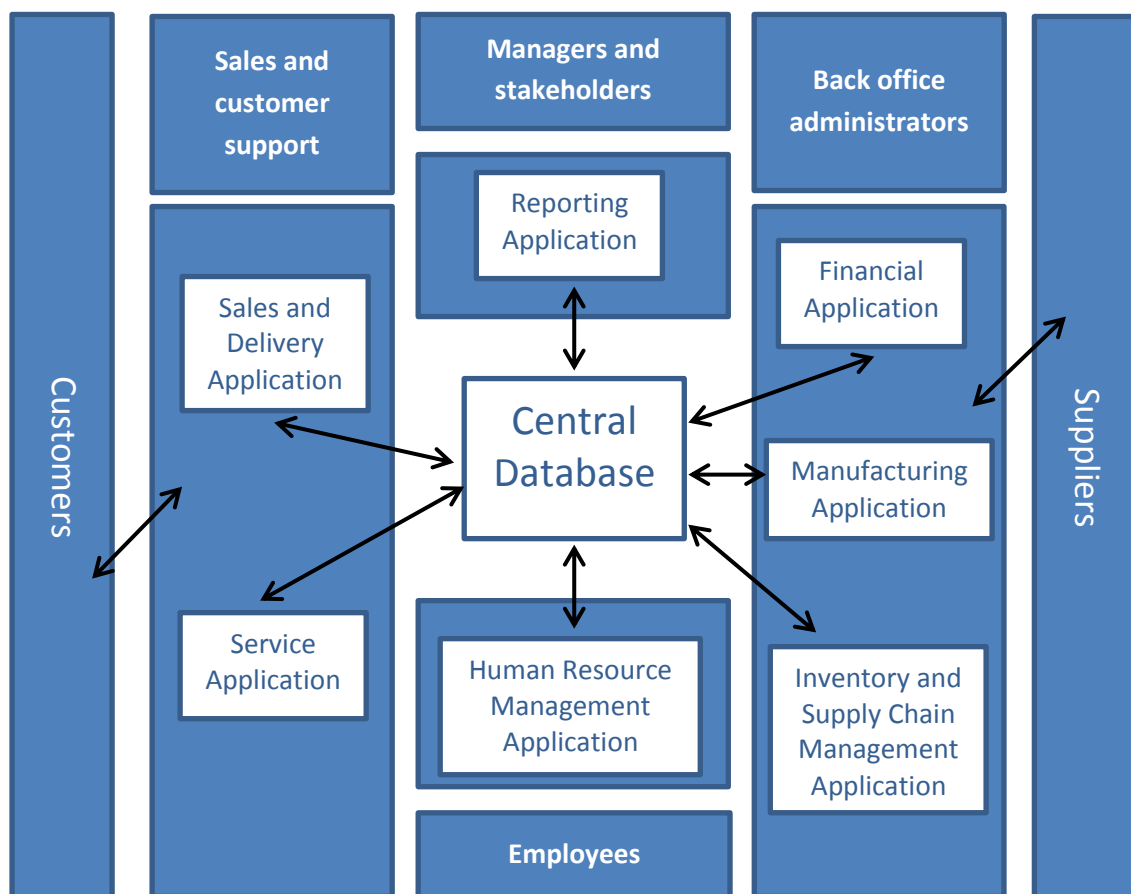


Figure 2.1. Typical ERP Systems (Adapted from Davenport, 1998)

Given the figure above, if the reporting department, for instance, is required to produce a certain performance report to its executives, ERP systems are usually equipped with all the necessary pieces of information that are needed to fulfil

delivering such request in a timely manner. That is due to the fact that all related pieces of information about the company should be available in the centralised database. The required performance report can be developed by picking out the right pieces of information from different modules that characterise ERP systems. This means that certain pieces of information can be generated from, for instance, the sales and delivery, finance and HR modules that can collectively contribute to developing a comprehensive performance report (Chung and Synder, 1999).

However, without such integrations, developing a performance report such as the one explained above can become a lengthy process due to the usual involvement of generating information from different stand-alone systems. On top of time consumption, there is a chance that the collected pieces of information might lack the desired accuracy. Having ERP systems set in place can contribute to reducing the time for the delivery of information as well as reducing the duplication and redundancy of information (Alshawi *et al.*, 2004). Such reductions are potentially beneficial to organisations due to cost reduction and increase of work efficiency and productivity.

The accumulative development of ERP systems started in the 1960s. Back then, organisations were given the opportunity of automating their inventory control systems by either developing or buying Inventory Control (IC) packages (Alshawi *et al.*, 2004). In the 1970s, further development to the 1960s' IC packages led to the development of the Material Requirement Planning (MRP). MRPs are pieces of software that were mainly used for managing the manufacturing processes by integrating the production plan system and the inventory control system into one centralised database (Adam and Sammon 2004, Alshawi *et al.* 2004). However, MRP lacked the support of plan management and order processing (Kalakota and Whinston, 1997).

In the 1980s, Manufacturing Resource Planning II (MRP II) was then developed to provide companies with a manufacturing solution that was thought to be sufficient enough to replace their existing MRP system (Shum and Lin, 2006). It enhanced the previous version of MRP with the functions

that were needed to perform all the necessary tasks with respect to managing the whole manufacturing process, starting from when a customer placed an order until it got dispatched.

However, MRP II had been designed to solely serve the manufacturing process. It involved systems such as shop floor and distribution management, project management, finance, human resources and engineering (Alshawhi *et al.*, 2004). As MRP and MRP II were designed solely to support the manufacturing process, software developers realised that there was a need to develop a more comprehensive system. Although MRP II seemed to be comprehensive enough, it could not deal with the shift in manufacturing trends that had emerged in the 1980s with respect to manufacturing customised products rather than standard ones (Adam and Sammon 2004). According to Adam and Sammon (2004), organisations demanded more comprehensive systems that were capable of supporting different aspects of business other than cost and quality due to the need of improving manufacturing lead times.

Manufacturers were also required to introduce real time flexible customised products which meant that they ought to have closer and more integrated communication media with their suppliers and customers. According to Alshawhi *et al.* (2004), ERP was first introduced in the late 1980s and it differed from MRP II in being capable of dealing with external issues as well as internal ones (Adam and Sammon 2004). According to them, it was designed to plan and schedule the supplying aspects of resources from suppliers, based on the demands from customers.

### **2.3. ERP implementation in organisations**

As mentioned in the previous section, ERP systems are capable of improving the efficiency of business process and increase productivity for organisations. However, sufficiently implementing ERP systems in organisations usually requires getting involved in complex projects (Ko, 2014; Ngai *et al.* 2008; Swan *et al.* 2000). Due to the high complexity of such projects, organisations usually decide to in-source IT consulting firms to conduct the implementation

phases of the project (Madtinos *et al.* 2012; Ifinedo, 2011; Dezdar and Sulaiman, 2009; Somers and Nelson, 2004; Shanks *et al.* 2004; Brown and Vessey, 2003). In addition to the high complexity of such projects, research on ERP implementation demonstrated that such projects can be very costly (HassabElnaby *et al.* 2012; Su and Yang, 2010).

According to a recent survey on ERP implementation conducted by Panorama Consulting Solutions (2015), the average cost of running an ERP implementation project for the period between 2010 and 2014 reached approximately £3.8 million with more than half of those projects exceeding their planned budget. The survey also revealed that the average duration of completing such projects reached an average of 15.7 months with more than half of those projects running over the scheduled time-frame. ERP implementation projects are usually associated with high risk of running over planned budgets together with running over the planned time-frame (Aloini *et al.* 2012; Kanaracus, 2013).

Even though organisations that opt for implementing ERP systems pay a large sum of money and usually spend quite a long time conducting the project, they are not always guaranteed great return on their investments. In fact, the survey that was conducted by Panorama Consulting Firm (2015) also revealed that more than half of organisations that conducted such projects have only received 50% of their desired return on investments.

According to Kraemer (2012), well over half of ERP implementation projects failed to deliver their desired outcome. Some scholars such as (Aloini *et al.*, 2012; Kanaracus, 2013) stressed out that by gaining only 50% of the benefits out of a costly project is considered to be a failure. The risks of not getting the desired efficiency of ERP systems are considered to be high, leading to a significantly high failure rate of ERP implementation projects (Koch and Wailgum, 2007).

There were some successful ERP implementation projects in organisations such as the ones that were conducted for Cisco Systems, Eastman Kodak and



Tektronix (Bicknell, 1998; Boudette, 1999). However, other organisations such as the pharmaceutical giants FoxMeyers Drug had to declare bankruptcy just after implementing an ERP solution. Due to a technical error, the ERP systems processed thousands of orders but only to be delivered to wrong addresses. Such error directly influenced the bankruptcy declaration of the organisation. Dell Computer (the PC giant organisation) had to scrap their ERP implementation process due to its rigidity and its lack of adaptation to their on-going global expansion (Bicknell, 1998; Boudette, 1999).

Research on ERP implementation had been mainly focused on finding out the causes and effects of the high rate of failure. Most research on the field of ERP implementation was concerned with developing an array of factors that can be of benefit to positively influence the implementation process; they were often referred to as the Critical Success Factors (CSFs) for ERP implementation projects (Huang and Yasuda, 2016; Saade and Nijher, 2016). According to Huang and Yasuda (2016), CSFs for ERP implementation projects can be described as positive attempts to draw out the most relevant factors that are essential to increase the chances of successfully implementing ERP in organisations.

The development of CSFs for ERP implementation through research often identified factors such as top management support, business process reengineering, user training and education, change management, strategic planning, user acceptance (Holland and Light, 1999; Somers and Nelson, 2001; Finney and Corbett, 2007; Al-Turki, 2011; Garg and Garg, 2014; Beheshti *et al.* 2014; Garg and Agarwal, 2014; Abu-Shanab *et al.* 2015), vendor/customer partnerships, dedicated resources, minimal customisations (Somers and Nelson, 2001), empowered decision makers (Finney and Corbett, 2007, Saini *et al.* 2013), internal communication (Beheshti *et al.* 2014; Abu-Shanab *et al.* 2015), change of organisation culture and structure (Dezdar and Sulaiman, 2009; Motwani *et al.* 2005) and alignment of ERP strategy with business processes (Saini *et al.* 2013).

Although CSFs for ERP implementation had been widely cited throughout the literature on ERP (Huang and Yasuda, 2016), other scholars questioned its applicability when put in practice like the work of Françoise *et al.* (2009). They conducted a review in order to determine the plausibility of the widely recognised CSFs by putting each CSF to a test carried out by ERP experts in order to examine each CSF's applicability in the workplace. The research criticised CSFs for not being practically appropriate as far as ERP implementers are concerned.

The work of Ram *et al.* (2013) further criticised the widely reported CSFs by questioning their critical and crucial stances when put in practice. Their research demonstrated that some of the CSFs were neither critical nor crucial to the successful implementation of ERP but were helpful to some extent on improving the level of ERP performance in a particular organisation. Despite the criticism, research on CSFs have continued to get carried out (Garg and Garg, 2014; Beheshti *et al.* 2014; Garg and Agarwal, 2014; Abu-Shanab *et al.* 2015) without necessarily addressing the issues that were raised by Françoise *et al.* (2009) and Ram *et al.* (2013).

Other research on ERP implementation focused on investigating the impact of organisational context on ERP implementation projects. Organisational context is best explained by imagining the organisation as a family (Wit and Meyer, 2010). According to Pettigrew *et al.* (1992), like all social families, organisations have their own cultures, myths, requirements, power, and social issues. Organisational context can be categorised into two different factors; external and internal. External factors can be described as the forces that surround a particular organisation such as economic, social and external political aspects; whereas internal factors might include the influences of resources, capabilities, structure, culture and internal politics on a particular organisation (Pettigrew *et al.*, 1992). Laughlin (1999) called them the socio-technical system of organisations and it includes business process, user, structure and culture.

It had been reported in the literature that the organisational context is capable of directly influencing the efficiency of ERP implementation projects (Huang and Yasuda, 2016). The process of implementing ERP systems in organisations usually requires reengineering organisation's business process (Panayiotou *et al.* 2015; Velcu, 2010). This means that organisations are required to perform certain tasks in the form of changing the structure of the organisation and its business process in order to fit them to those on the ERP systems (Hong *et al.* 2010). However, such tasks had been proven to be not as simple as it was hoped due to the inevitable dealing with contextual issues. The context of a particular organisation can negatively impact the progress of ERP implementation projects (Ahmadi *et al.* 2015).

Organisations are required to conduct business strategy and it should be aligned with the ERP's counterpart (Law and Ngai, 2007; Wang *et al.* 2007). Part of that usually includes developing an overall business strategic plan which should clearly state the willingness to align existing business process to ERP systems business process. Law and Ngai (2007) empirically studied the impact of organisational factors on the ERP implementation success. One of their findings demonstrated that the alignment of business strategy of a particular organisation with ERP implementation strategy is crucial to achieving a better business performance post ERP implementation. Their findings supported the outcome of the earlier work of Gefan and Ragowsky (2005) which stressed out on the need for configuring ERP systems to be in context with the business characteristics of a particular organisation.

Other scholars like Wang *et al.* (2007) investigated the contextual impact on ERP implementation in accordance to the knowledge gap that usually unfolds amongst different stakeholders and its impact on the outcome of a particular ERP implementation project. According to them, ERP implementation projects should be seen as a knowledge intensive process, which require extensive interactions amongst stakeholders in order to narrow the knowledge gap (Huang and Newell, 2003). The work of Wang *et al.* (2007) investigated the knowledge gap phenomenon through the lens of the stock-flow theory and they found that transferring knowledge from ERP implementers to users during

the ERP implementation project can lead to a better alignment between ERP systems' business processes and the organisation's counterpart.

The vital role of ERP implementers on the outcome of a particular ERP implementation project had been investigated thoroughly in the literature (Dezdar and Sulaiman, 2009). Metrejean and Stocks (2011) investigated the importance of ERP implementers' effectiveness in each phase of ERP implementation projects. Their research found that ERP implementers are mostly effective during the configuration and the integration phases of ERP implementation projects. Metrejean and Stocks (2011) provided recommendations for organisations that are in the process of conducting an ERP implementation which was to consider hiring ERP implementers to only conduct the configuration and the integration phases of the project which was seen as a way of reducing the cost of conducting ERP implementation projects.

Ko (2014) provided a different view in the sense that the relationship that is based on a mutual trust between ERP implementers and the user during the ERP implementation project is crucial to transferring knowledge. According to Ko (2014), it contributes to delivering a more effective outcome of the project. Building trustworthy relationships is considered to be a lengthy process as it requires getting involved in repeated interactions between certain individuals. Such interactions lead to the reduction of tension and ambiguity amongst both parties. Those interactions usually entail getting involved in ongoing forms of communications about needs, beliefs and preferences regarding the issue of concern (Vanneste and Puranam, 2010; Perrone *et al.* 2003).

Going back to the ERP implementation project, lengthy amount of time is usually required to develop mutual understanding between ERP implementers and users on the objectives and goals of the project. Therefore, Ko (2014) strongly believed that ERP implementers should be hired right from the start of the ERP implementation project. By doing so, organisations provide enough time for both parties to develop the desired mutual trustworthy relationship which in return increases the effectiveness of the outcome of the ERP implementation project.

As mentioned earlier regarding the need to create a fit between the organisation's objectives and the ERP implementation's counterpart, the literature stresses out the need of setting up continuous progress monitoring on ERP implementers by organisations throughout the different phases of the implementation process. Research on controlling ERP implementers by organisations such as Tiwana (2010), Tiwana and Keil (2009) and Chang *et al.* (2013) emphasised the importance of establishing such control.

It was also reported in the literature that it is important to empirically investigate the impact of the overreliance on ERP implementers to achieve the overall objectives of their business (Sturdy *et al.* 2009). The work of Chang *et al.* (2013) contributed to the literature on that sense as they empirically studied the impact of political aspects on ERP implementation projects through the adoption of the control theory. They emphasised the importance of controlling ERP implementers' progress throughout the ERP implementation process.

Chang *et al.* (2013) went on to explain that as the business objectives lie within the users and technological objectives lie within the ERP implementers, organisations are required to introduce some form of control over the extent of one side overshadowing the other (Newell *et al.* 2000). This means that organisations need to find ways to control ERP implementers as the latter's own personal objectives might be different than the overall business ones.

A general rule that should be learnt from the research conducted by Chang *et al.* (2013) is that relying on ERP implementers should be avoided; instead, organisations are advised to control and monitor the progress of ERP implementation projects in accordance to the overall business objectives (Wang and Chen, 2006). Chang *et al.* (2013) found that organisations conducted only outcome control over ERP implementers. They proposed instead to conduct behavioural control in order to ensure that ERP implementers are in-line with the overall business objectives throughout the implementation process.

The relationship between ERP implementers and users during ERP implementation projects had also been seen as a power and knowledge relationship. Pozzebon and Pinsonneault (2012) investigated the relationship between ERP implementers and users by analysing how power and knowledge are exercised and exchanged amongst members of both parties during the unfolding of ERP implementation projects. They developed a model based on the global-local characteristics of both parties (i.e. ERP implementers represent the global characteristics and the users represent the local counterpart). The model included explaining a variety of roles of and controls on ERP implementers and users during ERP implementation projects (see Table 2.1.). Coelho *et al.* (2015) adopted the model to investigate the impact of the relationship between ERP implementers and the users on an ERP implementation project in a public-sector Brazilian organisation.

Types	Roles (knowledge-related)	Control (power-related)
Dependency	ERP implementers are experts, authorities; users elect to play a more passive role, they are ‘information providers’.	ERP implementers often hold technical control of and responsibility for the results. Total outsourcing can be considered a typical governance modality
Autonomy	Users assume an active role and see ERP implementers as a coach, ERP implementers take a more passive role	Users control over and responsibility for the results. ERP implementers are often engaged by meticulous and temporally well-defined contracts.
Cooperation	ERP implementers and users play active roles, they aim to be partners.	Users and ERP implementers share control and responsibility over the mandate and results. Partial outsourcing often emerges.

Table 2.1. Three classic types of ERP implementer and user relationship in ERP implementation (adapted from Pozzebon and Pinsonneault, 2012)

The researcher believes that the overall concept of preliminarily characterising ERP implementers into being global is somehow problematic. This is due to the fact that there are many ERP implementers who can be categorised as local; given that organisations sometimes assign local IT consulting firms to conduct the implementation of a global ERP solution. This led the researcher to question whether the dimensions of power and knowledge between ERP implementers and users are the only formed relation that can influence ERP implementation projects or whether there are other relations that naturally unfold throughout the progress of the implementation project. The model in Table (2.1.) failed to consider adding the global ERP solution (as an active non-human agent) into the mix; which could leave out the bigger picture unexplored.

As mentioned in section (2.2.) in this chapter, ERP systems are meant to provide a globally standardised solution for organisations without paying specific attention to their local characteristics (O’Leary, 2000). ERP solutions are meant to be pre-configured with ‘best-practice’ business processes, where ERP implementers are encouraged by the ERP vendors to adopt such practices for implementation purposes even though they are not particularly obliged to do so (Wagner and Newell, 2004).

Organisations are also not obliged to work with ERP vendors during the implementation project as they can only deal with ERP implementers who are not necessarily contractually bound with the ERP vendor. ERP solutions are products that can be purchased solely; without the need to specifically identify implementers. This means that organisations can for instance add a clause on their ERP implementation contract, which affirms the necessity of carrying out all the necessary customisations in order to get the ERP solution intentionally adjusted to the existing organisation structure and business process. In fact, it had been reported that some ERP ‘best practice’ for specific industries had been solely developed through the collaborative work between organisations that were in the progress of implementing ERP systems and the ERP implementers that carried out the implementation process without necessarily getting ERP vendors involved (Wagner *et al.* 2006).

Other forms of relations that unfold during ERP implementation project could include the relationship between organisational structure & culture and the ERP's 'best practice'. For instance, it was reported in the literature that the misalignment of existing business process and structure on the one hand and ERP system's counterparts on the other can cause undesired disruption to the progress of a particular ERP implementation project (Morton and Hu, 2008; Soh *et al.* 2003).

On another note, the literature also failed to distinguish apart the different types of users or as they refer back to them as 'clients'. Most research refers back to the involved members of a certain organisation that get involved in an ERP implementation project as 'clients'. The researcher believes that the term 'client' is too generic for the purpose of analysing a complex situation. The clients should be fragmented into different groups. One of these groups is the Subject Matter Experts (SMEs) who usually put enough efforts to help in sufficiently implement ERP systems while department managers usually try their best to oppose any changes to be made in the structure of a particular organisation in order to protect their hierarchal positions. Therefore, the user resistance that had been widely identified in the literature as being harmful to the implementation process (Aladwani, 2001) does not reflect the overall impression of individuals throughout the organisation.

Mobashar Hossain *et al.* (2011) identified the SMEs empowerment by investigating ownership & governance, scope management and employee empowerment. Part of their findings affirmed the concurrent existence of employees' empowerment especially the ones who have been selected to become SMEs for ERP implementation projects; they have also demonstrated through their case study analysis that there were some deep concerns among high management about losing control over SMEs during the implementation process.

All the above aspects that unfold during the ERP implementation tend to form relations with one another; which results in creating a network of relations. In



order to explain the influences of such network of relations amongst all of the aspects that unfold, the literature on ERP implementation demonstrated that adopting a social theory (Elbanna, 2007; Lyytinen and Newman, 2015) such as Actor Network Theory (ANT) can provide a solid background to investigate the interactions between technological and social systems that unfold during ERP implementation projects (Mitev, 2009; Lee, 2001). The role of ANT in analysing such network of relationships during ERP implementation project is presented in the next chapter (see section 3.2.1. in Chapter 3 for more details).

The next chapter (see section 3.2.1.) also explains how ANT as well as being the most suitable social theory to explain the case under study, it also identifies its lack of adequacy to investigate the control related activities and the political issues that arise within the identified network of relations that unfold during ERP implementation projects. It follows on to explain why it is important to incorporate Foucault's analysis of power within ANT in order to sufficiently analyse and investigate the range of control related and political issues that invigorates during ERP implementation projects.

## **2.4. Summary and Conclusion**

This chapter has provided the reader with the necessary background knowledge on Information Systems and ERP, as well as reviewing the literature on their implementation in organisations. This included reviewing the literature on the factors influencing the ERP implementation projects in organisations, as well as the organisational context and its relationship with ERP implementation projects.

The next chapter provides the theoretical aspects that are related to the research. In addition, it provides the background knowledge on Actor Network Theory (ANT) and its adoption in IS and ERP research. Background knowledge regarding power analysis is also provided by giving special attention to Foucault's concept of analysing power. This includes providing the background knowledge on power analysis, using Foucault's power analysis in IS and ERP research.

## **3. Theoretical Framework**

### **3.1. Introduction**

The previous chapter presented the necessary background knowledge on Information Systems and ERP as well as reviewing the literature on their implementation in organisations. This included reviewing the literature on the factors influencing the ERP implementation projects in organisations, as well as the organisational context and its relationship with ERP implementation projects.

This chapter is aimed at presenting the theoretical aspects that are related to the research. It provides the necessary background knowledge on Actor Network Theory (ANT) and its adoption in IS and ERP research. It also provides the background knowledge regarding power analysis whilst paying specific attention to Foucault's concept of analysing power. In addition, the researcher provides the necessary background knowledge on research on Foucault's power analysis in IS and ERP research.

### **3.2. Adoption of theoretical perspectives in IS and ERP implementation research**

Reviewing the literature on IS and ERP implementation reveals that there is a range of theoretical perspectives and frameworks that had been widely adopted over the past few decades. One of the early frameworks that had been adopted was the Technology Acceptance Model (TAM). Developed by Davis (1989) and Davis *et al.* (1989), the main aim of developing TAM was to examine the degree of satisfaction amongst users of newly introduced Information Systems in a particular organisation. The model included examining the degree of perceived ease of use (PEOU) and the perceived usefulness (PU) amongst users of newly introduced IS or ERP systems in a particular organisation.

According to Kerimoglu *et al.* (2008), the level of satisfaction amongst users of a newly introduced IS or ERP can be achieved as soon as a collective belief is shared between users regarding the usage benefits of such systems. This means that users are likely to increase their willingness to use a newly introduced IS or ERP if they believed in its potential benefits of simplifying and/or enhancing their day-to-day activities (Lee *et al.* 2010).

TAM had been widely adopted by other scholars in the IS and ERP implementation discipline (Marangunic and Granic, 2015). The early work of Amoako-Gyampah and Salam (2004) can be seen as a good example. Their research investigated the impact of shared beliefs on the benefits of a technology and the impact of training and communication on the PEOU and the PU during the implementation of ERP systems in an organisation. A more recent research by Sternad and Bobek (2013) applied the TAM model to examine factors that influence an ERP implementation project in Slovenia.

Ever since its development in 1989, TAM had been extended to what was called TAM-2 which entailed the inclusion of external variables that could influence the Perceived Usefulness (PU) amongst users such as subjective norms, job relevance, experience, etc. (Venkatesh and Davis, 2000). Venkatesh (2000) went on to modify TAM-2 by arguing that such external variables that was introduced in TAM-2 could influence both Perceived Usefulness (PU) and the Perceived Ease of Use (PEOU); which directly influence the attitude towards using and the intention to use newly introduced IS or ERP systems in a particular organisation.

The researcher believes that TAM as well as its extended versions are not the most suitable theoretical model to be adopted for this research because it concentrates on the sole centralisation of users by which IS and ERP implementation projects are influenced. TAM's high valuation of the user intentions and acceptance of IS or ERP systems undermines other aspects that can have similar influences if not more. The importance of studying user intentions and acceptance is very much appreciated but other factors are

equally capable of influencing the outcome of implementing IS or ERP systems in organisations.

As mentioned in the previous chapter of this thesis (see section 2.3.), the organisational context is capable of directly influencing the efficiency of the ERP implementation process (Huang and Yasuda, 2016; Mitra and Mishra, 2016, Rabaa'i 2009). Another aspect that had been investigated in the literature of IS/ERP systems is the power dynamics and the political aspects that usually unfold during IS/ERP implementation projects (Silva and Fulk, 2012; Mobashar Hossain *et al.* 2011). Such aspects tend to be given less importance when adopting TAM as the theoretical framework for a particular research. However, as the researcher believes that in order to critically analyse such aspects of a particular ERP implementation project, TAM would fail to give this research the depth needed to rigorously investigate such issues.

Other researchers on IS/ERP implementation brought in a range of social and organisational theories in order to explain and critically analyse issues that unfold during the introduction of such systems. Theories such as Giddens' structuration theory, institutional theory and Actor Network Theory (ANT) had been widely cited in the IS/ERP implementation literature (Jones and Karsten, 2008; Elbanna, 2010).

Giddens' structuration theory assumes that the structure and the individuals are mutually constitutive of the social order (Giddens, 1984). The dualistic mutual participation of constituting the social norm between the structure and the individuals cannot be separated (Jones and Karsten, 2008). Giddens's structuration theory affirms that the social structure and the individuals are interdependent where the social structure draws on the interactions of individuals but at the same the social structure is produced and reproduced through the reactions of individuals (Walsham and Han, 1990).

Giddens introduced three dimensions for his concept of structuration theory in the form of signification, domination and legitimation while the respective interactions that correspond to each structural dimension are communication,

power and sanctions. Each representing dimension and its corresponding interaction are interlinked with modalities in the form of interpretive scheme, facility and norm (Giddens, 1984; Walsham and Han, 1990).

In the 1990s, Giddens' concept of structuration theory attracted scholars in the IS field who saw great potential of adopting such theory to investigate the implementation of IS in organisations such as Brooks (1997), Karsten (1995), Orlikowski (1993) and Volkoff (1999). However, recent research on the implementation of IS/ERP shifted away from adopting such theory. This was due to its lack of any methodological approach for researchers to follow.

Giddens' structuration theory had been best described as being more of a meta-theory (Walsham and Han, 1990; Weaver and Gioia, 1994) where other theoretical approaches can contribute to expanding it in order to produce a more sufficient concept for analysing a particular setting or context (Walsham and Han, 1990). Even Giddens (1990) stated that his structuration theory lacks the ability to carry out research with a clear conceptual approach; he suggested that researchers should get inspired by the logic of the proposed framework of the theory to develop a context-specific methodological approach (Giddens, 1991).

Giddens' structuration theory had also been criticised for presuming high knowledgeability of all human agents as well as ignoring the consequences of unintended actions by human agents (Jones and Karsten, 2008). Another criticism of Giddens' structuration theory is the fact that it tends to ignore the impact of technological artefacts on the structure and it is not clear where technology sits within the proposed structure (Jones and Karste, 2008; Poole and DeSanctis, 2004). As this research was meant to investigate power related issues of an ERP implementation project and its overall impact on the outcome, the researcher believes that the technological artefacts play a major role in the overall impact of the project under study and that their significant relationships with other agents contributed to the outcome of that particular project. Since the significant impact on technological artefacts is not best described using Giddens' structuration theory, it had not been adopted for this research.

However, there have been a few attempts to propose a technology-related methodological approach to Giddens' structuration theory such as the work of DeSanctis and Poole (1994). What they called the Adaptive Structuration Theory (AST) was based on Giddens' structuration theory but it was specifically developed to tackle the impact of technology in organisations. Their theory was centralised on investigating the change process that occurs during the introduction of a new piece of technology into a particular organisation.

AST is meant to investigate the change process by placing the introduced technology in a structure and the emerging structure that unfolds as a result of human interactions in response to the introduction of that piece of technology. The duality aspects of human interactions and the technology structure had also been brought forward from Giddens' structuration theory to AST where technology enforces the adaptation of human agents while human agents' reactions to such enforcements force the technology to move into a specific direction based on those reactions (Roh and Hong, 2015).

Shifting away from Giddens' structuration theory, the AST pioneers identified technology as a viable artefact which directly influences the structure of a particular organisation by interacting with users and implementers. Shaping the structure of a particular organisation is manufactured through the interactions between technology, users and the technology implementers (Roh and Hong, 2015; DeSanctis and Poole, 1994).

However, AST fails to some degree to investigate the reactional intentions of human agents to the newly introduced piece of technology. As explained by Leonardi *et al.* (2016), AST does not distinguish between the emerging reactions and the intended reactions of human agents to newly introduced pieces of technology. Intentions of human agents and artefacts have been explained as being central to the formation of power relation (Foucault, 1978). According to Digeser (1992), the concept of power from the Foucault's point of view is that power is transported through the interactions of intentions and objectives.

As far as this research is concerned, such interactions of intentions between different types of actors are crucial to its outcome. As this research intended to investigate such power relations that unfolded during an ERP implementation project, AST does not offer the research a great deal of investigation. Therefore, the researcher reached a decision not to adopt AST for this research.

Other theories such as the institutional theory provided the IS field with an alternative way of providing in-depth analysis. According to Currie (2011), the different versions of institutional theory (such as neo-institutional) shared a common concept in the IS field; which is that the IS adoption in organisations is influenced by institutional pressure such as governments rules and regulations as well as by the business processes embedded in the IS. Such pressure directly influences different organisational actions; one of these actions is to align the organisations business process and structure to fit the IS.

However, institutionalism approaches for analysing the adoption of IS in organisations usually adopts the bird eye view of organisational actions. Such actions should be investigated in greater detail in order to understand how and why such actions occurred during the adoption of IS in organisations (Hasselbladh and Kallinikos, 2000). As this research investigates the intentions behind actions of human agents in a specific organisation; and at the same time, it investigates the intentions behind actions of an introduced piece of technology, institutionalism approach provides very little to that respect.

Institutional theory fails to place technology as an actor amongst other actors in the case under study; which in return provide a very shallow version with regards to the capability of artefacts of enforcing their intentions on other actors through the embedded policy and procedures within (Hasselbladh and Kallinikos, 2000). By placing the technology right in the mix (i.e. recognised as being an actor), this research is able to provide deep investigation on human agents' and artefacts' reactional intentions during the introduction of the ERP systems under study.

Actor Network Theory (ANT) offers a different account of social investigation that is technologically oriented. It considers non-human actors as active as human ones within a specific network and considers the former as being capable of interacting with the latter. Although it lacks explaining intentional and political aspects of the case, the researcher believes that it provides this research with a strong ground to stand on.

ANT and its adoption in IS and ERP implementation is explained further in the next sections (see section 3.3. and sub-section 3.3.1. for more details). However, due to ANT's lack of explaining intentional and political aspects, this research embedded Foucault's analysis of power within ANT. The close relationship between ANT and Foucault's analysis power as well as the importance of embedding Foucault's analysis of power within ANT to the ERP disciplines is also explained in sub-section (3.3.2.).

### **3.3. Actor Network Theory**

The early eighties witnessed the birth of Actor Network Theory (ANT). ANT evolved out of social studies of science and technology (Hanseth *et al.*, 2004; Law, 1992), through the work of Callon (1986) and Latour (1987) at L'Ecole des Mines in Paris. They contributed to social studies of science and technology by introducing a theory that was capable of tackling the explanation of complex networks in a scientific form (Williams-Jones and Graham, 2003). According to Callon (1986), ANT is a way to explain and interpret social and technological developments, without being technically or socially focussed. This means that human and non-human elements can be named as actors or actants within the same network in a heterogeneous manner.

By deploying ANT, scholars were able to include actors in the form of people, machines, animals, texts, money, architectures or any other non-human elements that are worth adding to the network under study (Law, 1992). According to Law (1992), societies of humans would not make sense unless the heterogeneity of the social networks is characterised and explored deeper.



Characterising and exploring such social networks is meant to unveil the “*patterned networks of heterogeneous materials*” (Law 1992, p. 381).

According to Couldry (2008), Actor Network Theory (ANT) is a theory which describes social order by introducing a network of connections between human and non-human agents. This means that human and non-human elements are meant to interact with each other intentionally in a socio-technical network. Each element of a particular network has a different role in the same network, which means that there are no fundamental differences between human and non-human elements.

By adopting ANT, scholars are able to consider humans and non-human elements as being equally capable of agreeing or disagreeing about various issues that are related to a particular network (Pouloudi *et al.*, 2004). This means that any actor within the network is capable of influencing other actors by forming alliances or by enrolling other actors to support their thoughts or beliefs on a particular matter. This can occur, for instance, when human actors enrol or form alliances with non-human ones (artefacts or machines); so that they both can strengthen their shared beliefs regarding a particular issue. Such alliances can empower their shared views over other views of other actors in a particular network of actors (Mahring *et al.*, 2004).

Actor Network Theory (ANT) contributed to changing the epistemological norms by removing the distinctions between subject and object, culture and nature, or society and technology (Law, 1992). This means that actors within a particular network, whether human or non-human, are equally capable of participating in a particular social network by developing relations with other actors. However, the existence of such participations is only possible due to the production of sets of relations that develop during the course of unfolding a particular actor-network (Singleton and Michael, 1993). According to Singleton and Michael (1993), actors' relations with each other can change over time due to change of views on certain social or political matters.

To explain further the importance of using ANT as a way to explain complex networks, Goguen (2003) used an example that entailed explaining how Isaac Newton was not the only actor who founded the Theory of Gravitation. Instead, he had rather many actors with him that contributed to the foundation of the theory. Actors within the network of the theory of gravitation included John Flamsteed, who performed the role of data observation. In addition, Isaac Newton needed Edmund Halley and his teammates at the Royal Society for publication support. The Geometry of Euclid, the astronomy of Kepler, and machines of Galileo, as well as rooms, labs, and food at Trinity College all collectively contributed to the foundation of the theory due to the fact that they were part of its network.

Law (1992) provided the body of knowledge with another example to explain the process of developing actors within a particular network. He explained how he speaks to the readers of his paper through text, although he and the readers will probably never meet face-to-face. Law (1992) went on to explain that such communication is conducted through a network of humans and objects such as the computer, the paper, printing press and postal services. According to Law (1992), such a network participates collectively in shaping the social system by overcoming the boundaries hindering the readers from reading his text. Such a participative network is crucial to interconnect the social relationship between him (as an author) and the readers of his paper.

Human beings construct a social network not only with other human beings but also with other artefacts and materials. Similar to human beings, artefacts and materials have preferences of interacting with each other as well as interacting with human beings. Such collective interactions form the heterogeneity of the social network (Latour, 1999). This means that artefacts and materials should be considered as part of the social order. If artefacts and materials are taken out of the network, humans would not effectively change the social order of things, or as Law (1992) puts it with respect to the above mentioned example, *“If you took away my computer, my colleagues, my office, my books, my desk, my telephone I wouldn't be a sociologist writing papers, delivering lectures, and producing knowledge”* (p. 383-384). This means that human agents of the

social networks are part of their social network because each human agent “*inhabits a set of elements... that stretches out into the network of materials*” (Law, 1992, p. 384).

Latour (1999) explained ANT further by stating that it tends to study society in a local setting. This means that ANT is able to explain the morality and intentionality of actors in a subjective fashion. Through ANT, researchers are able to alternate between the social orders that are drawn out of a society and the unpredictable actions of individuals that contribute towards the social order of a particular society. By deploying ANT for their research, researchers are also able to overcome the obstacles of explaining a society in its traditional sense. This means that ANT is able to “*zoom from global to local and back*” (Latour 1999, p. 18) as well as setting free the belief that there is “*nothing that is especially local and nothing that is especially human*” (Latour 1999, p. 18) in a particular social setting. Latour (1999) called this position of the actor ‘*interobjectivity*’.

Callon (1986) introduced three principles which should be considered when deploying ANT for research purposes. The first one is *agnosticism*, which means that each actor, human or non-human, that is involved in a network, should be considered as an independent entity within it, and therefore analysed accordingly. The second principle is *generalised symmetry*, which means that ANT is meant to describe the different viewpoints of actors using the same wordings regardless of whether that actor is human or non-human. The third and the final principle is *free association*, which means that technical, social and natural actors are not supposed to be distinguished and should be treated equally.

Callon (1986) proposed the development of an actor-network, which is also called the *sociology of translation*, into four phases (moments). The first phase is called the *problematization phase*, where certain actors define and initiate the problem together with finding the right solution for it. Those actors can then form different roles as well as giving out identities for other actors in the network. The second phase, as explained by Callon (1986), is the *interessement*

*phase*. This phase includes explaining how actors who initiated the first phase persuade others within the network about the benefits of the proposed solution of such a problem, as well as providing an explanation of how such a solution can be beneficial to them when they become part of this network. In this phase, the actor who initiated the problem tries to form as many alliances as possible to persuade others to join the proposed solution for that problem, which eventually strengthens the overall view of such a proposed solution across the network.

The third phase, according to Callon (1986), is the *enrolment and support of actors phase* to join such a proposed solution for the problem. Actors, who are keen on such a solution, get enrolled into the network under study by agreeing to take part in it. They then can be given a satisfactory role in this actor-network. Newly enrolled actors can then empower the network by persuading (and negotiating with) non-enrolled actors to convince them to become part of the proposed solution.

The final phase, according to Callon (1986), is the *mobilisation phase*, where the actors who initiated the solution make sure that allied actors are still convinced by, as well as fully supporting, the initial solution and that their opinions have not changed over time. When enrolled actors mobilise, the actor network reaches the stability stage. An actor network can only be called stable when the solution becomes well established and empowered by the vast majority of actors who constituted this network. However, the above mentioned phases do not usually go as smoothly as initiators expect them to. Actor networks require plenty of effort, hard work and stamina to achieve stabilisation. Some processes might fail, half way through, before the achievement of the optimised result.

However, there are some issues that researchers should be aware of when identifying the actors in a network under study. Researchers are warned to make sure to draw a line as far as introducing actors is concerned. That is because introduced actors in a particular network can lead to endless ramifications which can lead to a much harder task as far as the deployment of

ANT as an analytical tool is concerned (Law, 1992). In order to tackle this issue, Law (1992) introduced a notion that he called *punctualisations*, which means that researchers who deploy ANT for their research ought to find a way to draw a line around their heterogeneous network for simplification purposes. According to Law (1992) “*punctualised resources offer a way of drawing quickly on the networks of the social without having to deal with endless complexity. And, to the extent that they are embodied in such ordering efforts they are then performed, reproduced in and ramify through the networks of the social*” (Law 1992, p. 384-385).

This research adopted the punctualisation notion by introducing only the most influential actors to the ERP implementation project under study in order to minimise the risk of blowing the research out of proportion, which can lead to making it harder for the reader to comprehend the already complex situation.

### **3.3.1. Actor Network Theory (ANT) in IS and ERP implementation research**

ANT is one of the well-established theories that enriched the understanding of IS because it tends to further describe the systems under study by perceiving them as social systems rather than perceiving them as being solely technical systems (Cho *et al.* 2008; Lewis and Townson, 2004). Mitev (2009) reflected on her inspiration to use the Actor Network Theory (ANT) for her PhD research on explaining and analysing a failed IS implementation project in the French Railway. According to Mitev (2009), ANT provided her with an effective platform for analysing human individuals and non-human artefacts in a ‘non-dualistic’ manner.

ANT has the ability to negotiate the processes of where different actors within a network are interlinked and how they can transform each other (Hanseth *et al.* 2004). According to Lee (2001), ANT provides the IS field with a unique way of explaining a certain phenomenon by interlinking the social system with the technical one; which means that non-human artefacts are not ignored but should be thought of as active entities that have the capability of changing the

conception of the phenomenon under study (Mitev, 2009).

Non-human actors should be seen as interlinked and closely associated with the social systems; they should be seen as essential entities that complete the social system (Law 1986). ANT enriched the IS field by providing a vital bridge between the social and the technical systems in order to assist in analysing and understanding a certain phenomenon (Lee, 2001). ANT is capable of harmonising the divisions between different sets of actors within a community or a society, such as the division that usually occurs when discussing global against local issues, and macro against micro issues (Elbanna, 2012). ANT affirms that sociotechnical matters should not be fixed to a certain scale, where for example global and local meanings are not rigid to its meaning, and that actors have the ability to transform them according to their needs and interests (Latour, 1991).

The adoption of ANT in the IS and ERP implementation had been widely used. Elbanna (2007) analysed the implementation of ERP in an international organisation by applying ANT to investigate the concept of integration as well as exploring the relationship between ERP and the setting in which it was being applied into. Bloomfield and Vurdubakis (1997) deployed ANT in the design and the development of Information Systems in the National Health Service (NHS). Their deployment involved the usage of stabilisation and destabilisation of the actors within their developed network of actors.

McGrath (2001) investigated how forces of the environment influenced an IS implementation project by deploying ANT's concepts of translation, enrolling and mobilising of actors who were supporting environmental issues during a period of organisational change. McGrath (2001) linked global and local matters that influenced an IS implementation project. Elbanna (2009) examined the concept of local and global context that ANT can offer by investigating the abandoning of best-practice "project's boundaries" for an ERP implementation project in a multinational organisation.

Marres (2004) examined a web portal of IS which was originally adopted by the World Bank but eventually clashed with the bank's interests. The analysis of Marres (2004) involved the adoption of ANT to identify and explain the alliances that were developed during a specified period of time. Adams and Berg (2004) adopted the black box notion of ANT to investigate the reliability of health information websites on the Internet; whilst Mahring *et al.* (2004) examined the introduction of a computerised baggage handling system at Denver International Airport by embedding the escalation theory within ANT. Mahring *et al.* (2004) proposed the addition of new phases to the network of actors such as *host networks* and *Trojan networks* as well as introducing what they called *swift translations* for their proposed *Trojan networks*.

Lyytinen and Newman (2015) adopted ANT to investigate the alienation of users during two ERP implementation projects. In their investigations, they explained how users were marginalised ('black boxed'). Although the ERP implementation had been declared successful, in the real world, users adopted techniques such as shadow systems and work-a-rounds in order to efficiently use the implemented ERP systems. Forming different networks of the cases under study and their introduction of a range of alliances provided in-depth analysis of the analysed cases.

Petrakaki and Klecun (2015) used Callon's (1986) sociology of translation to analyse the local customisation of Electronic Patient Record in the NHS context. They demonstrated through the adoption of ANT how the clashes between healthcare professionals and IS implementers disrupted the implementation process. Healthcare professionals argued that due to clinical safety, certain customisations to the software were necessary; while the IS implementers opposed making such customisations and they backed up their argument through the use of their technical expertise.

Pollack *et al.* (2013) adopted ANT to analyse the implementation of a Project Management Information Systems (PMIS) in three different organisations. Their research involved adding the PMIS as an actor with practitioners and researchers in the same network. They criticised researchers in the IS field for

their on-going assumption that PMIS is being implemented in organisations to act solely like a project control. They demonstrated how the actor network of practitioners/researchers and PMIS allowed other networks to stabilise and develop. According to them, new users in organisations were able to learn new project management techniques that were helpful to understand and use the newly implemented PMIS.

Cecez-Kecmanovic *et al.* (2014) analysed a case study using ANT in order to investigate the variations of success and failure of an IS project amongst different actors of the actor-network. They adopted the performative perspective to explain how the degree of success and failure is performed by agencies of assessment that offered different degree of success and failure. Their analysis included introducing the notion of ontological politics (Law, 2004) which means that the emergence of actor-networks and its socio-material practices are not given but they are enacted and re-enacted possibly for political reasons.

Dery *et al.* (2013) adopted ANT to investigate the relationship between IT-enabled HR and an HR function during an IS implementation project. They concluded that ANT helped in gaining deeper understanding on the outcome of the implementation of the project. Nguyen *et al.* (2015) adopted it to investigate the people/technology relationships during the transition from paper to electronic patients' records in an Australian nursing home. It was mainly concerned with explaining the complex interaction amongst actors such as the residents, nursing staff, paper-based patients' records, other existing Information Systems, IT team, GPs, hospitals and pharmacies.

Heeks and Stanforth (2015) reconfirmed the in-depth aspects of adopting ANT for a technological change environment. They used ANT's moments of translation to investigate the black-boxed actions of certain actors in the context of Sri Lanka's public sector. They concluded that ANT can offer the IS field with unique insights such as the formation of socio-technical structure, the interactivity of technology and the explanation of interests.



Research of ANT in the IS/ERP discipline needs to draw more attention to political aspects of actors. In fact, ANT had been criticised for paying little attention to political and intentional issues that unfold and are inert-communicated amongst actors of a specific actor-network. The next section is dedicated to investigating the debate on ANT and its lack of paying attention to political, moral and intentional aspects.

### **3.3.2. Criticism of ANT regarding the analysis of power related issues**

There has been some criticism of ANT, particularly on issues of power. ANT's lack of attention to issues of power had been a point of debate amongst scholars ever since it had been developed by Callon, Latour, and Law. The criticism included its lack of paying attention to morale and political issues (Walsham, 1997).

Winner (1993) criticised social constructivism (which is the general term that is used to refer to theories such as ANT) by questioning the core principle of developing social groups in social constructivism. Some of the questions put forward by Winner (1993) included; *“who says what are relevant social groups and social interests? What about groups that have no voice, but that nevertheless, will be affected by the results of technological change? What of groups that have been suppressed or deliberately excluded? How does one account for potentially important choices that never surface as matters for debate and choice?”* (p. 369)

Winner (1993) went on to explain that social constructivists, including those who pioneered ANT, *“offer an account of politics and society that is implicitly conservative, an account that attends to the needs and machinations of the powerful as if they were all that mattered”* (p. 369). Social conservatism and ANT lack the ability to demonstrate the observation of the less powerful social groups that had been excluded by the more powerful groups (Winner, 1993). Such views do not pay particular attention to the political issues, which in return can hinder researchers from explaining the power related views of the social actors involved (Winner, 1993).

Latour (1991), one of ANT's pioneers, defended such shortfalls of ANT in terms of its lack of politically analysing actor-networks. He stated that the accusation of the lack of political and moral analysis *"makes no more sense... because refusing to explain the closure of a controversy by its consequences does not mean that we are indifferent to the judgement that transcends the situation"* (P. 130).

Latour (1991) went on to explain that *"network analysis does not prevent judgement any more than it prevents differentiation. Efficiency, truth, profitability and interest are simply properties of networks, not of statements. Domination is an effect not a cause. In order to make a diagnosis or a decision about the absurdity, the danger, the morality, or the unrealism of an innovation, one must first describe the network. If the capability of making judgements gives up its vain appeals to transcendence, it loses none of its acuity"* (p. 130).

However, Walsham (1997) seems to find the above quote somehow problematic because he believed that as well as describing the network, moral and political analysis of the network should follow in order to provide the research with a deeper understanding of power and moral stances of the network under study; according to him, ANT *"does not offer explicit help in that area"* (p. 475). He then concluded that IS researchers should use ANT for analysing their case studies as long as it is complemented with other social theories and that moral and political issues are not best described using ANT on its own but they rather *"need to draw from other areas to supplement the theory"* (p. 477). This research contributes to knowledge by addressing what Walsham (1997) had identified.

It was argued that Foucault's analysis of power is capable of complementing ANT by providing the necessary tools to respond to the criticism that was aimed at ANT (Underwood, 1999; Fox, 2000; Doolin and Lowe, 2002; Law, 2009; Mathewman, 2013). ANT's lack of analysing political and moral issues of a particular actor-network can be complemented with Foucault's analysis of power in order to enhance the analysis of a particular case; that is, by

investigating the political intentions of actors for conducting specific actions in the case under study.

Law (1992) who is one of the pioneers of ANT, confirmed the closeness between ANT and Foucault's analysis of power; while Elbanna (2012) explained how Foucault's analysis of power tends to agree with ANT, in the sense that they both conceive the actions of agents as something that is not possessed by a certain group but is rather exercised through a complex relationship in a specific setting.

Scholars like Underwood (1999), Fox (2000) and Matthewman (2013) have incorporated Foucault's analysis of power within ANT. Underwood (1999) incorporated Foucault's theory of discourse within ANT in order to explain a project of constructing an online flexible teaching and learning environment. The outcome of the research found that blending Foucault's theory of discourse with ANT provided an effective tool to describe IS development.

Fox (2000) incorporated Foucault's analysis of power within ANT in order to critique the theory of Community Of Practice (COP) constructively. The main contribution of Fox's research was to affirm that ANT, Foucault's analysis of power and COP can enrich each other in order to gain deeper understanding of organisational learning. Matthewman (2013) reviewed the work of Foucault's technological thinking and his influence on ANT. Matthewman (2013) concluded his research by affirming that ANT cannot be understood without understanding Foucault.

However, none of the above mentioned scholars have incorporated ANT with Foucault's analysis of power to investigate an ERP implementation project. As it had been demonstrated in the ERP implementation literature, power related issues require further investigations (Horton 2003; Dhillon 2004; Doolin 1999; Maguire *et al.* 2010).

As mentioned in the literature that ERP implementation projects are considered to be very complex processes (Ko, 2014; Ngai *et al.* 2008; Swan *et al.* 2000),

as well as being very costly (HassabElnaby *et al.* 2012; Su and Yang, 2010). The average cost of such projects for the period between 2010 and 2014 reached approximately £3.8 million with more than half of those projects exceeding their planned budget (Panorama Consulting Solutions, 2015). According to the latter report, even though organisations pay a large sum of money to implement an ERP solution, more than half of those organisations have only received 50% of their desired return on investments. According Kraemer (2012), more than half of ERP implementation projects failed to deliver the desired outcome of ERP systems. This led Koch and Wailgum (2007) to believe that there are significantly high failure rates of ERP implementation projects.

Research for the past two decades on ERP implementation investigated the reasons for such failures with most scholars offering Critical Success Factors (CSFs) for such implementations (Holland and Light, 1999; Somers and Nelson, 2001; Finney and Corbett, 2007; Dezdar and Sulaiman, 2009; Saini *et al.* 2013; Beheshti *et al.* 2014; Abu-Shanab *et al.* 2015). The criticisms that had been cited in the literature about their practical inapplicability and their lack of depth inspired other researchers to find alternative ways of investigating ERP implementation projects in organisations.

Alternative research in the ERP implementation discipline investigated issues such as the impact of the organisational context on the implementation process (Law and Ngai, 2007); and the need to align the business processes with ERP procedures (Panayiotou *et al.* 2015) and the vital role of ERP implementers' and users' relationship on the outcome of ERP implementation projects (Metrejean and Stocks, 2011).

Going through the literature, the researcher noticed that there are many relationships that tend to unfold during ERP implementation project. One of these relationships which had been referred to as the ERP implementers' and the users' relationship had been cited in the literature and its vital role in maximising the outcome of the ERP implementation (Metrejean and Stocks, 2011). Such relationship had been seen as a power and knowledge relationship

(Pozzebon and Pinsonneault, 2012); in the form of being exercised and exchanged amongst members of both parties during ERP implementation project. This form of power relationships had been acknowledged by other researchers in the ERP implementation discipline such as (Coelho *et al.* 2015). Other researchers noted that organisations should perform on-going monitoring and control over ERP implementers throughout the ERP implementation process to ensure that the objectives of the organisation are being pursued; not their own interests (Chang *et al.* 2013).

Other forms of power relations that unfold during ERP implementation project could include the relationship between organisational structure & culture and the ERP's 'best practice'. For instance, the misalignment of existing business process and organisation structure with the ERP system's business process and structure can cause undesired disruption to the ERP implementation project (Morton and Hu, 2008; Soh *et al.* 2003).

All the above relations that unfold during the ERP implementation create a network of relations. In order to explain the influence of such network of relations on a particular ERP implementation project, the use of a theoretical perspective such as ANT offers deeper understanding on the impacts that could cause the ERP implementation to go into a downturn (Mitev, 2009; Lee, 2001). Given ANT's recognition of artefacts as being active entities and that they have the capability of making certain changes to a particular ERP implementation project (Mitev, 2009), actors such as ERP's 'best practice' and the organisation structure can be conveniently introduced amongst other actors in a non-dualistic manner.

However, as power relations are important to investigate the intentions of actors, political issues should be investigated as part of the actor-networks analysis. Foucault's analysis of power can provide this vital investigation; as it can provide a particular case with politically-oriented insights that are worthy of invigorating power related issues that influence the ERP implementation process. As Foucault's analysis of power lacks the methodological stance (Graham, 2005) that ANT possesses, and as ANT lacks the political

investigation that is required to gain deeper understanding of ERP implementation projects, the researcher believes that they both can equally complement each other (Law, 1992; Elbanna, 2012).

Inspired by the work of scholars like Underwood (1999), Fox (2000) and Matthewman (2013) who have incorporated Foucault's analysis of power within ANT, and given the fact that their work have not investigated power related issues in an ERP implementation project. This research contributes to knowledge by incorporating Foucault's analysis of power within ANT in order to investigate the power relations of an ERP implementation project. The researcher believes that such incorporation can add to the body of knowledge a vital way of investigating power related issues that can negatively influence the ERP implementation project.

The next section explains the different forms of analysing power as well as thoroughly explaining Foucault's conception of power that was adopted for this research.

### **3.4. The analysis of power**

The literature on power related issues provides a range of different techniques and theories to analyse power. According to Howcroft & Light (2006), most of the literature on power related issues focuses on overt power. Overt power usually means that arguments that arise between two different parties within a specific context are always won by one side over the other. The perception of power in most of the literature assumes that power is something that is owned. This perception has always viewed power as something that is being practised in a top-down manner, i.e. power of the masters over their slaves, managers over their employees and parents over their children. Marxist theorist Louis Althusser, as well as most other Marxist theorists, had always considered power as being power of the oppression, where for example the State oppresses individuals within a particular context (Mills, 2003).

Lukes (1974) developed three dimensions of power; two of those dimensions were drawn out of Dahl (1957) and Bachrach and Baratz (1970). The first dimension viewed power as the ongoing actions of one agent which constantly changes the behaviour of another; whereas the second dimension views power as the intentional set up of rules and regulations to constantly benefit certain groups over others (Isaac, 1987). Even though Lukes seemed to have acknowledged other forms of power to the extent that he agreed with Dahl, Bachrach and Baratz; he believed that another dimension of power should be added. He introduced the third dimension of power to complement the previous two. According to Lukes (1974) the third dimensional power is when one agent or a group of agents influence another agent or another group of agents to shy away from their interests.

Clegg (1989) criticised Lukes's approach of analysing power due to its presumption that reasons are solely based on intentions. Markus and Bjorn-Andersen (1987) added to Clegg's criticism by arguing that different interests within a network of power should be identified and attributed. They also argued that Lukes's three dimensional view of power ignores the notion of power as being seen as a set of interlinked relationships. As this research tended to investigate the different interests amongst an array of actors that were involved in the case under study, the above criticism of Lukes three dimensional power clearly demonstrates that it was not the right technique to adopt.

Clegg (1989) developed a model to analyse power which he called the Circuits of Power. It consists of three distinct circuits; episodic, dispositional and facilitative. The episodic circuit entails investigating power of agents through their daily communications, conflicts and resistance. The dispositional circuit entails the rules, regulations and the norms that legislates the context. The facilitative circuit represents the organisational, environmental, technological aspects that can empower agents to practice their powerful stances. Even though the three circuits are independently attributed, some form of interactions takes place and that such interactions enable or disable the empowerment of agents.

Even though the plausibility of Clegg's circuits of power is apparent based on the fact that it recognises the impact of micro and macro issues in the power domain, it is the complexity of the circuits that makes it somehow problematic for adoption on investigating power issues in a specific setting (Boje and Rosile, 2001). The researcher believes that such complexity would confuse the investigation process of the case under study; thus, it was not adopted for this research.

Foucault's analysis of power has taken a different approach. Foucault developed his technique of analysis by raising questions that are related to investigating the means that constitute the exercise of power and its effects, rather than adopting the classical methods of understanding power in the form of defining it or attempting to identify its location (Smart, 2004).

According to McHoul and Grace (1993), Foucault criticised other contemporary scholars who attempted to analyse power due to their perception of power as being the relationship between the state and the individuals, which, according to Foucault, underestimates the range of other relations of power that exist in a particular society, and that this underestimation has led to leaving mechanisms of other relational connections and consolidations unexplored (McHoul and Grace 1993).

Foucault strongly believed that power should not be thought of as something which can be possessed by a dominant group, government or state, neither is it bound to be owned by a certain political or social institution (Dreyfus and Rabinow, 1983; Smart, 2004) nor should it be thought of as a structure or strength that someone is tied to (Danaher *et al.*, 2005). Foucault also believed that power cannot be thought of as simply being the relationships between the oppressed and oppressor, but rather should be thought of as a set of interlinked relational social systems, where individuals are their driving forces which comes from within. According to Foucault (1980), this can be achieved by for instance resisting the power of oppressors; oppressed individuals develop a relational power system.



Foucault (1978 and 1980) also argued that analysing power should include such resistances as part of the system of power and therefore in order to efficiently analyse those interlinked relational systems of power, researchers ought to investigate the various struggles of the system of power. Foucault believed that power resistance from the oppressed individuals within a society, needs to be added into the analysis as it can have a major force in re-shaping the systems of power (Mills, 2003).

Foucault (1978) explained this further by questioning the essence of the sovereignty power; to that respect he stated that “*power must not assume that the sovereignty of the state, the form of the law, or the over-all unity of a domination are given at the outset; rather, these are the only terminal forms of power takes*” (p.92-93). Power according to him is not just the one directional state-people power relation. He states in the above quote that the sovereignty of the state and the law are different types of power terminals.

Foucault sees power as multi-directional and it is directly communicated amongst different types of agencies through confrontations and struggle. To that respect, Foucault (1978), stated that power is “*the multiplicity of force relations immanent in the sphere in which they operate and which, through ceaseless struggles and confrontations, transforms, strengthens or reverses them; as the support which force relations find in one another, thus forming a chain or a system*” (p. 92-93).

In the latter quote, Foucault believed that power is a multiple forces of relations that are communicated amongst agents through different types of struggles and confrontations which can be best described as a chain of power relations or a system of power relations. Foucault (1978) went on to stress the importance of free-localising power and to that respect he stated that power “*comes from everywhere... and it is the name that one attributes to a complex strategical situation in a particular society*” (p. 93).

Two years later, Foucault (1980) elaborated further by explaining his view of analysing power; “*power must be analysed as something which circulates, or*

*rather something which only functions in the form of a chain. It is never localised here or there, never in anybody's hands, never appropriated as a commodity or piece of wealth. Power is employed and exercised through a net-like organisation... individuals are the vehicles of power, not its point of application"* (p. 98).

From the previous quote, it is apparent that Foucault concentrated his analysis of power on the relationships between social structures, institutions and the individual. His work involved analysing the effects of various institutions on individuals from within and the role of those individuals in affirming or resisting such effects. His focus was primarily concerned with perceiving individuals as being active subjects, who possess power from within themselves, and as a result they should be perceived as agents who have the will to enact or contest power in a particular society (Mills, 2003).

Foucault (1980) explained this further by giving an example from the context of revolution: *"the State consists in codification of a whole number of power relations which render its functioning possible and ... Revolution is a different type of codification of the same relations"* (p. 122). The State, as being the power oppressors, structures various relations in a particular society, and these relations between individuals drive the political system in the desired direction. Revolutions, however, are initiated from those same individuals but it is rather driven in another direction (Mills, 2003).

To explain Foucault's analysis of power further, Danaher *et al.* (2005) provided an example about how newspapers in the West perceived the former Soviet Union's presidents, such as Gorbachev. They had always thought of them as possessing absolute power but in reality, Gorbachev's decisions, for instance, had always relied on negotiations with members of his party, the army, secret services, diplomats, etc.

When Gorbachev attempted to reform the Soviet system, he had to win over the views of all these parties. As soon as these relationships of power broke down, Yeltsin took over by becoming the president of a newly formed country,

'Russia'. Gorbachev, at that moment, switched instantly from being one of the most powerful men on the planet to being no one. This actually shows that power moves around; and as Danaher *et al.* (2005) explained, even Yeltsin could have stayed in control of Russia as long as he had the support of business, media, and foreign government figures.

In one of Foucault's writings on power, he seems to have come to terms with the fact that his analysis of power should be conceived as a set of "*complex strategic relationships in a particular society*" (Foucault 1978, p. 93). Power, according to Foucault, develops out of manoeuvres, tactics, techniques and functioning; that result in the development of power relations which invest in individuals and are transmitted through them (Smart, 2004). According to Foucault (1978), "*power is exercised from innumerable points, in the interplay of non-egalitarian and mobile relations*" (p. 94).

Foucault (1978) went on to explain that relations of power are embedded within other types of relationships, such as economic, knowledge, etc. However, he stressed that relations of power are "*not in super-structural positions, with merely a role of prohibition or accompaniment; they have a directly productive role, wherever they come into play*" (p. 94).

Foucault attempted to put his concept of power analysis into practice by explaining the relationship between power relations and the strategy of struggle and confrontation (Foucault 1982) "*Every power relationship implies a strategy of struggle, in which two forces are not superimposed, do not lose their specific nature, or do not finally become confused. A relationship of confrontation reaches its term when stable mechanisms replace the free play of antagonistic reactions*" (p. 794-795).

Foucault (1982) went on to explain that the strategy of struggle creates the relationship of power through a series of confrontation (and its consequences) between two independent forces (agents). The strategy of struggle created by a particular agent brings instability to the power relation with a unique aim of winning over other opposing strategies. Foucault (1982) went on to explain domination by stating that "*Domination may only be the transcription of a*

*mechanism of power resulting from confrontation and its consequences. A relationship of struggle between two adversaries is the result of power relations with the conflicts and cleavages they engender”* (p. 794-795).

These thoughts that had been put forward by Foucault above inspired the researcher to attempt the development of a concept for analysing power by incorporating it with ANT. The researcher intends to use it as the baseline for incorporating Foucault’s view of analysing power into ANT in order to conceptualise the notion of ‘*ANT-Foucault*’.

According to Elbanna (2012), ANT perceives power as something that does not belong to any of the actors but rather resides with the network of actors in which it operates. Elbanna (2012) affirmed the stance which argues that ANT agrees with Foucault’s notion of power by claiming that it is an “*end result of a complex mesh of relations and not a given a priori*” (p. 120). In Chapter 7 of this research, the researcher explains how Foucault’s analysis of power can be incorporated into the well-established ANT in order to pave the way for bringing forward the proposed concept of ‘*ANT-Foucault*’.

### **3.5. Foucault’s analysis of power in IS and ERP implementation research**

Ye *et al.* (2012) conducted a review of research on power relations in IS implementation projects. According to them, Doolin (2004) adopted Foucault’s analysis of power for an IS implementation in a hospital in New Zealand. The proposed IS was meant to monitor physicians’ activities in order to reduce cost. Doolin (2004) used the case study to explain how physicians had managed through their resistance to contribute to the unsuccessful implementation of the newly introduced IS.

Doolin (2004) explained how power relations that are embedded in the social system contributed to the unsuccessful implementation of IS. Doolin (2004) concluded that the social context or the culture should have been changed prior to the initiation of the IS implementation process. Alternatively, there should

have been negotiations with the groups that were involved in the implementation process. Doolin (2004) recommended analysing power relations prior to the initiation of IS projects in order to minimise the level of failure for such projects.

Berente *et al.* (2010) adopted Foucault's power analysis to investigate an ERP implementation project. They concluded that organisations should be cautious not to base their overall objective of the ERP implementation to be solely for sake of control or what they'd called 'dressage-as-control'. Ball and Wilson (2000) adopted Foucault's analysis of power to analyse the implementation of performance monitoring IS in two financial services. Their findings demonstrated the close relationships between disciplinary power and resistance (Ye *et al.* 2012).

### **3.6. Summary and Conclusion**

This chapter provided the reader with the theoretical aspects relevant to the research. It has also provided background knowledge on Actor Network Theory (ANT) and its adoption in IS and ERP research. Background knowledge regarding power analysis had been brought forward, whilst giving special attention to Foucault's analysis of power. Finally, this chapter has provided the background knowledge on power analysis using Foucault's power analysis in IS and ERP research.

The next chapter is aimed at explaining the research methodologies and techniques that were adopted to conduct the research by identifying and justifying the ontological approach, as well as the epistemological paradigm that was adopted. The research approach is explained, as well as presenting and justifying the adopted research strategy. In addition, it presents the techniques that were used for collecting data, together with presenting and justifying the mode of analysis adopted.

## **4. Research Methodology**

### **4.1. Introduction**

The previous chapter provided the reader with detailed background from the literature on the theoretical aspects that are related to this research. It provided the reader with background information on Actor Network Theory (ANT) and its adoption in the Information Systems (IS) and Enterprise Resource Planning (ERP) disciplines. It also shed some light on the power analysis aspects within the IS and ERP fields, paying specific attention to Foucault's concept of analysing power.

This chapter provides the reader with the research methodologies that were adopted for this research. It includes explaining the variety of research methods and techniques that were used for conducting this research. The chapter proceeds with identifying and justifying the ontological approach that was adopted for this research. It follows on by identifying and justifying the epistemological paradigm that was adopted for this research. Subsequently, this chapter explains how this research was approached.

It follows on by explaining the differences between carrying out a qualitative research study as opposed to a quantitative one. Consequently, it provides the reader with the adopted research strategy as well as explaining the reasons for adopting such strategy. This chapter follows on by justifying the research reliability, validity and validation. Subsequently, this chapter provides the reader with techniques that were used for collecting data. Finally, this chapter explains the modes of analysis that were adopted for this research.

#### **4.2. Research ontology**

Research ontology is mainly concerned with unveiling the view of researchers on the nature of reality. It deals with questions about existence, which involves exploring the assumptions held by researchers in regard to the way in which the world operates and their commitment to a particular set of views (Saunders *et al.* 2008). There are two types of research ontology: objective or subjective (Bryman, 2012).

This research investigated the phenomena under study subjectively. The researcher strongly believes that the reality of the case study exists inside individuals' minds, and that such reality is unveiled only by digging it out of the internal minds of individuals (Cua and Garrett, 2009). Believing that reality exists inside individuals' minds and that the only way to unveil it is by digging it out is one of the major characteristics of the subjective perspective.

According to Saunders *et al.* (2008), subjective reality affirms the fact that "*social phenomena are created from the perceptions and consequent actions of those social actors concerned with their existence*" (p. 110). This research involved studying a social phenomenon (power relations) by investigating the effects of social entities (individuals and artefacts that had taken part in the ERP implementation project under study) on a particular social setting (the organisation under study). The researcher used interviews and other data collection methods (see section 4.8.) in order to dig the social reality out of the concerned individuals' minds by investigating their perceptions and their consequent actions regarding the social phenomenon under study. Such actions are certainly best explained by looking at them subjectively.

#### **4.3. Research epistemology**

Research epistemology focuses on the sort of knowledge that is acceptable in a specific discipline, as well as being able to examine how social aspects can be investigated using the principles, procedures and ethos of natural sciences (Bryman, 2012). As Saunders *et al.* (2008) put it "*research epistemology*

*depends on the researcher's particular view of the relationship between knowledge and the process by which it is developed"* (p. 108).

According to Orlikowski and Baroudi (1991), there are three types of paradigm; positivist, critical and interpretivist. The researcher adopted the interpretive research paradigm to investigate the phenomenon under study. Interpretive research in the IS field is *"aimed at producing an understanding of the context of the Information Systems, and the process whereby the Information System influences, and is influenced by the context"* (Walsham 1993, p. 4-5). Consequently, this paradigm has become more popular in IS research throughout the last two decades (Walsham, 2006). Mingers (2003) surveyed six well respected US and European journals, in the period between 1993 and 2000, and found that 17% of the papers published during that period had adopted the interpretive paradigm, with 8% of them related to IS. There has been a leap in adopting this paradigm in the IS field from the 1980s to the 1990s.

This was clearly demonstrated in the survey that was conducted by Orlikowski and Baroudi (1991). The outcome of the survey demonstrated that during the 1980s, there were only 3.2% interpretive research studies in IS out of all papers that had been reviewed throughout their sampled journals.

In reference to the above mentioned increase of interpretive research in the IS field, the outcomes of some of those studies have had a direct impact on the body of knowledge and the world of business alike. It provided another view of looking at certain issues in relation to Information Systems. Mitev (1996), for instance, investigated the reasons behind the implementation failure of an Information System in the French Railways that was adapted from the American Airlines Reservation System. She explained how contextual, social and organisational aspects had negatively impacted the overall implementation process.

In addition, Elbanna (2012) examined the concept of local and global context that Actor Network Theory can offer by investigating the abandoning of best-



practice 'project's boundaries'. She studied a case study of an ERP implementation project in a Multinational organisation. Also, Mobashar Hossain *et al.* (2011) investigated the ERP systems implementation by consolidating six case studies from organisations in Saudi Arabia that have had an ERP system set in place. They specifically investigated three notions in the form of ownership and governance, scope management and employee empowerment. Their findings demonstrated some deep concerns among high management about losing control over employees who were involved in the ERP implementation process.

The interpretivist paradigm was the most suitable paradigm for conducting this research because it can provide the ability to produce "*an understanding of the context of the Information Systems, and the process whereby the Information System influences and is influenced by the context*" (Walsham, 1993; p. 4-5) as well as investigating the phenomenon under study by translating peoples' different interpretations of the phenomenon under investigation. It assumes that these can be understood only through the development of social construction (Walsham, 1993).

This paradigm does not require identifying variables but rather concentrates on the social relations of a particular issue (Kaplan and Maxwell, 1994). According to Bryman (2012), the interpretivist paradigm argues that the study of people, institutions and/or organisations is fundamentally different from the study of natural sciences, because reflections on people and the social order are given more specific attention than in the natural sciences. According to Myers and Avison (2002), interpretive studies generally investigate phenomena by analysing peoples' different interpretations of the phenomena under investigation. According to Oates (2006), the interpretive paradigm tends to look at "*how people perceive their world individually or in a group and try to understand phenomena through the meanings and values that the people assign to them. The aim is to create a rich understanding of a possibly unique context and an organised discovery of how human agents make sense of their perceived worlds*" (p. 292).

The researcher investigated the phenomenon under study by adopting the interpretive paradigm in order to adequately address the research objectives. Given the previously mentioned research objectives (see section 1.4. in Chapter 1), the researcher adopted the interpretivist paradigm because the outcome of this research was capable of identifying, exploring and explaining how factors (social agents including individuals and artefacts) in a particular social setting (the organisation under study) were related and inter-dependent (power relations analysis) (Oates, 2006). This was achieved by investigating the phenomenon under study through the meanings and interpretations of the individuals (via interviews) who were involved in that particular ERP implementation project. This research adopted the interpretive paradigm because it entailed developing rich insights (the case) of a unique context through the development of interpretations from people who were involved (Oates, 2006).

The reason for not adopting the positivist paradigm for this research was that such a paradigm looks at the object under study through the narrowest possible angle, leaving out the bigger picture. It depends on gaining deeper understanding by performing certain tests repetitively in order to get more accurate results. The researcher argues that repetition of tests may not necessarily provide a great deal of findings when it comes to investigating the social implications that usually unfold when investigating an issue in the Information Systems discipline.

This means that, for instance, if a research study is being conducted about a certain family affair, the positivist paradigm breaks down the family into smaller entities such as looking into the father's and the mother's behaviours as separate entities within the one family, while it ignores the bigger picture of the relationships amongst the individuals that are involved and the impact of such relationships in the family as a whole (Oates, 2006). While this research was intended to investigate human interactions in an organisation during the implementation of ERP; that requires gaining deeper insights into the social phenomenon under study; it is clear that positivism was not the right paradigm to adopt for this research.

Another reason was that this paradigm depends on gaining deeper understanding by performing certain tests repetitively in order to get more accurate results. However, repetition of tests may not necessarily provide a great deal of findings when it comes to investigating, for instance, the social implications that usually unfold when investigating an issue in the Information Systems' discipline.

In addition, generalisability seems to be one of the major outcomes of this paradigm, which results in missing out on vital issues. This is because some studies had proven the usefulness of context-unique research such as Mitev (1996), Elbanna (2012) and Mobashar Hossain *et al.* (2011). Another reason for not adopting this paradigm was the fact that different individuals interpret the world differently, and these differences are sometimes useful to provide a range of different understandings with regard to certain issues, especially in social-related research (Oates, 2006).

The critical paradigm was not adopted for this research because it examines practices and behaviours of real people, while recommending change of social practices (Myers, 2013). It presumes that social reality has objective properties that dominate peoples' perceptions of seeing the world. Although people have the ability, will and desire to manipulate their social and economic circumstances, their ability to do so is constrained by a range of social, cultural and political dominations (Oates, 2006). This research was not intended to recommend changes to social reality. Instead, it rather studied the phenomenon insightfully in order to gain deeper understanding of the effects of power relations on the implementation of ERP in an organisation.

#### **4.4. Research approach**

Research approach is concerned with whether the research is aimed at either developing a theory and hypothesis or hypotheses, which entails designing a research strategy to test it (known as *deductive*), or whether the research is aimed at collecting data in order to develop a theory as a result of the researcher's analysis (known as *inductive*) (Saunders *et al.* 2008).

The researcher approached this in an inductive manner in order to develop a deeper understanding of how individuals perceive the world. The reason behind this is that the researcher collected the data by interviewing certain individuals in an organisation that had gone through an ERP implementation process. As a result of the data analysis, the researcher developed deep insights into the phenomenon under investigation, which led to the development of a theoretical concept.

Given the objectives of this research (see Chapter 1, section 1.4.), approaching this research inductively assisted the researcher to achieve the objectives by developing a deeper understanding of how individuals perceive the phenomena under study. The main data collection method (see section 4.8.) for this research was by conducting in-depth interviews (see sub-section 4.8.1) with key individuals who participated in the ERP implementation project in the organisation under study. The findings of this research assisted the researcher to develop a general conception around the phenomenon under study by investigating the case study through the lens of Actor Network Theory embedded with Foucault's analysis of power.

Subsequently, an inductive approach was adopted because it is concerned with the thought that a theoretical proposition is the outcome of the research which includes drawing generalisable conclusions out of the data analysis (Saunders *et al.* 2008). According to them, the purpose of this approach is to get a feel of what goes on in a particular context so that the researcher can generate a deeper understanding of the nature of the problem that he/she is investigating. Such approach usually involves conducting in-depth interviews that are analysed thoroughly in order to formulate a theoretical perspective on the phenomena under investigation.

The researcher intended to approach this research inductively because it involved explaining the effects of a social phenomenon (power relations) in a social setting (the organisation) by investigating the perceptions and the understandings of different social agents (individuals who were directly

involved in the ERP implementation project in the organisation under study) in order to provide deep insights into the phenomenon under study.

The researcher did not approach the research deductively because that follows a structured approach based on the known theoretical considerations of a particular field of study where the researcher develops a hypothesis or hypotheses from what is already known in order to test and prove its worth by having the proposed hypothesis/hypotheses subjected to empirical scrutiny.

The hypothesis or hypotheses is/are then broken down into operational terms such as specifying how data should be collected in relation to the concepts that make up the hypothesis. This approach takes a structured form in which the researcher should follow a clear logical sequence (Bryman, 2012). This research did not follow a structured approach based on known theoretical considerations, nor was it intended to test a pre-defined hypothesis empirically, which was why the researcher did not approach this research deductively.

Another reason for not approaching this research deductively was that the deductive approach is a rigid methodology that would potentially limit the explanation of a phenomenon by narrowing the lens of investigation, which leaves out other angles that are well worth exploring (Saunders *et al.* 2008).

#### **4.5. Qualitative vs. quantitative**

This research adopted a qualitative research method. Qualitative research methods involve the usage of different techniques to analyse IS research with regards to issues related to society, organisation, politics, economy and management rather than technology (Myers, 1997). One of the key benefits of conducting qualitative research is to gain deeper understanding of the context where an array of decisions and a range of actions take place. It is the context that assists researchers to explain the reasons behind individuals' actions, which can be best understood mainly by talking directly to them (Myers, 2013).

In order to achieve the aim of this research, the researcher followed a qualitative research approach. The reason behind this was that qualitative research provides a deeper understanding of the context in which decisions and actions take place. In order to investigate the impact of power relations on the implementation of ERP in an organisational setting through a pre-identified period of time, qualitative research paved the way for the researcher to explain the reasons behind individuals' actions in specific incidents, which can be best understood mainly by talking directly to them. Qualitative research particularly contributes to the sufficient explanation of issues related to the "*study of social relations*" (Flick 2006, p. 11).

The researcher paid specific attention to the interpretations of individuals' actions in a particular ERP implementation project, as well as looking into the contextual aspects of that project; which is best conducted by adopting a qualitative research method. The reason for not adopting a quantitative research method was that this research had not considered analysing the technological aspects of ERP, but rather explained a range of social, political, organisational, economical and managerial interpretations in relation to the implementation of ERP in a specific organisation.

#### **4.6. Research Strategy**

Developing a research strategy entails planning out the most suitable techniques that are used for a particular research in order to come up with a significant outcome (Flick, 2006). As explained in the previous section, this research followed the qualitative research method. There are a range of research strategies that are usually adopted for attaining a sufficient outcome of a qualitative research method (Bryman, 2012; Oates, 2006). These include but are not limited to: survey, action research, grounded theory, ethnography and case study.

#### **4.6.1. Adopted research strategy**

The researcher adopted an explanatory case study strategy for this research. Case study research strategy refers to describing a particular situation in order to reach a conclusion about a certain phenomenon (Myers, 2013). This situation (or case) is studied in-depth for the sake of developing rich insights in order to capture the evolvement of complex relationships and processes that usually develop in a particular social setting (Oates, 2006). According to Yin (2014), a case study research strategy is an inquiry that investigates a certain phenomenon in its real-life context, in order to lift off the boundaries between that particular phenomenon and its context.

What characterises a case study is that it offers in-depth analysis of certain instances in order to investigate a certain (Oates, 2006). In addition, a case study is usually investigated in its natural setting by breaking down the setting under study into the smallest possible entities. Also, a case study should adopt a holistic approach, where the focus is primarily on investigating the inter-related and interconnected relationships whilst refraining from isolating individuals (Oates, 2006). Case study research should attain the characteristics of being intensive and greatly detailed, and that the phenomenon is studied in a specific context through the use of multiple data collection techniques.

According to Yin (2014), there are three basic types of case study research strategies. The first type is exploratory, where the researcher tries to come up with a question or a hypothesis to be adopted in a certain study. This type can be helpful if the aim is to determine the sort of questions to be asked in a questionnaire. The second type takes a descriptive approach, which provides a detailed analysis of a certain phenomenon in its own context. The analysis of this type generates a discussion of how different individuals perceive what had happened regarding a phenomenon in a particular context. The third type is explanatory, and this becomes useful when the main aim is to investigate why events occurred in the way they did. This type seeks to analyse the inter-linked actions that impacted the events that occurred.

This research adopted the explanatory type of case study because it is intended to investigate the effects of power relations on an ERP implementation project in an organisation in Saudi Arabia by identifying and analysing the inter-linked actions that impacted the implementation project under study.

#### **4.6.2. Rationale of using case study research strategy**

This research adopted an explanatory case study research strategy because the main aim of this research was to describe a particular situation in order to reach a conclusion about the phenomena under study (Myers, 2013). The case study was analysed in-depth in order to develop a rich insight out of investigating the complex relationships and processes within the boundary of the case being studied (Oates, 2006).

According to Yin (2014), case study research investigates a phenomenon in its real-life context, in order to lift off the boundaries between a certain phenomenon in a specific context. The aim of this research was to analyse the power relations that developed amongst actors who were involved in an ERP implementation project in an organisation in Saudi Arabia. These analyses were aimed at explaining the effects of such power relations on the ERP implementation project within a given time frame.

#### **4.6.3. Rationale for adopting an explanatory single case study**

This research adopted a single case study approach in order to investigate a certain phenomenon in its own real-life context. The case study followed the explanatory type that Yin (2014) identified, as explained previously (see Section 4.6.1.). The reason for adopting an explanatory single case study was that it enabled the investigation of the phenomenon through unveiling the occurrence of events in a particular social setting. In addition, it explained how the inter-linked factors that affected the events occurred in the way they did.

To put that in context, the outcome of this research enabled the investigation of how different social agents that were identified using the Actor Network



Theory (ANT) affected the previously mentioned ERP implementation project in the way they did. It explained how such inter-linked relationships that developed during the course of the ERP implementation process occurred and indeed affected the progression of the ERP implementation process. The case study is presented in Chapter 5, and for the sake of protecting the identity of participants, the organisation name, the departments, and the job titles of employees have been coded (see sections 4.8.3 and 4.8.5.).

#### **4.6.4. Single case study generalisability**

There has been scepticism about the ability of generalising the outcome of a single case study to the wider population. However, Yin (1981) opposed this by affirming that single case studies are generalisable to theoretical propositions. Walsham (2002) elaborated further on that by providing the literature with four types of generalisations that can be derived from interpretive case studies. He also backed up his argument by providing examples from the literature of scholars who adopted a single case study whilst drawing out generalisable propositions.

According to Walsham (2002), the first type is the development of concepts; an example of that is when Zuboff (1988) analysed the IT usage in an organisation using a single interpretive case study approach in which she developed a concept that she called the “*informaté*”. That concept had been widely adopted in the IS field and across other disciplines such as the work of Panteli (1994). The second type identified was the generation of theory from a single interpretive case study; an example is when Orlikowski and Robey (1991) constructed a theoretical framework focusing on the organisational consequences of Information Technology using an empirical work in IS. Jones and Nandhakumar (1993) adopted the framework to analyse an interpretive case study of the executive information system development process as well as suggesting other areas of developing it.

The third type is about the drawing of specific implications; an example of this type is when Walsham and Waema (1994) drew out a number of implications

of the development of IS in a financial services organisation using an interpretive case study. The fourth type is the contribution of rich insight; an example of this type was the work of Suchman (1987). She used an interpretive case study regarding the usage of a particular copying machine to explain the problem of human-machine communication, and the research drew out a range of theoretical propositions about human-machine interaction by developing concepts such as “*plans*” and “*situated actions*”.

According to Yin (2014), analytic generalisation from a single case study is usually based on either “*corroborating, modifying, rejecting or otherwise advancing theoretical concepts that you referenced in designing your case study or new concepts that arose upon the completion of your case study*” (p.41). Analytic generalisation gets the research promoted from the explanatory level of a case study to the conceptual level. Analytic generalisation affirms the stance that Walsham (2002) took with regard to generalising a concept out of a single interpretive case study.

The researcher argues that the analysis of an interpretive case study, if carried out and written up carefully (Walsham, 2002), can be generalisable to provide the body of knowledge with some important issues that is well worth adopting in the IS discipline as well as across other disciplines. As one of the objectives of this research was to introduce a case study; the presented case study (see Chapter 5.) is able to enrich the body of knowledge by providing valuable insights in its real-life context.

The researcher also argues that this research is generalisable to a concept. As one of the objectives of this research was to investigate the effects of power relations on the implementation of Enterprise Resource Planning (ERP) in an organisation in Saudi Arabia through the lens of Foucault’s analysis of power embedded within Actor Network Theory (ANT), the concept of ‘**ANT-Foucault**’ was developed (see Chapter 7, section 7.4.). Such concept is capable of providing analytic generalisation that can provide valuable insights for the body of knowledge by proposing an alternative way of analysing IS and ERP implementation projects in organisations.

The outcome of this research provides a new theoretical proposition which after being empirically tested in further research beyond the boundaries of this research could provide the body of knowledge with a new theoretical framework. Such a framework can help IT project managers to identify the whereabouts and the manoeuvres of power during the course of an IS or an ERP implementation project. However, the researcher should point out that the outcome of this research is only generalisable to a concept (analytic generalisation); while future research can be addressed towards achieving the overall outcome of developing the potential theoretical framework.

#### **4.6.5. Rationale for not using other research strategies**

The researcher believes that it is necessary to provide the reader with the reasons for not adopting other qualitative research strategies. In this section, the reasons for not adopting survey, action research, grounded theory and ethnography are explained.

The reason for not adopting survey strategy was that surveys are usually used when the aim is to collect the same type of data from a large number of participants in a standardised fashion. It is usually adopted by positivists, because its aim is to derive patterns and come up with generalised outcomes. Surveys strategy answers questions of who, what, where, how much and how many, and is used mainly for exploratory research (Hakim, 2000).

Although a survey strategy is capable of handling interpretive research (Oates, 2006), the strategy usually focuses on covering a large population rather than providing details on specific research agendas. In addition to that, survey research strategy ignores issues that are not converted into numbers. Consequently, the researcher strongly believes that the accuracy of participants' responses is not something that is determined solely by conducting postal, telephone or Internet surveys (Oates, 2006). As this research was intended to provide in-depth details of a specific context as well as investigating the process of capturing the changes that impacted the case under study over a certain period of time, survey was not the most suitable strategy.

The reason for not adopting action research strategy for this research was that action research requires researchers to immerse themselves in the issue being studied. Rather than being interested only in observing and documenting, researchers are interested in making a significant change in the place under study. Their intention is to change a certain situation into something that is considered to be better by either the researchers themselves or by the group/organisation under study (Mumford, 2001). Action research was not the most suitable strategy for this research because the researcher did not deliberately intervene in the organisation under study.

This research had not adopted grounded theory strategy because grounded theory suggests developing an on-going relationship between data collection and data analysis (Myers, 2013). Grounded theory was not suitable, because this research is not intended to develop a theory, but rather to explain a social phenomenon in its own context by providing detailed insights into the ERP implementation project under study. It is worth mentioning here that this research aimed at proposing a concept that can lead to a theoretical proposition after carrying out future research.

Ethnography was not the adopted research strategy because it engages researchers to take part in people's day to day activities, and use different types of data collection tools to record their observations. The key to achieving a successful ethnography strategy adoption is to record, reflect, acknowledge and link what is being observed with previous literature on the phenomena under study and then derive conclusions out of the findings (Oates, 2006). As this research was not intended to investigate individuals' day to day activities, but rather to explain the power relations that develop amongst individuals and artefacts of an ERP implementation project in an organisation, ethnography was not the most suitable strategy.

#### **4.7. Research reliability, validity and validation**

There is disagreement in the literature about whether the same procedures for validating quantitative research should be used for validating qualitative research (Lewis *et al.*, 2014). The terms reliability, validity and validation that are often used to evaluate quantitative research have been rejected by some qualitative researchers (Lincoln and Guba, 1985). Robson (2011) counter argued that by stating that reliability, validity and validation can be applied to qualitative research to some extent although the rigidity aspects of their application are not appropriate to qualitative research due to the contextual complexity of the phenomena under study (Marshall and Rossman, 1999).

Instead, qualitative research should be evaluated in terms of its robustness and thoroughness; which can be achieved by evaluating the appropriateness of the methodological choices and by evaluating the degree of fulfilling the overall objectives of the research. In addition, triangulation of sources and analysis should be evaluated in terms of its range of variations across the targeted population of the context under study. Another form of evaluation is to identify the theoretical and/or the contextual generalisability of the research (Lewis *et al.* 2014). Reliability, validity and validations for this research are discussed next.

##### ***Reliability***

Seale (1999) stated that evaluating the reliability of qualitative research should be devoted to providing great deal of details about the procedures that were used in order to ensure that the outcome of the research directly fulfils its objectives. Baum (1993) elaborated on that by stating that evaluating the reliability of a qualitative research is achieved by examining the way in which the research was approached in terms of the methods adopted and the analytical techniques used; and how well such methodologies and analytical techniques had contributed to fulfilling the overall objectives.

As far as this research was concerned, explanatory case study research strategy was adopted which enabled the in-depth investigation of how different social

agents had influenced the ERP implementation project under study. Adopting explanatory case study directly contributed to fulfilling the first of objective of this research, which is to introduce an in-depth case study of an ERP implementation project in Saudi Arabia.

In addition, the similarities between Foucault's analysis of power and ANT facilitated their appropriate incorporation to carry out this research. Such similarities directly participated on the second objective of this research; which is to embed Foucault's analysis of power within ANT. In addition, adopting the thematic analysis approach to analyse the collected data allowed an appropriate clustering and categorisation for the outcome of this research; which in return, contributed to investigating the influence of power relations on the ERP implementation project under study. As a result, the third objective of this research had been sufficiently met.

### **Validity**

The validity of qualitative research refers to providing evidence from the raw data that confirms the outcome of the research (Lewis *et al.* 2014). According to them, providing clear cut statements that are directly drawn out of the raw data confirms the accuracy of the research outcome. By doing so, the richness and the depth of the collected data confirms the validity of the research outcome and that is the core essence of conducting qualitative research.

In order to demonstrate the thoroughness and the robustness of the research outcome, the researcher provides two examples here where the research findings have been specifically talked about in the collected data. One of the findings of this research was that ERP's 'best practice' business process was being enforced in the organisation. The raw data confirms that best practice had been enforced in the organisation and an example is what research participant (P15) stated that *"we had to adapt to ERP implementers best practice processes. We took the system as it came out of the box without any customisation in the sense of following the best practice"*. Another research participant (P09) confirmed the enforcement of ERP's 'best practice' business

process by stating that ERP implementers “*had a specific business process that they enforced and they insisted that ERP should be implemented in a specific way*”.

The other example is concerned with another finding of this research which stated that the privatisation project influenced the ERP implementation project. Research participant (P13) confirmed such influence by stating that “*the ERP systems have to follow the procedures and the decrees that had been made with regards to the privatisations programme*”. Another research participant (P16) mentioned the same thing by stating that “*the ERP implementation project has followed the privatisation programme recommendations by reflecting such recommendations into the workplace*”.

The above two paragraphs confirms that the outcome of the research had been directly mentioned in the raw data. It is worth mentioning that the above mentioned quotes were drawn straight out of the raw data and it was free from any interpretations. The researcher dug the evidence straight out of the interview transcripts in order to confirm the unbiased aspects of the research outcome.

Another form of validity in qualitative research is concerned with the generalisability aspects of the research outcome (Lewis *et al.* 2014). As mentioned in sub-section (4.6.4.), single case study research can be generalisable to a concept (Walsham, 2002). According to Walsham, this type of generalisation is often called analytic generalisation and it is a term that had been acknowledged by Yin (2014). As far as this research is concerned, the outcome of this research drawn out the ‘**ANT-Foucault**’ concept (see Chapter 7, section 7.4.). Such concept is a valuable methodological tool for analysing IS and ERP implementation projects in organisations.

The researcher also believes that the outcome of this research is generalisable to the context under study. This is because even though the case study was mainly targeting a certain division in the organisation under study (i.e. DSS Division in MESAIR), the researcher made sure to include the wider audience

in the fieldwork. Research participants from other division within MESAIR have also been interviewed, which enhanced the contextual generalisability of the study. Research participants from four different divisions had been interviewed and they have collectively contributed to the outcome of this research. Therefore, this research is generalisable to the context under study.

### ***Validation***

The validation aspect in qualitative research is concerned with ensuring and verifying that the research was conducted and interpreted in a well worked manner (Creswell, 2009). One of the widely cited techniques for ensuring that the collected data had not been miss-interpreted by the researcher is to triangulate its sources. This means that the data that were used for conducting the research came from different types of sources (Yin, 2014).

Using multiple sources of data, or what is known as data triangulation, is another form of validating qualitative research (Lewis, *et al.* 2014; Creswell, 2009; Yin, 2014). This is because the use of different sources of data to investigate specific issues during the development of themes provides a coherent justification for the phenomena under study (Creswell, 2009).

As far as this research was concerned, the researcher was able to triangulate the data sources by collecting data from three different sources. Interviews, documents and archival records were used simultaneously so that the outcome of this research is justifiably validated (see section 4.8. for more details on data collection methods).

Another type of triangulation which is usually adopted for validating qualitative research is the use of multiple types of analysis (Lewis *et al.* 2014). According to them, checking the robustness and the thoroughness of the research outcome with some of its participants provides greater confidence on its viability in the context under study. To that respect, the researcher checked the themes that came out of the research with research participants and they are



all agreed that those themes sounded viable enough on the context of MESAIR (see Appendix 8 for a sample).

#### **4.8. Data Collection Methods**

As this research was based on a case study research strategy, the researcher followed Yin's data collection methods. According to Yin (2014), data collection methods for case study research include six major types. They are documentation, archival records, interviews, direct observation, participant observation and physical artefacts. This research adopted three types of data collection methods. Interviews are the main data generating method, while documents and archival records further enhanced the research. Using multiple data generating methods, as explained earlier, makes the research more credible.

##### **4.8.1. Interviews**

Interviews, as a method of data collection, are considered to be one of the most important sources for interpretive case study research (Yin, 2014). Interviews provide rich data that can be gathered from people who can come from a range of different backgrounds (Myers, 2013). There are three different types of interviews; first, structured interviews in which the researcher uses identical pre-determined questions for every interview. The interviewer reads the questions and records notes about the interviewees' responses. The second type is semi-structured interviews where the interviewer is equipped with a list of questions as well as themes to be covered, but the list is open to changes depending on the context of the conversation during the interviews. Semi-structured interviews provide interviewees with the chance to express themselves freely without being restricted by a rigid set of questions. The third type is unstructured interviews, where the interviewer explains the topic under study and gives the interviewees complete freedom to express themselves regarding the issues being discussed (Oates, 2006).

Yin (2014) compiled three different terminologies to explain the types of interviews. According to him, interviews can be categorised as prolonged (unstructured) interviews, shorter (semi-structured) interviews, and survey (structured) interviews. A prolonged (unstructured) interview usually lasts around 2 hours and it can be conducted all at once or on different occasions. With this type, researchers enquire about personal interpretations and opinions about certain events or discourses regarding a particular phenomenon in a specific context. With prolonged interviews, interviewees usually suggest other people to be interviewed. They usually provide or refer the researcher to other sources of data that can be suitable for investigating the phenomena under study further.

Shorter (semi-structured) interviews lean more towards the specificity of issues and they usually last for around an hour or so. They usually adopt an open-ended approach but they are somewhat restrained, steering the conversations towards topic-related issues. That means that the interviewer usually allows the interviewees to elaborate further to a certain extent. Researchers who adopt shorter (semi-structured) interviews usually formulate a set of topics or questions to be asked during interviews, but they allow interviewees to elaborate further on certain matters. Survey (structured) interviews are used if the researcher uses questionnaires as a form of enquiry, usually order to obtain quantitative data to support the case study statistically.

This research adopted interviews as the main data generating method. The researcher opted for in-depth semi-structured interviews in order to obtain the interpretations and the opinions of participants about certain issues concerning the ERP implementation project of the organisation under study. The researcher wanted participants who were closely involved in that particular project to elaborate further on issues under investigation to a certain extent. The sampling strategy is explained in greater detail in section 4.8.2., and the sample size and participants' identification are given in section 4.8.3.

#### **4.8.2. Sampling Strategy**

Sampling strategies can be categorised into three different segments; purposive, theoretical or convenience sampling (Ritchie *et al.*, 2014). According to them, purposive sampling is adopted when the researcher chooses their sample based on how valuable it is for providing the themes and the question under study with deeper insights and understanding. Those specific participants may have certain experiences or roles that would enable the researcher to gain deeper understanding about the phenomena under study. With this type of sampling, the researcher chooses participants on the basis of fulfilling two aims. The first aim is to ensure that all participants are aware of the specific context under study and are aware of the issues that are being investigated. The second aim is to make sure that diversity issues are being considered when choosing the sample.

Theoretical sampling is a strategy that can be adopted if the researcher opts to sample incidents, or individuals with the intention to develop a theoretical perspective. It involves the researcher choosing a sample, then upon analysing the gathered data the researcher keeps on choosing different samples until the collected data reaches the data saturation point as far as the development of the theoretical perspective is concerned.

Convenience sampling is adopted when the researcher is solely dependent on the availability of individuals, regardless of whether they contribute to the outcome of the research or not. This type of sampling strategy helps the researcher to gain a deeper understanding of a general phenomenon through the narrowest scale possible. Such sampling strategy is restricted to reporting findings, while the conclusion is restricted to those findings due to the lack of sampling diversity.

In this research study, the researcher adopted a purposive sampling strategy to investigate how power related issues had affected the implementation of an ERP in a specific organisation. The sample, therefore, was used to identify individuals that had directly affected such implementation project in a specific context. It was also used to help in investigating power issues that had

contributed to the direction of such implementation project. The sampling strategy assisted the researcher in achieving the overall aim of this research.

In addition, the sampling strategy for this research acknowledged the importance of diversifying the sample. That was very important so that the contextual generalisability is fulfilled. Even though the case study was mainly targeting a certain division in the organisation under study (i.e. DSS Division in MESAIR), the researcher made sure to include the wider audience in the fieldwork. Research participants from other division within MESAIR have also been interviewed, which enhanced the contextual generalisability of the study. Research participants from four different divisions had been interviewed and they have collectively contributed to the outcome of this research. Therefore, this research is generalisable to the context under study.

#### **4.8.3. Sample size and research participants' details**

Sample size is usually smaller in qualitative as opposed to quantitative research. The reason is that data that are gathered in qualitative research are usually deeper in detail, which means that the sample size should be small in order to do the analysis of the data justice. In addition, qualitative research is not aimed at providing statistical analysis in order to justify its worth, but rather at extracting information from participants about certain phenomena which may be identified by appearing only once in the statements of inquiry (Ritchie, *et al.*, 2014). Furthermore, the intensity of research resources in qualitative research is likely to be very high, which means that the amount of time required collecting and analysing a prolonged number of interviews requires several years (Ritchie, *et al.*, 2014).

The sample size for this research was based mainly on conducting twenty four in-depth semi-structured interviews. The overall duration of the whole conducted interviews was around 19 hours of one-to-one interviews. Research participants' names have been hidden in order to fulfil the promises made by the researcher. This is explained further in the section regarding ethical considerations (see sub-section 4.8.5.). As an extra cautious measure,

participants' roles in the organisation and their roles in the ERP implementation project under study have been coded in order to minimise the risk of identification. Table 4.1. presents the research participants by revealing their coded roles in the ERP implementation project under study against each of their unique code identifiers. The code identifiers were used throughout the research as a reference to the participants in Chapter 6 of this research. Table 4.1. also includes details about the duration of each interview.

With regard to the interviews, they were all conducted in Arabic. This is because all research participants are native Arabic speakers and the researcher believed that in order to dig out the most in-depth details out of the participants was to get them to speak in their own mother language. The Arabic transcripts had been translated into English by the researcher. According to Vulliamy (1990), the researcher is allowed to conduct their own translation from one language to another provided that they are highly aware of the culture and the language of the individuals under study.

The researcher is well aware of the culture as he was raised up in the same culture of the organisation under study. The researcher had also worked previously in the organisation under study and therefore is well aware of the contextual aspects of the organisation. The researcher is also a native Arabic speaker having been raised up in Saudi Arabia of a native Arabic speaking family. He is also fluent in English as he had conducted his undergraduate and postgraduate degrees in the UK.

As a cautious measure, the researcher asked a colleague (who is a native Arabic speaker and fluent in English) to pick out a random sample of the Arabic version of the interview transcripts and had it translated into English. This procedure was conducted to ensure the accuracy of the translation. A copy of the translated sample can be found in Appendix (9) together with the equivalent translation that had been conducted by the researcher (see Appendix 10).

It is worth mentioning that Subject Matter Expert (SME) is the term that is often used by ERP implementers in reference to identifying employees who had been nominated by their respective departments to participate in the ERP implementation blueprint workshops, which is a vital stage in the ERP implementation project and is usually the longest phase of the project.

Unique Code Identifier	Participant's Description	Interview Duration (minutes)
P01	SME - Corporate Administrative Services Department	90
P02	SME - Contracting and Bidding Services Department	75
P03	SME - Contracting and Bidding Services Department	60
P04	ERP Implementation Consultant	75
P05	SME - General Support Services Division	60
P06	ERP Manager - IT Department	30
P07	SME – Real Estate SBU	45
P08	SME - Human Resources	45
P09	SME - Human Resources	60
P10	SME - Human Resources	30
P11	SME – Real Estate SBU	75
P12	SME - Human Resources	30
P13	SME – Real Estate SBU	30
P14	SME – Real Estate SBU	30
P15	SME - Human Resources	75
P16	ERP General Manager - IT Department	60
P17	SME - General Support Services Division	75
P18	SME - Human Resources	30
P19	SME – Real Estate SBU	30
P20	SME - IT Department	30
P21	SME – Real Estate SBU	30
P22	ERP Module Leader - IT Department	30
P23	SME - IT Department	30
P24	SME - IT Department	30
Total number of minutes		1155
Total number of hours		19.25

Table 4.1. List of research participants and unique code identifier

(SME = Subject Matter Expert)

#### **4.8.4. Candidates invitation preparation**

The researcher developed an invitation letter, information sheet and a consent form. The invitation letter (see Appendix 1) began by introducing the researcher as well as introducing the research topic. It followed on by affirming that participation was voluntary and that if they decided to participate, they were welcome to withdraw from the research at any time without giving any reason and that the researcher holds the right to keep and use any collected data that would be used as part of the research inquiry.

The invitation went on to explain to the candidates that they had the right to ask the researcher to delete all collected information from their part if they wished to do so. The researcher also stressed the nature of confidentiality and anonymity in order to make the candidates feel more confident to participate. The letter also explained how the collected electronic data would be stored, mentioning that they would be password-protected and stored in a lockable cabinet at the University of Salford.

The researcher then used the invitation letter to direct the candidates to read the information sheet as well as opening up a channel for the candidates to ask the researcher questions if they needed to by using the contact details at the bottom of the letter. The next paragraph explained the procedure that would be followed if the candidates decided to participate in the research, which included explaining that there would be a consent form that should be signed.

It also explained how this consent form would act as an agreement of participation as well as agreeing to have the interview being audio recorded. The researcher then introduced the benefits of participating in the research, giving the candidates an array of benefits that could come out of the research. Finally, the invitation letter informed the candidates that they were welcome to contact the researcher at any time by using the contact details that were provided at the bottom of the invitation letter.

The Information Sheet (see Appendix 2) had been developed using a question and an answer fashion in order to give the candidates easier access to the most



relevant pieces of information with regard to their potential participation in the research. The answers to the questions that had been put forward in the Information Sheet ranged from explaining the general reasons for their selection as potential participants. It also answered questions regarding their freewill to participate and their right of withdrawal. It followed on to answer the question with regard to the benefits from their potential participation. It also answered the question regarding their confidentiality considerations, by assuring them that their identities would be kept anonymous. And similar to the Invitation Letter, it provided participants with contact details of the researcher at the bottom of the sheet.

The Research Participant Consent Form (see Appendix 3) was developed in order to fulfil the ethical consideration requirements which stated that it should be signed by the potential participant and the researcher prior to starting the interview process. It included agreeing to the fact that they had read and understood the provided Information Sheet; agreeing to the fact that they had been given the opportunity to ask questions about the research; agreeing to taking part in the research which included being interviewed and agreeing to the interview being audio recorded; agreeing to the fact that their participation was voluntary and that they could withdraw at any time without giving out any reasoning for their withdrawal; understanding that their identities would be kept anonymous; understanding that all collected electronic data would be password protected; and finally, understanding that all collected data would be kept in a lockable cabinet at the University of Salford.

#### **4.8.5. Ethical consideration**

Prior to the invitation of candidates to participate in the research, ethical approval from the University of Salford was required. As this research is about investigating social phenomena of an electronic Information Systems implementation, the researcher followed the Framework for Research Ethics (FRE) 2010 that was developed by the Electronic and Social Research Council (ESRC). The researcher spent around a month developing the ethical approval requirements which included developing the Participant Invitation

Letter, the Participant Information Sheet, the Participant Consent Letter and a draft of the interview guide questions. Ethical approval was eventually granted (see Appendix 4).

#### **4.8.6. Participant invitation process**

The researcher initiated the invitation process by listing out thirty potential candidates to participate in the research. All thirty candidates were contacted by e-mail, twenty four of whom replied positively (see Appendix 5 for a sample). The email included a covering message that was derived from the invitation letter. All emails entailed attachments of the Participant Invitation Letter, the Participant Information Sheet, and the Participant Consent Form. The list of the twenty four participants is shown in Table 4.1.

Upon arrival in Saudi Arabia, the researcher contacted the potential candidates through email or via telephone depending on each candidate's preference. Separate dates and times were agreed between the candidates and the researcher on an individual basis. All but four participants preferred to conduct the interviews in their own day-office, even though the researcher offered to hire a conference room in a hotel close to where they were located. The four exceptional research participants who preferred to conduct interviews outside their day-office have asked the researcher to meet up after working hours; (P11, P17 and P18) preferred to conduct the interview in a coffee shop after working hours, (P13) preferred to conduct the interview in his own business office outside working hours.

#### **4.8.7. Interview protocol**

This research adopted in-depth semi-structured interviews in order to investigate particular issues in their own context. The advantage of conducting semi-structured in-depth interviews is that they are rather open-ended, while still keeping the conversations focused on certain topics (Yeo *et al.*, 2014). This means that the interviewer usually allows the interviewees to elaborate further to a certain extent (Yin, 2014). The interview protocol entails five

stages: arrival and introduction, introducing the research, beginning the interview, during the interview, ending the interview and after the interview (see Table 4.2. adapted from Yeo *et al.*, 2014).

The arrival and the introduction stage of the interview protocol is a vital stage of the interviewing process, because interviews are usually conducted in the interviewee's chosen place which is usually their offices or their homes, although the researcher is actually the one who hosts the event and has the job of setting the tone of the interview. At that stage, the researcher needs to make sure that the interviewee is ready to start the interview by taking the interview guide questions and asking where the interviewee prefers to conduct the interview as well as checking the length of time they have available (Yeo *et al.*, 2014).

In this research study, the researcher conducted all interviews in the interviewees' business offices. All the necessary greetings and customs were formalised prior to the beginning of the interview. It proceeded by taking out the Interview Question Guidelines sheet (see Appendix 6), the Invitation Letter, the Information Sheet and the Participant Consent Form. The researcher then explained the importance of signing the Participant Consent Form prior to starting the interviews (see Appendix 7 for a sample signed form).

The researcher also asked the interviewees if they were happy for the interviews to be audio recorded as well as explaining the reasons for doing so. The researcher also reassured interviewees that such audio recordings would be kept locked in a cabinet at the University of Salford that would be accessible only to the researcher. All interviewees had no objection to signing the form nor for the interview to be audio recorded apart from eight interviewees who preferred leaving it solely for notes taking rather than being audio recorded.

The second stage of the interview protocol, according to Yeo *et al.* (2014), is to introduce the research. This stage is when the researcher introduces the aim and the objectives of the research as well as affirming the importance of the

interviewees' participation to the overall aim of the research. The researcher is also required to revisit the interviewees' rights of pulling out of the research without giving any reasons for withdrawing and that the interview is voluntary. This assists the interviewee to make sense of the research and should awaken their memory with regard to the context of the research. The researcher should also consider introducing some ground rules, such as explaining to the interviewee that the interview is not survey-based and that anything they would like to elaborate on further could be vital to the outcome of the research.

For this research, the researcher introduced the research aim and the objectives and explained the voluntary nature of the research. The researcher also stressed the importance of elaborating further on issues that would be raised during the interview by giving examples of instances that had happened during the implementation project. This included affirming that the interview process is voluntary and that the interviewees had the right to pull out of the interview at any time without giving any reason. In addition, the researcher emphasised the confidentiality and the anonymity of the interviewees in order to establish more relaxed interview conditions.

The third stage of the interview protocol involves asking the interviewee general background questions such as their age and employment status. Asking such questions at the beginning of the interview gives the researcher a chance to obtain some psychological insights about a particular interviewee. It helps in determining how conservative the interviewee is about sensitive information, as well as whether they are willing to share it with someone who they have just met (Yeo *et al.*, 2014).

Each interview was started by asking the interviewees about their age and employment status. Employment status included asking a few questions about the length of time they had held their position and the previous job that they held and so on. Most interviewees had held their jobs in their respected organisations for more than five years. One interviewee had been granted a job offer from the organisation under study after gaining management trust when he participated in implementing the Materials Management (MM) Module of

the ERP for the organisation under study whilst being initially part of the implementers' team.

The fourth stage of the interview, according to Yeo *et al.* (2014), is the stage when the researcher guides the participant through the pre-identified key themes, as well as elaborating further on themes that have developed as a result of the interview. The researcher should at this stage allow most of the conversation to come from the interviewee, because in that way the researcher reduces the bias of the collected data and gives the interviewee the freedom to brainstorm their thoughts so that the maximum amount of in-depth data results.

Stage	Criteria
Stage 1: Arrival and introduction	Establish an initial rapport; host the interaction by taking responsibility for making it friendly and positive
Stage 2: Introducing the research	Seeking informed consent: aims, objectives, voluntary, confidential; scope of the interview: but the participant is in control of what they disclose; no right or wrong answers, hearing their perspective in their own words
Stage 3: Beginning the interview	Contextual background information: for reference in interview and to set the tone
Stage 4: During the interview	Breadth and depth of coverage
Stage 5: Ending the interview	Give some advance notice; End on a positive note: suggestions and recommendations
Stage 6: After the interview	Thanks for participation: value of their contribution; how the information will be treated and used; be prepared to stay to help the change of mode back to the everyday; listen out for doorstep data.

Table 4.2. Stages of the interview protocol (Adapted from Yeo *et al.*, 2014)

While the interviewee gives their interpretations and opinions regarding certain issues, the researcher ought to stay focused by showing interest in what is being said. Losing focus will result in the researcher not being able to formulate another question with regard to issues that are raised by the interviewee. Such question formulation is one of the most productive aspects of in-depth semi-structured interviews. In addition, the loss of focus by the researcher will reduce the interviewee's willingness to talk, which will result in less vital information being provided.

In this research study, the researcher let the interviewees do most of the talking whilst paying attention to what was being said. By keeping track of what was being said, the researcher managed to derive several questions as an outcome of what had been said by interviewees. The researcher had also made sure to ask the interviewees to elaborate further on certain issues in order to address the themes that were identified prior and during the interviewing process.

The fifth stage of the interview protocol is to end the interview, which entails asking a question that starts by declaring that it would be the last one. Ending the interview in that manner gives interviewees a chance to rethink all the issues that had been covered and this could be beneficial for awakening the interviewees' thoughts on certain matters that had been discussed previously. The researcher might then have a chance of getting the attention of the interviewee to elaborate further on a previously discussed issue because they are aware by now that the interview is about to draw to an end (Yeo *et al.*, 2014).

The researcher finished all interviews by asking interviewees how their participation on the ERP implementation project had helped them career-wise. Such a question was vital to awaken each interviewee's thoughts because it involved talking about themselves and talking about the impact that such participation had had on their career. Talking about personal experiences and career-related aspects let interviewees go back to issues that were already investigated previously by giving out more instances and incidents that had

happened. This final question helped in enriching the insights of the phenomena under investigation.

The sixth stage of the interview that was identified by Yeo *et al.* (2014) is after the interview. At this stage, the researcher expresses their gratitude for the interviewee's participation in their research. By doing so, the researcher shifts the participants away from the interview mode and into a more social friendly mode. This shift enables the participant to ask questions that they were thinking about during the interview. At this stage of the interview, participants might put in their final reflections about certain issues that were raised during the interview. It also gives the researcher time to ask the participants if they have any documents that they are willing to share, such as minutes of meetings, email exchanges, reports, etc. with regard to issues that were raised during the interview.

The researcher made sure that interviewees were left feeling good about themselves by thanking them repeatedly and affirming that their contribution was vital to the outcome of the research. The researcher also managed to ask about the opportunity to obtain documents with regard to instances and incidents that had been mentioned during the interviews. Four of the participants gave the researcher a variety of documents which are discussed in section (4.8.9.). The four participants who shared a variety of closely related documents also gave the researcher more time to read their archival records of the ERP implementation project under investigation, as explained in section (4.8.10.).

#### **4.8.8. Interview questions guide**

The aim of the interviewing process was to provide the research with in-depth insights into the impact of power relations that developed amongst participating actors of an ERP implementation project in an organisation in Saudi Arabia. The interview question guidelines were formulated to identify such relations, as well as investigating the effects that such relations had had on the implementation project.



The process of formulating the question guidelines was aimed at developing questions in an open ended manner. Open ended questions make interviewees answer with the necessary breadth and depth to attain the objectives of research, rather than giving yes or no answers (Yeo *et al.*, 2014). This can be achieved by asking questions that start with 'how', 'what' and 'why' rather than asking questions that start with 'do' or 'did'.

In this research, the questions were developed with open-endedness in mind. In addition, the researcher aimed to formulate non-leading questions, which would not take the interviewee towards a particular answer (Yeo *et al.*, 2014; Yin, 2014). The researcher persisted in asking non-leading questions in order to satisfy the non-bias response that is vital to collecting transparent and non-led responses. The researcher had formulated seven open-ended, non-leading interview questions (see Table 4.3.).

Mapping interview questions to the objectives of the research is considered to be important in achieving the overall aim of the research. The researcher needed to ensure that all interview questions were derived from the research objectives. Given the previously mentioned research objectives in Chapter 1 of this thesis (see section 1.4.) interview questions had been formulated in accordance to the research objectives. Interview questions had all been developed, in order to assist the researcher of introducing the case study. Those questions were able to identify the key actors that were involved in the case study. Within each question, the researcher sought to investigate those actors in order to identify the power relations that were required to satisfy the overall aim of this research.

Interview Question	Mapped objectives
To what extent has the introduction of the Enterprise Resource Planning (ERP) empowered SMEs over their managers?	Objective 1 Objective 2 Objective 3
To what extent have decisions gone against manager's wishes and in-line SAP ERP's best practice? How?	Objective 3
To what extent have the personal relationships between SMEs and ERP implementers impacted the 'to-be' business process of ERP systems?	Objective 2 Objective 3
To what extent has ERP 'to-be' business process favoured one executive manager over another? Or Vice versa	Objective 2 Objective 3
How have managers/SMEs decisions had an influence on the employees' job role assignment in the ERP systems even though sometimes their job titles weren't in-line with ERP job role assignments?	Objective 3
To what extent has privatisation influenced the ERP implementation process? How?	Objective 3
To what extent has your participation in SAP ERP SMEs workshops helped you in improving your job position?	Objective 1

Table 4.3. Interview questions guide

#### **4.8.9. Documents**

Another data collection method that was adopted for this research was the use of documents. Documents include but are not limited to: letters, memoranda, emails, minutes of meetings, written reports, proposals, progress reports, internal records, newspaper articles, presentations, etc. (Yin, 2014). According to Yin, case study research uses documents to support the analysis that was originally extracted from the interview analysis. In addition, incorporating documents as part of the analysis helps the researcher in providing other sources of information. This variety of sources supports the accuracy of the findings which would support the validity of the research.

This research used documents as another form of data collection method. The researcher had been given access to a variety of documents by seven research participants with regard to the ERP implementation project under investigation. The documents that were collected included around forty email exchanges that were related to the ERP implementation project. In addition, a total number of thirty seven ERP implementation workshop plan of actions, reports and requests.

Another type of document was a total of four official internal communication letters. There were also nine overall ERP planning and progress reports. In addition, there were twelve organisational analysis and memos. All collected documents were used as part of the analysis for this research which was reflected on the creation of themes that had contributed to the research outcome.

#### **4.8.10. Archival records**

Archival records can be described as computer files and records such as public use data, organisational records, demographical information on certain contexts (country, region, organisation, etc.), and data that are publicly and readily available in libraries or on the Internet (Yin, 2014). According to Yin, archival records are useful for case study building because they provide general information about certain contexts. Although they are usually developed using

quantitative and statistical methods, they are considered to be appropriate pieces of information that can be used for case study research.

The researcher used archival records, including publicly available demographic information about the organisation under study, to build a more focused picture of the research context. Part of that was drawn out of the organisation's own website and the organisation's own monthly published magazine. Another source of information to that regard was found on the online archives of local newspapers.

In addition, government archival records were accessed through the government's official online channels. Information that were collected through those channels were mainly centred on the privatisation in general and specifically on the organisation's privatisation programmes. Useful pieces of information were drawn out of the ERP developers' and implementers' websites with regards to the project under study. The researcher used all accessed archived records as part of developing the research context of this research (see Chapter 1, section 1.5.), building the case study (presented in Chapter 5), drawing out the findings for this research (see Chapter 6), and enriching the Discussion Chapter (see Chapter 7).

#### **4.9. Modes of analysis**

Data analysis in qualitative research is not as clearly structured as in quantitative research. However, scholars have developed a variety of approaches for qualitative research data analysis (Spencer *et al.*, 2014). Spencer *et al.* (2014) identified nine different approaches from the literature that can be adopted to analyse data in a qualitative manner. They are ethnographic, life histories, narrative analysis, content analysis, conversation analysis, discourse analysis, analytic induction, grounded theory, interpretive phenomenological analysis and thematic analysis.

This research adopted the thematic analysis approach for analysing the data. This was because thematic analysis is concerned with identifying and

interpreting clusters of meaningful patterns from the data (Saunders *et al.* 2008). The overall aim of thematic analysis is to identify and interpret themes that are able to sufficiently address the research aim and objectives (Spencer *et al.* 2014).

NVivo Software was used to carry out the thematic analysis. The process of conducting the analysis started off by creating a new NVivo project. Upon transcribing all twenty four interviews and translating them into English (see sub-section 4.8.3. for more details), they were uploaded into the NVivo project under a newly created folder which was labelled '*Interviews*'.

As the research was concerned with finding out the impact of power relations on the ERP implementation under study, all interview transcripts have been queried in a various number of ways. The researcher was mainly concerned on deriving power related issues that may have influenced the case under study. The thoughts behind conducting such queries was based on finding out whether there were any incidents where human interactions affected the implementation process.

The first query was regarding whether the relationship between privatisation consultants and ERP implementers had played a big part in shifting the implementation process in a certain way or not. With key words such as privatisation and ERP consultants, the researcher was able to find the first relationship that has had a certain degree of influence on the case under study. As a result, a node was created which was labelled '*Privatisation Consultant and ERP implementers power relationships*'. All related instances that had been found in the data were fed into the node.

The researcher was then encouraged to pursue searching for another relationship that influenced the case under study; that was the relationship between the privatisation programme and the ERP implementation project. The outcome of the query demonstrated that such relationship had been mentioned in the interview transcripts. As a result, another node was added to

the NVivo project which was labelled *'Privatisation influence on the ERP implementation process'*.

The interview transcripts were then queried using other key words that emerged out of what was found in the previous node. It was found in the instances that were added into the previous node that there was also a direct link between privatisation and the structure of the organisation; while there was a direct link between the ERP implementation and the business process. As a result, the interview transcripts were then queried to that respect. A new node was then created and it was labelled *'Structure over business process'*.

The organisation culture and the lack of change management were acknowledged by research participants as being two of the key issues for not getting the desired outcome of the project; and they appeared in the transcripts as soon as the structure and the business process were mentioned. Two more nodes were created as a result which were labelled *'Change Management Powerless'* and *'Power of the organisation culture'*.

The researcher then went on to query the ERP's business process to investigate the impact it had on influencing the directions of the ERP implementation project under study. The result of the query demonstrated that the ERP's best practice had been negotiated heavily during the unfolding of the course of the implementation process. As a result, a new node was created and it was labelled *'ERP's best practice enforcement'*.

The instances on the previously mentioned node invigorated another theme; which was that ERP implementers and SMEs had been involved in many negotiations with regards to implementing the ERP in a specific way while the SMEs asked for more customisations to be made. With that in mind, the researcher queried the interview transcripts to investigate the impact of the developed personal relationships between ERP implementers and SMEs on the outcome of the implementation process. As a result, another node was created as a result; and it was labelled *'SMEs and ERP implementers personal relationships influencing the To-Be business process'*.

The researcher then queried the interview transcripts in order to find out the extent of SMEs empowerment that the ERP implementation project had provided. The result of the query led to creating a new node that was labelled '*ERP empowering SMEs*'. This node inspired the researcher to query the data about SMEs and department managers pursuing their own personal interests. The node was created to that respect.

With regards to email exchanges and other documents that were used as part of this research, they were mainly analysed manually in coherence with those that were carried out in NVivo. The reason for doing so was that all documents were in paper-prints; and extracting out certain texts out of scanned printouts had been proven to be a difficult task.

#### **4.10. Summary and conclusion**

This chapter has explained the research methodologies and techniques that were adopted for this research. The research was approached subjectively, and the rationale behind that has been explained. The adoption of the interpretivist paradigm has been justified. In addition, the reasons for approaching this research inductively have been given.

The rationales have been explained for adopting the qualitative perspective as well as a single explanatory research strategy. The research credibility has been justified mainly by triangulating the sources of data. Techniques that were used for collecting data were then given, including interviews, documents and archival records. Finally, the adoption of thematic analysis was explained.

The next chapter introduces the case study, which involves providing background information about an ERP implementation project in an organisation in Saudi Arabia.

## **5. ERP Implementation Project: The MESAIR Case Study**

### **5.1. Introduction**

The previous chapter aimed to provide the reader with the research methodologies that have been adopted for this research. The researcher explained the concept of research ontology which was identified for this research as being subjective. It also demonstrated the epistemological paradigm, which was identified as interpretive, qualitative research. Subsequently, the type of research approach was identified as inductive. The research strategy was also explained, which was a single explanatory case study. Justification of the generalisability aspects of using a single case was explained thoroughly. The data collection methods and their credibility were explained thoroughly.

This chapter introduces the developed case study of an organisation in Saudi Arabia. For the sake of fulfilling the ethical requirements to conduct the research, the organisation was given a coded name in the form of MESAIR. The case study was developed by the researcher with a view to explaining thoroughly the most relevant issues that would serve this research well. This chapter is mainly constructed as a narrative that tells the story of the ERP implementation project's roll-out through reference to copies of emails that were collected during the fieldwork which was backed up by interviewees' interpretations of the specific issues under investigation. It is also important to point out that the researcher intended to use square brackets '[ ]' and upper case letters for the texts that had been inserted intentionally which were not in the original quotes.



This chapter starts by providing the reader with general background information about the organisation under study. It follows on to explain its organisational structure prior to introducing the privatisation project, which is explained subsequently. Next, the legacy information systems and the organisation culture are explained. The Information systems requirements and the ERP selection process deployed by the organisation under study are also explained. Subsequently, the strategy and approach of the ERP implementation project are explained, as well as providing the reader with insights into the business blueprint workshops and how issues developed regarding the ERP implementation project under study.

## **5.2. General background**

This case study concerns an organisation that has operated in the airline industry in the Middle East since the mid-40s. Throughout this research, the organisation under study had been called MESAIR. As it stands, and according to MESAIR's website, its fleet contains a range of 115 aircrafts operating domestic and international flights to a range of destinations in the Middle East, Africa, Asia, Europe and North America. It also owns a fleet of cargo aircraft that operates globally.

## **5.3. Original organisation structure**

According to (Kassem and Habib, 1989), ever since MESAIR was established, it had been registered as a public firm. Hence, a vertical organisation structure has always been in place. This means that a Chairman of the Board of Directors sits on top of the tree, who is responsible for reviewing the strategic issues of the organisation. Underneath the Chairman, there is a President, who is responsible for overseeing the overall progress of the organisation. The organisation is then divided into divisions, which are overseen by Deputy Presidents (DPs). DPs manage a range of various business functions, such as Finance, Human Resources, General Support Services, Cargo, Catering, Ground Handling, Marketing, IT, Aircraft Maintenance Services, Flying Academy, Medical Services, etc. (see Figure 5.1.).

Going down the organisation tree, there are General Managers (GMs) who monitor business progress in their general managerial departments. Each GM's role is to manage a certain business process which would then be broken down into smaller departments. Each department is managed by a Senior Manager or a Manager depending on the hierarchal level that these post holders are in.

#### **5.4. MESAIR's Privatisation Project**

By June 2006, a new president had been appointed for MESAIR with the intention of reigniting the long-halted privatisation project, which was aimed at privatising certain functions of the organisation in order to reduce costs and maximise productivity. The master plan was meant to initiate the creation of what were then called Strategic Business Units (SBUs). These SBUs were intended to become independently run companies that would be partially owned by MESAIR (owning most of the shares) while signing partnerships with other companies in the private sector that possesses lengthy experience in their respected fields of business.

The intention was for MESAIR to benefit from the experiences that those companies had accumulated over the years as well as sharing the running cost. The privatisation plan and the IT masterplan for MESAIR was clearly stated in a document that was obtained from one of the folders that was shared by a research participant (see Appendix 11). The document had eventually been circulated to local media agencies as a form of project announcement which included stating all the related details about the ERP and the privatisation projects.

According to the document, the outcome of the privatisation project of MESAIR was hoped to transform the organisation by becoming a holding group that would then sit on top of newly created SBUs as part of the plan. The President of MESAIR holding company is meant to chair the board of directors' meetings for every SBU as a result of owning the majority of shares of all SBUs. The initial plans included the creation of nine SBUs which

included: Catering, Cargo, Ground Handling, Aircraft Maintenance Services, Flying Academy, Medical Services, Premium Airlines, Economic Airlines, Religious Airlines and VIP Airlines (see Figure 5.2.).

### **5.5. MESAIR legacy IS and culture**

According to (Kassem and Habib, 1989), MESAIR was originally established as a government firm and it had been run in a government fashion ever since it was established. All employees, prior to the initiation of the privatisation project, had held various types of jobs in the Saudi government job scheme, which were created and managed by the Ministry of Civil Services. Jobs that were created and managed by that ministry are considered to be among the safest jobs in the region because they offer their occupiers extreme job security whilst benefiting from working fewer hours as opposed to semi-government or private sector jobs. Employees of MESAIR had always manually conducted their day to day business activities. According to interviewee (P03), employees of MESAIR *“were used to a certain way of dealing with business aspects for more than 15 years. That is by doing business manually or using paper-based systems”*.

The paper-based information systems were predominant across the organisation up until 2006. Paper-based IS meant that all departments received all requests from all other departments within MESAIR or from outside the organisation in the form of printed and signed letters. To this regard, research participant (P01) said *“as MESAIR employee, I have always worked on a Purchase Requisition Form and other papers [FORMS]”*. As a result, MESAIR had one of the busiest intra office correspondence mail services in the region. This meant that official electronic communication between different departments was almost non-existent. Some departments developed stand-alone electronic archival systems to keep track of the incoming and outgoing letters for their respective departments.

The IT Department developed some stand-alone digital information systems for finance and Human Resources. However, all those digital information

systems had been developed mainly to support the predominant paper-based ones. In one of the meeting minutes (see Appendix 12) between ERP implementers and (ERP Mgr. Org.) that was obtained from one of the research participants, such systems are mentioned like GSL GL, QSP GL, OASIS, MEMIS, etc. The minutes also indicated that there would be some manual entries conducted to the ERP systems even though the same minutes refer to interfacing efforts between legacy and ERP systems; which affirm the predominance of paper-based systems.

As a result of such IS isolation, an organisation culture had been developed over the years in the shape of transferring responsibility and blame for issues somewhere else. This means that if a department or an employee were able to give responsibility for a certain task to another department or another employee, they would do so with no hesitation. This was mentioned by research participant (P17) who stated that *“MESAIR have a culture amongst its employees to pass on a certain job for other departments to deal with; whilst the other department pushes it back to original department by providing a counter argument about what department should deal with that particular job or they sometimes passing it on to another department”*. Research participant (P01) mentioned a similar thing by saying *“the culture of departments throwing work at each other is very apparent in MESAIR”*.

Ever since the privatisation project began, the status of employment aspects caused anxiety amongst employees. The privatisation project brought with it more strict rules and regulations such as introducing the Golden Cheque Scheme, which was a scheme that had been brought forward to offer current employees the chance to take the early retirement option while benefiting from being paid 20% of their remaining salaries in advance.

Research participant (P04) mentioned the Golden Cheque Scheme and the impact it had on the organisation by saying *“at MESAIR, as soon as the Royal Decree has been issued regarding the golden cheque the good employees walked out and this is a problem... the idea was to get rid of the below average employees... they should have chosen who should walk out [BY*

*CONDUCTING AN EVALUATION STUDY], to determine the targeted ones and give them 20% of their remaining salaries... but keeping it open for everyone to benefit from, all the good ones would leave and that's exactly what happened".*

## **5.6. Information Systems requirements and ERP Selection**

Upon the collection of requirements from all departments in the organisation, MESAIR chose SAP ERP to become their main business process platform. On 12 December 2007, SAP Middle East and North Africa (MENA) announced a multimillion dollar agreement with MESAIR to become its core business process platform in order to accelerate the privatisation process. The contract included purchasing a significant number of licenses of SAP ERP.

MESAIR had also purchased templates from another airline (Jarmair) that had previously gone through similar privatisation as well as going through a similar ERP implementation process. In addition to the introduction of the ERP solution, MESAIR had also purchased other Information Systems, such as aircraft maintenance, reservation system, ticketing, yield management system, and document management system, which were meant to be integrated with SAP ERP so that the outcome of the overall IT master plan project could achieve its objectives by introducing a comprehensive Information Systems (IS) solution to cover almost all main business functions (see Appendix 11).

## **5.7. ERP implementation project – strategy and approach**

Aligned with the signature of the contract with SAP MENA, MESAIR had also signed a contract with another company that would run the implementation phases of SAP ERP systems. Throughout this research, this company was referred to as PAHO. As part of the contract, PAHO was responsible for conducting the overall ERP implementation process. As agreed with MESAIR, PAHO initiated the ERP implementation process by providing a projected time line plan for all the phases that the project would entail (see Appendix 13).

The projected plan that was developed by PAHO entailed implementing full ERP functions for all SBUs in a four roll-outs plan which should last eighteen months with six months of post implementation support (see Figure 5.4.). The whole ERP implementation project was projected to start by December 2007 and draw to an end by December 2009.

According to a presentation slide (see Appendix 13), all 4 roll out plans would run in parallel with their collective starting point of December 2007. The first roll-out should finish by October 2008 and it would include full ERP operation for Catering and Cargo SBUs. By November 2008, full ERP operation was projected for Ground Handling, Medical Services and the Flying Academy SBUs which was called the second roll-out.

The third roll-out was projected to finish by April 2009 and it would facilitate full ERP operation for Premium Airlines, Economic Airlines, Religious Airlines and VIP Airlines SBUs. The fourth roll-out was projected to finish by May 2009, which would facilitate full ERP operation for Aircraft Maintenance Services SBU. The fourth roll-out would also include integrating certain ERP functions with an aircraft maintenance IS that was purchased around the same time as purchasing the SAP ERP licenses.

Shortly after the projected plans had been delivered by PAHO, the ERP Project Manager (ERP Mgr. Org.) of MESAIR stressed the importance of delivering the financial modules as a matter of urgency so that MESAIR could adjust their financial books in order to be well ahead of time to prepare for the closing business financially across all SBUs by the end of 2008. This was clearly demonstrated in an email (see Appendix 14) that was sent by (ERP Mgr. Org.) to each SBU's finance unit representative. That email referred to a meeting that was held on 28 October 2007 with regard to discussing the possibilities of accelerating the finance modules implementation for all SBUs while using a database interface with legacy systems in order to provide full system functionalities. The email included two attachments, minutes of a meeting and a presentation slides that was delivered by the PAHO Project Manager (PM) for this specific project.

The meeting's agenda focused mainly on reviewing the ERP implementation strategy (see Appendix 12). According to the presentation slides, which were attached to the above mentioned email, PAHO identified the risks of adopting the then proposed Accelerated SAP Finance (ASF) solution. Some of those risks included that the ASF solution would only be an interim solution that would eventually evolve into the Fully Integrated Solution (FIS) once full implementation of all modules had been put in place (see Appendix 15).

The slides had also informed meeting attendees that the ASF solution would only implement financial modules (FICO) which are General Ledgers, Accounts Payable, Accounts Receivable, Fixed Assets and Finance Controlling. It went on to explain that other SAP ERP modules such as Human Resources (HR), Sales and Distribution (SD), Materials Management (MM), etc. would not be included in the proposed ASF solution.

The slides had also identified another risk that was considered to be high in terms of its sensitivity towards successful full ERP functionality: the fact that interfacing ERP finance modules with legacy Information Systems (IS) could become a very complex matter and such action might require manual analysis and entries such as reconciling stocks balance and valuations between ERP finance modules and legacy IS finance modules.

However, according to the slides, PAHO indicated that it was possible to implement the ASF solution as requested by MESAIR representatives, provided that executive decision is obtained and provided that they were aware of the limitations and risks that were inherent within the ASF implementation solution (see Appendix 15). According to the minutes of the meeting (see Appendix 12), MESAIR representatives concluded by accepting the fact that *“ASF solution would not bring in enough business values and benefits for SBUs to warrant the efforts and manpower needed to realise the solution”*.

The minutes of that meeting also indicated that SBU representatives had recommended to *“focus the full ERP implementation with extreme prejudice towards the SAP financial modules and related functions to have a complete*

*commercial solution that would enable SBUs to be independent of any legacy processing and to enable them to carry on their business transactions in a consolidated SAP ERP environment”.*

Based on the request of PAHO to obtain executive decision regarding the SAP ERP implementation strategy going forward, MESAIR (ERP Mgr. Org.) called up a meeting with the MESAIR IT Steering Committee to present and seek approval of the modified implementation approach. The presentation was directed towards equipping the committee with comparisons between the original ERP implementation plan (see Figure 5.4. and Appendix 16) as opposed to the revised one (see Figure 5.5.) together with pointing out the critical success factors for the ERP implementation project. According to the presentation slide (see Appendix 16), the critical success factors for the ERP implementation included:

- a. Use of standard and consistent SAP processes for business units – 80-90% template*
- b. MESAIR project team trained and skilled in SAP processes*
- c. All infrastructure installed and operational in the required time-scale*
- d. Data required by the SAP system effectively formatted and cleansed*
- e. Effective test planning, management and sign-off of the system/procedures*
- f. Change Management approach and end user education/training*

Even though the presentation slides identified change management as one of the critical success factors for the projects, there was no mention of the ways in which MESAIR was going to approach change management issues. The presentation also instructed the committee to reach an agreement on whether MESAIR should adopt the revised ERP implementation plan or revert back to the original one.

In addition, the committee was asked to assign Executive Business Process Ownership from the HR and the Aircraft Maintenance. This meant that the committee should assign an executive member from the HR Division and the Aircraft Maintenance SBU who would be responsible for signing off the implementation phases’ blueprints. However, there was no mention of



assigning any other executive business process sponsors from any of the other SBUs that were being created as far as the privatisation project was concerned.

Based on the conclusion with the MESAIR IT Steering Committee, MESAIR (ERP Mgr. Org.) emailed (see Appendix 17) SBU representatives and informed them that the revised plan for the ERP implementation strategy had been approved by the committee, stating “*I am pleased to advise you that the Corporate IT Steering Committee headed by [THE PRESIDENT OF MESAIR] has granted its approval for the strategy of implementation highlighted in the attached as the revised project plan*” (see Figure 5.5.).

That email had followed on to explain that MESAIR ought to implement:

- a) *The SAP Financial Suite to all 5 SBUs by end of June 2008*
- b) *The complete ERP functionalities to Cargo & Catering by end of January 2009*
- c) *The complete ERP functionalities for all other SBUs by end of May 2009*

The plans seemed to lack consistency already, because according to the email MESAIR were aiming towards initiating five SBUs, whereas in the original plan which was demonstrated in Figure 5.3. six SBUs were proposed to be configured as part of the ERP implementation strategy.

## **5.8. ERP implementation project – Business Blueprint Workshops**

The ERP implementation project went ahead, and it began with a series of business blueprint workshops. Prior to starting the workshops, the (ERP Mgr. Org.) emailed (see Appendix 18) SBUs representatives to nominate Subject Matter Experts (SMEs) who would participate in the workshops in order to discuss the ways to configure the ERP systems. The business blueprint workshops were planned to be split into two phases. Phase one would entail preparing the blueprints of all finance modules across SBUs, while phase two would be dedicated to preparing the blueprints for all other ERP modules across SBUs. On that email, (ERP Mgr. Org.) had requested SBUs representatives to nominate SMEs for finance modules such as Accounts

Receivable, Accounts Payable, Bank Accounting, Fixed Assets, Controlling and Budgeting, Profitability Analysis, General Ledgers, etc.

However, the email also instructed SBU representatives to nominate SMEs to participate in the workshops for the Materials Management module and Sales & Distribution module. The problem was that it was not clear who was the main department responsible for the Materials Management, as the business process of managing materials in MESAIR was spread across a cluster of departments and divisions under the Airlines SBUs together with other SBUs.

In the Airlines SBU, it was also not clearly identified which departments would stay under the Airlines SBU and which other departments would be split across all SBUs. For example, at the start of the implementation blueprint, the overall impression was to start with the finance modules that would be configured to five SBUs, whilst the Finance Division which was meant to be under the Airlines SBU would serve all SBUs with their financial needs until they achieved full ERP independence. As shown in Figure (5.4.), four different types of airlines SBUs were taken into consideration by PAHO, which would take the total number of proposed SBUs to ten as far as the ERP configuration was concerned.

However, in the email, the (ERP Mgr. Org.) had told SBU representatives that there were only five targeted SBUs, which were Airlines, Aircraft Maintenance, Cargo, Catering and Ground Handling. According to interviewee (P01), there were eight SBUs that were configured in the ERP at the sign off Phase 1 and Phase 2 of the implementation project with PAHO; he stated that *“at the sign off with PAHO, we are talking about the Medical Services and the Flying Academy, Ground Handling, Cargo, Catering, Religious [AIRLINES], Private [AIRLINES] and [PREMIUM] Airlines... the religious carrier had been scrapped and it became a division under the [PREMIUM] Airlines SBU”*.

Going back to the Materials Management (MM) module, its implementation approach was not clearly set out, nor was it clear what the business process

would be as far as departments and divisions were concerned. On an email that was sent by the (ERP Mgr. Org.) to SBU representatives (see Appendix 19), which included an attachment of a document containing the second version of the schedules for each ERP modules business blueprint workshops, he asked them for their input on the attached schedule by saying *“please expedite your inputs so we could consolidate the final schedule and publish it for the attendees with advance notice”* and that the schedule had *“more details in regard to the Materials Management (MM) and Sales & Distribution (SD)”*.

The attachment (see Appendix 20) demonstrated for the first time since the start of the ERP implementation project what the MM and SD modules would entail. As far as the MM module was concerned, there were items for discussion in the workshops about contracts, deliveries, finance integration, goods issue, goods receipt, master data, material groups, outputs/forms, organisation structure, plant definition, purchase orders, purchase requisitions, roles & authorisations, release strategies, supplier information records and trading partners. The SD workshops included covering items in the workshops such as airmail billing, credit card billing, contracts, master data, organisation structure and outputs/invoices.

Although the workshops for MM and SD were starting at that point, there was no identification of which departments from the Airlines SBU should send out SMEs to participate in their business blueprint workshops. On another email (see Appendix 21) that was sent out by (ERP Mgr. Org.), the list of SMEs for all workshop sessions was formulated, apart from MM and SD representatives from the Airlines SBU (see Appendix 22). The General Support Services (GSS) Division had to force their way in in a coincidental fashion, which is discussed in greater detail in section (5.10.) of this chapter.

## **5.9. PAHO leaving the process**

According to research participant (P01), PAHO *“left the project after one year”*. It was towards the end of the second phase of the ERP implementation

project, when PAHO started to feel the level of complexity and the uncertainty coming from MESAIR employees.

When the researcher asked research participant (P02) about the reasons for PAHO leaving the process he said *“PAHO had lots of requirements and they were very hard to accommodate... [DURING THE INITIAL PART OF THE PROJECT], MESAIR employees didn't understand the concept behind implementing SAP ERP systems. [AS THE PROJECT PROGRESSED INTO THE FINAL STAGES OF THE WORKSHOPS], MESAIR employees started to engage fully with the implementation project and they put forward [A LOT OF CUSTOMISATION REQUIREMENTS]... because these requirements came too late, PAHO refused them and I think that was the straw that broke the camel's back”*.

This pressure was caused by many factors and one of the main factors that had caused PAHO to leave the implementation project for good was the lack of clarity about going forward. Towards the end of the first year of implementation, SMEs and department managers began to understand the full benefits of the ERP which resulted in putting forward many customisation requests. PAHO refused to accommodate such customisations unless official change requests had been put forward which usually involves making further payments by MESAIR.

This was clearly stated by research participant (P02) who explained further what had happened during that crucial time of the project by saying *“PAHO felt that they could not go back to square one as the project had already gone through these requirements over 18 months ago. SMEs started to disagree with the business processes that had been configured in the ERP systems. These issues caused PAHO to make up their minds about leaving the project altogether”*. (P13) backed up what (P02) said and elaborated further on that by stating that *“PAHO had an implementation standard that they always followed and they had hardly ever tolerated our requests of customisations the ERP systems”*.

Research participant (P07) explained how and why PAHO felt that it was time to terminate the contract by saying that PAHO *“reached to a stage where they could not continue with the ERP implementation project and their reasoning was that the MESAIR implementation project would actually get us making losses if we are to continue with the implementation and they said that they will pay the penalty charge and would pull out of the contract”*.

Even though (P07) never explained how PAHO would make losses had they carried on with the project, but the researcher assumes it might be due to the legality issues of the contract. PAHO might have realised the lack of clarity of the signed contract with MESAIR which meant that they are left with two options; they could either agree to all the customisations and lose their reputations in the market as a result of that decision or they could pull out of the contract; as going forward with the same principles might end up costing them a large sum of money given the possibility of seeking legal advice on certain clauses of the contract. The final option for PAHO was to pay the penalty charge of terminating the contract and that is what they did; as by July 2009, PAHO left the MESAIR ERP implementation project for good.

#### **5.10. General Support Services Division**

This case study is aimed at focusing on the General Support Services (GSS) Division. According to a document obtained from one of the research participants, GSS Division is responsible for providing services for all MESAIR business units. Services that were provided by GSS included space planning, designing and supervision as well as space maintenance and community services. Other services included property management & leasing, bidding and contracting as well as providing corporate administrative services such as corporate mail services, transportation and office services, graphic arts services, audio/visual services, printing services, as well as uniform, dining and commissary procurement, etc. (see Appendix 23)

The General Support Services (GSS) Division is divided into four General Managerial Departments in the form of Space Management and Development

(SMD) Department, Contracting and Bidding Services (CBS) Department, Corporate Administrative Support (CAS) Department, and Space Maintenance Services (SMS) Department (see Figure 5.6.).

This case study pays specific attention to the activities that were being carried out on the GSS Division together with focusing on the SAP ERP Materials Management (MM) module and it covers phase one and two of the ERP implementation project that lasted collectively for around sixteen months (from November 2007 until March 2009).

#### **5.10.1. Middle managers' conflict of ERP interest**

Prior to the ERP selection, MESAIR's IT Department conducted a Statement of Needs (SoN) exercise across all business units, as mentioned earlier. During that exercise, the General Manager for Space Management and Development (GM SMD) at the time had decided that his Department would opt out of participation in the (SoN) exercise. His decision was made solely due to the fact that he wanted to protect an in-house developed Information System that he had supervised throughout its growth and development.

Being aware of the fact that this IS could be scrapped and would eventually be replaced with an ERP based solution, he argued that his department did not need any upgrading and that its IS would be integrated with the ERP solution once the latter had been put in place using the widely used Open Database Connectivity (ODBC) method, which connects different format databases together.

On the other hand, the General Manager for the Contracting and Bidding Services (CBS) Department (GM CBS) at the time had given the SoN exercise full support. This was due to the fact that (CBS) Department had no digital Information Systems in place. Instead, they used to keep track of their business activities using a paper-based Information System. This was mentioned by research participant (P17) who stated that *“(GM SMD) was against participating in the ERP due to his strong belief of the legacy system*

*and that meant the SMD Department was not included in the original IT masterplan”.*

Although both decisions were embraced by their shared line manager, the Deputy President for General Support Service (DP GSS), the results of both decisions were evidently essential for the survival and the growth of each department. This is explained in greater detail in the next section of this chapter.

#### **5.10.2. Top management decision prior to the ERP implementation**

Going back to the period prior to the selection of the ERP by the IT Department of MESAIR, the Deputy President for General Support Services (DP GSS) had switched both General Managers. That meant that the General Manager for Space Management and Development (GM SMD) had become the General Manager for Contracting and Bidding Services (GM CBS) and vice versa. For the sake of this research and to keep the level of confusion to a minimal, the former General Manager for Space Management and Development would be called (GM 1) and the former General Manager for Contracting and Bidding Services (GM CBS) would be called (GM 2).

Research participant (P11) mentioned the switch and the reason for doing so by saying *“DP GSS wanted to refresh both departments, he also wanted (GM 1) to develop an information system for the (CBS) department just like the one for (SMD)”*. The reason for the switch was that the (DP GSS) was keen on giving (GM 1) the chance to replicate the supervision of digitising the paper-based information system into the Contracting and Bidding Services (CBS) Department, together with arranging for the installation and the set-up of all the necessary infrastructure that had to be conducted prior to the operation of the desired digital IS.

In the meantime, (DP GSS) appointed an IT Specialist (GSS IT) to review the existing digital Information Systems for the Space Management and Development (SMD) Department that were already in place. (GSS IT)

reviewed the digital IS and found out that it was a system that was being used to monitor the progress of space utilisation and development projects.

### **5.10.3. Information Systems (IS) review**

Upon the completion of the IS review for the division, (GSS IT) recommended that the division should consider introducing an integrated IS (such as an ERP solution) to serve the whole division, which would allow information to flow digitally so that all employees across the division could share information in a digital fashion.

Subsequently, (GSS IT) found out that MESAIR had already purchased SAP ERP licenses to cover almost all business processes across business units. As a result, (GSS IT) reported back to (DP GSS) by explaining how ERPs were meant to transform and re-engineer the whole business process across MESAIR. (GSS IT) had also explained that this transformation was meant to result in the cancellation and the merging of many business units in order for the ERP to achieve its potential objectives such as reducing costs and improving business productivity and efficiency by eliminating the duplicated business activities across business units (Alshawhi *et al.*, 2004; Wagner and Monk, 2008).

Realising the impact that such change could have on the division, (DP GSS) requested (GSS IT) to investigate the impact that the introduction of an ERP solution would have on business units within the division. After going through a thorough investigation, (GSS IT) concluded that there were a few business processes that should involve a few departments in the division while other departments were not included in the ERP business process.

Upon receiving the (SoN) from (ERP Mgr. Org.), (GSS IT) found out that on the one hand, the business process for Space Management & Development (SMD) Department was not included in the ERP implementation project, due to the fact that (GM 1) had decided to opt out of participating on the Statement of Needs (SoN) exercise that was conducted prior to the ERP implementation



project. On the other hand, the business process for Contracting and Bidding Services (CBS) Department was fully included in the ERP business process (see Appendix 24).

Upon feedback from (GSS IT), (DP GSS) had asked all departments within the division to send out nominees to participate in the workshops for the ERP implementation project. These nominees were called Subject Matter Experts (SMEs), who were meant to represent each department in the ERP implementation project workshops.

#### **5.10.4. Subject Matter Experts (SMEs) selection**

Going back to (SMD) Department, (GM 2) sent out experienced employees as nominees to participate in the workshops as he had been aware of his department missing out on the SoN exercise as a result of his predecessor's (GM 2's) decision. As a result, those nominees (SMEs) struggled to establish any business process that their department could own in the newly introduced ERP solution. Therefore, they kept on coming back to their departments with negative feedback from the workshops due to lack of support from the newly introduced ERP solution.

In the case of the CBS Department, (GM 1) had nominated an employee (CBS SME) who had previously been side-lined and relieved from any managerial duties within the department due to previous clashes with (GM 2) and then (GM 1) over the years. The nomination decision of (GM 1) had been made with the intent that by doing so, the department's participation in the ERP implementation project would be kept to a minimal. He thought that such minimal participation should make way for the in-house work-in-progress IS to survive the overall ERP implementation process.

However, the nominated employee (CBS SME) had managed to take full advantage of his participation in the ERP implementation project workshops. According to research participant (P17) *"some managers decided to send out unwanted employees to the ERP workshops such as the case of (SME CBS)"*.

(P12) mentioned something similar by saying *“managers thought that it would be a good idea to nominate the low performing employees of the department so that we could get rid of them for a while and we thought that such a move might get them to finally get some work done because they didn’t do much in their day-to-day business activities”*.

As it turned out, (CBS SME) eventually became the focal point for all departmental decisions as far as shaping the future was concerned. (CBS SME) managed to regain respect in the department by being invited to almost all department meetings. This led him to being invited to the division’s executive monthly meetings. At the latter mentioned meetings, he was one of the main employees to participate as far as ERP project issues were concerned. Such issues were very important because during these meetings numerous issues had been raised up with regards to the impact that the introduction of the ERP solution would have on the transformation of business process across the division.

On another note, GM for Corporate Administrative Services (GM CAS) Department had nominated an employee from the newly acquired department Corporate Procurement Services (CPS) to represent the whole division on the SAP ERP implementation project workshops (the Materials Management module). For the rest of this research, that nominee would be called (CAS SME).

#### **5.10.5. Buyer role and the clash of conflict**

During the initial stages of the ERP implementation project (ERP Mgr. Org.) requested an appointment of an executive figure to a newly created role in the ERP implementation project (ERP Project Executive Sponsor). To that request, (DP GSS) appointed (GM 2) to fill that role in an attempt to galvanise the exclusion of Space Management & Development (SMD) Department from the ERP implementation project.

During the ERP implementation workshops, an incident occurred which began as a result of a request made by ERP implementers to assign the buyer role to certain employees within the division who would be responsible for conducting the general purchases in the ERP systems. Up until that moment, the ERP systems had been configured to include two departments within the division that are responsible for conducting the purchasing procedures; the Corporate Administrative Services (CAS) Department and the Contracting and Bidding Services (CBS) Department.

(GM 2) - who had also become one of the ERP Project's Executive Sponsors for the whole division - jumped in to include members of the SMD Department to share the buyer role too in the ERP systems. (GM 2) based his argument on the fact that SMD Department used to buy products and services directly without going through the official buying procedures (i.e. bidding and/or contracting or processing buying orders).

This whole issue began when (GSS IT) sent out an email to the (ERP Mgr. Org.), asking him to arrange extra buyers' training courses as part of the newly developed non-stock procurement systems in the ERP solution for a list of employees from the CBS Department. In an email exchange (see Appendix 25), (ERP Mgr. Org.) replied to (GSS IT) by saying "*... there is no 'buyer organisation' in the system for Contracting and Bidding Department, please double check with GSS's main [REPRESENTATIVE] (CAS SME) for more clarification...*". To that, (GM 2) (who was being copied on the email exchange) replied by saying that "*all departments in GSS (CBS, SMD, CAS and SMS) have 'buyer role'...*"

(GM 2) also asked (CAS SME) (who was being copied on that email) to clarify. (CAS SME) replied by saying that there were two purchasing groups that had been configured in SAP ERP, and they were CPS (a department in CAS) and CBS only. (GM 2) replied to that email by saying "*this was not what [WE] agreed on in the meeting chaired by (DP GSS)*". (CAS SME) then forwarded the email to (CBS SME) and the latter complained about the progress of the SAP ERP implementation project by forwarding the email to

(ERP Mgr. Org.) and showing his frustration on many levels including the fact that employees from CBS Department had not had the required buyer role training which was a prerequisite for gaining access to the newly introduced ERP system (see Appendix 26).

(ERP Mgr. Org.) replied to that email by saying “...*As far as training is concerned... I take no part in determining who is included and who is not [IN THE BUYER ROLE TRAINING COURSES] from the business community*”. (GM 2) replied to both (ERP Mgr. Org.) and CAS SME by saying that the SMD Department should have been assigned a buying role in the system as well as affirming that (CAS SME) had actually sent out an incomplete purchasing group to the (ERP Mgr. Org.). On that respect he said “*the Purchase Group list [THAT WAS CONFIGURED IN SAP ERP] is not the final we agreed on and you know it. Please follow what I am directing as the EBS [EXECUTIVE BUSINESS SPONSOR]*”. To that CAS SME replied by suggesting to call up a meeting to discuss those issues further.

It is worth mentioning that (CAS SME) had restricted his reply to individuals within the GSS Division who were directly involved in the ERP implementation process. (CAS SME) email was copied to (DP GSS), (GM 1), (GSS IT) and (CBS SME) plus other departments’ managers within the division. However, he had intentionally left out (ERP Mgr. Org.) of this email as he presumed that this was an internal matter that should be kept within the GSS division.

However, (CBS SME) thought differently as he forwarded that email (see Appendix 27) to the (ERP Mgr. Org.) whilst copying in (DP GSS), (GM 2), (GM 1), (GSS IT) and (CAS SME). In that email (CBS SME) said “*we, everybody, should realise that SAP [ERP] doesn’t mean changing legacy systems only, but also changing legacy ideas, which don’t work with SAP [ERP]. SAP [ERP] is a change of management. So, all those who think that they have purchasing group while they don’t should stop. They should not be purchasing, it is not their function*”. He went on by affirming the genuine owners of the purchasing process for non-stock items, saying; “*For those*

*[WHO DISAGREE], MESAIR, should say loudly, there isn't any purchasing group in GSS except those which exist in the following two departments (1) Contracting and Bidding Services (CBS) Department (2) Corporate Administrative Services (CAS) Department".*

(CBS SME) went on to encourage others to continue doing what they were doing as far as implementing the purchasing process was concerned and that those who were arguing with the purchasing groups should *"legalise their existence as buyers, which is against the concept of centralising purchasing"*. He went on to explain the danger of leaving buying processes open to every department, saying *"it is really dangerous if every department manager who wants to purchase material or services creates his own purchasing group and ignores the real purchasing groups"*.

What (CBS SME) meant to say in that email was that best practice should always be adopted and that enforcement of rights to conduct purchasing orders should not be allowed as it was bad practice. In an interview with (CAS SME), he said *"Best practice was there, we implemented a lot of them...we have adopted the best practice, but yet in some aspects; that required managerial decisions and we couldn't do them [GAINING APPROVAL TO ADOPT BEST PRACTICE]"*. (CAS SME) then went on to explain the reasons for not being able to adopt them; to that respect he said *"had MESAIR adopted best practice regardless of the outcomes, my line managers would have never had a chance of changing anything. MESAIR line managers would have had no choice [BUT TO ACCEPT BEST PRACTICE AND ADOPT IT]... I didn't have the power to tell the implementer to configure it [IN SAP ERP SYSTEM] in that way [BEST PRACTICE]"*.

And when (P01) was asked about the email correspondence mentioned earlier and about the possibility of personal clashes having influenced that correspondence, he said *"how do you expect to implement SAP ERP when you have some members of MESAIR staff trying to have a go at each other, when their agendas clashed with benefiting SAP ERP [IMPLEMENTATION PROCESS]"*.

(CAS SME) also mentioned how sometimes they had to take the decision to apply best practice without gaining approval from their line managers. In that respect, he said *“In some cases, we took the decision ourselves [SMES AND SAP ERP IMPLEMENTERS] and with that we had to carry some risks on our shoulders and the fact that someone might question these decisions”*.

Research participant (P02) (the understudy of CBS SME) mentioned the same thing. (P02) said *“we as SMEs have had one goal and that goal was to work with best practice. Of course we had to go back to our managers regarding certain issues and get their approval regarding that particular matter especially if it involved changes to be made to the way we do our business in our respected department”*. He also mentioned how they used to get into disagreements regarding certain issues, saying *“in some instances there were some disagreements and resistance because as you may be aware nobody wants to lose or have some of their authority taken away from them”*.

However, SMEs seemed to have been advocates for the best practice because according to (P02) *“SMEs used to try to convince them [LINE MANAGERS] that this is the way we should adopt SAP ERP in order for it to work sufficiently. We also used the high authority recommendations regarding adopting best practice”*.

The email exchanges that were explained above demonstrate the risks that (CAS SME) was talking about. Together with other SMEs who were participating in the Materials Management Module’s workshops, he had to carry out some risks when taking decisions to adopt best practice by asking SAP ERP implementers to configure the general procurement process to be carried out by only two departments (CBS and CAS). This decision was clearly not welcomed by (GM 2) who was also one of the Executive Business Sponsors for the SAP ERP implementation project.

#### **5.10.6. Blurred views of GSS on the privatisation project**

During the workshops of the SAP ERP implementation project, SAP ERP implementers asked SMEs of the GSS Division about whether MESAIR had projected the division to stay under the Premium Airlines SBU or whether it would have its own SBU, and if there was an SBU to be created, what sort of business activities it would be responsible for. GSS Division SMEs could not provide them with clear answers with regards to the projected future of their respected division. Such queries inspired (GSS IT) to ask the (DP GSS) about the projected plans for the GSS Division. (DP GSS) confirmed to (GSS IT) that the former was projecting a plan for the division which included creating a new SBU that would be responsible for all non-aircraft logistics as well as looking after the real estate affairs for all other SBUs (See Figure 5.7.).

This plan had never been discussed during the ERP implementation project workshops. According to research participant (P01), *“We went to the SMEs workshops when no one knew their scope. You were sent there just to attend the workshops but what for? What is my scope? Why am I here?...what was our ultimate goal?! Nobody sat with us [AS SMES] and explained what we had to do in the SAP ERP implementation project. And that our ultimate goal was to achieve a certain aspect. It is different when your aims and goals are clearly read out to the SMEs so that they can work for it. But when the ultimate goal was only to participate in workshops as an SME!”*

As a result, ERP implementers were instructed by the MESAIR to configure the SAP ERP systems without taking into consideration the projected plans for the GSS Division. This decision contributed creating a sense of confusion amongst GSS SMEs as they never knew what direction the division was going to take and whether they would have their own SBU or not.

#### **5.11. Summary and Conclusion**

This chapter introduced the developed case study of an ERP implementation project in an organisation in Saudi Arabia. It started by providing the reader with general background information about the organisation under study. It

continued by explaining its organisational structure prior to introducing the privatisation project which was explained subsequently. Next, the legacy information systems and the organisation culture were provided. The researcher also explained the Information systems requirements and the ERP selection process that was deployed by the organisation under study. Subsequently, the researcher explained the strategy and the approach for the ERP implementation project as well as providing the reader with insights into the business blueprint workshops and how issues developed regarding the ERP implementation project under study. Next, the researcher explained the focus of the case study which was on the General Support Services Division and the Materials Management (MM) module in the ERP by providing incidents that occurred during the ERP implementation project under study.

The next chapter provides the reader with the results and the findings from the conducted interviews and the collected documents, together with the aid of archival records. This aims to give the research a stronger base by providing deep insights into the major issues in order to investigate the phenomena under study.



Figure 5.1. MESAIR's executive organisational structure prior to privatisation

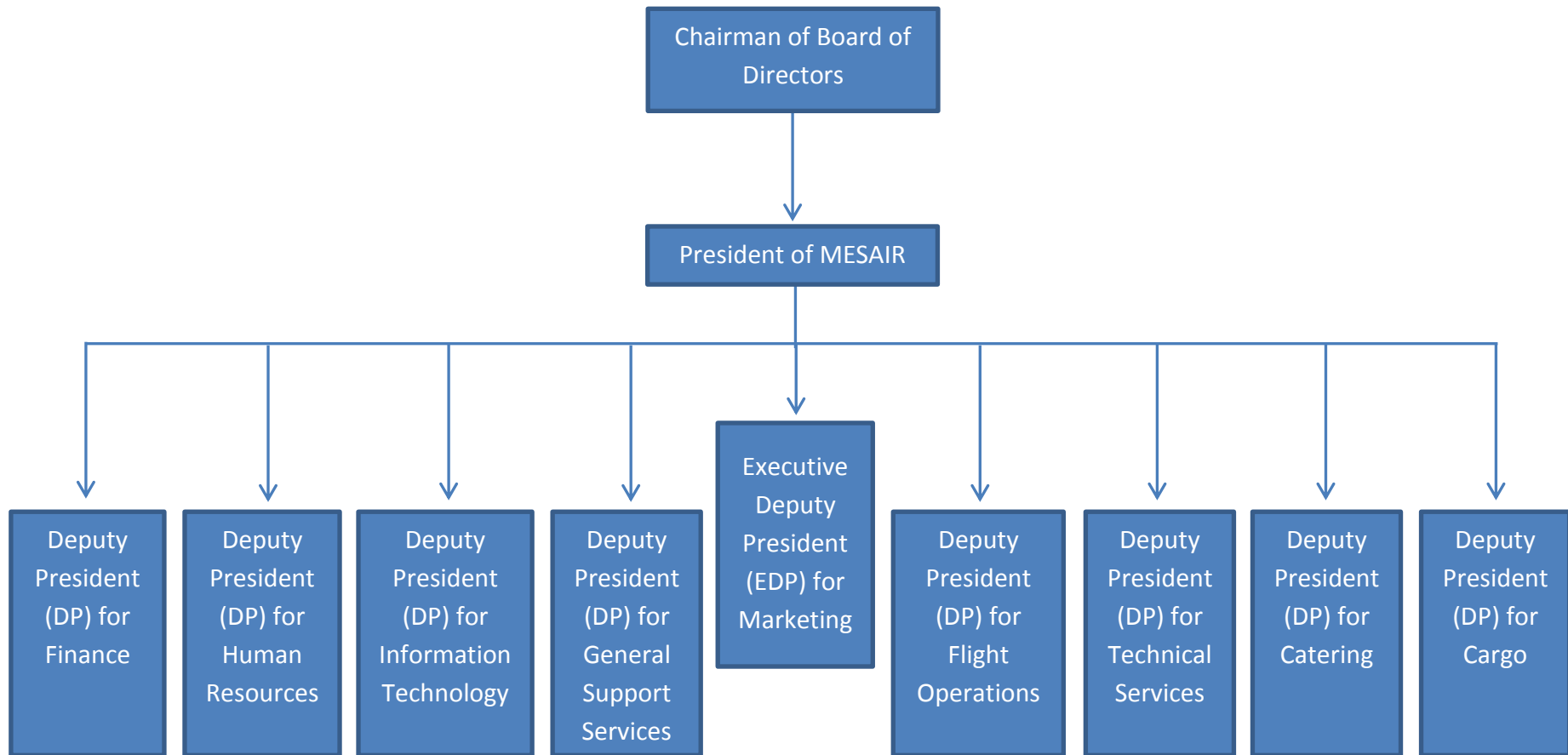


Figure 5.2. MESAIR's proposed organisational structure prior to the ERP implementation project

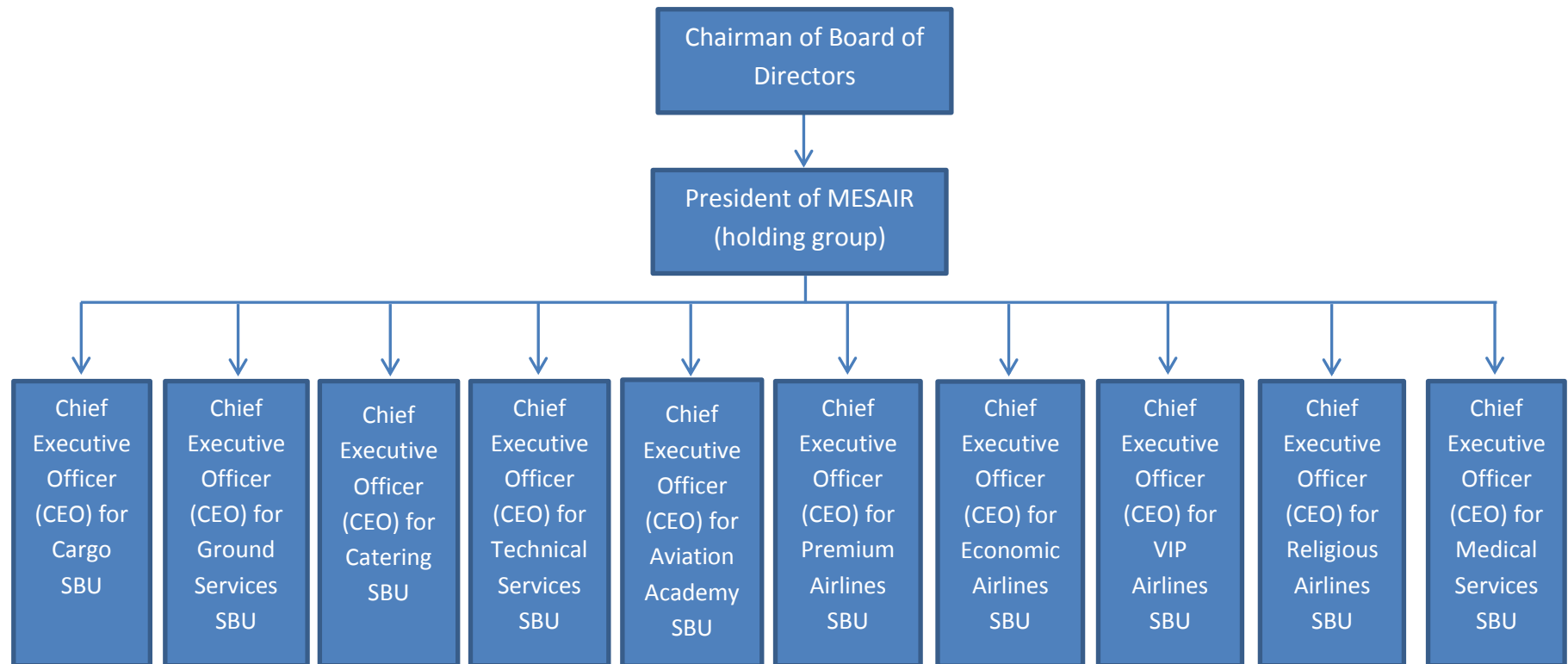


Figure 5.3. MESAIR's approved organisational structure at the start of the ERP implementation workshops

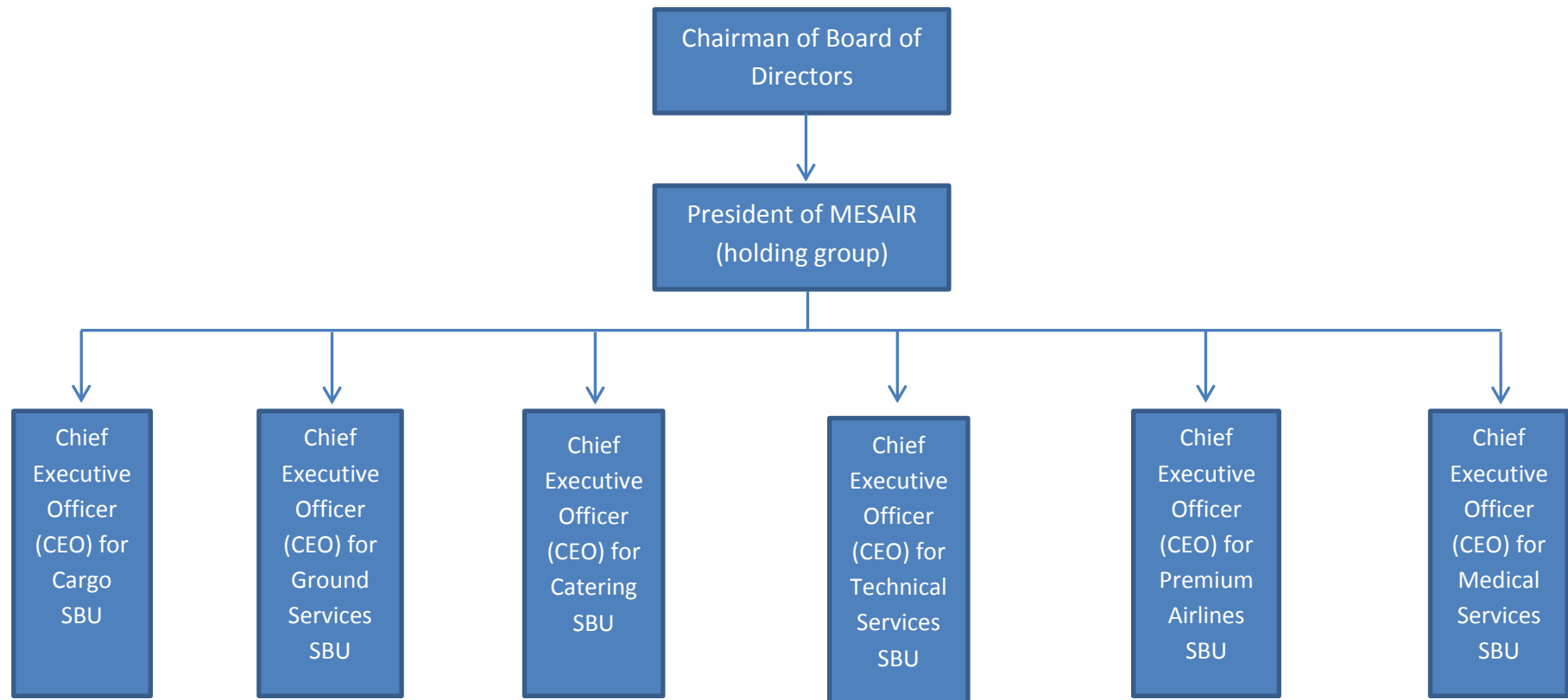


Figure 5.4. ERP implementation strategy – original plan

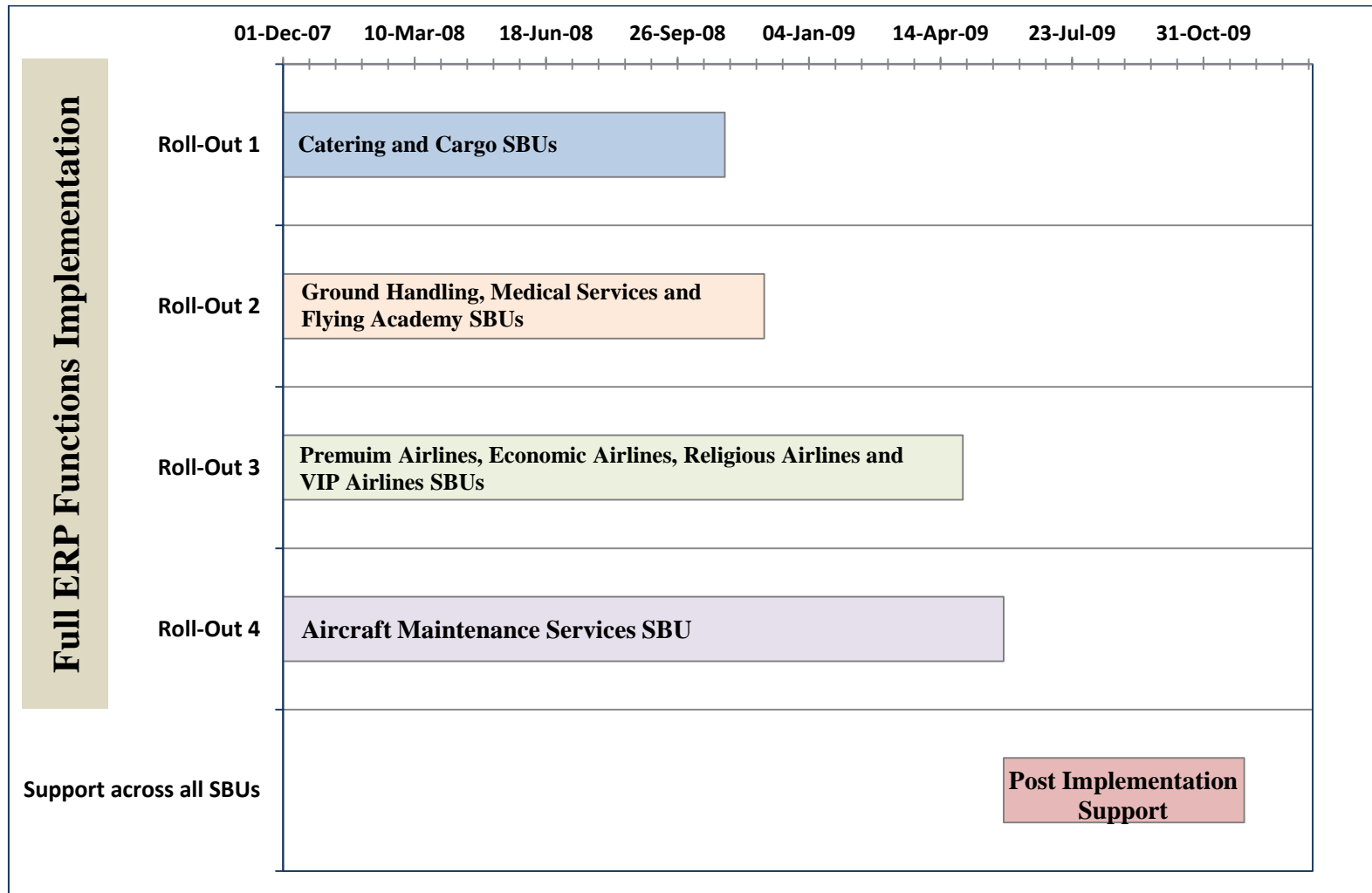


Figure 5.5. ERP implementation strategy – revised plan

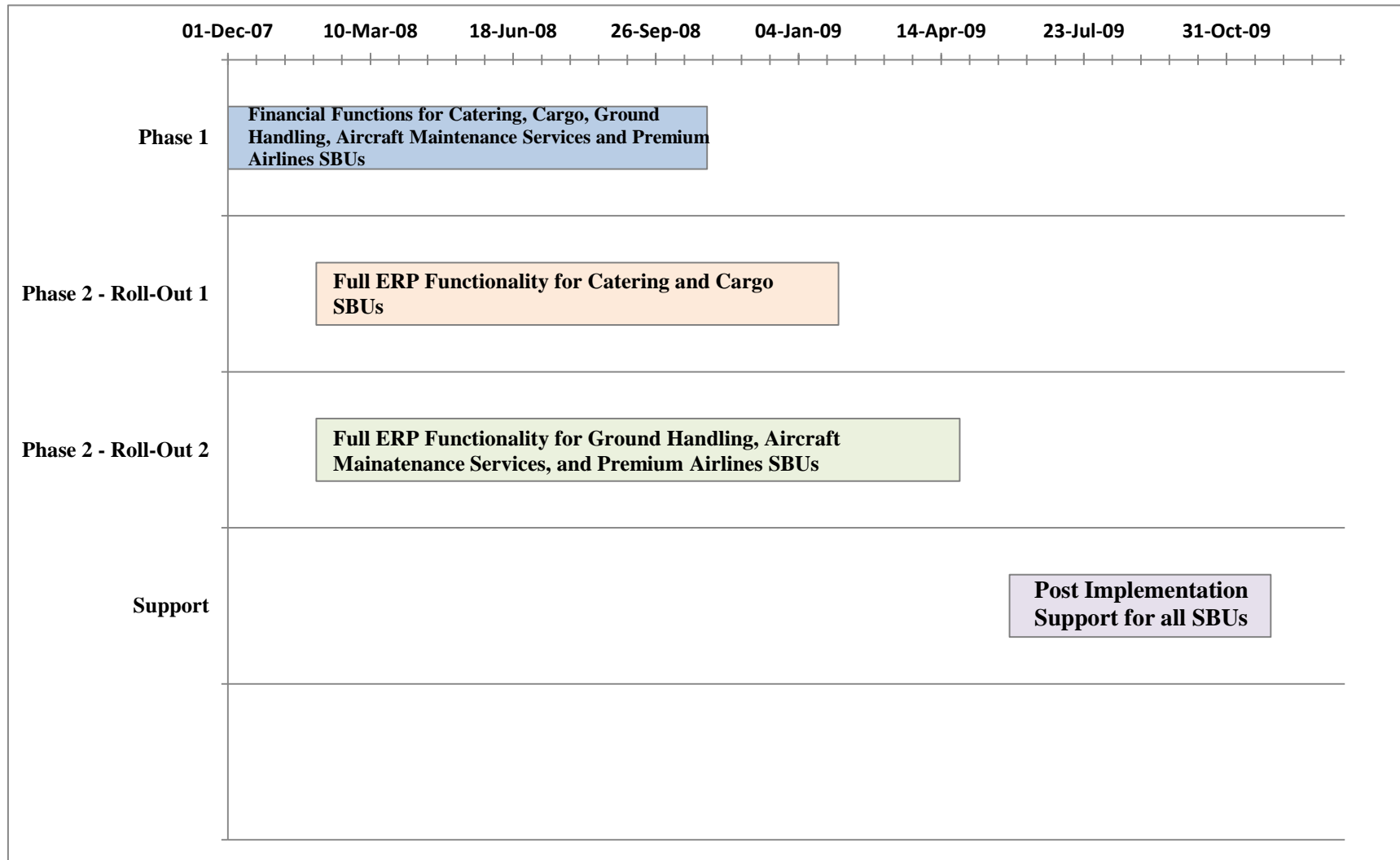


Figure 5.6. GSS Division Organisation Structure

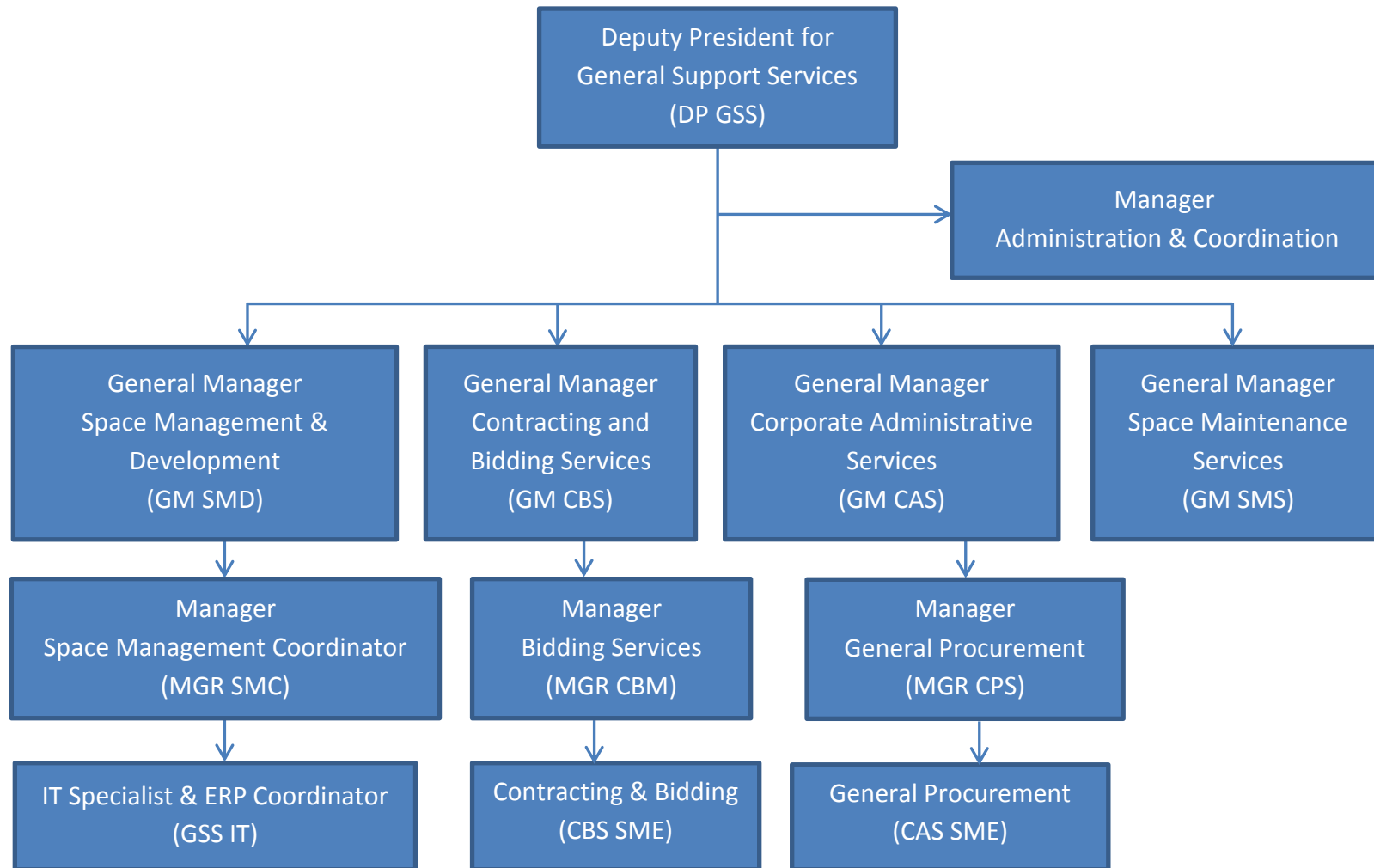
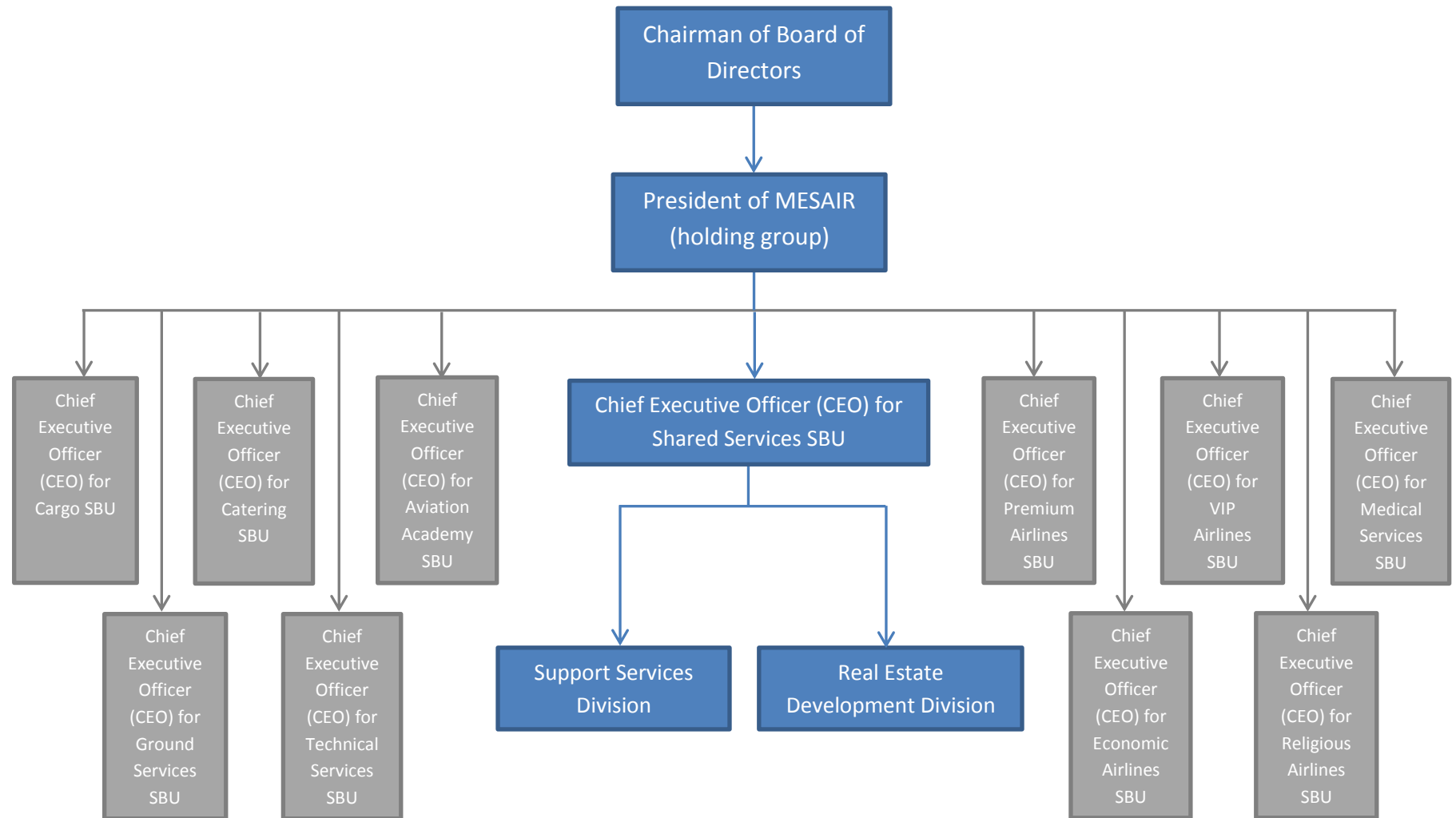


Figure 5.7. GSS Projected SBU Plan



## **6. Research Findings**

### **6.1. Introduction**

The previous chapter aimed at introducing the developed case study of an organisation in Saudi Arabia. For the sake of fulfilling the ethical requirements to conduct the research, the organisation was given a coded name in the form of MESAIR. The case study was developed by the researcher to explain thoroughly the most relevant issues in this research. General background information about the organisation under study and its organisational structure prior to introducing the privatisation project had been explained. MESAIR legacy information systems and the organisation culture have also been explained as well as explaining the Information Systems requirements, the ERP selection process and the strategy of the ERP implementation project. Incidents that occurred during the ERP Implementation Project under study were presented whilst focusing on the General Support Services (GSS) Division and the Material Management (MM) Module in the ERP.

This chapter provides the reader with the research findings that were drawn out of the data analysis. As the research findings were based on the thematic analysis, this chapter starts where Chapter 4 ended, by explaining the mechanisms and the techniques that were used in order to develop the themes. The researcher follows on to explain nine developed themes as well as drawing out the research findings from the themes.

### **6.2. Themes development**

As explained in Chapter 4 (section 4.9.), this research adopted the thematic analysis approach for analysing the collected data. This was because thematic analysis is mainly concerned with identifying and interpreting clusters of meaningful patterns from the data (Saunders *et al.* 2008). The overall aim of



deploying the thematic analysis was to identify and interpret meaningful patterns out of the collected data which were able to sufficiently address the research aim and objectives (Spencer *et al.* 2014). The developed themes were then interpreted to provide an in-depth understanding of each developed phenomenon in order to derive helpful pieces of information that can contribute positively to fulfilling the objectives and the aim of the research.

Given the objectives of this research (see section 1.4. in Chapter 1), the researcher was mainly concerned with identifying certain actors that were involved in the case under study as well as attempting to analyse their relationships with other actors in order to identify some of the main power relations that unfolded during the evolvement of the case under study.

The discussion chapter (see Chapter 7) is devoted to explaining the network of power relations that influenced the case under study in greater detail. This meant that the research findings in this chapter together with the case study that was presented in the previous chapter (see Chapter 5) would be put under greater investigation. Such investigation was aimed at explaining different sets of power relations put together. In addition, the introduction of such sets of power relations focused on explaining the shifts of power from one actor to another. In addition, the discussion chapter is devoted to explaining different alliances that were developed amongst the concerned actors against other set of actors in order to dominate certain aspects of the ERP implementation project under study.

As explained in in Chapter 4 (see section 4.9. for more details), all interviews transcripts, documents and archival records were thoroughly interpreted and analysed in order to draw out the themes that are related to the research. A total number of nine themes emerged out of the data analyses that were crucial to achieving the overall objectives of this research (see Table 6.1). The development of the themes entailed explaining the emergence of power relations that were unfolded during the evolvement of the case under study.

The emerged themes are: ERP implementation project's role of empowering Subject Matter Experts (SMEs), ERP's best practice enforcement, SMEs' & ERP implementers' personal relationships influencing ERP's 'To-Be' business process, privatisation project's influence on the ERP implementation project, organisation structure over ERP's 'best practice' business process, power of the organisational culture, disappearance of change management and its lack of power, privatisation project consultants & ERP implementers power relationships and ERP implementation project enrolling SMEs and/or managers into pursuing own personal interests.

Theme number	Sub-section	Theme Title
1 <sup>st</sup> theme	6.2.1.	ERP implementation project's role of empowering Subject Matter Experts (SMEs)
2 <sup>nd</sup> theme	6.2.2.	ERP's best practice enforcement
3 <sup>rd</sup> theme	6.2.3.	SMEs' & ERP implementers' personal relationships influencing ERP's 'To-Be' business process
4 <sup>th</sup> theme	6.2.4.	Privatisation project's influence on the ERP implementation project
5 <sup>th</sup> theme	6.2.5.	Organisation structure over ERP's 'best practice' business process
6 <sup>th</sup> theme	6.2.6.	Power of the organisational culture
7 <sup>th</sup> theme	6.2.7.	Change management and its lack of power
8 <sup>th</sup> theme	6.2.8.	Privatisation project consultants & ERP implementers power relationships
9 <sup>th</sup> theme	6.2.9.	ERP implementation project enrolls SMEs and/or managers into pursuing own personal interests

Table 6.1 The development of the nine themes

### **6.2.1. ERP implementation project's role of empowering Subject Matter Experts (SMEs)**

As this research was concerned with finding out the impact of power relations on the ERP implementation under study, the researcher was mainly devoted to digging out power related issues that may have influenced the case under study. The first theme that emerged out of the data analysis was about finding out the relationship between the ERP implementation project under study and the Subject Matter Experts (SMEs) and whether the latter have been empowered by participating in the former.

The researcher asked interviewees whether they thought that the participation in the ERP implementation project empowered Subject Matter Experts (SMEs) in one way or another. The reason for asking such a question was to try and identify the link between ERP and SMEs in the power relation system.

As the introduction of ERP in particular organisation is meant to transform the business across an array of organisational functions, through the enforcement of its business processes, the researcher argues that the ERP implementation project possesses power. The assumption of this theme was formulated to find out whether the power of the ERP implementation project was capable of transferring such power to SMEs, which would eventually be capable of strengthening SMEs' positions in their respective business functions.

In a statement in one of the emails (see Appendix 28) that was sent from MESAIR (ERP Mgr. Org.) to all DPs across the organisation, he stressed out the importance of SMEs to the ERP implementation project by stating that they *“will be the bedrock of business knowledge in the new SAP [ERP] best practices and business processes; they will be the core business team to facilitate, support and propagate financial transactions knowledge across all the specialties for the Finance Sections of each SBU”*.

Many research participants stressed out the beneficial aspects of participating in the ERP implementation project under study especially for SMEs. According to (P07), *“SMEs have benefited a lot from the ERP implementation*

*project because they are the ones who participated in the workshop and therefore understood the system... This means that they became popular in their respective department”.*

(P09) elaborated further on this by stating that SMEs *“have edged it over other employees because they lived through the process of building the ERP systems”*. (P11) also stated that SMEs *“raised their stakes at their Divisions and as a result they gained decent positions in their departments or their divisions or even in the organisation as a whole”*. Other research participants such as (P13), (P15), (P16), (P19), (P20) and (P24) also mentioned that most SMEs in the implementation under study benefited from their participations.

Research participant (P08) provided his personal experience by saying *“I felt that I became more popular amongst my colleagues because I started to understand how the system work and my colleagues always turn for me to get advice about doing something in the ERP...”*. (P08) also demonstrated the empowerment factor due to his participation by saying *“I felt empowered by such knowledge as well as gaining more reputable position within the organisation”*.

One of the research participants (P01), who was an SME in the ERP implementation project of MESAIR, had been offered an acting managerial position in his department. Arguably, one of the reasons for that was due to his positive participation in the ERP implementation project as an SME. However, when the researcher asked him whether or not he thought that his participation in the ERP implementation project had helped in gaining the acting managerial job of the department in which he had been working, he said *“no, it certainly didn’t, if we are talking about my situation it hasn’t”*.

(P01) went on to explain what had happened during that period by saying *“there were certain circumstances in the department; where the General Manager (GM) [HAD] to replace the last manager with someone, and there were some alternatives for him and I was chosen eventually. It could have gone to somebody else; I wasn’t privileged because of Subject Matter Expert (SME),*

*there were almost three names or two names and that GM nominated one or two and I wasn't even 1<sup>st</sup> choice, I was 2<sup>nd</sup> choice. However, 1<sup>st</sup> choice was 'regret' and pulled out and had he accepted the offer he would have taken it. Therefore, the involvement in SAP [ERP IMPLEMENTATION PROJECT]; this was not the factor that they based their decision on."*

Although (P01) never admitted to it being one of the reasons for being offered the acting managerial position, the researcher sensed that there were parts of his statements that were not necessarily true. This was evident when he told the researcher that there were three nominees to take up the acting managerial positions and then he reduced them to two choices. Whilst saying this, the researcher felt that (P01) was trying to hold back some of the truth. That was clearly visible due to his hesitations while telling the story.

When (P01) was asked about whether his former manager had been transferred to another department, he said *"he was appointed during that period, not appointed but he had rather been given a special assignment from the Deputy President (DP) [GSS] to take care of the MRP and he stayed there for a while before he was transferred to [CONTRACTING AND BIDDING SERVICES]."*

His responses regarding the previous manager in the above two statements were somehow different. In the first statement he told the researcher that the GM had to replace the previous manager with someone else, whereas in the second statement he told the researcher that he was given a special assignment from the DP (to whom the previously mentioned GM reports) to take care of the MRP.

In addition, at the time of replying to the question on what had happened to the previous manager at that time, he seemed very hesitant as well as trying to carefully choose the right words. The researcher's assumption was that he was trying to bolster his argument regarding this matter in order to make it sound as if he had earned the acting managerial position based solely on his personal

and managerial skills by affirming that his participation in the ERP implementation project had nothing to do with it.

This assumption had been proven by another research participant (P02). When he was asked the same question, his reply was *“yes of course it did have an influence. There are a lot of MESAIR employees [WHO PARTICIPATED IN THE SAP ERP IMPLEMENTATION PROJECT AS SMES] who benefited from the participation. As an outcome of this, they have lately earned good managerial positions because they were SMEs in the [MESAIR] SAP ERP implementation project... Because of these things, almost all SMEs have their own positions in their departments. An SME is the one who understood the systems and he is the one who has been working on it [EVER SINCE THE START OF THE IMPLEMENTATION PROJECT].”*

(P02) then mentioned the name of (P01) straightaway as an example of how SMEs became managers because of their participation on the ERP implementation project by saying *“(P01) became a manager lately... You know, he used to hold grade 15 [IN THE OLD MESAIR GOVERNMENT HIERARCHY] before his participation, but now he has been promoted gradually until he made his way up the [HIERARCHY LADDER] to grade 18 [IN LESS THAN FIVE YEARS].”*

The above statement was backed up by research participant (P17) by saying *“in MESAIR, I have seen some examples of SMEs taking their career to the next level after participating in the ERP implementation project. (P01) for example, he became an acting manager of his department which was the General Procurement Department”.*

(P17) also elaborated further on this by stating that (P01) went on to become the Finance Department manager for one of the newly created SBUs. To that respect (P17) said *“quite recently (P01) became the Finance Department Manager for one of the SBUs... I believe that his early participation of the ERP implementation project of MESAIR had paved the way for climbing the ladder in the way that he did”.* Another example was given by the same participant

about the role of participating in the ERP implementation project under study which paved the way for another SME to become a manager; to that respect he said *“(P10) have become quite recently a manager of HR for one of the SBUs that was created and it was also mainly due to his valuable contribution to the ERP implementation project”*.

The above statement from (P02) and (P17) demonstrates the level of accuracy in the researcher's assumption which confirms that (P01) benefited greatly from the ERP implementation project to the extent that he was offered the acting managerial position. The fact that (P01) had eventually been assigned as the manager of Finance for one of the Strategic Business Units (SBUs) under MESAIR demonstrates that ERP implementation projects have the capability of empowering SMEs.

To affirm this assumption further, it is worth mentioning that research participant (P03) provided a similar response to the same question by saying *“employees who participated in the SAP ERP implementation project as SMEs and used to hold low ranked positions, have all had been given supervision positions, simply because they are the ones who understood how the [ERP] systems work.”*

(P06), who is an ERP Manager in MESAIR IT Department, elaborated on this matter further by saying *“some of the SMEs got promoted or became the favoured employee in their departments because they were the ones who trained the department's staff and they are the ones who provided technical support for SAP ERP systems”*. Research participant (P04) thought that SMEs *“have power over their managers for the duration of the project in regard to issues that concern that particular project.”*

According to (P04), the reason for this is that *“SMEs are the ones who will become your decision makers, they are the ones who will determine how they want the business process to be used; they are the ones who will tell the consultant that they want the business process to be in certain way... SMEs are empowered over their managers regarding issues for this project [SAP ERP*



IMPLEMENTATION PROJECT]”. (P04) even elaborated further on this matter by explaining that “*if an SME proves to be more efficient than their managers provided that they had gained a few years of work experience in the company, why not! [TAKE OVER THE MANAGERIAL POSITION OFF THEIR MANAGERS]*”.

(P05) elaborated further on what (P04) stated above by stating that “*SMEs didn’t provide adequate feedback to their managers and there was very little communication in regard to certain issues [IN THE ERP IMPLEMENTATION PROJECT] and SMEs used to make their decisions based on their experience and knowledge plus [USING] their [OWN] power as being reliable employees in their departments [TO DEVELOP THE TO-BE BUSINESS PROCESS].*”

(P05) also went on to explain this further by saying “*this has impacted the decision making process [IN REGARD TO DETERMINING THE TO-BE BUSINESS PROCESS] which was being taken without going back to discuss matters with their departments; not without going back but let’s just because say of their knowledge and experience they are certain that [specific business process] should be [DONE] like this*”.

In an email (see Appendix 27) that was sent by one of the SMEs (CBS SME) to his line managers with regard to an issue that had been raised regarding which departments should own the buyers role in the ERP system, he said “*we, everybody, should realise that SAP [ERP] doesn’t mean changing legacy systems only, but also, changing legacy ideas, which doesn’t work with SAP [ERP]. SAP [ERP] is a change of management. So, all those who think that they have a purchasing group, while they don’t, should stop. Because they practice purchasing wrongly, it is not their function*”.

(CBS SME) elaborated further on this matter in the same email by affirming the genuine owners of the purchasing business process for non-stock items by saying; “*For those [WHO DISAGREE], MESAIR, should say loudly, there isn’t any purchasing group in GSS except those which exist in the following*

*two departments (1) Contracting and Bidding Services (CBS) Department (2) Corporate Administrative Services (CAS) Department”.*

(CBS SME) went on to encourage others to continue doing what they were doing as far as implementing the purchasing business process was concerned and that those who were arguing with the purchasing groups should *“legalise their existence as buyers, which is against the concept of centralising purchasing”*. He went on to explain the danger of leaving buying processes open to every department by saying *“it is really dangerous if every department manager who wants to purchase material or services, creates his purchasing group and ignores the real concerned purchasing groups”*.

(P17) confirmed that this particular SME (CBS SME) was side-lined in his department prior to being nominated to become an SME for the CBS department in the ERP implementation project. According to (P17), *“I was aware at the time that (CBS SME) had been side-lined for a while... [and] was sent out only to keep him away from office and to keep him occupied with some project that they didn’t care about. Eventually, (CBS SME) turned things around to his favour because he started planning the new business process of the whole department. The GM (GM1) that sent him out had no option but to bring him back into the picture”*.

(P17) went on to explain that his line manager (GM 1) switched his opinion dramatically about (CBS SME) and that the former started considering the latter as a vital employee for the CBS Department. (CBS SME) even found himself attending the Division’s executive meetings on a regular basis. According to the minutes of one of those meetings, he had been given plenty of time to express his views on what the new business processes for the respected division should be like (See section 5.10.5. in Chapter 5 for more details).

These sorts of empowerments that had been gained as a result of SMEs’ involvement in the ERP implementation project workshops demonstrated that SMEs had been empowered over their line managers due to their participation

in the ERP implementation project. Therefore, one of the findings for this research was that the ERP implementation project had directly empowered SMEs over their line managers. As discussed in section 3.5. (Chapter 3) of this research, ERP provides empowerments to SMEs during ERP implementation projects (Sia *et al.* 2002; Volkoff *et al.* 2004; Maas *et al.* 2014; Kayas *et al.* 2008; Hall 2002, Rose and Kræmmergaard 2006).

Due to the fact that the Discussion chapter was aimed at explaining the power relations by deploying ANT on the case study as well as backing it up with the research findings, it is important to explain briefly the sort of power relations that have been identified out of this theme. Therefore, it can be argued that those power relations that were developed during the ERP implementation project under study had promoted SMEs to become more powerful entities by handing them the necessary tools that they needed to make changes in their respective departments (Sia *et al.* 2002).

Their line managers eventually sensed the power relations that developed between the ERP implementation project and the SMEs. In order to regain control, line managers felt the need to get involved with the SMEs that they had sent out with regard to the ERP implementation project under study. This involvement by the line managers was deliberately initiated to break and/or loosen the power relations that had developed between the ERP implementation project and the SMEs. These power relations are to be investigated further in the Discussion Chapter (see Chapter 7).

From the above analysis, it can be argued that one of the findings for this research was that the ERP had empowered SMEs by handing them the necessary tools that they needed to make changes in their departments. The alliance that was formed between the SMEs the ERP developed a power relation that was capable of enforcing their collective beliefs into the business units across the organisation under study.

### 6.2.2. ERP's 'best practice' enforcement

This theme emerged out of the data; it is worth noting that the thought behind digging this theme out of the data was with respect to the previous one. As the previous theme embraced and proved the existence of ERP's empowerment of SMEs, the researcher was keen to find out the power possession of ERP's best practice and its impact on the organisation under study especially with regards to its impact on the organisation structure.

The result of the data analysis demonstrated that it was ERP's best practice that possessed power. That power comes in the form of enforcing the ways of which ERP is implemented in the organisation. The standardised best practice of implementing ERP was the driving force of enforcing organisations to make the necessary changes in their organisations in order to adhere to ERP's best practice. The transference of power from ERP's best practice to SMEs had been conducted through the interaction between ERP implementers and SMEs.

According to the SAP's website, SAP Best Practice is *"a clear methodology and step-by-step approach that provides complete pre-configuration settings that give you everything you need to run specific key processes with minimal installation effort... Best Practices provide predefined business scenarios that focus on the areas of customer relationship management, supply chain management, and business intelligence"*.

(P16) explained this further by stating that ERP developers *"do the business process from their collective business knowledge and from their collective know-how that came out as a result of previous implementation"*; he also added that ERP developers *"became experts and they research and develop such systems and they concluded that certain ways are best for doing specific business process"*.

Another research participant (P17) embraced the above quote by confirming that *"best practice is an approach that is used by ERP implementers which means that the ERP systems have to follow certain procedures"*.

The power of ERP's best practice and its transference into SMEs had been mentioned a numerous number of times in the collected data. According to an email (see Appendix 29) that was sent by the (ERP Mgr. Org.) to all nominated SMEs by their departments at the start of the ERP implementation project, he stressed the importance of implementing ERP's best practice across the cluster of business functions that was being represented by SMEs.

On that email, (ERP Mgr. Org.) stated that *"it is highly NOT recommended by the implementers that single business expert/user be responsible for multiple roles where conflict of interest can arise. From an accepted business practice, audit and QA perspectives it is recommended to segregate roles and responsibilities to ensure checking, due diligence and appropriateness of business conduct. Mixing business roles, responsibilities and authorities in some cases are even internationally not acceptable"*.

Such instructions by the (ERP Mgr. Org.) demonstrate that MESAIR had set out plans to deploy ERP's best practice. In the above instance, (ERP Mgr. Org.) was trying to explain that multiple roles in the ERP system is not good practice and that business functions should spread different roles across an array of employees within their respective business functions in order to maximise the efficiency of the business process which would eventually lead to more appropriate business conduct.

With respect to some comments that had been made by the research participants in response to a question that the researcher had asked during the interviews, which was aimed at investigating the extent of the ERP's best practice enforcement into MESAIR, (P02) said *"[SMEs] had one goal and that was to work with the best practice... SMEs, used to try to convince [DEPARTMENT MANAGERS] by stressing out the importance of adopting best practice and try to convince them that this is the way we should adopt SAP [ERP] in order for it to work sufficiently"*.

(P24) embraced what (P02) by confirming that employees who were involved in the ERP implementation under study had to *"follow the recommendations of*

*ERP implementers to adopt best practice. The ERP systems in MESIR had been mostly configured as best practice*". (P07) explained this further by calling the adoption of best practice as an act of enforcement; to that respect he stated that *"best practice was being enforced into the organisation to some extent and if you wanted to make changes you will need to customise the ERP systems and of course with that it runs an extra cost"*. (P01) also mentioned the same thing by stating that *"Best practice was there, we implemented a lot of them"*.

(P09) mentioned the enforcement factor by stating that ERP implementers *"had a specific business process that they enforced and they insisted that ERP should be implemented in a specific way"*. (P13) mentioned the same thing by stating that *"ERP implementers always told us as SMEs that the system runs in certain standard which is what they referred to as best practice"*.

(P04) agreed with all the above mentioned research participants by stating that *"[ERP IMPLEMENTERS] usually transform business according to what SAP ERP requires in order for it to run efficiently"*. (P04) went on to explain what he meant in the above statement about ERP consultants' intentions to transform business to what ERP requires by stating that *"there would be lots of departmental merging and some departments would be cancelled out altogether"*.

From the above data analysis it is visible that there had been another form of power relation that was developed between ERP's best practice and the organisation structure of MESAIR. Therefore, the researcher argues that ERP's best practice forces the embedded processes into the organisation under study. This was done by forcing the organisation to make the necessary changes to the organisation structure (Wagner *et al.* 2006; Morton and Hu 2008; Soh *et al.* 2003).

Such power relation had also been mentioned in the collected data in the form of, for instance, what (P18) stated *"ERP implementers were firmly consistent that the ERP systems should not be customised and that the organisation structure is the one that should be changed. This meant that ERP*

*implementers wanted to follow ERP's best practice as far as the implementation is concerned".*

(P02) provided an example of the enforcement of ERP's best practice on the existing organisation structure and business process by stating that *"we [MESAIR] have never had a department called Supplier Management, and because of the outcome that came out of the SAP ERP workshops, such a department had been created, so that our business [PROCESS] adapts to the ERP systems [BEST PRACTICE]"*.

(P03) had also mentioned the same example when he said *"Because of the function S&D [SALES AND DISTRIBUTION] in SAP ERP, they had to create a unit which was called Supplier Management. This was created because it was realised that the SRM [SUPPLIER RELATIONSHIP MANAGEMENT] module in [SAP ERP] needed to be managed by a stand-alone unit, and therefore, they had to create this unit to take care of all aspects of vendor and supplier related issues, such as communication, and evaluation"*.

(P01) provided another example of the enforcement of ERP's best practice in the organisation under study by stating that *"In order to approve [THE OLD PURCHASING FORM] we had to sign it by six or seven different line managers before it gets finalised... During the ERP implementation process, we said no, the best practice says no; there should be only three levels of approval. So we implemented ERP to accept only three levels of approvals"*.

However, in some other instances ERP's best practice clashed with another form of power that comes from the existing organisation structure. This was confirmed by research participant (P17) when he stated that *"the challenge that ERP implementers often face is that sometimes best practice clashes with existing organisation structures"*.

(P03) elaborated further on this matter by providing an example; and by doing so, he wanted to demonstrate how the ERP's best practice could not handle the enforcement of the existing organisation structure and business process. (P03)

explained to the researcher how the existing bidding process could not change in accordance with ERP's best practice due to the obligations that MESAIR adhered to in terms of following the existing business process in order to fulfil certain Government Legislation regarding that matter; *"There are certain steps we follow as part of bidding procedure; and when we asked consultants to get SAP ERP to adapt to our bidding system... MESAIR is still operating as a public sector organisation... and we still have to abide to the Saudi Government Rules and Regulations"*.

(P03) went to explain the solutions that was suggested by ERP implementers which was *"to do most of the initial procedure in SAP ERP and you do the middle part of the procedure outside SAP ERP and then you would feed the packages that you've received from bidders back into SAP ERP"*.

Then, (P03) mentioned how ERP's best practice was forcing its own process into the organisation by stating that *"SAP ERP systems [BEST PRACTICE] were enforcing the e-bidding system, where bidders would upload their documents straight into the SAP ERP systems using their own unique username and password through the SAP ERP portal which is part of the SRM module."*

The researcher asked research participant (P02) about a certain incident that had happened during the ERP implementation project when ERP implementers used to stress that this function is an HR (Human Resources) one, where in MESAIR the function was being managed by the finance department. ERP implementers refused to keep it as it is by arguing that they cannot give ERP systems access to Finance staff to do an HR process. His reply was *"Yes, that's true. This department has now been moved to the HR division... These employees together with their department had been moved to the HR division."*

Research participant (P17) confirmed this by stating that *"MESAIR had always conducted their payroll activities under the finance department whereas best practice in SAP ERP systems states that payroll is an HR function. ERP implementers fought against keeping the payroll department under finance. They recommended that Payroll Department should be moved to HR"*.



From the analysis above, it is clear that ERP's 'best practice' was being enforced in the organisation under study. As far as this research was concerned, another power relation can be identified, which had emerged between the ERP's 'Best Practice' and the organisation structure. The researcher argues that ERP's 'best practice' possessed power that was being blocked by another force which came from the organisation structure (Wagner *et al.* 2006; Morton and Hu 2008; Soh *et al.* 2003).

### **6.2.3. SMEs' and ERP implementers' personal relationships influencing the 'To-Be' business process**

This theme emerged out of the data and it arose with respect to the previous one. As the previous theme investigated the enforcement of ERP's best practice on the organisation under study, research participants stressed that the extent of such enforcements can be balanced out depending on the personal relationships that develop during the implementation process. This theme investigates the relationships that were built during the implementation project between SMEs and ERP implementers and the influence they had on the way the ERP systems were configured.

According to (P02), such personal relationships have played a significant role in determining the way the ERP systems had been configured; he stated that ERP implementers and SMEs were involved in many disagreements about the way to configure the ERP systems. (P02) went on to say that SMEs wanted to make lots of customisations and ERP implementers mostly refused to adopt them by insisting that the ERP systems cannot tolerate such customisations. However, according to (P02) *"after personal relationships had been developed, we started to realise that there are certain ways which can be done to go with our favoured business process in the form of customising the SAP ERP, and that [ERP IMPLEMENTERS] can configure it in such a way as well as making the necessary customisation to bring our requests into reality"*.

Other research participants such as (P09), (P11), (P15), (P18) have affirmed the importance of developing relationships with ERP implementers because

according to (P21) *“as an SME you are going to spend a long time with them. The more you socialise with them the easier they are to respond to our requirements”*. To that respect, (P22) said *“as soon as we started mixing together in an informal fashion, things changed with regards to agreeing certain customisations in the ERP systems”*.

Another research participant (P24) agreed to what (P22) said by stating that *“socialising with ERP implementers proved to be one of the keys to get them to agree to make customisation to the ERP systems”*. While (P09) shared his own experience regarding the impact of personal relationships on the way that ERP systems had been implemented by saying *“we had good relationships with ERP implementers and it influenced the way the systems had been implemented”*.

(P09) explained how he had experienced the extent of the social outings on the attitude towards implementing ERP from both parties *“[WE TRIED] to work towards finding the right solution without being biased towards implementing the ERP systems to match our legacy systems from our side as SMEs and also the ERP implementers used to make customisations whenever they thought it was doable”*. To that respect (P02) said *“we used to reach mutual agreements and we sometimes met half way through”*.

(P03) had backed up the assumption that (P02) had initiated by sharing his own experience with regards to the influence of personal relationships between both parties on formulating the way that the ERP systems were implemented by saying *“as we started going out camping, during which we did lots of various social activities for instance riding camels, playing football and volleyball, their attitudes towards us as SMEs changed almost immediately; coming the next day to work with a different mentality, and a different attitude”*.

(P03) went on to explain the change in ERP implementers' attitudes by saying *“we started to communicate in a more positive and less hostile environment; which means that whenever we suggested a way of adopting a certain business process that goes against how SAP ERP had perceived it to go, they would say*

*that they are going to try to make it happen in favour to our suggestions. The importance of conducting social outings with ERP implementers in the way of which ERP systems had been implemented was also mentioned by (P11); to that respect he stated that “we used to go out for dinners and sightseeing... as a result of these outings, I used to call [ONE OF THE IMPLEMENTERS] on his private mobile phone at night sometimes asking him about issues that I faced and he was never too bothered about these calls”.*

(P06) confirmed the assumption and insisted that personal relationships between SMEs and ERP implementers positively contributed to the determination of ERP implementation by saying that *“improved relationships between these two parties have contributed to finding a solid ground to determine the ‘To-Be’ business process”.*

However, two research participants discussed the impact of changing the companies that conducted the ERP implementation on the way of which ERP had been implemented. As MESAIR had to change the implementer from PAHO to another company called MSB (see section 5.9. in Chapter 5), the change of implementers brought in some changes to their attitudes from being too rigid about making customisation to the ERP into becoming more relaxed about it.

On this particular matter (P01) said *“with PAHO there were no big effects because they had professionalism in the way they did business with us... they never agreed to irrational, non-logical customisations [TO THE ERP] and also they had never agreed to doing issues that were out of their scope of work, or things that will harm the system... when MSB took over the project, personal relationships were highly apparent and visible”.*

(P01) went on to give his own opinion on the change of attitude by saying: *“MSB agreed to make lots of customisations although sometimes there was no logic behind them... This is when personal relationships overshadowed the implementation process... regardless of how strong the personal relationships between both parties are, it shouldn’t have influenced the implementation*

*process of SAP ERP systems". (P02) affirmed the flexibility of the ERP implementation process during MSB's era by stating that "with MSB, the implementation process was more flexible than when it was with PAHO."*

With regards to the extent of customisation that is allowed by ERP implementers (P04) stated that *"there is nothing officially declared by SAP [AS THIS BUSINESS PROCESS BEING BEST PRACTICE] because the consultants [ERP IMPLEMENTERS] have to develop the processes themselves. But when he does the development he will do it based on best practice in his eyes or so to speak."*

From the above analysis, the evidence was clear that personal relationships between ERP implementers and SMEs influenced the way of which ERP had been implemented. The impact of personal relationships between ERP implementers and SMEs on the process of implementing ERP systems in organisations had also been discussed in the literature (Metrejean and Stocks, 2011; Pozzobon and Pinsonneault, 2012; Coelho *et al.* 2015; Chang *et al.* 2013).

The researcher argues that the development of such personal relationships is another form of power relation. From the above data analysis, it was evident that SMEs and ERP implementers formed an alliance by agreeing to customise ERP's best practice only when it was necessary to do so. Had personal relationships stayed formal throughout the process of the implementation, the 'To-Be' business process would have been negatively affected as a result. Such alliance eased off the domination of ERP's 'best practice' business process; as a result, the most suitable business process for the ERP systems had been adopted throughout the organisation under study.

#### **6.2.4. Privatisation project's influence on the ERP implementation project**

This theme emerged out of the data as a result of querying the interview transcripts on privatisation. Many research participants mentioned the

privatisation programme and its impact on the overall outcome of the ERP implementation project. This theme is aimed at investigating the impact of the privatisation project on the ERP implementation project.

According to research participant (P06) *“privatisation massively influenced the way in which ERP had been implemented because it involved determining the SBUs [STRATEGIC BUSINESS UNITS] and their structure and so on”*. Other research participants affirmed the influence of privatisation on the ERP implementation project; according to (P14) *“the privatisation programme influenced the ERP implementation massively”* and it was affirmed by (P15) who added that *“the privatisation programme might have enforced ERP systems to be implemented in a specific way in order to align it with the outcome of the privatisation programme”*.

(P20) elaborated on that by stating that *“the configurations of the organisation structure in the ERP systems were dependant on the outcome of the privatisation programme”*, this also mentioned by (P17) who stated that *“the overall ‘To-Be’ organisation structure that was configured on the ERP implementation project was derived out of the privatisation masterplan”*.

(P21) briefly explained the outcome of the privatisation programme by explaining the proposed organisation structure and why it was important to implement ERP systems *“the privatisation masterplan included creating new sub-companies within MESAIR... so, in order for the holding company [MESAIR HOLDING] to oversee their progress, an integrated system [ERP SYSTEMS] had to be introduced”*. This was explained further by (P16) who affirmed that *“ERP implementation was a vehicle to implement the privatisation strategy which was to separate legally and financially and HR related matters to separate each SBU”*.

However, even though most research participants affirmed the influence of privatisation on the implementation of ERP, they were mainly sceptical about its positive stance. This was evident when (P11) questioned the efficiency of the privatisation project; to that respect he said *“I believe that the way the*

*privatisation strategy had not been done in a professional manner”. (P17) explained the negative impact of privatisation on the ERP implementation by saying “the privatisation programme had influenced the ERP implementation project quite negatively... [AS] the privatisation programme was not finalised prior to starting the ERP implementation project which has not helped the ERP implementers”.*

(P19) affirmed the negative influence and added that *“it caused the ERP implementation not to run smoothly as ERP implementers needed a clear roadmap to follow in order to implement the ERP sufficiently”.* The negative impact of the privatisation programme on the ERP implementation project was clearly evident across research participants. Some research participants offered more explanations on the negative impact such as (P14) stated that *“the privatisation programme was not very clear to how many SBUs there will be and what their resources of revenue should come from”.*

(P10) explained what (P14) affirmed about the clarity aspect of the privatisation programme by stating that *“the initiation of the SBUs had caused some issues to the ERP because at the beginning it wasn’t clear how many SBUs there will be and some of them had not been approved until a few years later which required going back to starting a new ERP implementation project”.* (P18) affirmed this by stating that *“some SBUs had been approved at a later stage and they had to start another ERP implementation project with another ERP implementer and that was not the best way to implement ERP systems”.*

From the above data analysis, it is evident that the lack of clarity on SBUs brought in confusion to the ERP implementation. This issue had been found to be a valid point as in one of the presentation slides that was delivered by the (ERP Mgr. Org.) on March 2008 (three months after the ERP implementation project kicked off), it stated that MESAIR had six approved SBUs (Premium Airlines, Catering, Technical Services, Medical Services, Aviation Academy and Ground Services SBUs) whereas the three of the other four proposed SBUs which had not approved yet at that time (Cargo, VIP Airlines, Religious

Airlines SBU) had been placed as divisions under the Airlines SBU, while the odd one out (Economic Airlines SBU) had been scrapped altogether (see Figure 6.1).

However, on another slide of the same presentation, (ERP Mgr. Org.) provided his audience with the approved ERP implementation strategy and on that slide, five SBUs were considered for configuration on the ERP systems; which were Catering, Cargo, Ground Handling, Aircraft Maintenance Services and Premium Airlines SBUs (see Figure 6.2).

The presentation slides provides more evidence on the level of confusion across the whole organisation to the extent that the (ERP Mgr. Org.) could not confirm the status on one of the SBUs which was planned to be configured as an SBU (Cargo SBU) in the ERP systems. This was because Cargo SBU at that time had not yet been approved by the Chair of the Board of Directors and therefore, had been placed under the Premium Airlines SBU pending approval.

From the above instances, it was clear that the privatisation project had influenced the ERP implementation project by disrupting its progress. The research participant provided an array of examples to this regard and the researcher believes that it is important to provide more detailed evidence about the extent of impact privatisation has had on the ERP implementation process.

(P01) provided one of those examples by saying *“had we had a real estate company from day one, the Asset Management Department would have known where it belongs within the proposed structure! Therefore, during the implementation for the procurement business process in the SAP ERP systems, I can build up something for the Real Estate SBU”*.

(P01) went on to explain the impact of not being able to configure the Real Estate SBU on the overall outcome of the ERP implementation project by stating that other SBUs were meant to pay ground rent for the Real Estate SBU and had it been approved prior to the implementation of ERP, it would have made a massive difference to the way of which the financial modules in the

ERP systems had been configured. To that respect, he said: *“the management and maintenance is a process that was [SUPPOSED TO BE] run by Real Estate SBU, had we have known these givens, things would have been implemented differently in SAP ERP”*. However, as (P10) affirmed, the approval of the Real Estate SBU came into effect almost three years later and it was way after the initial ERP implementation had drawn to an end.

(P07) also mentioned that after the SBU had eventually been approved it is still not been officially registered as a privately owned company, and as a result, there was a miss-configuration of the ERP systems for the Real Estate SBU. According to (P11) the Real Estate SBU *“is supposed to provide other SBUs with real estate services that would generate income, this had been an almost impossible task... because there were no procedures that had been put in place that had been approved by all other SBUs with regards to charging other sister companies regarding providing such services”*. As a result the Real Estate SBU still provides free of charge services to other SBUs within MESAIR; something that (P07) acknowledged during the interview *“we still provide services for free”*.

(P01) had provided another example when MESAIR decided to form a new division to take care of procurements for the Airline SBU (Sub-Company) whilst other SBUs have their own procurement departments. However, this hadn't happened up until 2010 even though the ERP implementation project had initially kicked off by the end of 2007. On this note he said *“a new structure was formed on the basis of the recommendations that were generated from [THE PRIVATISATION CONSULTING FIRM]... we became under DP Procurement... It had been two years of trying to do it the right way”*.

Regarding the above incident, it could be argued that MESAIR had left the change for far longer than it should have; and by leaving it that late, the business process and the ERP implementation project as a whole was harmed. (P03) explained the harmfulness of doing so by stating that *“had we told [ERP IMPLEMENTERS] that these are our SBUs that had already been privatised and we want you implement SAP ERP in a certain way, they could have*



*managed to customise the SAP ERP systems in a way that will be of benefit to MESAIR in general and to SBUs specifically”.*

From the above analysis, it was clearly evident that the privatisation programme negatively influenced the ERP implementation project under study. The researcher argues that the privatisation project possessed power and that such power had negatively influenced the ERP implementation project by disrupting its progress. Kholeif *et al.* (2007) mentioned the outcome of this theme in the Egyptian context.

#### **6.2.5. Organisation structure over ERP's 'best practice' business process**

This theme emerged out of the data and it was in accordance to what had been mentioned by the research participants during the interviews with regards to ERP's best practice. The data revealed that there is a strong interaction between ERP's best practice and the organisation structure. The interaction that comes into play usually involves dealing with conflict of interest as the ERP's best practice enforces its way into the organisation while the organisation structure imposes such enforcement through its rigidity and hardship.

(P17) mentioned such interaction and according to him it was linked to the lack of clarity of the privatisation programme; to that respect he stated that *“the organisation structure was an obstacle that had hindered the ERP implementation to some extent. This is because the privatisation programme was not finalised prior to starting the ERP implementation project”*. (P01) explained this further by saying that *“we didn't build our organisation based on the processing model that we have; I have a process from A to Z... with one, two, three and four steps I can come up with the organisation structure based on the 'To-Be' business process. Sadly, they tried to create their aim to be built up according to the structure before paying attention to the [ERP'S 'TO-BE' BUSINESS] process”*.

(P01) went on to explain how MESAIR approached the ERP Implementation Project by stating that *“the thing that we did in SAP ERP, we only changed the process from a manual to an automated one”*; and when he was asked to clarify whether MESAIR SMEs pulled ERP Implementers towards configuring ERP in accordance with the existing business process, his reply was: *“Yes, we did”*.

(P13) confirmed this by stating that *“ERP implementers always told us as SMEs that the system runs in certain standard but there were many instances where ERP implementers opted to go along with making customisations that had been requested by the business functions”*. (P14) agreed to what (P13) stated by adding that *“there was a standard but it had not been implemented without any customisations as ERP implementers used to tweak the ERP systems to match what the business function would like to be”*.

(P14) explained this further by blaming ERP implementers for not putting enough efforts to explain the benefits of adopting best practice as well as providing the danger of making a lot of customisations; to that respect he said *“ERP implementers didn’t put enough effort to convince the business functions about the benefits of making business change to align the ERP best practice and that was unfortunate but it did happen... they had to be rigid about their approach of adopting best practice approach by maintaining their stance to change the business process to adapt to the ERP’s business process through its best practice”*.

(P03) seemed to agree with all the previously mentioned research participants when he said *“in some instances best practice seemed to have clashed with the organisation structure... during the implementation process not a lot of restructuring had been conducted in MESAIR. I can’t remember that the ERP had a big impact in changing the organisation structure.”*

(P01) had also recalled an instance when SMEs went back to their line managers regarding the purchasing process, and asking them to take action in the form of promoting the merger of the Procurement Department with Bids

and Contracts Department; their response was that “[SME LINE MANAGERS] said they themselves don’t have the authority to change it in that way. And they explained that [SMEs] were going to have to obtain higher executive authorities [PRESIDENT AND/OR THE CHAIRMAN]”.

In order for the proposed merger to come to life, it took MESAIR two years to do so; as (P01) put it “[TWO YEARS DOWN THE LINE], they merged Bids and Contracts Department with General Procurement Department under one Deputy President (DP) and it was called DP Procurement... It had been two years of trying to do it the right way until it happened”.

Research participants (P15) and (P17) recalled an incident that occurred and it seemed to prove the rigidity of the organisation structure. They collectively (although in separate occasions) mentioned that the payroll department is under the finance department in MESAIR while in the ERP systems it is part of the HR module. According to (P15) “at the time of the workshops we identified the issue and as a result ERP implementers invited SMEs from the finance department to the Payroll workshop to finalise the issue and the outcome was that the people who were handling the payroll function in Finance have continued to do so after the implementation and we didn’t create or move the payroll department into HR. We basically had to assign payroll matrix to the payroll employees in Finance”. (P17) added on that by stating that “DP Finance convinced everyone that part of the business process could be done in HR but the final part of actually contacting the bank, and provide them with the Salary reports should still be under finance”.

From the above analysis, it is clearly evident that the organisation structure possessed power that was capable of clashing with the ERP’s best practice during the project under study. Those clashes of power affirm the stance that there are power relations that develop between the organisation structure and the ERP’s best practice business process during the course of the project; a notion that had been discussed in the literature (Morton and Hu, 2008; Ahmadi *et al.* 2015).

#### **6.2.6. Power of the organisation culture**

The theme emerged out of the data and it is in accordance to the previous theme. Some research participants mentioned the cultural aspects that have affected the implementation process whilst talking about the organisation structure and the ERP's best practice. So, it appears that the organisation culture possesses intrinsic power. Unless such power is fully exposed prior to the ERP implementation project, there is always the threat of such power over-empowering the sort of power that ERP plans to force on organisations through its best practice business processes.

(P03) mentioned one of the organisational cultures by saying *"MESAIR is a government firm, and most MESAIR staff, as you are probably aware, [THEIR MIND-SETS ARE GOVERNMENT ORIENTED]. So we had lots of problems at the beginning of the ERP implementation project in the form of the mind-sets of MESAIR Staff to accept IS [IN GENERAL] regardless of whether it being an ERP or any other IS"*. (P03) mentioned the mind sets of the MESAIR employees as a cultural barrier that hindered the ERP implementation project going forward.

(P03) elaborated further on this by talking about the acceptance of IS amongst MESAIR employees by stating that *"[MESAIR EMPOLYEES] couldn't accept the ERP as they were used to a certain way of dealing with business. That is by doing business manually or using paper-based systems. Because of this organisation culture, most MESAIR Staff were scared of the ERP... and lots of efforts had been put to get them to accept the ERP"*. (P17) mentioned a similar thing as being a cultural implication on the project under study; he stated that *"employees had been used to dealing with paper-based systems... and it is a very hard task to try and make massive changes to the business process without gradually introducing it"*.

(P22) and (P04) acknowledged what (P17) stated while (P04) explained further how the government-oriented culture that lacks the disciplinary action on employees played a big part in not being able to conduct the ERP implementation process; to that respect he said *"MESAIR's SAP ERP*

*implementation project was the worst implementation project ever... Why? Because, it's a government firm; how could a company not have any disciplinary action against its employees".*

(P04) went on to share an incident which demonstrated how MESAIR, being a government firm, possessed limited power on imposing disciplinary action against its employees. Such organisational culture impacted the process of the ERP implementation project. To that respect, (P04) stated that *"there was an SME whose role was vital to the success of the project, three months into the project he told me that he hadn't been promoted for over eight years and that he wanted me to ask his manager to get him promoted to the next grade. Upon telling him not being able to do so, he wanted to leave the project for good... he then told his manager that he either gets promoted or else he would not continue participating in the ERP implementation project; and these types of behaviour tend to hurt [ERP] projects."*

Another organisational culture, which was raised up by (P03), was that most MESAIR employees do not actually conduct the tasks that they are assigned to do; according to him *"20% of the people do all the work while 80% they don't do anything. This stat is not really accurate but I am sure that there are at least more than half of the number of employees [WHO DO NOT] do anything around here"*.

Another issue that was related to the culture of the organisation have been mentioned by (P12) who talked about how department managers in MESAIR mostly sent out the less performing employees to participate in the ERP implementation project; he stated that *"managers thought that it would be a good idea to nominate the low performing employees of the department so that we could get rid of them for a while and we thought that such a move might get them to finally get some work done because they didn't do much in their day-to-day business activities"*.

Such behaviours of managers were acknowledged by (P03) who elaborated further on that by saying *"department managers were asked to send their most*

*experienced employees to the ERP implementation workshops, some managers sent out non capable employees who are not efficient in doing their day to day business for that particular department. Some of those SMEs spoke very little English”.*

(P12) went on to explain how such act backfired at department managers due to the lack of competencies of employees that were sent out to participate in the ERP implementation project; to that respect he stated that *“they didn’t actually understand the capabilities of the ERP systems and as a result the outcome that was reported back to their managers was not accurate enough to comprehend the importance of ERP implementation workshops”.*

(P06) agreed with what (P03) and (P12) mentioned with regards to managers not being fully dedicated to the ERP implementation project; he stated that *“not being able to get comprehensive requirements from SMEs contributed to introducing panic amongst SAP ERP implementers; and therefore, not being able to follow best practice which has caused making lots of customisations to SAP ERP systems. Such customisations might minimise the efficiency of SAP ERP systems”.* So, by sending out the less experienced or unwanted employees to become SMEs, department managers contributed to the lack of information exchange accuracy between the ERP implementers and the departments.

(P05) added that *“these personal clashes are one of the issues that we face at MESAIR. It is a culture thing and that is a big issue... The ERP system should not get involved in these matters... We always like to include personal issues when trying to come up with a decision”.* That demonstrates the impact of the organisational culture on the ERP implementation project.

In addition, (P04) explained the amount of effort that one must put in in order to make any changes to this organisation culture by stating that *“any changes to be made had to be approved by the President of MESAIR, so it is not easy to make changes just because ERP requires such changes... President of MESAIR*

*has also got limited powers as [CHAIRMAN OF MESAIR] can order him to do certain things in a certain way and that is a big problem.”*

(P03) went on to explain what he meant by elaborating further on how decisions in relation to making changes to the organisation are very difficult to conduct. To that respect, he stated that *“when you are trying to privatise an organisation... approval [IS NEEDED] at the highest levels and it also takes forever to send request to the [CHAIRMAN OF MESAIR’S] office for approval”*.

(P03) provided some issues that had been raised during the training sessions for the approval roles in the ERP systems. He stated that *“Some managers thought it would have been a hassle to attend a training course in order to learn how to operate approval roles in SAP ERP. Some of those managers also had issues with not being able to communicate very well in English as well as lacking computer literacy”*. Such statement had been backed up by (P22) who stated that *“department managers refused to get the right training and instead they got other employees to do the release of transactions in the ERP systems... we had to deal with it and it’s still an issue”*.

As previously explained in Chapter 5 (section 5.5), MESAIR, as an organisation, had developed a culture over the years through practices of its employees which can be described in the shape of transferring responsibilities and blame for issues somewhere else. This means that if a department or an employee was able to give responsibilities for a certain task to another department or another employee, they would do so with no hesitation. This organisation culture was apparent in some of the documents that were analysed. In particular, emails that were being exchanged amongst MESAIR employees demonstrated the dominance of this organisation culture. (P04) called to it *“departmental floppiness”* whilst (P18) called it *“pass on the job for someone else”*; the latter elaborated on this by saying that *“given the fact that it is a large organisation, so it was easy for employees to pass on a certain job for other departments to deal with; whilst the other department pushes it back to the original department by providing a counter argument about what*

*department that should deal with that particular task or it might be even passed on to another department”.*

On some of the emails (see Appendix 26 and Appendix 27) that were exchanged amongst employees from the GSS Division (see Chapter 5, section 5.10.5.) regarding which departments within GSS should own the buyer role, the email exchanges demonstrated the effect of the organisation culture on the ERP implementation project. (GM 2) was determined to get his department to become buyers although they were not in a position to do so.

SMD Department did not handle contract management activities whether service or material contracts. Their main business function was to utilise office space for all other business units across the organisation, as well as assessing the expenses for allocating and renovating the desired space. Contractors would then be granted through buying procedures that had been managed by the CBD for service contracting and CAS for material provision (see Chapter 5 section 5.10.5. for greater detail.

From the above analysis, it was clearly evident that the organisation culture possessed power. The enforcement of the power of organisation culture clashed with powers that came from the ERP's 'best practice'. The researcher argues that the power of the organisation culture disrupted the process of the ERP implementation project. The impact of the organisational culture was discussed in the literature (Wagner and Newell, 2004; Rabaai, 2009; Hawari and Heeks, 2010; Mitra and Mishra, 2016).

#### **6.2.7. Change management and its lack of power**

This theme emerged out of the data as a result of what had been mentioned by research participants regarding the negative impact of not giving sufficient attention to the management aspects of change across the organisation. The disappearance of change management had negatively impacted the ERP implementation project. This disappearance of change management removed



the power that was necessary to suppress other counter forces for the sake of benefiting the organisation as a whole.

(P01) based his assumption on the failure of the ERP implementation project by providing the researcher with a bold statement regarding the disappearance of change management where, in his opinion, it was the main factor for the failure of the ERP implementation project of MESAIR; to that respect he said *“change management is one of the critical and vital elements for the project to succeed that weren’t there at all... Failure of the whole implementation was mainly due to this factor... change was greatly massive in every aspect; system, structure, processes and procedures. However, in the real world there was no change management... Changes were huge, tremendous everywhere you go. Because the Information System had been changed, the process had been changed, and structure had been changed. But yet there was no change management in the real world”*.

(P11) backed up what (P01) stated by saying *“may be if there was someone responsible for the change management aspects of the ERP implementation project, things would have been different”*. (P19) acknowledged the limited affects that change management had had on the ERP implementation process by saying that *“change management is a very important aspect of the success of ERP implementation project... At MESAIR we had a problem because change management was not as effective as it should have been”*. Of course, (P19) was talking about the ERP implementation project for the Real Estate SBU which took place a few years down the line.

However, according to (P14) a change manager had been assigned for the Real Estate SBU’s ERP implementation project but due to clashes with other department managers he had been replaced by someone from the IT Department which according to him introduces the issue of what he referred to as a conflict of interest because it was the IT Department that supported the ERP’s best practice and therefore, someone from outside MESAIR should have done the change management job for the project.

(P13) backed up what (P14) was saying and he went on to say *“I still don’t get how someone from MESAIR was meant to do the change manager job given that he was culturally influenced with the MESAIR culture. It was a bad move, may be they wanted to save some money because consultants get paid way more than what an internal employee would”*.

(P01) shared his experience with not having a dedicated change management team for the MESAIR’s ERP implementation project by saying that SMEs had not been briefed about their scope of the project and that *“[SMES] were sent there just to attend the workshops but what for? What is my scope? Why am I here for? What training I should have attended prior to attending these workshops? At least to understand the engagement with this company [PAHO WHO ARE THE IMPLEMENTERS] in what respect!”*.

(P01) went on to explain how some SMEs went into the workshop thinking that they will be dealing SABB (Saudi Arabian British Bank) rather than SAP and that he concluded that *“It is different when your aims and goals are clearly read out to the SMEs so that they can work for it”*. (P02) agreed with what (P01) had to say about this particular issue; he provided the researcher with his own experience about such an issue that had arisen due to the lack of change management which was the fact that SMEs and department managers had not been fully aware of the scale of the ERP implementation project.

(P02) said that *“at the start of the project, SMEs didn’t understand the concept behind implementing the ERP systems. During the PAHO era, MESAIR staff started to gradually understand the potential benefits of implementing SAP ERP into their organisations. As a consequence, by the end of PAHO’s era MESAIR Staff and departments started to engage fully with the implementation project, and therefore, started to put forward their requirements for SAP ERP as well as asking for amendments. However, because these requirements came out too late, PAHO refused them and I think that was the straw that broke the camel’s back”*.

The above quote from (P02) statement indicated some alarming signs that demonstrate the extent of the disappearance of change management and the impact it had on the implementation process of ERP. Another alarming issue which arose due to the disappearance of change management was what (P01) explained to the researcher on how such a project should have entailed an outside firm that should have dealt with the data auditing part of the project as part of change management.

(P01) stated to that respect that *“because of the absence of auditing, in the Finance Department there were some members of MESAIR Staff had some financial liabilities but somehow they have succeeded to resign or retire from MESAIR without anyone asking them to pay off these financial liabilities. Because they had the role in SAP ERP systems and can delete these liabilities from the system.”*

In one of the slides of the initial presentation for the ERP implementation project under study, the (ERP Mgr. Org.) explained that MESAIR had outsourced the role of the change management to outside firms and instead MESAIR decided to conduct its own change management function with regard to the implementation project under study. Research participants confirmed that the role had not even been assigned to an internal management team.

From the above analysis, it was clearly evident that the introduction of change management is vital to the success of the ERP implementation project. However, at MESAIR the disappearance of change management and its lack of power had caused disruption to the overall ERP implementation project. Such disruption could have been avoided had a change management team been dedicated to deal with the major changes that the organisation had to go through during the ERP implementation project under study. This was discussed in the literature (Umar, 2016; Al-Shamlan and Al-Mudimigh 2011)

#### **6.2.8. Privatisation project consultants and ERP implementers power relationships**

This theme emerged out of the data and it was in accordance with what the research participants had mentioned about the interlined relationship between ERP's best practice and the organisation structure. As ERP's best practice is mainly concerned about implementing ERP in a standardised manner and that the organisation structure had been continuously updated throughout the lifespan of the implementation project; there was a special relationship between ERP implementers and the privatisation consultants. Such relationship needed to be maintained in order to ensure the alignment of the organisation structure with the ERP's business process. The researcher argues that there were power relations that had been developed between the privatisation project consultants and the ERP implementers; and that such power relation influenced the way of which the ERP had been implemented.

(P02) mentioned that there were other consulting firms who were working closely with the ERP implementers. They took care of issues regarding the privatisation project as well as dealing with issues related to the organisation structure; to that respect he said *"there were other consulting firms who were working closely with the SAP ERP implementers. For instance Jarmair; they had been working together with PAHO [THEN MSB]. Jarmair were responsible for the organisation structure and PAHO [THEN MSB] were responsible for the business processes"*.

(P03) backed up what (P02) stated by saying *"ERP implementers had other consulting firms who were working together to make sure that business process is aligned with the organisation's structure. These two consulting firms had lots of meetings in order to ensure that structure is aligned with the 'to-be' business process. Therefore, I think that ERP systems have contributed to the procedures of changing MESAIR organisation structure like creating or eliminating departments"*. This statement was backed up by (P18), (P16), (P11) and (P22).

(P04) elaborated further on this by explaining the type of engagement; to that respect he said *“the privatisation consulting firm were the ones who developed a business plan and they formed the organisation structure for the Real Estate SBU [ONE OF THE SUB-COMPANIES WHICH WAS CREATED DURING THE ERP IMPLEMENTATION PROJECT] and they’d developed the processes and procedure manuals for each department. In other words, this consultancy firm had developed the full programme in order for this company to become independent. So, based on what they have done, ERP implementers develop ERP to match the business plan which was developed by the privatisation consulting firm”*.

(P01) provided some insights on the type of relationship by sharing his own experience; to that respect he said *“in 2010 a new structure was formed on the basis of the recommendations that were generated from the privatisation consulting firm; and at that time we left General Support Services (GSS) Division, and we became under DP Procurement with Bids, Contracts, Warehouse, Fuel Management under one umbrella which was called DP Procurement.”*

From the above analysis, it can be argued that there was close inter-linked relationships between ERP implementers and privatisation consultants that produced an alliance of power. Such power alliance can be thought of teaming up to overcome obstacles that come on the ways of both running projects (the privatisation and the ERP implementation projects).

#### **6.2.9. ERP implementation project enrolls SMEs and/or managers into pursuing personal interests**

This theme emerged out of the data as it was mentioned by research participants during the interviews that the introduction of the project had equipped SMEs and/or managers with the necessary tools to achieve their personal interests. This means that the ERP implementation project had the ability to enrol SMEs and/or managers to pursue their own personal interests,

whether this was a better career, a higher managerial role, or developing a network of connections across the organisation.

(P02) said regarding this matter *“yes of course it did have an influence. There are a lot of MESAIR employees [WHO PARTICIPATED IN THE SAP ERP IMPLEMENTATION PROJECT AS SMES] who benefited from the participation. As an outcome of this, they have lately earned good managerial positions because they were SMEs in the MESAIR SAP ERP Implementation Project. One of the reasons was that because of their participation, they understood the SAP ERP systems from end-to-end. As I said they have earned their respective positions in their own departments. Some of them became managers, and some of them used to be managers and they became GMs, DPs. This happened all across MESAIR”*.

(P09), (P10), (P19), (P20) and (P01) backed up the above statement while the latter explained how the whole ERP implementation project had facilitated the path for (ERP Mgr. Org.) to climb up the ladder in a dramatic fashion. As it turned out, (ERP Mgr. Org.) became DP for the IT division as well as becoming acting EDP (Executive Deputy President); to that respect (P02) said *“(ERP Mgr. Org) became an EDP, although he was only SAP ERP project director back then when we started the implementation project... he used to be project director grade 21, and he is on grade [25] I think... of course he is now acting EDP”*.

On another note, (P01) mentioned one of the clashes that had happened between an SME and a GM from the same division regarding how a certain business process should be formulated and explained how personal interests overshadowed the objective of the argument by stating that *“that GM wanted to split the procurement process into two parts strategic and operational procurement, and they wanted the strategic procurement to stay in the Bids and Contracts Department in a way that they will control announcing vendors, send to the suppliers and sign contracts, and then after that the operational matters of the contract comes to General Procurement Department... the way he wanted to implement it was for his own personal interest”*. The researcher

believes that (P01) wanted to say that the GM was trying to include his department to become part of the purchasing business process.

As explained in Chapter 5 (Section 5.10.5.), during the ERP implementation project, an incident occurred involving (GM 2) and (CBS SME), which was when the ERP implementers who were running the workshops had requested SMEs to assign buyer roles to certain employees within the division to make general purchases from external suppliers through the official channels, which should only be made by Corporate Administrative Services (CAS) Department or the Contracting and Bidding Services (CBS) Department.

(GM 2) jumped in to include members of the SMD Department to take buyer roles too in the ERP systems. He based his argument on the fact that the SMD Department used to buy products and services directly without going through the official buying procedures (i.e. bidding and/or contracting or processing buying orders). For the full context of the incident, please refer back to Chapter 5 (section 5.10.5.). This incident was also mentioned by research participant (P17). (P01) went on to explain that (GM 2) wanted to become part of the purchasing business process and to that respect he said *“it’s been built on personal interests”*.

From the above analysis, it can be argued that the introduction of the ERP implementation project in MESAIR equipped SMEs and/or department managers with the necessary platform to pursue their own personal interests.

### 6.3. The outcome of the themes

In order to develop the main findings for this research, the outcome of the themes needs to be grouped together. The overall outcome of the emerged themes above is shown below:

**1<sup>st</sup> theme**      *ERP implementation project's role of empowering Subject Matter Experts (SMEs)*

- Outcome**
- ERP implementation project empowered SMEs by handing them the necessary tools that they needed to make changes in their departments.
  - The alliance between the SMEs and the ERP implementation project formed a power relation that was capable of enforcing their collective beliefs into the business units across the organisation under study.

**2<sup>nd</sup> theme**      *ERP's best practice enforcement*

- Outcome**
- ERP's 'best practice' had been enforced in the organisation.
  - Power relations emerged between the ERP's 'Best Practice', ERP consultants, SMEs and the business unit.
  - ERP's 'best practice' possessed power that was being blocked by another force coming from the business units through their respected managers and/or SMEs.

**3<sup>rd</sup> theme**      *SMEs & ERP implementers personal relationships influencing ERP's 'To-Be' business process*

- Outcome**
- The development of personal relationships between SMEs and ERP implementers had influenced the 'To-Be' business process.
  - Power relations were formed between SMEs and ERP implementers by forming an alliance; agreeing to customise some of the ERP's 'best practice' business process.
  - Power of alliance was imposed on ERP's 'best practice' business process by agreeing to customise some of ERP's business processes.



<b>4<sup>th</sup> theme</b>	<b><i>Privatisation project's influence on the ERP implementation project</i></b>
<b>Outcome</b>	<ul style="list-style-type: none"> <li>• Privatisation project possessed power that had been imposed on the ERP implementation project.</li> <li>• Power relations were apparent between the privatisation project and the ERP implementation project that were capable of disrupting the progress of the latter.</li> </ul>
<b>5<sup>th</sup> theme</b>	<b><i>Organisation structure over ERP's 'best practice' business process</i></b>
<b>Outcome</b>	<ul style="list-style-type: none"> <li>• Organisation structure imposed power that was capable of suppressing the ERP's best practice business process during the ERP implementation project.</li> <li>• Clashes of power between the organisation structure and the ERP's best practice business process.</li> </ul>
<b>6<sup>th</sup> Theme</b>	<b><i>Power of the organisational culture</i></b>
<b>Outcome</b>	<ul style="list-style-type: none"> <li>• Organisation culture possessed power. The enforcement of the power of organisation culture clashed with powers that come from the ERP's "best practice" business process.</li> <li>• Power of the organisation culture disrupted the process of the ERP implementation project.</li> </ul>
<b>7<sup>th</sup> theme</b>	<b><i>Change management and its lack of power</i></b>
<b>Outcome</b>	<ul style="list-style-type: none"> <li>• Disappearance of change management and its lack of power had caused disruption to the overall ERP implementation project.</li> <li>• Disruption could have been avoided had a change management strategy been imposed into the case under study.</li> </ul>
<b>8<sup>th</sup> theme</b>	<b><i>Privatisation project consultants &amp; ERP implementers power relationships</i></b>
<b>Outcome</b>	<ul style="list-style-type: none"> <li>• Close inter-linked relationships between ERP implementers and privatisation consultants produced an alliance of power.</li> <li>• Power relations were imposed in the case under study to overcome both projects' obstacles.</li> </ul>

**9<sup>th</sup> theme**      *ERP implementation project enrolls SMEs and/or managers into pursuing own personal interests*

- Outcome**
- Introduction of the ERP implementation project had equipped SMEs and/or department managers with the necessary platform to pursue their personal interests.
  - Power relations between the ERP implementation project and SMEs and/or managers were apparent which granted greater enforcement for SMEs and/or managers to seek higher managerial roles.

#### **6.4. Research Findings**

The research findings contribute to the achievement of the overall objectives of this research. The themes that emerged out of the data analysis helped in identifying some of the actors that were involved in the case under study. It also helped in explaining some of the power relationships that were formed during the course of the case under study. The findings for this research are introduced next and they are directly obtained out of the emerging themes. It is worth mentioning here that the reason for not clustering and grouping the findings was that the researcher wanted to keep the contextual aspects of the findings as they play a major role in identifying the actors as well as playing a major role in explaining the network of power relations that was developed amongst the introduced actors (see section 7.5. in Chapter 7.).

##### **1<sup>st</sup> finding     *ERP implementation project's role of empowering Subject Matter Experts (SMEs)***

The ERP implementation project under study had empowered SMEs by handing them the necessary tools that they needed to make changes in their respective departments. The alliance that was formed between the SMEs and the ERP implementation Project had formed a power relation that was capable of enforcing their collective beliefs in the business units across the organisation under study.

##### **2<sup>nd</sup> finding     *ERP's best practice enforcement***

ERP's 'best practice' business process was being enforced in the organisation. As far as this research was concerned, the researcher identified another power relation which had emerged between the ERP's 'Best Practice' business process, ERP consultants, SMEs and the business unit. These sorts of power relations affirmed the researcher's approach by demonstrating how the ERP's 'best practice' business process possessed power that was being blocked by another force coming from the business units through their respected managers and/or SMEs.

**3<sup>rd</sup> finding**     *SMEs & ERP implementers personal relationships influencing ERP's 'To-Be' business process*

Personal relationships that developed between SMEs and ERP implementers during the course of the ERP implementation project had influenced the 'To-Be' business process. As far as this research was concerned, such personal relationships could be regarded as a form of power relationships that had been developed throughout the course of the ERP implementation project. As a result, such power relations came into force when SMEs and ERP Implementers became allied by agreeing to customise some of the ERP's 'best practice' business process. This alliance of power had managed to enforce ERP's 'best practice' business process to ease off the amount of power domination that it was practising on the organisation under study.

**4<sup>th</sup> finding**     *Privatisation project's influence on the ERP implementation project*

The privatisation project possessed power and that power had negatively influenced the ERP Implementation Project by disrupting its progress. It is worth mentioning that power relations were apparent between the privatisation project and the ERP Implementation Project as well as other actors that were involved in the system of power relations.

**5<sup>th</sup> finding**     *Organisation structure over ERP's 'best practice' business process*

The organisation structure possessed power that was capable of suppressing the ERP's best practice business process during the ERP implementation project. Such clashes of power affirm the conclusion that there are power relations that develop between the organisation structure and the ERP's 'best practice' business process during the course of the project.

**6<sup>th</sup> finding**      ***Power of the organisational culture***

The organisation culture possessed power. The enforcement of the power of organisation culture clashed with powers that came from the ERP's "best practice" business process. The power of the organisation culture disrupted the process of the ERP Implementation Project.

**7<sup>th</sup> finding**      ***Change management and its lack of power***

The disappearance of change management and its lack of power had caused disruption to the overall ERP implementation project. Such disruption could have been avoided had a change management strategy been set in place.

**8<sup>th</sup> finding**      ***Privatisation project consultants & ERP implementers power relationships***

The close inter-linked relationships between ERP implementers and privatisation consultants produced an alliance of power in the sense that they could team up to overcome obstacles that arose for both running projects (the privatisation and the ERP implementation projects) regarding the business process and the structure if necessary.

**9<sup>th</sup> finding**      ***ERP implementation project enrolls SMEs and/or managers into pursuing own personal interests***

The introduction of the ERP implementation project in MESAIR had certainly equipped SMEs and/or department managers with the necessary platform to pursue their own personal interests. These power relations between the ERP implementation project and SMEs and/or managers had been developed and the introduction of the ERP implementation project had granted greater authority for SMEs and/or managers to seek higher managerial roles.

The researcher believes that the above findings were capable of laying out the groundwork for the application of Foucault's analysis of power embedded within ANT in the case under study (see section 7.5. in Chapter 7) in order to fulfil the objectives of this research. The above findings were formulated to act as the foundation for the next chapter.

## **6.5. Summary and Conclusion**

This chapter provided the reader with the research findings that were drawn out of the data analysis. As this research was based on drawing out the findings by deploying the thematic analysis on the collected data as explained in Chapter 4 (section 4.9.), the researcher explained the mechanisms and the techniques that were used in order to develop the emergence of themes.

The researcher then went on to explain the nine emerged themes by digging out the relevant pieces of information of the collected data and analysing them rigorously. Out of the emerged themes, the researcher drew out nine findings for this research. Those findings were capable of laying out the groundwork for the application of Foucault's analysis of power embedded within Actor Network Theory (ANT) in the case under study (see section 7.5. in Chapter 7) in order to fulfil one of the objectives of this research.

The next chapter provides the reader with procedures taken of embedding Foucault's analysis of power within ANT together with its application in the case under study in order to explain the power relations that were formulated during the ERP implementation project under study. It includes introducing the main actors that were involved in the case. It also includes explaining the enforcement of power from one actor to another as well as explaining the different alliances that were formed during the course of the ERP implementation project. The researcher also explains the network of power relations that were formed during the course of the case under study as well as explaining the shift of power from one actor and/or a group of actors to another actor and/or a group of actors.

Figure 6.1     The change of MESAIR structure in line with the approved and the non-approved SBUs

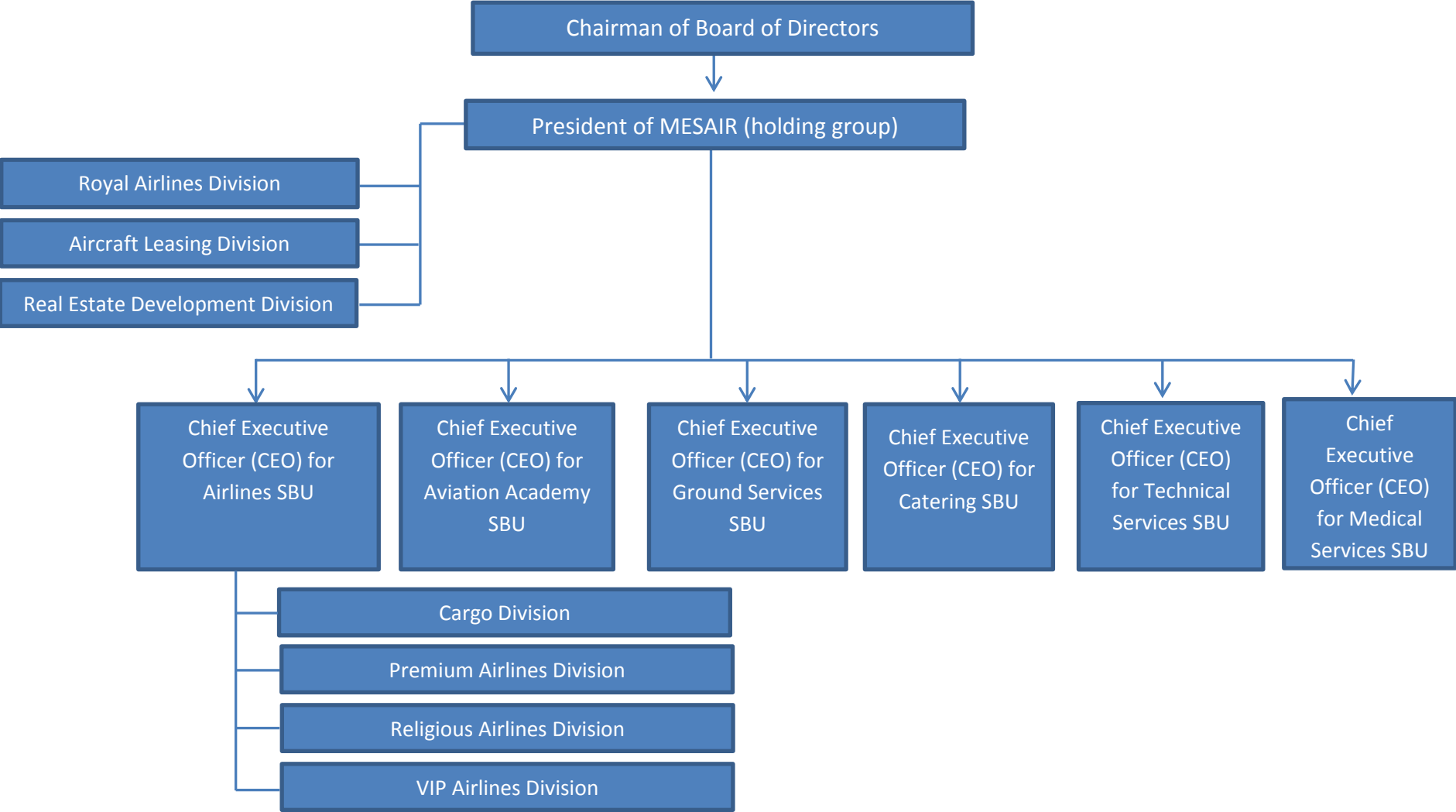
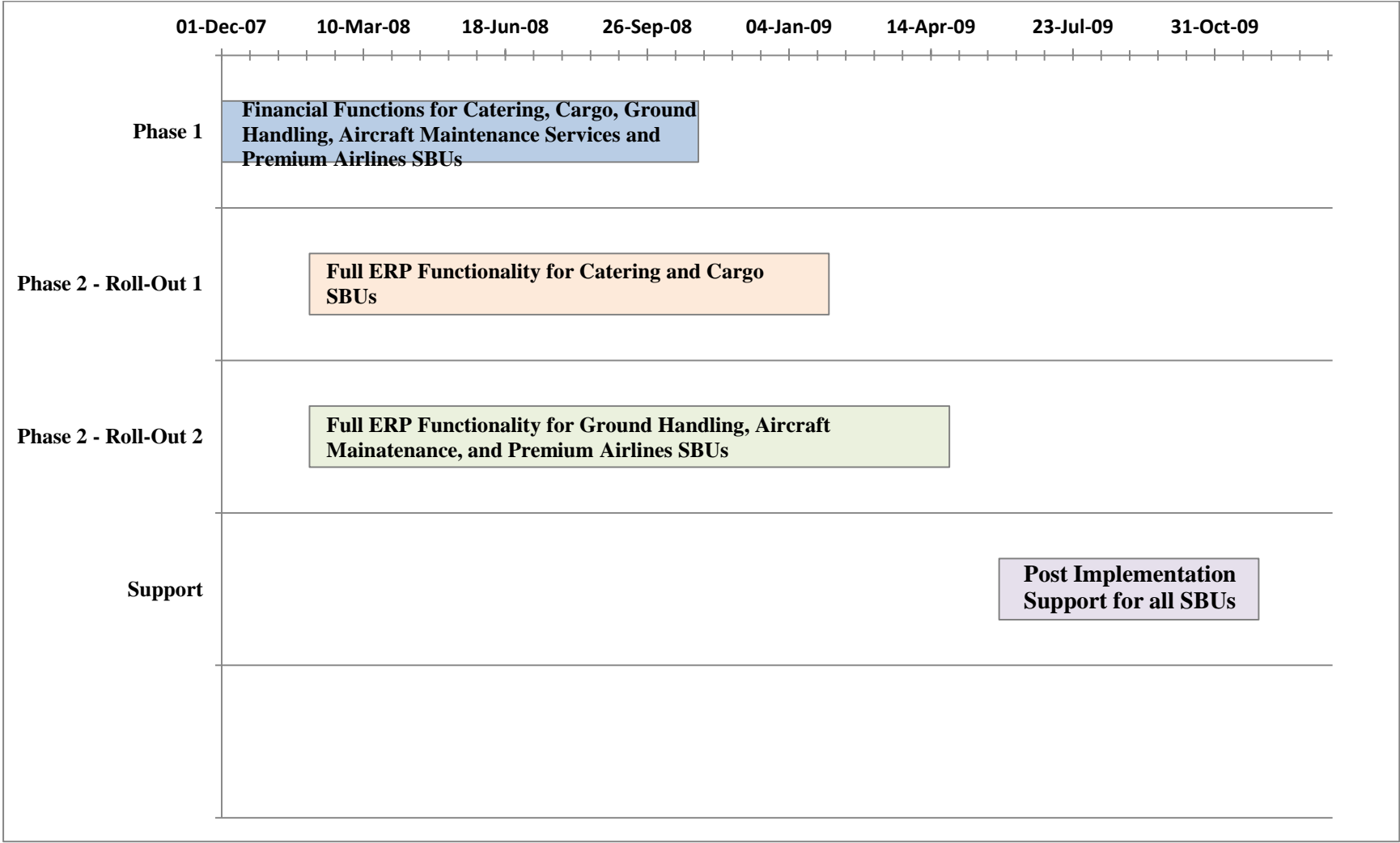


Figure 6.2    Approved ERP implementation strategy





## **7. Discussion**

### **7.1. Introduction**

The previous chapter aimed at providing the reader with the research findings that were drawn out of the data analysis. Nine findings were drawn out of the emerged themes which were intended to lay out the groundwork for the application of Foucault's analysis of power embedded within the Actor Network Theory (ANT) in the case under study in order to fulfil one of the objectives of this research.

This chapter provides the reader with the procedure of embedding Foucault's analysis of power within ANT. The embedding is applied on the case under study in order to explain the power relations that were formulated during the ERP implementation project under study. It includes introducing the most influential actors that were involved in the case under study. It also includes explaining the enforcement of power by one actor over another as well as explaining the different alliances that were formed during the course of the ERP implementation project. The researcher explains also the network of power relations that were formed during the course of the case under study as well as explaining the shift of power from one actor and/or group of actors to another actor and/or a group of actors.

### **7.2. The similarities between Foucault's analysis of power and Actor Network Theory (ANT)**

Given the aim of this research, it is necessary to begin the Discussion chapter by explaining how incorporating Foucault's analysis of power within ANT can

enhance the latter and fulfil the issues of criticisms regarding ANT's lack of morale and political issues which had been debated in the literature (Walsham, 1997).

As explained in section (3.2.2.) in Chapter 3, ANT had been criticised of not being capable to offer the analysis of political issues that arise in a particular actor-network due to its inability to demonstrate the observation of the less powerful social groups that had been excluded by the more powerful groups (Winner, 1993). As ANT tends to describe the network of actors efficiently; it does not provide the research with deeper understanding of moral, political, and power issues that arise during the course of the network under study. Walsham (1997) advised IS researchers to compliment ANT with other social theories in order to enhance ANT, which can offer the investigative aspects of moral, political and power issues of a particular IS project.

As mentioned in section 3.2 in Chapter 3, ANT is capable of explaining complex networks (Williams-Jones and Graham, 2003) by investigating and unveiling the "*patterned networks of heterogeneous materials*" (Law 1992, p. 381). In addition, ANT supported the notion that actors within a particular network are equally capable of participating in a particular social network by developing relations with other actors within the same network.

In section (3.3.), it was mentioned that the analysis of power that had been developed by Foucault can be embedded within ANT due to their similarities. This is because Foucault's analysis of power shares the notion that power is "*something which circulates, or rather something which only functions in the form of a chain... it is employed as exercised through net-like organisation*" (Foucault 1980, p. 98).

These similarities between ANT and Foucault's analysis of power lay the groundwork for the researcher to embed Foucault's analysis of power within ANT because they both share the notion of analysing a particular social order

by investigating a network of agents (or actors) that have had an impact on it (Law, 1992).

On another point, ANT promotes the notion that suggests that agents (or actors) of a particular social order (or a particular social network) are capable of equally influencing a particular social order by developing different types of relations with other influencing actors of the same network (Law, 1992). Such development of relations can come in the form of being able to impose certain thoughts or beliefs in the network under study (Pouloudi, *et al.* 2004). ANT suggests that any actor in a particular network is able to influence other actors of the same network by enrolling them into their own thoughts or beliefs on a particular matter (Pouloudi, *et al.*, 2004; Mahring *et al.*, 2004).

The analysis of power developed by Foucault can be embedded within ANT because it promotes a similar notion: that any individual in a particular social order is capable of imposing a form of power. That means that any individual (or agent) in a particular social order is capable of enacting or contesting power on other individuals (or agents) of the same social order (Mills, 2003). It is believed that Foucault's analysis of power is capable of complementing ANT by providing the necessary tools to respond to the criticism that was aimed at ANT, which is its lack of analysing political and moral issues of a particular actor-network (Underwood, 1999; Fox, 2000; Doolin and Lowe, 2002; Law, 2009; Mathewman, 2013).

Thus it is clear that both ANT and Foucault's analysis of power equally promote the notion that agents (or actors) in a particular social order are capable of making changes to the social order that they are involved in by enrolling other agents (or actors) into their own thoughts or beliefs. Their efforts at imposing their thoughts and beliefs can be thought of as a form of power of Agent A over Agent B, for instance. The enrolment procedure that ANT promotes can also be called enacting power of Agent A over Agent B. At the same time, Agent B is capable of buying into such thoughts and beliefs and

enrolling into them or they are able to contest those thoughts and beliefs by opposing (or contesting) them and imposing their own thought and beliefs regarding a particular matter in a particular social order (Pouloudi, *et al.*, 2004; Mahring *et al.*, 2004).

Following on from the above, the researcher believes that Foucault's analysis of power can be embedded in ANT because they both promote the notion that the developed relations amongst certain agents in a particular social order are not rigid (Fox, 2000). Instead, they actually change over time due to changes of heart by agents on a particular social matter. That means that if Agent A, for instance, imposed their thoughts and beliefs on Agent B, then Agent A managed to get Agent B enrolled into them. Over time, Agent B may have the will to oppose Agent A's thoughts and beliefs, and this therefore means that Agent B has the will to break their enrolment. By doing so, Agent B has the option of imposing their own thoughts and beliefs on the social order whilst opposing Agent A's (Callon and Latour, 1981; Doolin and Lowe, 2002).

Imposing one's own thoughts and beliefs on a social order whilst opposing others, is the sort of power that Foucault had been trying to promote in his analysis of power (Law, 1992). Foucault (1980) believed that agents of a particular social order are the driving force of power which comes from within. That means that agents have the ability to practice power over other agents by opposing their thoughts and beliefs and by imposing their own thoughts and beliefs on a particular social order.

Foucault's analysis of power proposes a power of agents (or individuals), and that such agents possess power from within themselves and that they have the will to impose or oppose power in a network of power relations within a particular social order (Mills, 2003). Thus the development of power relations is similar to the network of actors that is advocated by ANT; but it includes analysing the network of power relations of a particular social order. According to Foucault (1980), agents who resist the power of oppressors

develop a relational power system. Such relational power system can be thought of as an actor network.

Law (1992) also promoted the similarity of ANT and Foucault's analysis of power by affirming that "*actor-network theory is all about power... close to Foucault (1979)*" (p. 387). Elbanna (2012) also affirmed Law's (1992) observation on ANT's similarity with Foucault's analysis of power by arguing that ANT perceives power as something that does not belong to any of the actors but rather resides in a network of actors in which it operates. Elbanna (2012) therefore affirmed that ANT agrees with Foucault's notion of power by claiming that it is an "*end result of a complex mesh of relations and not a given priori*" (p. 120).

It is necessary to embed Foucault's analysis of power within ANT, because Foucault had not attempted to further develop his analysis of power into a well-established theory. Instead, Foucault believed that his analysis of power should be analysed in accordance with the case being studied (Smart, 2004). Foucault suggested an analytics of power which cannot be thought of as a theory (Dreyfus and Rabinow, 1983).

According to Dreyfus and Rabinow (1983), Foucault stated that "*If one tries to erect a theory of power one will always be obliged to view it as emerging at a given place and time and hence deduce it, to reconstruct its genesis. But if power is in reality an open, more-or-less coordinated cluster of relations, then the only problem is to provide oneself with a grid of analysis which makes possible an analytic of relations of power*".

Therefore, in order to take full advantage of Foucault's analysis of power, it should be embedded within the well-established Actor Network Theory (Underwood, 1999). Thus ANT can provide a firmer ground to stand on as far as this research was concerned. This was made possible by using the phases of

ANT developed by Callon (1986), which were explained in section (3.2.) in Chapter 3, for analysing the case study presented in Chapter 5.

In addition, ANT provided the notion of introducing non-human actors (or agents) as part of the network (Callon, 1986). Foucault had hardly ever talked about agents or actors as being non-human. It is absolutely vital, however, to introduce non-human actors as part of the case under study, because non-human actors possess power from within that can oppose other powers coming from other actors; or they can impose their own power on other actors within a particular social order (Underwood, 1999; Doolin and Lowe, 2002; Fox, 2000; Matthewman, 2013).

ANT can also provide the research with a very important aspect, which is the notion of punctualisation which - as explained in section 3.2 in Chapter 3 - means that researchers who deploy ANT for their research need to find a way to draw a line of their developed network for simplification purposes (Law, 1992).

### **7.3. The initial stage of embedding Foucault's analysis of power within ANT**

Going back to section (3.3.) in Chapter 3, the researcher finished it off with a series of quotes that was written by Foucault (1982). Foucault (1982) had inspired the researcher to embed his analysis of power within ANT. As mentioned in section (7.1.) of this chapter, the researcher planned to use ANT's phases that were developed by Callon (1986) - which was explained in section (3.2.) of Chapter 3 - as the baseline for embedding Foucault's analysis of power within it, in order to investigate the effects of power relations on the ERP implementation project in an organisation in Saudi Arabia. In order to make it easier for the reader to follow up on the embedding process, tables and lists are provided throughout the remainder of this section.

As mentioned above, Callon (1986) introduced four phases for implementing ANT. They are *the problematisation phase*, *the interessement phase*, *enrolment and support of actors phase* and *the mobilisation phase* (See Table 7.1). The *problematisation phase* is concerned with introducing and initiating the problem by an actor or a group of actors as well as determining the right solution for it. Such solutions include forming and assigning different roles for other actors in the network.

The *interessement phase* is concerned with explaining the persuasion procedures that were adopted by the initiating actors to convince other actors in the network about the benefits of the proposed solution of such a problem. It entails explaining how such a solution is beneficial to them should they join the network. Joining the network by other actors means that the initiating actors develop new alliances which in return strengthen the overall view of the proposed solution across the network.

The *enrolment and support of actors phase* is concerned with explaining the enrolment of actors who are keen on the proposed solution by taking part in it. This means that those actors are given a certain role in the actor-network. Newly enrolled actors can then empower the network by persuading (and negotiating with) non-enrolled actors to convince them to become part of the proposed solution.

The *mobilisation phase* is concerned with explaining the actions taken by the actors who initiated the solution to ensure that allied actors are still fully supporting the initial solution and that their opinions have not changed over time. When enrolled actors mobilise, the actor network reaches stability. An actor network can only be called stable when the solution becomes well established and empowered by the vast majority of actors who constitute this network. However, the above mentioned phases do not usually go as smoothly as initiators expect them to. The process of stabilising Actor-networks might

fail half way through as it requires plenty of effort to achieve the optimised result.



ANT's sociology of translation	Phase explanation
Problematization phase	<ul style="list-style-type: none"> <li>Defining and initiating the problem by certain actors.</li> <li>Determining the right solution for the problem.</li> <li>Creating and assigning different roles for other actors in the network by the initiating actor.</li> </ul>
Interessement phase	<ul style="list-style-type: none"> <li>Initiating actors persuade other actors to join the network by convincing them about the benefits of the proposed solution for the problem.</li> <li>Joining the network by other actors means that the initiating actors develop new alliances which in return strengthen the overall view of such proposed solution across the network.</li> </ul>
Enrolment and support of actors phase	<ul style="list-style-type: none"> <li>Enrolment of actors who are keen on the proposed solution by taking part in it.</li> <li>Enrolled actors will be given a certain role in the actor-network.</li> <li>Enrolled actors empower the network by persuading non-enrolled actors to convince them to become part of the proposed solution.</li> </ul>
Mobilisation phase	<ul style="list-style-type: none"> <li>Actions that are to be taken by the actors who initiated the solution to ensure that allied actors are still fully supporting the initial solution and that their opinions have not changed over time.</li> <li>When enrolled actors mobilise, the actor network reaches stability.</li> <li>An actor network can only be called stable when the solution becomes well established and empowered by the vast majority of actors who constituted this network.</li> </ul>

Table 7.1 Phases of Actor Network Theory (ANT); adapted from Callon (1986)

As explained in section (3.4.) in Chapter 3, Foucault's conceptualisation of power inspired the researcher to attempt the development of power analysis incorporated within ANT. Foucault attempted to conceptualise his notion of power analysis by stating that every power relation entails a strategy of struggle. Here, there are similarities between what Foucault attempted to do and ANT's four phases developed by Callon (1986). Callon (1986) called his four phased ANT concept the '*sociology of translation*'.

The sociology of translation contained four phases that can be thought of as a strategy of translation, because it includes explaining how certain actors or a group of actors define and initiate the problem. Defining and initiating means that those actors set an aim and a set of objectives for solving the problem. According to Lynch (2012), one of the initial requirements of developing a strategy is to develop the aim and the objectives of solving a certain problem.

However, as explained in section (3.2.2.) in Chapter 3 and due to the fact that the sociology of translation does not pay particular attention to power issues (Winner, 1993; Walsham, 1997), embedding Foucault's analysis of power within it entails establishing the analysis of power that had been missing from ANT's sociology of translation. The initial stage of the embedding process entails re-developing the phases of ANT by incorporating Foucault's analysis of power within them. ANT's sociology of translation could be called the strategy of struggle. Following Foucault's strategy of struggle through the lens of ANT's phases made it possible to initiate the embedding process.

The *problematization phase* could be modified from just defining and initiating the problem by certain actors as well as determining the right solution together with creating and assigning different roles for other actors in the network, to defining the strategy of confrontation through confronting the problem by the initiating actor or a group of actors. The power analysis factor can thus be added to the *problematization phase* of the ANT sociology of translation.

Therefore, instead of just defining and initiating the problem by certain actors, those actors are actually confronting a certain problem.

As shown in Table (7.2.) below, the *interressement phase* could be modified from merely explaining the persuasion procedures of joining the network as well as developing new alliances in order to strengthen the proposed solution of the problem, to initialising the power relationship by the actors who defined the strategy of confrontation in order to confront the problem by imposing their own solution of the confronted problem on other actors in the same network. Therefore, instead of analysing the persuasion procedures by the initiating actors on other actors on the same network, actors who initiated the problematisation phase are the ones who initialise the power relationship by imposing their own solution of the confronted problem to other actors on the same network.

In the next row of Table (7.2.), the *enrolment and support of actor phase* could be modified from the enrolment of actors who are keen on the proposed solution as well as giving them certain roles in the actor-network to enrolling actors by enforcing the solution into other opposing actors in the developed power relationship including explaining the struggle and the instability that develops between the two opposing adversaries (opposing actors or opposing group of allied actors).

According to Foucault's power analysis, on the one hand, the more enrolment in the network the greater domination and the greater empowerment the initiating actors gain (Doolin and Lowe, 2002). On the other hand, less enrolment of actors in the network brings up an array of struggle and plenty of instability in the network. Such struggle and instability can be thought of as the result of a series of conflicts between the initiating actors and other actors who oppose and resist the enrolment into the proposed solution for the confronted problem (Underwood, 1999).

In the next row of Table (7.2.), the *mobilisation phase* could be modified from analysing the actions that are to be taken by the actors who initiated the solution to ensure that allied actors are still fully supporting the initial solution and that their opinions have not changed over time as well as determining the stability of the actor network, to ensuring that enrolled adversaries (actors) are still on-board by reinforcing the solution of the confronted problem in order to maintain the domination and the empowerment of the initiating actors. The power relationship reaches stability if enrolled actors stop opposing the solution together with refraining from resisting change (Callon and Law, 1982).

Phases of ANT	Explanation of the ANT	ANT and power analysis
Problematization phase	<ul style="list-style-type: none"> <li>• Defining and initiating the problem by certain actors.</li> <li>• Determining the right solution for the problem.</li> <li>• Creating and assigning different roles for other actors in the network by the initiating actor.</li> </ul>	Defining the strategy of confrontation through confronting the problem by the initiating actor or group of actors
Interessement phase	<ul style="list-style-type: none"> <li>• Initiating actors persuade other actors to join the network by convincing them about the benefits of the proposed solution for the problem.</li> <li>• Joining the network by other actors means that the initiating actors develop new alliances which in return strengthen the overall view of such proposed solution across the network.</li> </ul>	Initialising the power relationships by the actor who defined the strategy of confrontation to confront the problem by imposing solution of the confronted problem on other actors in the same network.
Enrolment and support of actors phase	<ul style="list-style-type: none"> <li>• Enrolment of actors who are keen on the proposed solution by taking part in it.</li> <li>• Enrolled actors will be given a certain role in the actor-network.</li> <li>• Enrolled actors empower the network by persuading non-enrolled actors to convince them to become part of the proposed solution.</li> </ul>	<ul style="list-style-type: none"> <li>• Enrolling by enforcing solution on other opposing actors into the developed power relationship</li> <li>• Explaining the struggles and the instability that develops between the two actors.</li> <li>• More enrolment provides greater domination &amp; greater empowerment.</li> <li>• Less enrolment provides struggle and instability.</li> </ul>
Mobilisation phase	<ul style="list-style-type: none"> <li>• Actions that are to be taken to by the actors who initiated the solution to ensure that allied actors are still fully supporting the initial solution and that their opinions have not changed over time.</li> <li>• When enrolled actors mobilise, the actor network reaches the stability.</li> </ul>	Ensuring that enrolled adversaries (actors) are still on-board by reinforcing solution in order to maintain domination and empowerment. When enrolled actors mobilise, the power relationship reaches stability.

Table 7.2. Initial stage of embedding Foucault's analysis of power within ANT

#### **7.4. The final stage of embedding Foucault's analysis of power within ANT**

To complete the embedding process, each phase of the ANT's sociology of translation could be re-labelled using power-related terminologies in order to minimise the level of confusion. Such labelling was particularly important for the researcher at the time of applying it to the case under study because it made it easier to investigate the effects of power relations on the case under study (see Table 7.3.). As Law (1999) stated that labelling the attributes that are often associated with ANT has "*done harm as well as good*" (p. 8). He went on to explain that other terminologies that had been associated with ANT such as blackboxing and punctualising have simplified its comprehensibility but at the same time it made it lose its "*capacity to apprehend complexity*" (p. 8).

He suggested that researchers should not get tied with the labels that had been attributed to ANT but rather engage in appreciating the complexity of the meanings behind each label. As mentioned in section (3.2.2.) in Chapter 3, Foucault's analysis of power is capable of complementing ANT (Underwood, 1999; Fox, 2000; Doolin and Lowe, 2002; Law, 2009; Mathewman, 2013) labelling each phase with terminologies that are inspired by Foucault's analysis of power would strengthen its stance on being capable of tackling morale, political and power related issues.

Therefore, the first phase could be labelled the '*strategy of confrontation phase*'. This phase entails the explanation of how the strategy of confrontation was defined by the initiating actors. This phase also includes explaining how the initiating actors intend to confront the problem. Such problem confrontation includes developing the aim and the objectives for solving the problem as well as the strategies that are used in order to confront the problem.

The second phase was labelled the '*power relation initialisation phase*' which constitutes the initialisation procedures of the power relation. This means that the initiating actors of the power relation network, who are the ones who

defined and confronted the problem, impose the solution on other actors of the same network. The initiating actors try to impose such a solution in order to establish the solution as well as attempting to gain more support from actors within the same network. The more support they gain the easier it becomes to apply the next phase of the concept.

The third phase was called the '*conflict and domination phase*'. This phase includes explaining the enrolment of other actors by the initiating actors through the enforcement of the solution for the confronted problem. It also includes explaining all the struggles and the instabilities that occurs amongst the initiating actors and the opposing ones. The objective of the initiating actors for this phase is to enrol as many actors as possible into the solution of the confronted problem because the more actors are enrolled, the greater domination the initiating actors gain. The desired domination provides empowerment for the initiating actors. However, less enrolment means that there will be greater struggle and instability in the network.

The fourth phase was called the '*stable mechanism phase*'. This phase includes explaining the actions that are taken by the initiating actors in order to ensure that enrolled actors are still on-board. This means that the initiating actors review the status of the power relations network by reinforcing the solution of the confronted problem in an attempt to maintain the maximum domination possible. When enrolled actors mobilise, the power relationship reaches stability.

However, the network of actors could reach the stable mechanism phase at some point throughout the duration of the network but in some instances it could go back to the '*conflict and domination phase*' due to the breakage of alliances between the initiating actors and their alliances. In order to minimise confusion, the name of the above table has been shortened from 'the final stage of embedding Foucault's analysis of power within ANT' to 'ANT-Foucault'. The next section of this chapter is aimed at applying ANT-Foucault in the case

study introduced in Chapter 5 through the aid of the research findings presented in Chapter 6.



Phases	Labelling	Phase explanation
1 <sup>st</sup> phase	Strategy confrontation phase of	Defining the strategy of confrontation through confronting the problem by the initiating actor or group of actors
2 <sup>nd</sup> phase	Power relation initialisation phase	Initialising the power relationships by the actor who defined the strategy of confrontation to confront the problem by imposing solution of the confronted problem on other actors in the same network.
3 <sup>rd</sup> phase	Conflict domination phase and	<ul style="list-style-type: none"> <li>• Enrolling by enforcing solution on other opposing actors into the developed power relationship</li> <li>• Explaining the struggles and the instability that develops between the two actors.</li> <li>• More enrolment provides greater domination &amp; greater empowerment.</li> <li>• Less enrolment provides struggle and instability.</li> </ul>
4 <sup>th</sup> phase	Stable phase mechanism	Ensuring that enrolled adversaries (actors) are still on-board by reinforcing solution in order to maintain domination. When enrolled actors mobilise, the power relationship reaches stability.

Table 7.3. ANT-Foucault

## **7.5. Applying ANT-Foucault on the case under study**

This section begins by introducing the actors that were involved in the case under study. Each actor's role in the ERP implementation project under study is explained in the next sub-section. The punctualisation notion of ANT was used in order to minimise the introduction of actors to include only the most influential ones. This follows on by applying the embedded Foucault analysis of power within ANT on the case under study. The phases presented in Table (7.3.) have been used as the point of application.

### **7.5.1. Introducing the actors**

As explained in sub-sections (4.6.1.) and (4.6.3.) in Chapter 4, this research adopted a single case study strategy, since the outcome would enable an investigation of why events occurred in the way they did. In addition, it explained how the inter-linked factors that affected the events occurred in the way they did. The case study in Chapter 5 was used to explain such events by applying the embedding of Foucault's analysis of power within ANT to it.

As explained in chapter 5, the case study is concerned with an organisation in Saudi Arabia that operates in the airline industry since the mid-40s. For ethical purposes, the name of the organisation under study was given the name MESAIR. To initiate the application of Foucault's analysis of power embedded within ANT in the case under study, the most influential actors need to be introduced.

As this research was inspired by ANT's notion of introducing a network of connections between human agents, and non-human ones in a socio-technical network, the introduction of actors include introducing both human and non-human actors (Couldry, 2008). The introduction of the actors was developed through the aid of the research findings presented in Chapter 6 together with the aid of the case study in Chapter 5. However, in accordance with Law's guidelines on drawing a line when introducing actors, in order to avoid endless

ramification which can lead to a much harder task in the deployment of ANT (Law, 1992), Law's *punctualisation* notion was used. That notion means that researchers who deploy ANT for their research ought to draw a line of their heterogeneous network for simplification purposes.

The researcher had deployed the *punctualisation* notion by bordering the activities that were being carried out to include only the GSS Division of MESAIR together with focusing on the ERP's Materials Management (MM) module. In addition, it covers phases one and two of the ERP implementation project that lasted collectively for around sixteen months (from November 2007 until March 2009). Introduced actors of the case study were also limited to the most influential ones that had significantly contributed to the case.

The 1<sup>st</sup> influential actor that was involved in the ERP implementation project (see Table 7.4.) was the MESAIR Chairman of the Board of Directors (MESAIR Chairman) who was responsible for approving all the planning that was being conducted by the executives of the organisation.

The 2<sup>nd</sup> influential actor was the President of MESAIR (MESAIR President) who was responsible for directing the overall master plan of privatising MESAIR as well as implementing the latest IS systems in the organisation. As mentioned in section (5.4.) in Chapter 5, the MESAIR President had been appointed in June 2006 after overseeing and directing a major privatisation project in another organisation prior to his appointment. He was appointed specifically to reignite the long-halted privatisation project, which was aimed at privatising certain functions of the organisation under study.

The 3<sup>rd</sup> influential actor was MESAIR's Project Manager (ERP Mgr. Org.). He was the project manager from the MESAIR side who supervised the compilation of the Statement of Needs (SoN); a task that included visiting every business unit across the organisation in order to collect their requirements for newly proposed digital Information Systems. He also

supervised the selection process of the ERP. His role included reviewing all the requirements that were collected from across the organisation and matching them with the most relevant ERP solution available in the market that covered most of the requirements included in the Statement of Needs (SoN). He had also co-supervised the overall IT Master plan project which was aimed at introducing a comprehensive Information Systems (IS) solution to serve almost all main business functions.

The 4<sup>th</sup> influential actor was the consultants who were hired to implement the ERP in MESAIR (ERP implementers). As mentioned in section (5.7.) in Chapter 5, MESAIR had signed a contract with a company that ran the implementation process of the SAP ERP systems. ERP implementers were employees of a company called PAHO and they were responsible for running the overall ERP implementation project.

The 5<sup>th</sup> influential actor was the ‘best practice’ business process embedded in the ERP (ERP’s best practice). According to the SAP website, SAP Best Practice is *“a clear methodology and step-by-step approach. Every package has extensive reusable documentation for self-study, evaluation, as well as for project team and end-user training. SAP Best Practices provide complete pre-configuration settings that give you everything you need to run specific key processes with minimal installation effort... SAP Best Practices cross-industry packages provide predefined business scenarios that focus on the areas of customer relationship management, supply chain management, and business intelligence”*.

This means that ERP’s best practice is an approach that ERP implementers can deploy with regards to building specific business process in the organisation in which the ERP is being implemented. The researcher believes that this non-human actor played a vital part in determining the ways in which the project proceeded. The enforcement of ERP’s best practice had been imposed on MESAIR even though in some instances, such enforcement seemed to have

caused disruption to the overall process of the ERP implementation project and the privatisation project.

Even though this actor should have been introduced as the actual technology; in the form of the ERP software, but the researcher believes that ERP software were not very influential during the implementation process due to its static nature of awaiting the stage of instalment in organisations' servers. The way of which ERP software usually gets configured is mainly dependant on developing mutual agreements between ERP implementers and SMEs about the extent of implementing ERP's best practice.

As ERP's best practice is usually the point of debate, the researcher believes that ERP's best practice; as an actor, is more influential than introducing ERP software as an actor. In order to reduce the level of confusion to the reader, ERP software is not introduced as an actor but is rather considered as part of the ERP's best practice which was seen as being the most influential technology actor in the network of actors.

The 6<sup>th</sup> influential actor was the privatisation project (privatisation project) which was a project that was aimed at transferring MESAIR from a public firm to a private one. The master plan for that project was to initiate the creation of what were then called Strategic Business Units (SBUs), which were planned to become independently run companies that would be partially owned by MESAIR (owning most of the shares) while signing partnerships with other companies in the private sector. The outcome of the privatisation project of MESAIR was aimed at transforming the organisation by becoming a holding group that would then sit on top of all SBUs. The President of the MESAIR holding company was meant to chair the board of directors' meetings for every SBU as a result of owning the majority of shares of all SBUs. The privatisation project had been identified as a non-human actor in the network because it affected the ERP implementation project under study.

The 7<sup>th</sup> influential actor that affected the ERP implementation project under study was the consultants who were running the privatisation project (privatisation consultants). Those consultants were responsible for running the privatisation project as well as working closely with the ERP implementers in order to align the new business process with the new structure for MESAIR.

The 8<sup>th</sup> influential actor was the Deputy President of the General Support Services Division (DP GSS). As the case study focused on the General Support Services Division (GSS), the Deputy President for that division was identified as an influential actor within the developed network of actors. Throughout the period of the ERP implementation project for phase 1 and 2, he made vital decisions that had affected the overall ERP implementation project such as swapping GM 1 and GM 2 over as well as hiring an IT Specialist (GSS IT) to oversee the overall IT projects for GSS.

The 9<sup>th</sup> influential actor was General Manager 1 (GM 1). He was included because at the time of managing the Space management and Development (SMD), he made a decision to opt out of participating in the Statement of Needs (SoN) exercise prior to the ERP implementation project, a decision which had its consequences during the implementation process of the ERP.

The 10<sup>th</sup> influential actor was General Manager 2 (GM 2), because he agreed to become part of a committee responsible for signing off blueprints for the ERP implementation project's workshops. At the time of managing the Space Management and Development (SMD), (GM 2) initiated the 'buyer role' incident by attempting to persuade the SMD Department to conduct the buying procedure in the general procurement business process.

The 11<sup>th</sup> influential actor was the General Manager of the Corporate Administrative Support Department (GM CAS). This was because the CAS Department was the one that owned the general purchasing business process

which meant that they were supposed to be configured as the only ‘buyers’ of general materials in the GSS Division.

The 12<sup>th</sup> and the 13<sup>th</sup> influential actors were the Corporate Bidding Services Department’s Subject Matter Expert (CBS SME) and the Corporate Administrative Support Department’s Subject Matter Expert (CAS SME). They both significantly participated in the ERP implementation process for the GSS Division.

The 14<sup>th</sup> influential actor was the General Support Services Division’s Information Technology Specialist (GSS IT). GSS IT had been closely linked with DP GSS with regard to the participation of the division in the ERP implementation project.

The 15<sup>th</sup> and the 16<sup>th</sup> influential actors were the organisation’s structure and culture (Org. structure and Org. culture) respectively. Both non-human actors had influenced the ERP implementation project due to their negative impact on the progress of the project.

The 17<sup>th</sup> influential actor was the change management strategy (change management), which had not been put in place. MESAIR had not agreed with any consulting firm to run the change management strategy, although change was apparent throughout the organisation during the ERP implementation project.

The 18<sup>th</sup> influential actor was the Deputy President of Privatisation (DP Privatisation) who chaired the privatisation committee as well as working closely with the privatisation consultants in order to identify future SBUs and to plan the mechanisms for establishing the SBUs and MESAIR – the mother company – as privately owned organisations.

The next four subsections of this chapter are aimed at applying the ANT-Foucault in the case under study. Each phase of the ANT-Foucault has its own sub-section in order to minimise confusion.



Count	Actor description	Short name
1 <sup>st</sup>	MESAIR Chairman of the Board of Directors	MESAIR Chairman
2 <sup>nd</sup>	The President of MESAIR	MESAIR President
3 <sup>rd</sup>	MESAIR's ERP project manager	(ERP Mgr. Org.)
4 <sup>th</sup>	The Consultant who were hired to implement the ERP in MESAIR	ERP implementers
5 <sup>th</sup>	The 'best practice' business process that is embedded in the ERP	ERP's best practice
6 <sup>th</sup>	The privatisation project	Privatisation project
7 <sup>th</sup>	The consultants who were running the privatisation project	Privatisation consultants
8 <sup>th</sup>	Deputy President of the General Support Services Division	DP GSS
9 <sup>th</sup>	General Manager 1	GM 1
10 <sup>th</sup>	General Manager 2	GM2
11 <sup>th</sup>	General Manager of the Corporate Administrative Support Department	GM CAS
12 <sup>th</sup>	Corporate Bidding Services Department's Subject Matter Expert	CBS SME
13 <sup>th</sup>	Corporate Administrative Support Department's Subject Matter Expert	CAS SME
14 <sup>th</sup>	General Support Services Division's Information Technology Specialist	GSS IT
15 <sup>th</sup>	The organisation structure	Org. structure
16 <sup>th</sup>	The organisation culture	Org. culture
17 <sup>th</sup>	Change management strategy	Change management
18 <sup>th</sup>	Deputy President of Privatisation	DP Privatisation

Table 7.4. The most influential actors and their short names

### **7.5.2. Strategy of confrontation phase**

As explained in section (7.4.) of this chapter, this phase entails the explanation of how the strategy of confrontation was defined by the initiating actors. It includes explaining how the initiating actors intended to confront the problem. Such problem confrontation includes developing the aim and the objectives for solving the problem as well as the strategies that were used in order to confront the identified problem.

In MESAIR, the phase of confronting of the problem started when a new president had been appointed (MESAIR President) with the intention of reigniting the long-halted privatisation project, which was aimed at privatising certain functions of the organisation in order to reduce costs and maximise productivity (Akoum, 2009; Starr, 1988). The MESAIR President realised the importance of upgrading the IT infrastructure and the IS of MESAIR to the success of the privatisation project (Watson *et al.*, 2003). At the time of initiating the privatisation project, MESAIR was relying exclusively on paper-based information systems, which meant that official electronic communication between different departments was almost non-existent. Although there were a few attempts at developing stand-alone digital information systems for some departments such as Finance and Human Resources, their main aim had always been to support the paper-based system (Alshawhi *et al.* 2004).

The MESAIR President had confronted the problem raised by the MESAIR Chairman about the long-halted privatisation project through setting up a set of objectives that MESAIR had to achieve within a given period of time. Those objectives included (see Appendix 11)

- i- Initiating the Strategic Business Units (SBUs) that would eventually be transformed into a company through the formation of partnerships with other industry-specific companies. Part of the plan included transforming MESAIR into a holding group that would then stand above all SBUs (see Figure 5.2. in Chapter 5 for more details).

- ii- Upgrading the IT infrastructure and the information systems for MESAIR. With regard to the IS upgrade, MESAIR set a target of purchasing an ERP solution which was believed to be able to integrate all major processes within MESAIR into one common system that would support all levels of management as well as serving all SBUs across MESAIR (Al-Mashari and Al-Mudimigh, 2003).

In order to achieve both objectives, the MESAIR President initiated two committees. The first one was responsible for overseeing the overall privatisation programme, whilst the other one oversaw the overall IT master plan. The privatisation committee was being managed by the Deputy President of Privatisation (DP Privatisation), whilst the IT master plan committee was being managed by MESAIR's ERP project manager (ERP Org. Mgr.). Of course, both committees had been instructed to work closely together in order to align the objectives for both running projects. The MESAIR President had also set up a monthly executive communication meeting in order to monitor the progress of both projects (see Figure 7.1.). However, as this research focused on the implementation of ERP in MESAIR, IS related issues were given specific attention.

Upon realising the importance of introducing an integrated IS that would serve all SBUs across MESAIR, the (ERP Mgr. Org.), working closely with an IT consulting firm, had reached the decision that introducing an ERP solution was the best option (Alshawhi *et al.*, 2004). As part of the plan for the ERP selection strategy, a decision had been reached to conduct a Statement of Needs (SoN) which entailed visiting every business unit across the organisation in order to collect their IS requirements (Howcroft and Light, 2006; Howcroft and Light, 2010). The proposed plan was to find the most relevant ERP solution that would cover most of the requirements that were included in the Statement of Needs (SoN).

Initiating actors	Roles for confronting the problem
MESAIR Chairman	The aim was set up by MESAIR Chairman to re-ignite the long-halted privatisation project.
MESAIR President	<p>The objectives were set to</p> <ul style="list-style-type: none"> <li>- Initiate the Strategic Business Units (SBUs) and transforming MESAIR to act as a mother company for all SBUs.</li> <li>- Upgrade the IT infrastructure and the information systems for MESAIR.</li> </ul>
DP Privatisation	Work together with a consulting firm to identify the future SBUs and to plan out the mechanisms for establishing the SBUs and the MESAIR – the mother company – as privately owned organisations.
ERP Mgr. Org.	Work together with a consulting firm to develop the IT master plan strategy and to identify the potential requirements for upgrading the IT infrastructure and the information systems for MESAIR.

Figure 7.1. Initiating actors and their roles for confronting the problem

MESAIR had eventually chosen SAP ERP to become their main business process platform (see Appendix 11). The contract that was signed included purchasing a significant number of licenses of SAP ERP. The organisation under study had also purchased ERP templates from a well-known European airline (Jarmair) that had previously gone through similar privatisation and ERP implementation processes. In addition to that, MESAIR signed a contract with another company (PAHO) for running the ERP implementation project.

As far as the IS was concerned, (ERP Mgr. Org.), together with the IT consulting firm, had confronted the problem by establishing the need for buying an ERP solution. From there on, the process of finding a solution began when MESAIR conducted the Statement of Needs as well as selecting the most appropriate ERP solution for MESAIR (see Figure 7.2.).

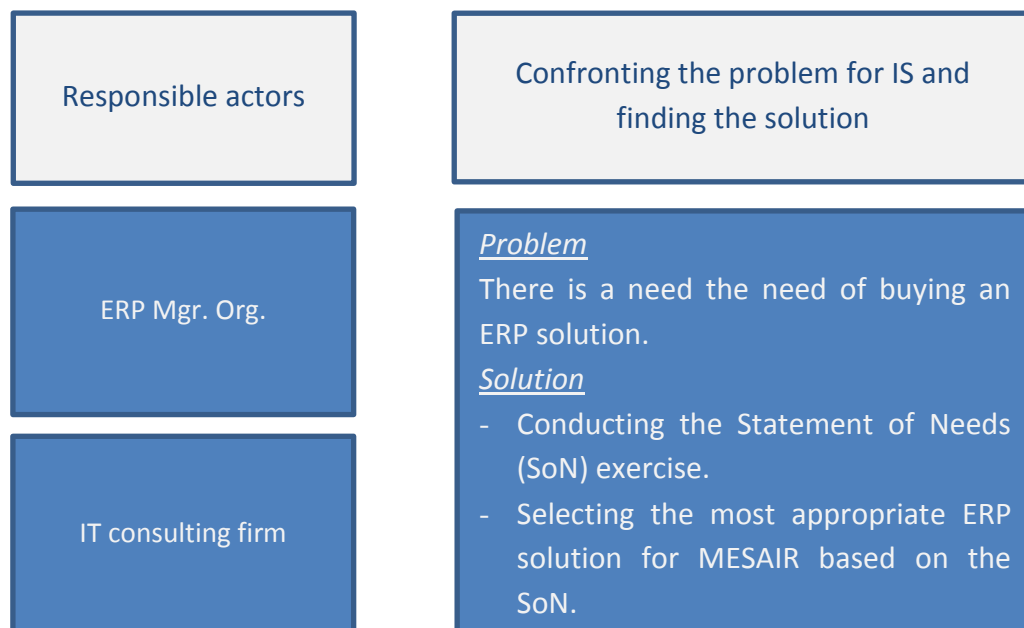


Figure 7.2. Confronting the problem for IS and finding the solution

### **7.5.3. Power relation initialisation phase**

As explained in section (7.4.), this phase constitutes the initialisation procedures of the power relation. This means that the initiating actors of the power relation network, who were the ones that defined and confronted the problem, impose the solution on other actors of the same network. The initiating actors try to impose this solution in order to establish it as well as attempting to gain more support from actors within the same network. The more support they obtained the easier it became to apply the next phase of the concept.

As identified in the previous phase, the initiating actors were MESAIR Chairman, MESAIR President, the (ERP Mgr. Org.) and DP Privatisation. They collectively contributed to the confrontation part of the problem as well as determining the right solution for it. By doing so, those actors initiated the first group of alliance. This alliance group set their aim to carry out a successful privatisation process together with sufficiently implementing the ERP solution in MESAIR. This alliance is henceforth called the ERP-Privatisation alliance. More actors had been invited to join the ERP-Privatisation alliance as the initiating actors orchestrated the signing agreements made with the privatisation consultants, and the ERP implementers.

The initiation of the ERP-Privatisation alliance enabled the creation of a power relation network. It was initiated as soon as the group of actors collectively agreed on fulfilling the objectives that had been set out for both the privatisation and the ERP implementation projects. This alliance was complemented with the additions of two more actors: the privatisation consultants and the ERP implementers. The privatisation consultants together with the ERP implementers joined the alliance by signing their respected contracts for each proposed project (see Figure 7.3.).

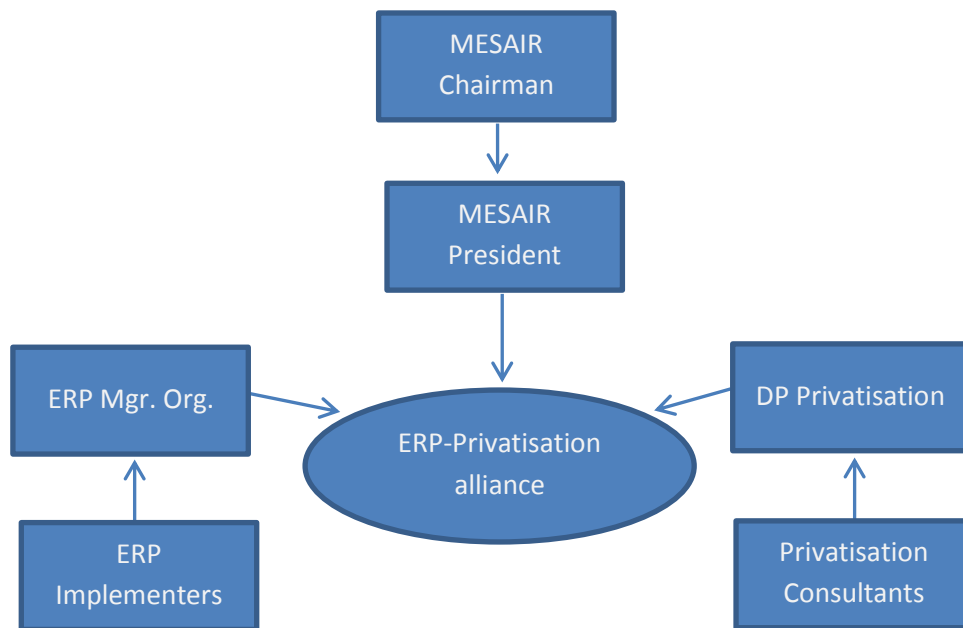


Figure 7.3. The ERP-Privatisation alliance

The privatisation consultants on the one hand agreed to work closely with the privatisation committee in order to identify and initiate the Strategic Business Units (SBUs) that would eventually be transformed into companies through the formation of partnerships with other industry-specific companies. Part of the plan included transforming MESAIR into becoming a holding group that would then stand above all SBUs (Akoum, 2009). On the other hand, the ERP implementers agreed to work closely with the IT master plan committee, as well as aligning the ERP objectives with the privatisation project's by integrating all major processes within MESAIR into one common system; that is the purchased ERP solution.

The power relation network up until that point was initiated as a result of a sum of agreements between the actors that directly contributed to its initiation, as well as agreements with the ones that had been invited to join the network at a later stage (i.e. the privatisation consultants and the ERP implementers). Due to the specific attention that was being paid on this research to the activities

that were being carried out on the GSS Division, together with focusing on the SAP ERP Materials Management (MM) module which covers phases 1 and 2 of the ERP implementation project; it was decided to retain the boundaries that had been set in order to fulfil the objectives of this research. That means that the application of ANT-Foucault into the case under study was mainly drawn towards focusing on the ERP implementation project whilst touching on the privatisation project where necessary.

However, the ERP-privatisation alliance began both projects by imposing their objectives on MESAIR. As far the ERP implementation project was concerned, the solution for the confronted problem (see Figure 7.2.) had been imposed on other actors across MESAIR. As far as the GSS Division was concerned, the imposition of the solution from the ERP-Privatisation alliance came about when (DP GSS) requested (GSS IT) to investigate the impact that the introduction of the ERP solution would have on business units within the division (Newman and Zhao, 2008). After going through a thorough investigation, (GSS IT) concluded that there were a few business processes that should involve a few departments in the division while other departments were not included in the ERP business process.

Upon realising the pressure that was created out of the imposed solution, (DP GSS) requested (GSS IT) and (GM 2) to attend the initial ERP implementation project meeting, in which (ERP Mgr. Org.) together with the ERP implementers explained the project's objectives and introduced the projected phases for the ERP implementation project. During that meeting, the solution of the confronted problem had been imposed on (GM 2) and (GSS IT). Both actors at that stage were enrolled in the power relations network as soon as that meeting drew to an end.

Upon realising the magnitude of the project, (GM 2) and (GSS IT) provided their feedback to (DP GSS), and by doing so they passed on the imposed



solution of the confronted problem to (DP GSS). With the solution being imposed on (DP GSS), he was enrolled into the power relations network.

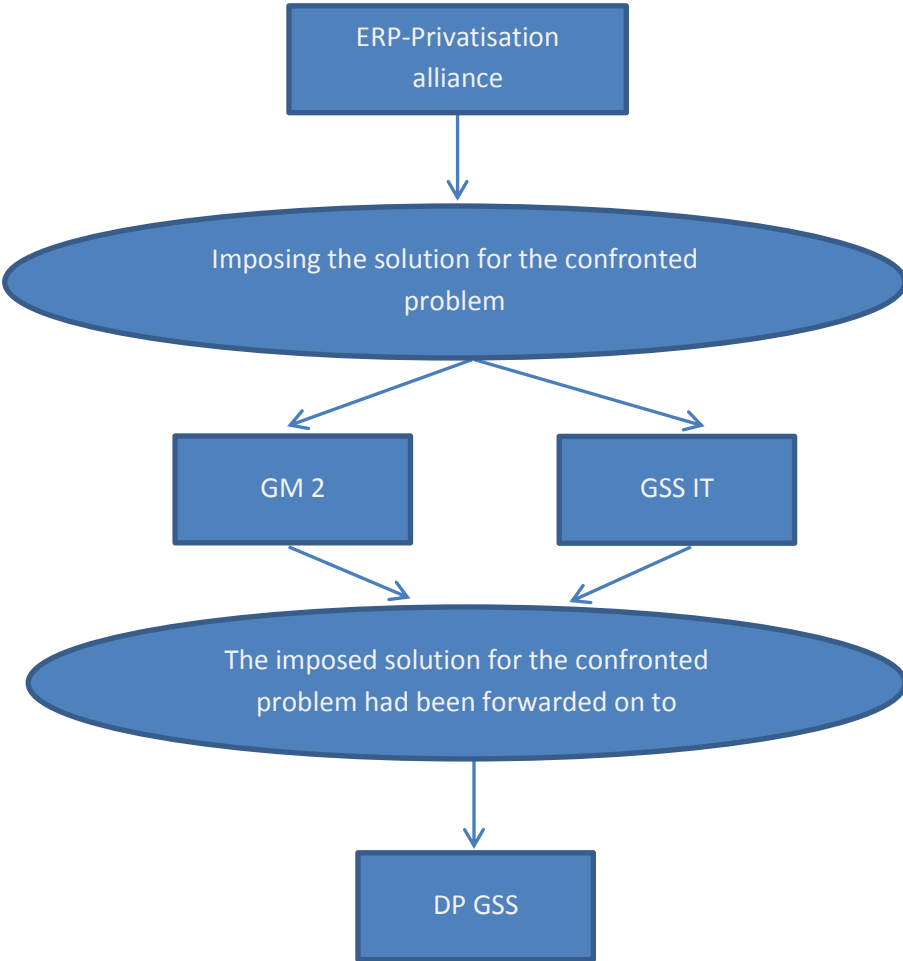


Figure 7.4. Imposing the solution for the confronted problem on GSS Division

#### **7.5.4. Conflict and domination phase**

As explained in the previous section, (DP GSS) had little choice but to accept the enrolment into the power relations network together with (GM 2) and (GSS IT), who had both been used as agents to impose the solution of the confronted problem into the GSS Division. At that stage, (DP GSS) requested (GSS IT) to become the focal point of contact with ERP-Privatisation alliance regarding issues related to GSS Division's involvement on the ERP implementation project. As a result, (GSS IT) received the first request from ERP-Privatisation alliance through the (ERP Mgr. Org.) asking him to nominate Subject Matter Experts (SMEs) to participate in the ERP implementation project's blueprint workshops. Upon gaining approval from (DP GSS), (GSS IT) enforced the solution of the confronted problem by emailing all GMs across the Division to nominate Subject Matter Experts (SMEs) to represent their respected departments in the ERP implementation project's blueprint workshops.

The outcome of the nominations was rather different from one GM to another. (GM 1) - who had decided to opt out of participating on the Statement of Needs (SoN) exercise that was conducted prior to the ERP implementation project for the department (SMD) that he previously managed prior to being switched to another department (CBS) - nominated an employee (CBS SME) who had previously been side-lined and relieved from any managerial duties within the department due to previous clashes with (GM 2). The decision of (GM 1) was purely based on minimising the participation of his department in the ERP implementation project in order to make way for the in-house work-in-progress IS to survive the overall ERP implementation process.

By doing so, (GM 1) joined the power relations network for the wrong reasons. He opposed the solution of the confronted problem by sending out someone of whom he had not initially believed in; with the intention to protect the department in-house built IS. The trouble started for (GM 1) when (CBS SME) managed to take full advantage of his participation in the ERP implementation project workshops. (CBS SME) eventually became the focal

point for all departmental decisions as far as shaping the future was concerned. (CBS SME) managed to regain respect in the department by being invited to almost all department meetings.

By doing so, (CBS SME) joined the power relations network with a different attitude than his manager (GM 1). (CBS SME) welcomed the solution of the confronted problem and became an advocate for its objectives. By welcoming this solution and its objectives, (CBS SME) regained power over his manager to the extent that (GM 1) - his manager - changed his attitude towards him. As a result, (GM 1) started showing (CBS SME) some respect as well as considering him as a valuable employee.

On the other hand, GM Corporate Administrative Services (GM CAS) nominated an employee (CAS SME) from the newly acquired department Corporate Procurement Services (CPS) to represent the whole division on the SAP ERP implementation project workshops. (CAS SME) had also welcomed the solution of the confronted problem, which empowered his position on (GM CAS) to the extent that he promoted him at a later stage to become the manager of the CPS department.

(GM 2) nominated an SME to participate in the ERP implementation project's blueprint workshops, who struggled to find any potential involvement for his department (SMD). As previously explained, that was due to the fact that (GM 1) decided to opt out of participating on the Statement of Needs (SoN) exercise that was conducted prior to the ERP implementation project for the department (SMD), which he previously managed prior to being switched to another department (CBS).

As soon as the ERP implementation project's blueprint workshops began, the ERP's best practice business process had been imposed on the nominated SMEs. The ERP's best practice had thus enforced its business process on the SMEs. With regard to the power relations network, ERP's best practice joined

up that network as soon as the ERP implementation project's blueprint workshops began.

Since the deployment of ERP's best practice usually intends to follow a step-by-step approach and is a complete pre-configuration business process, its power clashed with power that was coming from the privatisation project & alliances (Wagner *et al.* 2006; Wagner and Newell, 2004). As a result, the ERP-Privatisation alliance that had been initially created was split apart. This breaking of the alliance had forced some actors to opt out of the ERP-Privatisation alliance in favour of supporting the ERP's best practice power. As a result, a newly formed alliance had been created, which is henceforth called the Best-Practice alliance (see Figure 7.5.). The Best-Practice alliance included actors such as the ERP implementers, CBS SME, CAS SME, the (ERP Mgr. Org.) and the ERP's best practice. These actors unwittingly decided to join the Best-Practice alliance because they were all supporting the implementation of ERP's best practice in MESAIR. Best-Practice alliance's main objective was to implement a pre-configured ERP across MESAIR. All actors that formed the alliance were supporting that objective.

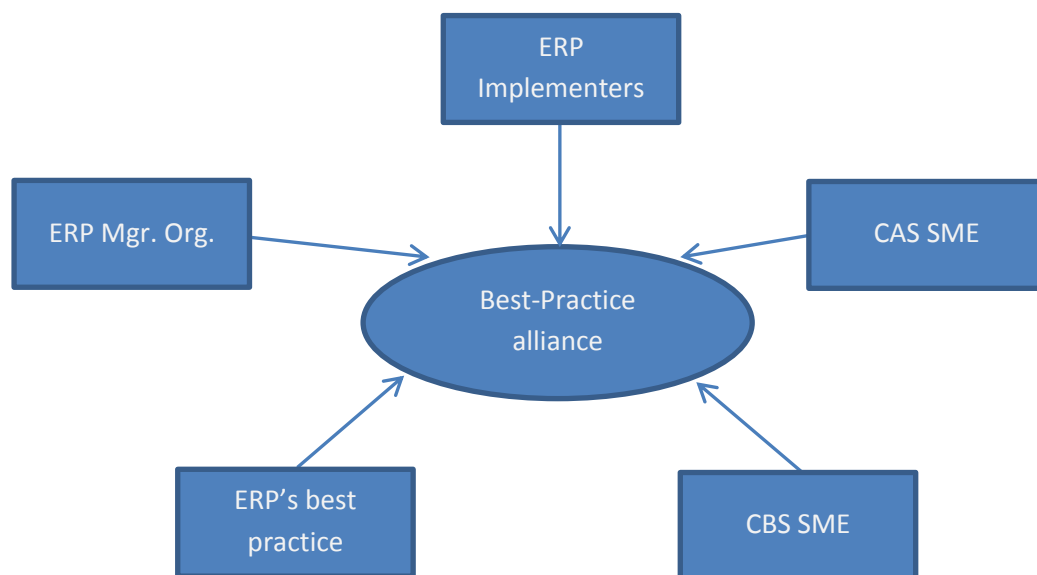


Figure 7.5. The initiation of the Best-Practice alliance

The breaking of the ERP-Privatisation alliance caused the initiation of another alliance, henceforth called the Privatisation alliance (see Figure 7.6.). Actors who joined the alliance included MESAIR Chairman, MESAIR President, DP Privatisation, Privatisation consultants and the privatisation project. The main objective of this alliance was to initiate the Strategic Business Units (SBUs) that would eventually be transformed into a company through the formation of partnerships with other industry-specific companies together with transforming MESAIR into becoming a holding group that would then stand above all SBUs (Akoum, 2009); for more details see Figure (5.2.) in Chapter 5. The Privatisation alliance possessed power by imposing its own objective over the ERP's best practice business process. Such power had been clearly demonstrated in Chapter 5.

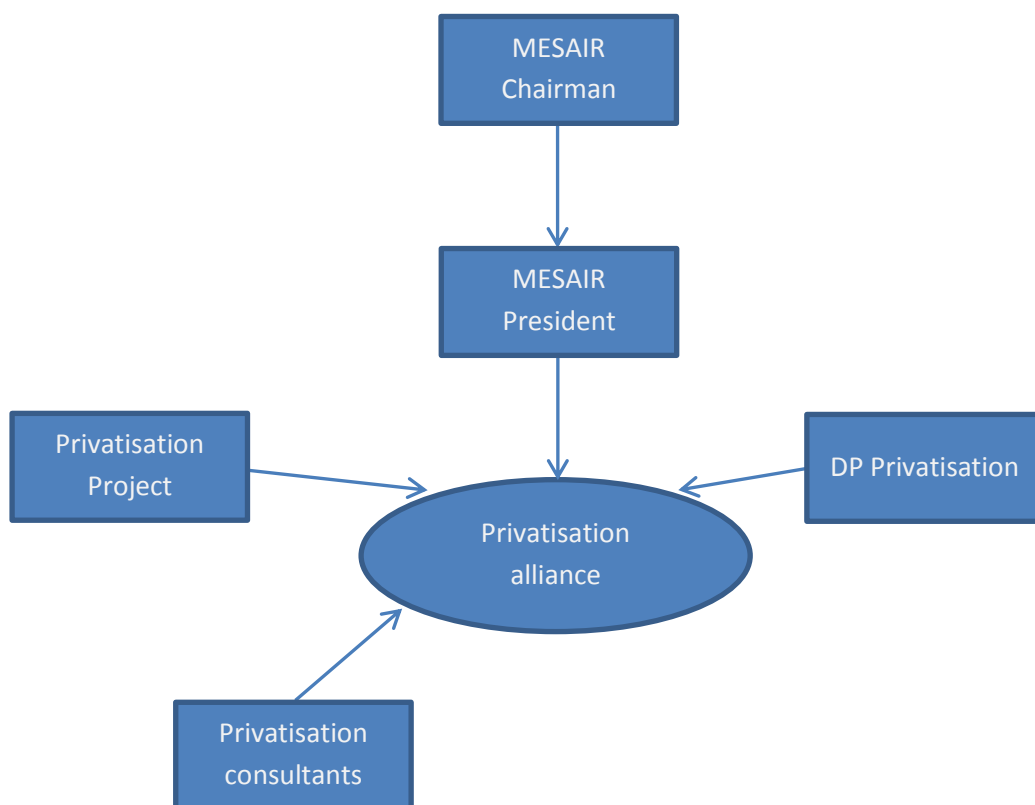


Figure 7.6. The initiation of the Privatisation alliance

The outcome of the privatisation project of MESAIR was hoped to transform the organisation by becoming a holding group that would then sit above all SBUs as part of the plan. The President of the MESAIR holding company was meant to chair the board of directors' meetings for every SBU as a result of owning the majority of shares of all SBUs (Akoum, 2009). The initial plans included the creation of ten SBUs which included: Catering, Cargo, Ground Handling, Aircraft Maintenance Services, Flying Academy, Medical Services, Premium Airlines, Economic Airlines, Religious Airlines and VIP Airlines (See Figure 5.2.).

However, the planned number of SBUs had been reduced to six at the start of the ERP implementation project's blueprint workshops (see Figure 5.3.). This was due to the fact that MESAIR Chairman had not yet approved the other four SBUs by the start of the ERP implementation workshops. That same number of the proposed SBUs had been changed for the second time running during the workshops, which included only five SBUs to be configured in ERP systems (see Figure 5.5.). Those plans lacked the consistency that was required to run a successful best practice ERP implementation.

In the power relations network, the Privatisation alliance enforced its main objective on the Best-Practice alliance. This enforcement shifted power towards the Privatisation alliance, whilst leaving the ERP alliance with little choice but to accept the enforcement of the privatisation project's objective. By accepting this power enforcement, ERP's best practice, together with its alliance in the Best-Practice alliance, lost the will to implement the ERP in the desired best practice fashion. As a result, the ERP implementation project had been stretched out and lost its will to dominate the power relations network; instead, the Privatisation alliance was dominating the power relations network (see Figure 7.7.).

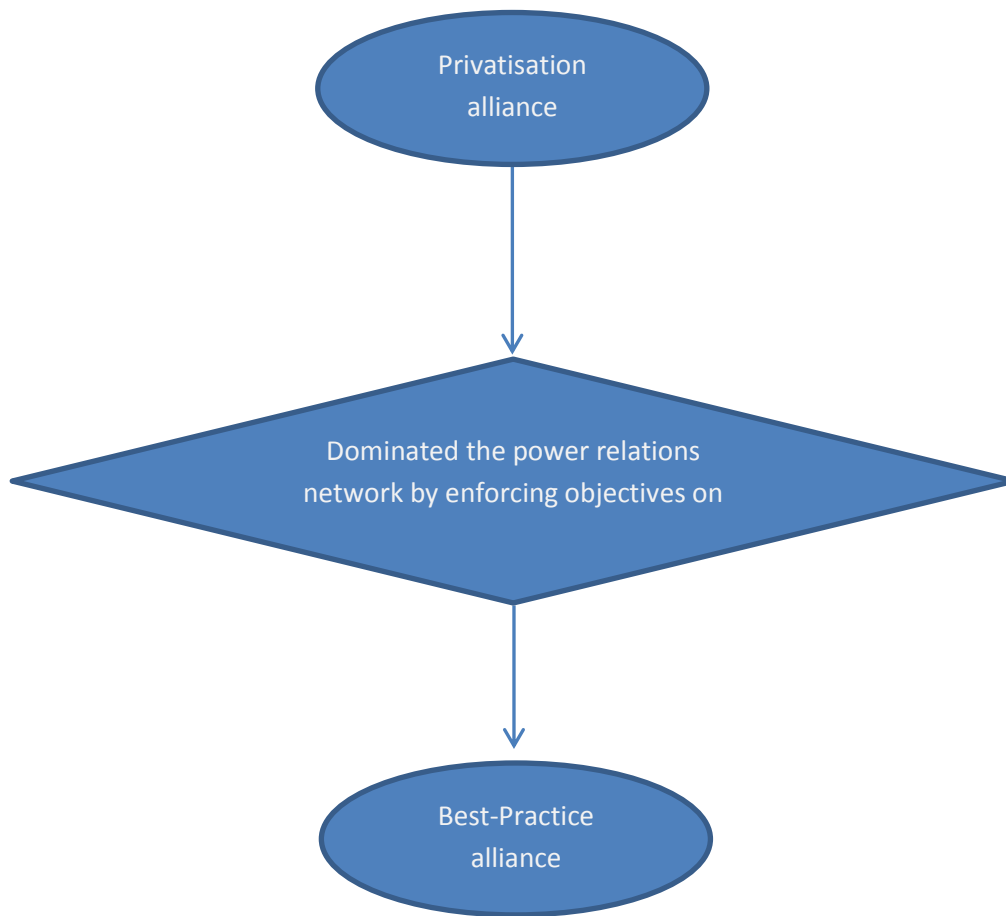


Figure 7.7. Privatisation alliance domination of the power relations network

As this research focused on the GSS Division and by going back to the issues that unfolded during the ERP implementation project with regards to the configuration of the buyer role in the ERP systems (see sub-section 5.10.5. in Chapter 5), Best-practice alliance enforced its main objective on the Division through (CBS SME) and (CAS SME). As explained in sub-section (5.10.5.) in Chapter 5, (CBS SME) and (CAS SME) worked with the ERP implementers to configure the buyer role for the division to make general purchases from external suppliers through the official channels. Part of those configurations included assigning employees from the Corporate Administrative Services (CAS) Department and the Contracting and Bidding Services (CBS) Department to be responsible for conducting the buying procedure in the ERP systems.

However, (GM 2) - who had also become one of the ERP Project's Executive Sponsors for the division as a whole - jumped in to include members of the SMD Department to take buyer roles too in the ERP systems. (GM 2) based his argument on the fact that SMD Department used to buy products and services directly without going through the official buying procedures (i.e. bidding and/or contracting or processing buying orders).

By doing so, (GM 2) joined forces with the organisation structure and the organisation culture. As explained in sub-section (6.2.5.) in Chapter 6, the organisation structure possessed power in the form of being too rigid to change. According to P01, MESAIR had not built the *“organisation based on the processing model... they tried to create their aim to be built up according to the structure before paying attention to the [ERP'S 'TO-BE' BUSINESS] process”*. P03 had also explained the power of the organisation structure by saying: *“In some instances best practice seemed to have clashed with the organisation structure. Anyway, during the implementation process not a lot of re-organisation structure had been conducted in MESAIR. I can't remember that SAP ERP had a big impact in changing the organisation's structure.”*

The organisation culture had also possessed power that was apparent during the unfolding of the ERP implementation under study. P03 said that SMEs and ERP implementers *“had lots of problems at the beginning of the SAP ERP implementation project in the form of the mind-sets of MESAIR Staff to accept IS [IN GENERAL] regardless of whether it being an ERP or any other IS... they couldn't accept the SAP ERP as they were used to a certain way of dealing with business aspects for more 15 years”*.

Going back to the power relations network, the power of the Best-Practice alliance was coming from the (CBS SME), (CAS SME), ERP's best practice and the ERP implementers, who were members of the Best-Practice alliance.



They collectively wanted to impose their main objective on the division, which was to configure the ERP systems using the best practice approach. This enforcement of objectives had been resisted by (GM 2) by claiming that the SMD Department do actually buy services for MESAIR and for that reason it should be included in the configuration process.

Because (GM 2) was one of the ERP implementation project's Executive Sponsors for the division as a whole, he saw the opportunity to impose one of the organisation culture in the form of badly practising the purchasing procedure. This was evident when (CBS SME) forwarded an email from (GM 2) regarding this matter to the (ERP Mgr. Org.) whilst copying in (DP GSS), (GM 2), (GM 1), (GSS IT) and (CAS SME).

In that email he said *"we, everybody, should realise that SAP [ERP] doesn't mean changing legacy systems only, but also changing legacy ideas, which don't work with SAP [ERP]. SAP [ERP] is a change of management. So, all those who think that they have a purchasing group while they don't should stop. They should not be purchasing, it is not their function"*. He went on by affirming the genuine owners of the purchasing process for non-stock items, saying; *"For those [WHO DISAGREE], MESAIR, should say loudly, there isn't any purchasing group in GSS except those which exist in the following two departments (1) Contracting and Bidding Services (CBS) Department (2) Corporate Administrative Services (CAS) Department"*.

(CBS SME) went on to encourage others to continue doing what they were doing as far as implementing the purchasing process was concerned and that those who were arguing with the purchasing groups should *"legalise their existence as buyers, which is against the concept of centralising purchasing"*. (CBS SME) went on to explain the danger of leaving buying processes open to every department, saying *"it is really dangerous if every department manager who wants to purchase material or services creates his own purchasing group and ignores the real purchasing groups"*.

By doing so, (CBS SME) wanted to reclaim power that was gained from (GM 2) and give it back to the Best-Practice alliance. (CBS SME) regained power and handed it back over to the Best-Practice alliance by escalating a division-internal matter to an influential member of that alliance (ERP Mgr. Org.).

In the meantime, (GM 2) joined forces with the organisation structure and the organisation culture to impose the badly practised way of conducting business into the ERP systems. By doing so, (GM 2), the organisation structure and the organisation culture created a new alliance. This alliance is henceforth called the MESAIR Legacy alliance (see Figure 7.8.). The enforcement of the MESAIR Legacy alliance clashed with the power that was being imposed from the Best-Practice alliance onto the GSS Division.

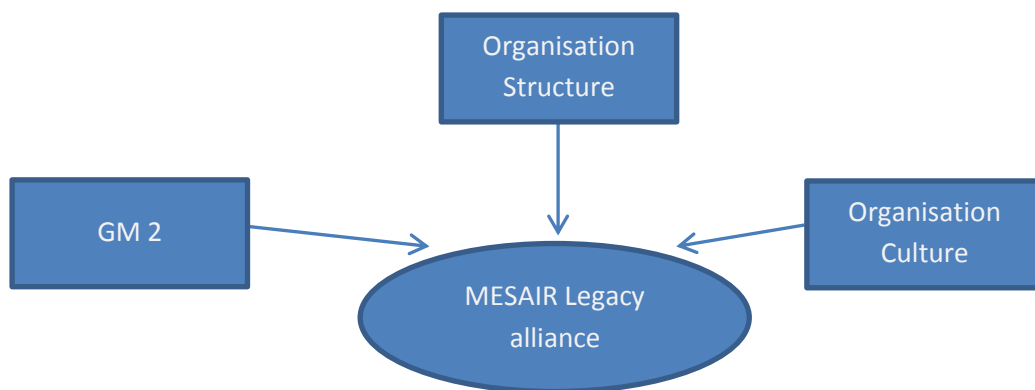


Figure 7.8. The initiation of MESAIR Legacy alliance

Another actor that should have joined the Best-Practice alliance to help in the enforcement of its objective in the GSS Division was the change management strategy. Change management, as an actor on the power relations network, could have prevented the clash of powers between Best-Practice alliance and the MESAIR Legacy alliance by enforcing a change management strategy in the mix. Because there had been no change management strategy set in place, change management lacked power and this contributed to causing the clash of powers.

As for the Privatisation alliance, it had its own power of enforcing its objective on the power relations network. It clashed with the other two alliances (Best-Practice alliance and the MESAIR Legacy alliance) and those clashes meant that none of the alliances were capable of dominating the power relations network, which in return had halted the progress of the ERP implementation project (see Figure 7.9.).

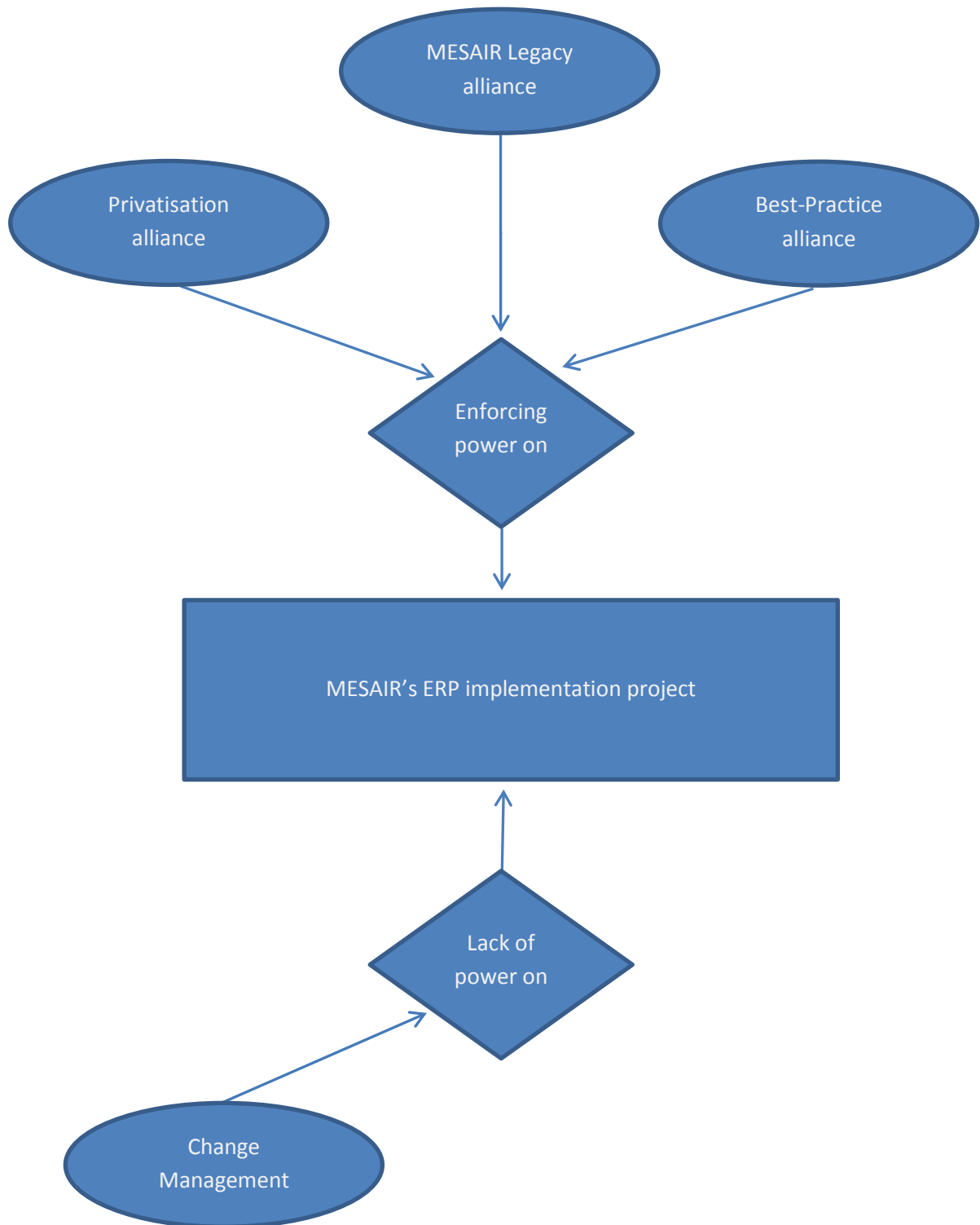


Figure 7.9. Effects of power relations on MESAIR's ERP implementation project

#### **7.5.5. Stable mechanism phase**

During the final periods of the case under study, the ERP implementers started to feel the complexity of the ERP implementation project. This was due to lack of clarity going forward. The (ERP Mgr. Org.) started putting forward many alterations to the original plans, which both parties initially agreed on. Some of those changes included configuring new SBUs in the ERP systems. As a result, the ERP implementers started refusing to make changes unless MESAIR filed official change requests, which involved paying PAHO for accepting such requests. Such disagreements between MESAIR, which was being represented by (ERP Mgr. Org.), and PAHO, which was being represented by the ERP implementers, had led PAHO to leave the project for good.

Going back to the power relations network, the Best-Practice alliance had been broken because its members developed different objectives. As soon as PAHO left the project the Best-Practice alliance had been dismantled, and as a result it lost all powers that it had gained during the course of the case under study. This power was not regained until MESAIR signed up with another company to carry on with the desired ERP implementation project. However, as the period after PAHO leaving the process is beyond the time-frame for the case under study, the power relations network had reached stability. This was due to the fact that the ERP implementation had been put on hold until they agreed with the next company to take the ERP implementation project forward.

## **7.6. Relevance of ANT-Foucault concept to the literature of ERP implementation**

Due to the high rate of failure of implementing ERP in organisations (Kraemer, 2012) and due to the extraordinary resources that are usually allocated for conducting such projects, research on ERP implementation have mainly been devoted to investigating issues that contributed to such high failure rate (Huang and Yasuda, 2016). Early research stressed out the importance of identifying as well as recommending the adoption of Critical Success Factors (CSFs) when studying or practically dealing with such projects (Beheshti *et al.* 2014; Garg and Agarwal, 2014; Abu-Shanab *et al.* 2015).

The criticism of CSFs for not being practicality inappropriate (Françoise *et al.* 2009) and for not being sufficiently critical nor crucial for directly contributing to the success of ERP implementation (Ram *et al.* 2013), research had mainly been shifted towards providing the body of knowledge with greater detailed investigations. Some research concentrated on investigating the impacts of the organisational context on ERP implementation projects as it had been reported in the literature that the organisational context is capable of directly influencing the efficiency of the ERP implementation process (Huang and Yasuda, 2016).

This is inclined with the work of (Hong *et al.* 2010) that investigated in greater detail the impact of the organisation structure on the ERP implementation projects by stressing out the importance of structurally aligning the organisation with the ERP counterpart; which was seen as an important aspect of reducing the negative impact on the overall outcome of ERP implementation projects (Ahmadi *et al.* 2015). Other research investigated the importance of developing mutual trustworthy relationship between ERP implementers and users (Ko, 2014), which was seen as major contribution to delivering a more effective outcome of the ERP implementation project. However, Tiwana (2010), Tiwana and Keil (2009) and Chang *et al.* (2013) emphasised the importance of establishing continuous monitoring and assessment of ERP implementers throughout the different phases of ERP implementation projects.

Many research on ERP implementation adopted theoretical frameworks to help in understanding the activities that impact such projects. One of those widely adopted theories in ERP implementation research is the Actor Network Theory (ANT). ANT enriched the understanding of IS because it tends to further describe the systems under study by perceiving them as social systems rather than perceiving them as being solely technical systems (Cho *et al.* 2008; Lewis and Townson, 2004).

ANT provides a unique way of explaining a certain phenomenon by interlinking the social system with the technical one; which means that non-human artefacts are not ignored but should be thought of as active entities that have the capability of changing the conception of the phenomenon under study (Mitev, 2009). Non-human actors should be seen as interlinked and closely associated with the social systems; they should be seen as essential entities that complete the social system (Law 1986).

The work of Lyytinen and Newman (2015) is a great example; they adopted ANT to investigate the alienation of users in two ERP implementation projects. In their investigations, they explained how users were marginalised 'black boxed'. Although the ERP implementation had been declared successful, in the real world, users adopted techniques such as shadow systems and work-arounds in order to efficiently use the implemented ERP systems. Their research involved forming different networks of the cases under study as well as introducing a range of alliances which provided in-depth case study analyses.

Even though ANT provided many benefits for investigating ERP implementation projects, it had been criticised for paying little attention to power related issues (Walsham, 1997). It lacks the ability to demonstrate the observation of the less powerful social groups that had been excluded by the more powerful groups which strict explaining political and intentional issues in a particular social setting (Winner, 1993). Walsham (1997) believed that as

well as describing the actor-network, moral and political analysis of the network should follow in order to provide the research with a deeper understanding of power and moral stances of the network under study.

Going back to the literature on ERP implementation, power related aspects had been mentioned as they unfold during the progression of a particular implementation process. This was apparent in the work of Pozzebon and Pinsonneault (2012) who investigated the relationship between ERP implementers and users by analysing how power and knowledge are exercised and exchanged amongst members of both parties during a particular ERP implementation project.

Also, the work of Mobashar Hossain *et al.* (2011) identified the SMEs empowerment by investigating ownership & governance, scope management and employee empowerment. Part of their findings affirmed the concurrent existence of employees' empowerment especially the ones who have been selected to become SMEs for ERP implementation projects; they have also demonstrated some deep concern among high management about losing control over SMEs during the implementation process. Other forms of relations that unfold during ERP implementation project could include the relationship between organisational structure & culture and the ERP's 'best practice'. For instance, the misalignment of existing business process and organisation structure with the ERP system's business process and structure can cause undesired disruption to the ERP implementation project (Morton and Hu, 2008; Soh *et al.* 2003).

All the above aspects that unfold during the ERP implementation can form relations with one another; which results in creating a network of relations. In order to explain the influences of such network of relations amongst all of the aspects that unfold, the literature on ERP implementation demonstrated that adopting a social theory (Elbanna, 2007; Lyytinen and Newman, 2015) such as Actor Network Theory (ANT) can provide a solid background to investigate



the interactions between technological and social systems that unfold during ERP implementation projects (Mitev, 2009; Lee, 2001).

However, due to the ANT's lack of political and moral analysis, the researcher followed the advice of Walsham (1997) that suggested the use of ANT for analysing case studies as long as it is complemented with other theories and that moral and political issues are not best described using ANT on its own but they rather "*need to draw from other areas to supplement the theory*" (p. 477). This research contributed to knowledge on that respect.

It was argued that Foucault's analysis of power is capable of complementing ANT by providing the necessary tools to respond to the criticism that was aimed at ANT (Underwood, 1999; Fox, 2000; Doolin and Lowe, 2002; Law, 2009; Mathewman, 2013). ANT's lack of analysing political and moral issues of a particular actor-network can be complemented with Foucault's analysis of power in order to enhance the analysis of a particular case; that is, by investigating the political intentions of actors for conducting specific actions in a particular case.

Scholars like Underwood (1999), Fox (2000) and Mathewman (2013) have incorporated Foucault's analysis of power within ANT. However, none of the mentioned scholars have incorporated ANT with Foucault's analysis of power to investigate an ERP implementation project. As it had been demonstrated in the ERP implementation literature, power related issues require further investigations (Horton 2003; Dhillon 2004; Doolin 1999; Maguire *et al.* 2010).

However, as power relations are important to investigate the intentions of actors within a particular case, political issues should be investigated as part of the actor-networks analysis. Foucault's analysis of power can provide this vital investigation; as it can provide the case under study with political-oriented insights that are worthy of invigorating power related issues that influence the ERP implementation process. As Foucault's analysis of power lacks the

methodological stance that ANT possesses, and as ANT lacks the political investigation that is required to gain deeper understanding of ERP implementation projects, the researcher believes that they both can equally complement each other (Law, 1992; Elbanna, 2012).

Inspired by the work of scholars like Underwood (1999), Fox (2000) and Matthewman (2013) who have incorporated Foucault's analysis of power within ANT, and given the fact that their work have not investigated power related issues in an ERP implementation setting; this research contributed to knowledge by incorporating Foucault's analysis of power within ANT in order to investigate the power relations of an ERP implementation project.

The researcher believes that such incorporation can add to the body of knowledge a valid methodological approach to investigate power related issues that negatively influence the ERP implementation project. As seen in this chapter, the ANT-Foucault concept was capable of investigating and explaining the unfolding of power relations during the progression of a complex ERP implementation project.

In principle, the researcher believes that the ANT-Foucault concept is capable of being adopted into other ERP implementation projects provided that careful consideration of the context is taken. Such consideration should take into account the contextual aspects of the case study. For example, not all ERP implementation projects involve dealing with a privatisation project like that on the case of MESAIR. The researcher also believes that the concept of ANT-Foucault has got the potential of being upgraded to take a theoretical stance provided that it gets adopted in other contexts.

## **7.7. Summary and conclusion**

This chapter provided the reader with the procedures taken to embed Foucault's analysis of power within ANT. The developed ANT-Foucault

concept was applied on the case under study in order to explain the power relations that were formed during the ERP implementation project. It included introducing the most influential actors that were involved in the case, as well as explaining the enforcement of power from one actor to another. It included explaining the different alliances that were formed during the course of the project. The network of power relations that were formed during the course of the case under study were also explained, as well as the shift of power from one actor and/or group of actors to another actor and/or a group of actors.

The next chapter presents the conclusion for this research starting with addressing the research objectives, aims and question. It follows on by providing the evaluation of the research in terms of its capability of contributing of knowledge, the appropriateness of the methodological choices, the relevance of the research findings to the application of ANT-Foucault into the case under study and the relevance of the conceptual development to its application on the case under study. The research limitations and recommendations for further research are also presented.

## **8. Conclusion**

### **8.1. Introduction**

The previous chapter presented the procedures taken to embed Foucault's analysis of power within ANT. The developed ANT-Foucault concept was applied on the case under study in order to explain the power relations that were formed during the ERP implementation project. This included explaining the different alliances that were formed during the course of the project. The network of power relations that were formed during the course of the project were also explained, as well as the shift of power from one actor and/or group of actors to other actors and/or groups of actors.

This chapter presents the conclusion for this research, starting by addressing the research objectives, aims and questions. It continues by providing an evaluation of the research, segmented into four parts. The first part is to evaluate the research in terms of its capability of contributing to knowledge. The second part includes evaluating the research in terms of the appropriateness of the methodological choices. That is followed by evaluating the relevance of the research findings to the application of ANT-Foucault in the case under study. The fourth part entails evaluating the relevance of the conceptual development to its application on the case under study. Finally, the research limitations and recommendations for further research are presented.

### **8.2. The achievement of the research objectives, aim and question**

The aim of this research was to investigate the effects of power relations on the implementation of Enterprise Resource Planning (ERP) in an organisation in

Saudi Arabia through the lens of Foucault's analysis of power embedded within Actor Network Theory (ANT).

In order to achieve this, three objectives were derived that collectively contributed to achieving the overall aim. The first objective was to introduce a new case study of an ERP implementation project in an organisation in Saudi Arabia; the second was to embed Foucault's analysis of power within the Actor Network Theory (ANT); and the third was to apply Foucault's analysis of power embedded within Actor Network Theory (ANT) to the case study in order to investigate the effects of the power relations on the implementation of Enterprise Resource Planning (ERP) in an organisation in Saudi Arabia.

The objectives of this research have been addressed accordingly. The first objective was sufficiently addressed in Chapter (5), which introduced a new case study of an ERP implementation project in an organisation in Saudi Arabia; the MESAIR case study. The second objective was addressed in section (7.4.) of Chapter (7), which presented Foucault's analysis of power embedded within ANT: the ANT-Foucault concept. The third objective was fully addressed in section (7.5.) of Chapter (7), where the ANT-Foucault concept was applied to the MESAIR case study with the aid of the research findings.

The attainment of the objectives for this research directly contributed to achieving the aim of this research. The fulfilment of the aim of this research directly answered the research question; what is the relationship between power relations and the ERP implementation within an organisational context? The answer to this question was presented in section (7.5.) of Chapter (7). The application of the ANT-Foucault concept in the case study unveiled relationship of power relations and the ERP implementation within the context of MESAIR. The alliances that were formed, together with each alliance's efforts to enforce their respective objectives in order to dominate the power

relations network were explained thoroughly from sub-sections (7.5.1.) to sub-section (7.5.5.).

### **8.3. Evaluating the research**

In order to evaluate the research, it is necessary to review its importance in terms of its contribution to knowledge. It is also necessary to review the appropriateness of the methodological choices made, which gave this research the robustness and the thoroughness that were capable of fulfilling the requirements of its aims and objectives. In addition, evaluating this research requires reviewing the relevance of the research findings to the application of ANT-Foucault concept on the case under study, and the relevance of the conceptual development to its application. Finally, this requires evaluating its limitations as well as providing the necessary recommendations for further research.

#### **8.3.1. Contribution to knowledge**

Research on ERP implementation have mainly been devoted to investigating issues that contributed to its widely reported high failure rate (Huang and Yasuda, 2016). While most research identified and recommended the adoption of Critical Success Factors (CSFs) for ERP implementation (Beheshti *et al.* 2014; Garg and Agarwal, 2014; Abu-Shanab *et al.* 2015), other research investigated the impacts of the organisational context on ERP implementation projects such as (Hong *et al.* 2010; Ahmadi *et al.* 2015);

Due to ANT's uniqueness of explaining a certain phenomenon by interlinking the social system with the technical one (Cho *et al.* 2008; Lewis and Townson, 2004) and due to its unique feature of including non-human artefacts as active entities that have the capability of changing the conception of the phenomenon under study (Mitev, 2009); many research adopted ANT to analyse and investigate ERP implementation projects (Lyytinen and Newman, 2015).

However, ANT had been criticised for paying little attention to power related issues (Walsham, 1997) as it lacks the ability to demonstrate the observation of the less powerful social groups that had been excluded by the more powerful groups which strict explaining political and intentional issues in a particular social setting (Winner, 1993). Walsham (1997) believed that as well as describing the actor-network, moral and political analysis of the network should follow in order to provide the research with a deeper understanding of power and moral stances of the network under study.

The literature on ERP implementation stressed out the importance of investigating power related issues that unfold during the progression of the implementation process such as the power relation between ERP implementers and users (Pozzebon and Pinsonneault, 2012), the empowerment of SMEs (Mobashar Hossain *et al.* 2011) and the power relation between ERP's best practice and the organisational structure (Morton and Hu, 2008; Soh *et al.* 2003). Such power relations that unfold during the progression of the ERP implementation project usually develop a network of relations that are dependant of one another (Elbanna, 2007; Lyytinen and Newman, 2015). Thus, ANT can provide a solid background to investigate the interactions between technological and social systems that unfold during ERP implementation projects (Mitev, 2009; Lee, 2001).

However, due to the ANT's lack of political and moral analysis, the researcher followed the advice of Walsham (1997) that suggested the use of ANT for analysing case studies as long as it is complemented with other theories and that moral and political issues are not best described using ANT on its own but they rather "*need to draw from other areas to supplement the theory*" (p. 477). This research contributed to knowledge to that respect.

Given the wide citation of the effectiveness of incorporating Foucault's analysis of power within ANT due to their incoherent nature (Law, 2009;

Elbanna, 2012), this research contributed to knowledge on that respect. Inspired by the work of Underwood (1999), Fox (2000) and Matthewman (2013) who have incorporated Foucault's analysis of power within ANT, and given the fact that their work have not investigated power related issues in an ERP implementation project; this research contributed to knowledge by incorporating Foucault's analysis of power within ANT in order to investigate the power relations that developed during the progression of an ERP implementation project in particular organisation; MESAIR.

The researcher believes that such incorporation can add to the body of knowledge a valuable methodological tool to investigate power related issues that can negatively influence ERP implementation projects. The ANT-Foucault concept was capable of investigating and explaining the unfolding of power relations during the progression of a complex ERP implementation project. With regards to the generalisability aspects of this research, the researcher argues that the outcome of this research is generalisable to a concept; the '*ANT-Foucault*' concept.

The researcher also believes that the outcome of this research is generalisable to the context under study; MESAIR organisation. This is because even though the case study was mainly targeting a certain division in the organisation under study (i.e. DSS Division in MESAIR), the researcher made sure to include the wider audience in the fieldwork. Research participants from other division within MESAIR have also been interviewed, which enhanced the contextual generalisability of the study. Research participants from four different divisions had been interviewed and they collectively contributed to the outcome of this research. Therefore, this research is generalisable to the context of the organisation under study.

With regards to the generalisability aspects to other contexts and other countries, the researcher argues that the ANT-Foucault concept is capable of being adopted into other ERP implementation projects provided that careful



consideration of the context is taken. Such consideration should take into account the contextual aspects of the case being study. For example, not all ERP implementation projects involve dealing with a privatisation project such as that on the case of MESAIR. The researcher also believes that that concept of ANT-Foucault has got the potential of being upgraded to take a theoretical stance provided that it gets adopted in other contexts which is beyond the scope of this research.

### **8.3.2. Appropriateness of the methodological choices**

This research was aimed at studying a social phenomenon (power relations) by investigating the effects of social entities (individuals and artefacts that had taken part in the ERP implementation project under study) on a particular social setting (the organisation under study); using interviews as one of the sources for collecting the data made it possible to dig the social reality out of the concerned individuals' minds by investigating their perceptions and their consequent actions regarding the social phenomenon under study. The documents and archival records helped in triangulating the data sources. Using data triangulation validated the credibility of the research (Lewis, *et al.* 2014; Creswell, 2009; Yin, 2014). In addition, the triangulation of analyses given that the researcher obtained analytical confirmation from research participants provided a further validation for the outcome of the research.

Thematic analysis proved to be the most appropriate mode of analysis for this research due its vital contribution of identifying the social agents (humans, and non-humans) that were used to apply the ANT-Foucault concept on the case under study, which was useful to explain the power relations phenomenon in its real-life context.

The interpretivist paradigm was the most appropriate paradigm for this research due to its capability of identifying, exploring and explaining how factors (social agents including individuals and artefacts) in a particular social

setting (the organisation under study) were related and inter-dependent (power relations analysis) (Oates, 2006). This was achieved by investigating the phenomenon under study through the meanings and interpretations of the individuals (via interviews) who were involved in that particular ERP implementation project (the MESAIR case). This research adopted the interpretive paradigm because it entailed developing rich insights (the MESAIR case) into a unique context through the development of interpretations from people who were involved (Oates, 2006).

The research was approached inductively in order to achieve its objectives by developing a deeper understanding of how individuals perceive the phenomena under study. The findings made it possible to develop a general conception of the phenomenon under study by investigating the case study through the lens of the ANT-Foucault concept.

The purpose of this approach is to get a feel of what goes on in a particular context to generate a deeper understanding of the nature of the problem. Such approach usually involves conducting in-depth interviews that are analysed thoroughly in order to formulate a theoretical perspective on the phenomena under investigation. It was intended to approach this research inductively because this involved explaining the effects of a social phenomenon (power relations) in a social setting (the organisation) by investigating the perceptions and the understandings of different social agents (individuals who were directly involved in the ERP implementation project in the organisation under study) in order to provide deep insights into the phenomenon under study.

This research was approached qualitatively because it was not intended to analyse the technological aspects of ERP, but rather to explain a range of social, political, organisational, economical and managerial interpretations in relation to the implementation of ERP in an organisation. The case study strategy helped in explaining the phenomenon under study to the greatest possible details.

This research adopted the explanatory case study research strategy because the main aim of this research was to describe a particular situation in order to reach a conclusion about the phenomena under study (Myers, 2013). The case study was analysed in depth in order to develop a rich insight into the complex relationships and processes within the case (Oates, 2006). The reason for adopting an explanatory single case study was to enable the researcher to investigate how different social agents that were identified using the Actor Network Theory (ANT) had affected the ERP implementation project in the way they did. It explained how inter-linked relationships amongst social agents that had developed during the course of the ERP implementation process had occurred and indeed affected the way of which the ERP implementation process progressed.

This research was generalised to a concept. As one of the objectives was to analyse the case study by using Actor Network Theory (ANT) embedded with Foucault's analysis of power, the concept of '*ANT-Foucault*' was developed. This concept could provide analytic generalisation that can provide valuable insights for the body of knowledge by proposing an alternative way of analysing IS and ERP implementation projects in organisations.

### **8.3.3. Relevance of the research findings to the application of ANT-Foucault into the case under study**

Two of the main objectives for this research were to embed Foucault's analysis of power within the Actor Network Theory (ANT) and apply Foucault's analysis of power embedded within Actor Network Theory (ANT) in the case study in order to investigate the effects of the power relations on the implementation of Enterprise Resource Planning (ERP) in an organisation in Saudi Arabia. The research findings drawn out of the thematic analysis of the data helped in identifying the actors involved in the case. It also contributed to explaining some of the power relations formed during the ERP implementation project.

The first finding contributed to the research by showing that the ERP implementation project under study empowered SMEs by handing them the necessary tools that they needed to make changes in their respective departments. The alliance that was formed between the SMEs and the ERP implementation Project formed a power relation that was capable of enforcing their collective beliefs in the business units across the organisation. This was also mentioned in the literature such as the work of Mobashar Hossain *et al.* (2011).

The second finding contributed to the research by establishing that ERP's 'best practice' business process was being enforced in the organisation. In addition, another power relation emerged between the ERP's 'Best Practice' business process, ERP consultants, SMEs and the business unit. These power relations demonstrated how the ERP's 'best practice' business process possessed power that was being blocked by another force coming from the business units through their respective managers and/or SMEs. This finding was discussed in the literature such as the work of Soh *et al.* (2003).

The third finding contributed to the research by establishing that personal relationships that developed between SMEs and ERP implementers during the course of the ERP implementation project had influenced the 'To-Be' business process. Such personal relationships could be regarded as a form of power relationships that had developed throughout the course of the ERP implementation project. As a result, such power relations came into force when SMEs and ERP Implementers became allied by agreeing to customise some of the ERP's 'best practice' business process. This alliance of power managed to enforce ERP's 'best practice' business process to ease off the amount of power domination that it was practising on the organisation. This was discussed in the literature such as the work of Wang *et al.* (2007), Chang *et al.* (2013) and Ko (2014).

The fourth finding contributed to the research by establishing that the privatisation project possessed power, which had negatively influenced the ERP Implementation Project by disrupting its progress. It is worth mentioning that power relations were apparent between the privatisation project and the ERP Implementation Project as well as other actors that were involved in the system of power relations. This was discussed in the literature such as the work of Kholeif *et al.* (2007) and Gavidia (2016).

The fifth finding contributed to the research by establishing that the organisation structure possessed power capable of suppressing the ERP's best practice business process during the ERP implementation project. These clashes of power confirm that power relations developed between the organisation structure and the ERP's 'best practice' business process during the course of the project (Morton and Hu, 2008).

The sixth finding helped to establish that the organisational culture possessed power. The enforcement of this power clashed with powers that came from the ERP's "best practice" business process. The power of the organisational culture disrupted the process of the ERP Implementation Project. This was discussed in the literature (Rabaii, 2009; Wagner and Newell, 2004).

The seventh finding helped to establish that the disappearance of change management and its lack of power had caused disruption to the overall ERP implementation project. This disruption could have been avoided had a change management strategy been set in place. The impact of change on the positive progression of ERP implementation project had been discussed in the literature such as (Umar, 2016; Hassan and Mouakket, 2016).

The eighth finding helped to establish that the close inter-linked relationships between ERP implementers and privatisation consultants produced an alliance of power in the sense that they could team up if necessary to overcome obstacles that arose for both running projects (the privatisation and the ERP

implementation projects) regarding the business process and the structure (Kholeif *et al.* 2007).

The ninth finding helped in establishing that the introduction of the ERP implementation project in MESAIR had certainly equipped SMEs and/or department managers with the necessary platform to pursue their own personal interests. These power relations between the ERP implementation project and SMEs and/or managers had developed and the introduction of the ERP implementation project had granted greater authority for SMEs and/or managers to seek higher managerial roles (Mobashar Hossain *et al.* 2011).

The findings of this research directly contributed to laying out the groundwork for the application of the ANT-Foucault concept to the case under study which directly contributed to the fulfilment of the research objectives.

#### **8.3.4. Relevance of the conceptual development to its application in the case under study**

Foucault's analysis of power embedded within ANT presented in section (7.4.) in Chapter 7 provided the four phases of the developed concept. The first phase was labelled the '*strategy of confrontation phase*'; the second phase was labelled the '*power relations initialisation phase*'; the third phase was labelled '*conflict and domination phase*' and the fourth phase was labelled the '*stable mechanism phase*'.

As explained in section (7.5.) in Chapter 7, the application of the ANT-Foucault concept on the case under study demonstrated its appropriateness in terms of explaining the power relations and its impact on the ERP implementation project. Thus the concept of ANT-Foucault was capable of providing valuable insights into the case. It was equally capable of explaining the power relations and their impact on ERP implementation projects. The concept of ANT-Foucault is capable of providing an alternative way of

analysing the power related issues that are usually associated with ERP implementation projects in particular and with IS implementation projects in general.

#### **8.3.5. Research limitations and recommendations for further research**

As explained in sub-section (8.3.1.), even though the *ANT-Foucault* concept was capable of investigating and explaining the unfolding of power relations during the progression of a complex ERP implementation project; the outcome of this research have been mainly generalised to the context of the research; MESAIR. The researcher believes that the ANT-Foucault is capable of being adopted to investigate a similar implementation project in another context and/or another country, provided that special consideration is given to the varying contextual aspects of other contexts.

Therefore, further research can be devoted towards adopting the concept to other contexts in other countries in order to further examine its robustness, thoroughness and diversification. By doing so, the concept can then be developed into a new theoretical framework that is empirically tested across an array of different contexts in different countries. Upon the development of the framework, IT project managers can adopt it in order to deeply analyse power related issues that unfold during the progression of IS or ERP implementation projects.

#### **8.4. Summary and conclusion**

This chapter presented the conclusion for this research starting with addressing the research objectives, aim and question. It continued by providing the evaluation of the research which included reviewing its capability of contributing to knowledge, the appropriateness of the methodological choices, the relevance of the research findings to the application of ANT-Foucault to the case under study and the relevance of the conceptual development to its

application. Finally, the research limitations and recommendations for further research were presented.



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# Appendix 1



Dear Participant,

My name is (ABC) and I am doing a PhD research at the Digital Business Research Centre at the University of Salford, United Kingdom.

The main aim of this research is to find out how relationships that was built during the Enterprise Resource Planning (ERP) implementation process between Subject Matter Experts (SMEs), ERP Consultants and ERP Systems can have a direct impact on the business process to be implemented. This includes looking into how these relationships can impact a particular business process to go against their respected manager's will and desire as an outcome of the "To Be" business process.

You are being invited to take part in the above mentioned research because of your involvement in the ERP implementation project of the Saudi Arabian Airlines. Your participation in this study will be conducted in the form of an interview focusing on the above mentioned issues.

Participation is voluntary and **you can withdraw from the research at any time without giving any reason.** If you decide to withdraw, any data that are collected will be retained and used as part of the study, unless you request it to be deleted. Any information obtained in connection with this study will be treated as privileged and confidential. All information will be kept anonymous; so that you cannot be identified by others. Electronic data will be encrypted and password-protected so that no one can access it but the researcher. All information that are used to conduct the proposed interview will be securely stored in a lockable cabinet at the University of Salford.

Please take time to read the accompanied Information Sheet carefully. You are entitled to ask me if there is anything that is not clear or if you would like more information. It is up to you to decide whether or not to take part. If you do, you will be given the accompanied information sheet to keep and be asked to sign a consent form which acts as an acknowledgement to reading the information sheet and that you agree to take part in the interview as well as agreeing for that interview to be tape recorded. You will also agree that you understand your rights to withdraw from the research as explained above.

You will not benefit directly from taking part but the results of this study will enable us to gain deeper understanding on the practice of the implementation of Enterprise Resource Planning (ERP) into organisations. Such results will contribute to maximising the success rate of such implementations within organisations. It will also contribute to enriching the body of knowledge in that respect.

If you have any questions or would like more information, please do not hesitate to contact me.

**Contact Details:**

**My Name**  
Centre for Digital Business  
Salford Business School  
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Date: 13/05/2013

Version Number: 03/13-PIL2

# Appendix 2



Centre for Digital Business  
Salford Business School  
Maxwell Building  
University of Salford  
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M5 4WT

## Participant Information Sheet

### The effects of power relations on the implementation of Enterprise Resource Planning (ERP) into Organisations

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

#### Why have you been chosen?

You are being invited to take part in an interview because you were involved in the Enterprise Resource Planning (ERP) implementation project for the Saudi Arabian Airlines. Your participation in this study will be conducted in the form of an interview discussing the impact of the interlinked relationships amongst employees and/or ERP Systems that were involved in the implementation project.

#### Do you have to take part?

No, it is up to you to decide whether or not to take part. If you do, you will be given this information sheet to keep and be asked to sign a consent form. **You are free to withdraw at any time without giving any reason.**

#### What will happen to you if you take part?

You will be asked to sign a consent form which acts as an acknowledgement to reading this information sheet and that you agree to take part in the interview as well as agreeing for that interview to be tape recorded. You will also agree to the fact that participation is voluntary and that you can withdraw from the research at any time without giving any reason.

#### What are the possible benefits of taking part?

You will not benefit directly from taking part but the results of this study will enable us to gain deeper understanding on the practices of the implementation of Enterprise

Resource Planning (ERP) into organisations. Such results will contribute to maximising the success rate of such implementations within organisations. It will also contribute to enriching the body of knowledge in that respect.

#### What will happen if you don't want to carry on with this study?

You can withdraw from the study at any time without giving a reason. If you do decide to withdraw, any data I have collected will be retained and used as part of the study, unless you request it to be deleted.

#### Will my taking part in this study be kept confidential?

Any information obtained in connection with this study will be treated as privileged and confidential. All information will be anonymous so that you cannot be identified by others and will be stored in a lockable cabinet at the University of Salford.

#### Contact Details:

If you have any questions or would like more information, please do not hesitate to contact me:

My name  
Room 512  
Centre for Digital Business  
Salford Business School  
Maxwell Building  
University of Salford  
The Crescent  
Salford, Greater Manchester  
M5 4WT  
Mobile: xxx  
Email: xxx

Date: 01/03/2013

Version Number: 03/13-PIS1

# Appendix 3



## Research Participant Consent Form

**Title of Project: The effects of power relations on the implementation of Enterprise Resource Planning (ERP) into organisations**

**Name of Researcher: My name**

***Please tick the appropriate boxes***

	Yes	No
I have read and understood the project information sheet dated 01/03/2013 (Version Number: 03/13-PIS1).	<input type="checkbox"/>	<input type="checkbox"/>
I have been given the opportunity to ask questions about the project.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to take part in the project. Taking part in the project will include being interviewed and audio recorded.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that my taking part is voluntary; I can withdraw from the study at any time and I do not have to give any reasons for why I no longer want to take part.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that my personal information will be kept anonymous; so that I cannot be identified by others.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that all collected data will be encrypted and password-protected so that no one can access it but the researcher.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that all information that are used as a result from the interview will be securely stored in a lockable cabinet at the University of Salford.	<input type="checkbox"/>	<input type="checkbox"/>

\_\_\_\_\_  
Name of participant [printed]      Signature      Date

\_\_\_\_\_  
Researcher [printed]      Signature      Date

Project contact details for further information:

My name  
Maxwell Building  
Centre for Digital Business  
Salford Business School  
University of Salford  
The Crescent  
Salford  
Greater Manchester  
M5 4WT  
Mobile: xxx  
E-mail: xxx

Date: 01/03/2013

Version Number: 03/13-PCF1



# Appendix 4



College of Arts & Social Sciences  
Room 626 Maxwell Building  
The Crescent  
Salford, M5 4WT  
Tel: 0161 295 5876

12 June 2013

Tariq Kashmeery  
University of Salford

Dear Tariq

**Re: Ethical Approval Application – CASS120032**

I am pleased to inform you that based on the information provided, the Research Ethics Panel have no objections on ethical grounds to your project.

Yours sincerely

**Deborah Woodman**  
**On Behalf of CASS Research Ethics Panel**

# Appendix 5

## Kashmeery, Tariq (PG)

---

**From:** P01 <P01@MESAIR.com>  
**Sent:** 11 July 2013 14:58  
**To:** Kashmeery, Tariq (PG)  
**Subject:** RE: دعوة للمشاركة في بحث رسالة الدكتوراة

Dear Mr. Tariq,

Please accept my apology for late response.

It is my pleasure to participate in this research and just let me know a head of time when we can meet.

For the time being I would suggest to conduct interview in my office.

Regards,

P01



# Appendix 6



## Draft Interview Guide

- During (Subject Matter Expert) SME workshops, how did participants determine the business process to be used in the ERP systems?
- To what extent did the introduction of the Enterprise Resource Planning (ERP) empowered SMEs over their managers?
- To what extent did decisions go against manager's wishes and in-line SAP ERP's best practice? How?
- To what extent did decisions go against SAP ERP's best practice and in-line with manager's wishes? How?
- Has the ERP implementation process followed the privatisation consultant's recommendations in that respect? How?
- Has the ERP implementation process followed IT Advisory consultants?
- Was employees' job role assignment in the ERP systems influenced by managers' decisions?
- To what extent has the personal relationships between SMEs and ERP implementers impacted the 'to-be' business process of ERP systems?
- To what extent has ERP 'to-be' business process favoured one executive manager over another due to trust of DG and board of directors?
- How much impact has the privatisation process had on the decisions of the 'to-be' business process?

# Appendix 7



## Research Participant Consent Form

**Title of Project:** The effects of power relations on the implementation of Enterprise Resource Planning (ERP) into organisations

**Name of Researcher:** Tariq Kashmeery

*Please tick the appropriate boxes*

	Yes	No
I have read and understood the project information sheet dated 01/03/2013 (Version Number: 03/13-PIS1).	<input type="checkbox"/>	<input type="checkbox"/>
I have been given the opportunity to ask questions about the project.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I agree to take part in the project. Taking part in the project will include being interviewed and audio recorded.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I understand that taking part is voluntary; I can withdraw from the study at any time and I do not have to give any reasons for why I no longer want to take part. I also understand that in case I decide to withdraw, any data that are collected will be retained and used as part of the study, unless you request it to be deleted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I understand that my personal information will be kept anonymous; so that I cannot be identified by others.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I understand that all collected data will be encrypted and password-protected so that no one can access it but the researcher.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I understand that all information that are used as a result from the interview will be securely stored in a lockable cabinet at the University of Salford.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

P15

Name of participant [printed]

Signature

Date

11-4-16

*Tariq Kashmeery*  
Researcher [printed]

Signature

Date

11/4/2016

Project contact details for further information:

Tariq Kashmeery  
Room 512, Maxwell Building  
Centre for Digital Business  
Salford Business School  
University of Salford  
The Crescent  
Salford  
Greater Manchester  
M5 4WT  
UK Mobile: [redacted]  
Saudi Mobile: [redacted]  
E-mail: [redacted]

Date: 01/03/2013

Version Number: 03/13-PCF1

# Appendix 8

---

**From:** P23  
**Sent:** 22 July 2016 15:15  
**To:** Kashmeery, Tariq (PG)  
**Subject:** RE: PhD research outcome confirmation

Hi Tariq,

Good to hear from you.

I have read the attached file and can confirm that I agree with your PhD research outcome.

Good luck with your PhD.

Regards,

P23

**From:** Kashmeery, Tariq (PG)  
**Sent:** 20 July 2016 16:59  
**To:** P23  
**Subject:** PhD research outcome confirmation

Hi

I hope you are very well.

I have been advised to validate the outcome of my PhD research. As a valued research participants, I would like you to kindly review the attached PDF which contains the outcome of my PhD research and reply to me by confirming that you are in agreement with the content of the attached file.

Many thanks,  
Tariq

## Appendix 9

- P02: You see, our main goal was to work on the best practise. Of course, as we are SMEs, we had to go back to our managers sometimes to get their approval on changing certain matters on the way we do business in our departments. Generally, the responses were mostly positive but sometimes managers argued and disagreed when it came to changing or taking away privileges. You know, no one wants their authority taken away. We, as SMEs, had to convince them that this is the best practise and the importance of adopting it in order for SAP to work effectively.
- Me: I'm not sure, but do you have examples from the MM system? Can you remember something where the best practice disagreed or wasn't in line with the idea you had in the office?
- P02: Yes, we didn't have a department called supplier management for example. After the SAP workshops took place, this new department was created in order for the business to implement ERP system and they put it under general procurement department.
- Me: in regards to the relationships that formed between SMEs and the SAP ERP consultants, did it play any role in changing the business processes?
- P02: Yes it played a role. There were many disagreements and the beginning when we didn't know each other. However, this changed when we went out with them for lunch or going out to show them our culture. At first, before having a relationship with them, we used to want our own processes and ask for them and they refused them and gave their excuses that this doesn't fit in with SAP ERP and there was no way to of implementing it in such a way. However, after getting to know them personally, we found out that there are certain ways to get around this by customising SAP ERP. They can actually change it to a way where our requests are taken into consideration.
- Me: So of course, personal relationships that formed from going out helped in that matter.
- P02: Yes it had a major effect where it made them open up to us as they were very persistent about their ways. But as time passed by they let us know that there ways of getting our own business process. Sometimes we just refused their business process changes. But in all cases, we agreed at the end or we met half way. I know that both of us knew we had to follow the best practise but we all knew that best practise can only be done had this system been implemented in an organisation for example in Germany. But we all know that there are differences in the Saudi and German culture. The German culture in business is focused only on process where they have specific standards they go by. However, if you go adopt this process in Saudi, the systems will collide with one another as this will be very difficult to adopt these processes in Saudi even though they were easy to adopt in a country such as Germany. I wanted to give you examples but I cant remember, but I will remember something as we talk more about it...

# Appendix 10

- P02: Look... we've had one goal and that was to work with the best practice, and what I mean by "we" is us SMEs. Of course we had to go back to our managers regarding certain issues and get their approvals regarding that particular matter especially if involves changes to be made to the way we do our business in our respected departments. There were some good responses from managers in general. However, I have to say that in some instances there were some disagreements and resistances because as you may be aware that nobody wants to lose or have some of their privileges and authorities eliminated. We, as SMEs, used to try to convince them by stressing out the importance of adopting best practice and try to convince them that this is the way we should adopt SAP in order for it to work sufficiently. We also used the high authority recommendations regarding adopting best practice.
- Me: I am not sure if you can provide me with examples of such arguments in regards to the MM module! Can you recall any incident where best practice had disagreed with the ideology of your departments \*i.e. department managers\*?
- P02: Yes, as an example, we've never had a department called Supplier Management, and because of the outcome that came out of the SAP ERP workshops, such department had been created, so that our business adapts to the ERP systems and they had dragged it under the General Procurement Department.
- Me: Regarding personal relationships that occurred during the implementation between SMEs and SAP ERP implementation consultants (who were responsible for leading workshops, had it had any role in changing business processes?
- P02: Yes it had a role. When we \*SMEs and consultants\* didn't know each other that much, there had been lots of disagreements. But when we started going out for a meal or for sightseeing to show them our culture, things started to get sorted out. Before getting to know each other we \*SMEs\* used to ask them to have a certain process, they always refused it by giving out excuses like this doesn't work in SAP ERP and that there was no way of doing it in such a way. However, after personal relationships had been developed, we started to realise that there are certain ways which can be done to go with our favoured business process in the form of customising the SAP ERP, and that they can configure it in such a way as well as making the necessary customisation to bring on our requests into reality.
- Me: Of course, personal relationships and the going outs helped in that respect!
- P02: It had a major effect and it did help opening them up \*consultants\*, as they were very closed and stubborn. However, eventually they started claiming that there ways of achieving our preferred business process. In other instances, we used to refuse their proposed business processes too. Either way, we used to reach to mutual agreements and we sometimes met half way through. I am aware that both parties were aware that they should follow the "best practice" but we were all aware that best practice might only be implemented had it been implemented into an organisation in Germany for instance. However, we all know that there are some cultural differences between Saudi and Germany. The German culture about doing business is focused solely on process, they have certain standards that they follow. However, if you try in Saudi to adopt such process, systems will clash as it is very hard to implement certain processes in Saudi as easy as it might have been done in a country like Germany. I wanted to give you examples but I can't recall any, however, I am sure I will remember some instances while talking about it further...

# Appendix 11

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MESAIR  
LOGO



Dec. 22, 2007

## **MESAIR Selects SAP to Thrust Business Transformation**

*Middle East's Largest Airline Builds Its Business Process Platform on SAP® ERP*

**AMMAN, Jordan, Dec. 22, 2007** — SAP Middle East North Africa (MENA) LLC, a subsidiary of SAP AG (NYSE: SAP), today announced that **MESAIR** has selected SAP® ERP as the business process platform to help accelerate its transformation as a privately-run company. At a signing ceremony today in Jordan, Saudi Arabia, SAP Arabia LLC, as the prime contractor and SAP MENA celebrated a, multi-million dollar agreement that states SAP's flagship enterprise resource planning (ERP) application and industry-specific best practices to fuel efficient processes and evolve business models across the airline's newly changed business area. With a first rollout phase targeting more efficient financials, followed by human resources and maintenance processes, the implementation builds on the SAP NetWeaver® technology platform to integrate front-end and back-office systems for operations, revenue accounting, reservations & scheduling, fuel management and technical documentation.

Recently privatized, **MESAIR** needed a unified business and IT infrastructure to drive the transformation of its operations into nine independent subsidiaries: Catering, Cargo, Ground Handling, Technical Service, Flight Academy, Medical Services, and Premium, Religious and Royal & VIP Airlines. Having extensively vetted various competitive

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offerings, the airline chose SAP for its industry expertise and the flexible design and open integration of SAP software.

"As each of our strategic units has its own unique business models and competitive demands, we needed a business and IT infrastructure that empowers them to optimize and expand core activities flexibly and profitably," said **the MEGAB President**.

"SAP presented proven industry expertise, a compelling vision for the future. With SAP, we gain the business process platform that will bring new efficiencies to each unit and unprecedented flexibility to evolve as business demands change."

The SAP implementation at **MEGAB** is part of a greater IT Master Plan aimed at facilitating the airline's privatization strategies and reacting to the changing market conditions. The group is in the process of overhauling its central IT systems as results of an IT diagnostics and master plan project conducted in 2006 showed two main areas for improvement:

- Acquire and implement state-of-the-art airline industry-specific applications to ensure competitiveness and sustainability in the future, covering all strategic business units and the holding company, with a focus on the core passenger airline.
- Build a modern, and user-focused IT infrastructure and IT production to enable new applications and processes.

As part of the MEGAB's strategic IT master plan, the SAP initiative will coincide with other major undertakings currently pursued by the group to renew its application landscape for marketing, operations and network planning and scheduling processes. Built on the business-driven blueprint of enterprise service-oriented architecture (enterprise SOA), SAP ERP will enable the group's business divisions to rework vital core business processes, seamlessly integrating back-office with front-office functions to improve MEGAB's overall services and provide timely and cost-effective services to its passengers.

The phased rollout of SAP ERP begins in January 2008 to deliver financials processes across the group by June 2008, adding human resources and payroll processes by January 2009 and SAP software to manage maintenance, repair and overhaul (MRO) processes for its jet fleet, the largest in the Middle East by May 2009. Tapping SAP Best Practices used by more

## JOURNAL OF MANAGEMENT INQUIRY / Volume 16(4) December 2007 403-416 403

"The agreement comes as SAP moves to significantly expand its presence in the region with the recent acquisition of our software license and maintenance business of SAP Arabia LLC, formerly SAP's exclusive long-term partner in the region," said \_\_\_\_\_ president of SAP Arabia. (See related announcement, titled, "SAP Acquires Software License and Maintenance Business From Exclusive Partner SAP Arabia In Streamlined Operations in the Middle East and North Africa.") We look forward to continuing our partnership with SAP and will be announcing our new company name in the first quarter of 2008.

1000-1009

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the 1990s, the number of people in the world who are undernourished has declined from 760 million to 600 million. The number of people who are malnourished has declined from 1.1 billion to 800 million. The number of people who are obese has increased from 100 million to 300 million. The number of people who are overweight has increased from 100 million to 300 million. The number of people who are obese and overweight has increased from 100 million to 300 million. The number of people who are obese and overweight has increased from 100 million to 300 million.



## Appendix 12

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### MESAIR Logo

Date: Sunday 10.08.2007	Time: 10:00 – 10:45	MESAIR-HQ Meeting Report
Meeting called by	BSP Hqs. Org.	
Type of Meeting	Strategy Review	
Presenter	BSP Project Implementation (PMO)	
Note taker	Coded names	
Timekeeper	BSP Hqs. Org.	
Attendees		
Finance	1	
The project	2	
The project	3	
Large	4	
Colony	5	
Ground Services	6	
Colony	7	
Colony	8	
1	9	
Finance	10	
Finance	11	
Finance	12	
Finance	13	
Finance	14	
Finance	15	
Finance	16	
Finance	17	
Finance	18	
Finance	19	
Finance	20	
The project	21	
1	22	
1	23	
1	24	
1	25	
BSP Architecture	26	
BSP Architecture	27	
BSP Architecture	28	
BSP Architecture	29	
1	30	

*Coded names*

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## MESAIR Logo

Agenda Topic:		
Review the Accelerated SAP Finance (APF) implementation strategies.		
Discuss the proposed options and reach a general consensus regarding the recommended option.		
14:00 – 15:00	Presenter	
Discussion	Called inputs	
The results of the detailed analysis carried out after the initial proposal submitted on June 12 <sup>th</sup> 2007 by <b>INAC</b> consultants involving SAPs from the business and IT systems.		
Conclusions		
<ol style="list-style-type: none"><li>1. The APF allows <b>INAC</b>'s business units to generate and publish independent financial statement as originally envisioned.</li><li>2. The Agreement that the recommended feasible APF option would not provide enough business values/benefits as currently anticipated by the BUs.</li><li>3. The Finance Division is capable of supporting the BU in producing and publishing their independent financial statements.</li><li>4. The BU would be able to avoid a fuller solution that would grant them full functionalities.</li><li>5. Instead, the BUs were more inclined to recommend a full implementation of the entire SAP financial suite and related functions to provide complete commercial solution thereby facilitating for the BU full operations within the SAP environment.</li><li>6. It was unanimous that the project plan should be re-worked for the full SAP implementation with "extreme prejudice" towards the implementation of SAP financial modules across all BUs as a first priority.</li></ol>		
Action Items	Person Responsible	Deadline
<b>INAC</b> draft the project plan in line with the recommended approach.	<b>INAC</b>	2007
Send executive direction in regard to the interim solution.	Business Stakeholders	2007

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### **MESAIR Logo**

The meeting was intended to brief the business stakeholders about the results of the detailed analysis carried out by MESAIR consultants on the basis of the initial proposal submitted in June 18<sup>th</sup> 2007.

As a follow up on the initial proposal, MESAIR complete various activities and provided further clarifications for the proposed solution:

1. July 2007 - Submitted a detailed write up of the end state of the Accelerated Financial Implementation
2. Answers to queries raised by the Finance and Technical Services Divisions in August 2007
3. Conducted workshops with the business (FIN & TSC) and IT Systems to further understand the current business processes and the existing 'legacy systems' interfaces.

As such, the objective of the meeting was to review the evolved solution in terms of the two feasible options and discuss the advantages and disadvantages of each. It was also the objective of the meeting to get a consensus on the MESAIR recommended option for the AIF solution.

#### **Review the Accelerated SAP Financial Implementation options & strategies**

MESAIR presented the AIF implementation, covering the following topics:

1. Objectives of Accelerated SAP Financials
2. Project Structure, Phases and Plan
3. Highlight Considerations and Challenges
4. Strategies for AIF
5. Recommended Approach
6. Request for Decisions

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### **MESAIR Logo**

#### **ERP Objectives**

It was highlighted that the main objectives of the ERP concept were:

1. Provide the ability to generate consistent financial statements for the Business Units
2. Avoid spreading the already scarce business management and expertise over different implementations, interim and enterprise ERP solution
3. Capitalise on the urgent implementation of the Financials to be the catalyst & synergise **W2000** to complete the entire ERP implementation project.

#### **ERP Plan**

The plan called for a 6 months duration which assumed a start up in 1<sup>st</sup> September and a completion on 31<sup>st</sup> December 2007. These assumptions were no longer valid since there would only remain 30 weeks before the end of 2007 which put greater pressure and increase the risks on all involved parties.

#### **ERP Considerations & Limitations**

1. ERP is an interim solution that will evolve to the fully integrated solution
2. ERP will only include FI/CO modules (GL, AP, AR, FA, & CO)
3. No integration to other SAP modules (i.e. SD, MM, HR, PM)
4. Legacy systems accounts for individual business units at the expense level only
5. Data cleansing will require significant resources from **W2000** and this will be compounded by year end activities and May holidays
6. One interface to be built between QDP GL and SAP GL and its complexity to be determined by the possible method to automatically or manually transfer closed balances from QDP GL to SAP GL at month end. This could very well entails a large manual process on the Business part
7. Only 30 weeks remaining before year end 2007
8. In order to avoid double entry & arising errors and to avoid further complication at consolidation level, all GL entries should be done on the legacy system (QDP) and then fed to SAP via the interface.

#### **Strategies for ERP**

Next presented two possible strategies for the ERP considering all the unearthed facts about the existing data, the complexity of interfaces, and the business imposed deadline of year end 2007.

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## MESAIR Logo

1. **Strategy One:** Run SAP GL in parallel to QSP GL, where QSP GL, to send period end totals via the interface that would be determined by the level of electronic data logging of ledger for separating data by GL.

### Functions to be delivered by strategy one:

- Financial Reporting at total level
- Budget Reporting
- Cost Center Distribution
- Budget Control
- A degree of expenses line item reporting & consolidation are possible depending on complexity of interface
- Manual journal entries at GL level

2. **Strategy Two:** Run SAP Financials (FI) in parallel to legacy financials where all source ledger systems would be interfaced to SAP (i.e. QSPS, Treasury, MRM, HR, etc.). SAP FI will provide line item functionality and processing for the GL. The degree of success depends on complexity of identifying Wts in source document / systems such as FI in MRM and AP Invoice in QSPS.

### Functions to be delivered by strategy two:

- Financial Reporting at total levels
- Budget Reporting
- Cost Center Distribution
- Budget Control
- Line item reporting out of SAP in GL, HR, AP & TR
- Manual entry possible in all module
- Degree of Consolidation possible but will require manual analysis and entries and reconciliation back to legacy

### Not Recommended Strategy:

Given the above possible two strategies, we strongly recommended Strategy One as most viable and least risky strategy to implement the RFP.

The rational given by ~~redacted~~ on their analysis and experience in previous implementations are:

- Only strategy that is achievable in given time line i.e. 01/01/2007
- Strategy meets RFP Objectives
- Least risky
- Low investment in interfaces that are only needed for the interim

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## MESAIR Logo

### Executive Committee Decision

MES presented the below issues and requested the attendees to make decisions in order to move forward:

1. Endorsement of Strategy One
2. Chart of Accounts (Group Chart of Accounts vs. Localization)
3. Concept of Zero Balances vs. Balance Sheet split by BU
4. Executive level Process Owner
5. Manipulation of legacy (Fixed, Business Process, Additional Accounts (GL, AP, AR))
6. Obtaining future agreements on resulting Inter Company Transactions

### Discussion of the presented strategies and recommended an approach

A lengthy detailed discussion was carried out in regard to the presented strategies for ERP between the BU stakeholders and the MES consultants. The discussion focused on the following issues:

1. The deliverables of the recommended ERP strategy
2. The recommended approach (Strategy One) and impact on the business in terms of manual processes & accounting errors
3. Possible impacts on the full ERP implementation Plan with special concern over resources availability and overlapping activities
4. The ability the Finance Division supporting the BU's objective of generating and publishing separate financial statements for the units
5. The feasibility of adjusting the ERP implementation plan to have an implementation alternative that would focus on implementing the full suite of ERP financial for all the BUs followed by other ERP modules thereby ensuring full financial processes (i.e. purchase to pay and sell to collect)

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### **MESAIR Logo**

#### **Conclusion**

The discussion, debate and deliberation led to a unanimous conclusion that the AIF would not bring enough business value and benefits for the BIC to warrant the efforts and manpower needed to realize the solution. Moreover, the possible manual process required at each month end to verify, validate, rectify financial records before feeding to SAP GL from the legacy system was deemed too large of an effort for the realized business value of the AIF.

As an alternative, the BIC stakeholders recommended to focus the full SAP implementation with "extreme prejudice" towards the SAP financial modules and related functions to have a complete commercial solution that would enable the BIC to be independent of any legacy processing and enable them to carry on their business transactions in a consolidated SAP environment.

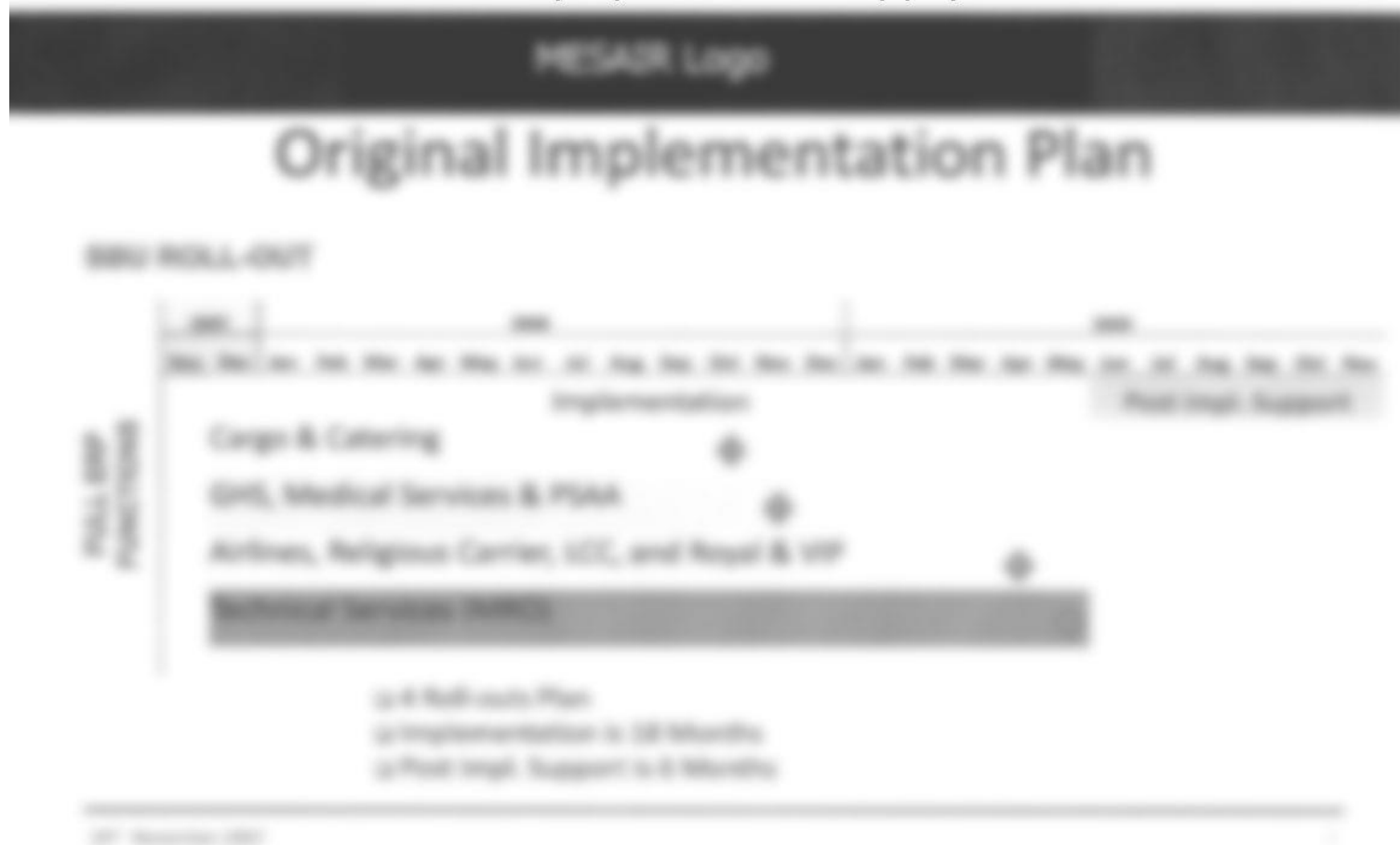
It was agreed to present this conclusion to the executives seeking their endorsement and approval of the modified implementation approach.

#### **Adjournment**

Meeting was adjourned at 11:45 by SAP AG. (Sg)

## Appendix 13

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# Appendix 14

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From:	CEO Reg. Org
Sent:	26 November 2007 05:16
To:	Recipients names are intentionally hidden
Subject:	FBI Accelerated Finance Implementation Review of Strategies and Recommended Option (Meeting Minutes)
Attachments:	Meeting Minutes of Accelerated FBI Financial Implementation 26 Oct 2007.pdf FBI/DOJ FBI Options Presentation 26 October 2007.pdf

Muhammad Alshukri

Attached please find the meeting minutes of the FBI Stakeholders' meeting held on Sunday 26<sup>th</sup> October 2007 in regard to the Accelerated Finance Implementation. Also attached is the presentation delivered by [REDACTED] Consultant. Thank you.

## Appendix 15

HESAR Logo


### Considerations and Challenges

ADP solution will only be an interim solution and will evolve into the Fully Integrated Solution (FIS).


Reasons for this are:-

- ADP solution will only include FICD modules therefore no integration to other ADP modules e.g. SI, MR, RI, FI
- Reduces risk of short-term design adversely impacting the long-term FIS

FICD Modules



FIS



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## Strategies for ASF cont.

### 2. Run SAP Financials in parallel to Legacy Financials - Analysis

Functionality	Complexity & Risk
Financial Reporting at total level	Multiple interfaces
Budget Reporting	Extensive logging required for multiple system updates
Cost Center Distribution	Interface will probably be "Blended"
Budget Control	- Automated to some degree after
Cost Item Reporting out of SAP to GL, AR, AP & CR	Partial and manual updates and entries needed e.g. Journals about differences and reconciliations between WBS and GL
Manual entry possible in all modules	Complexity rating = "Very Complex"
Degree of Automation possible here will require manual updates and entries and reconciliation back to legacy	Risk rating = "High"
	Feasibility rating = "Not Feasible"
	- Due to multiple and complex interfaces
	High level of manual intervention

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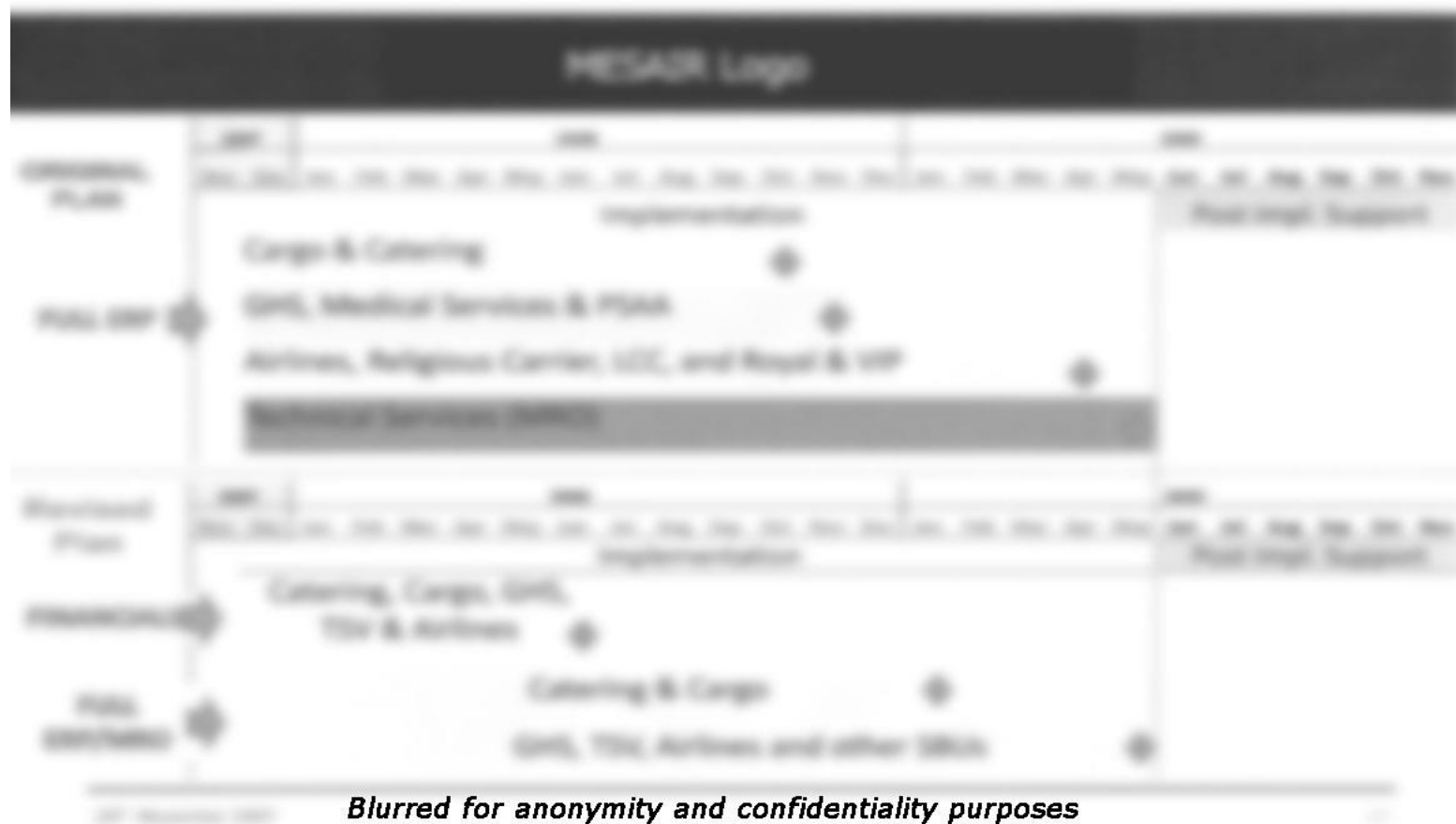
## Request for Decisions

Executive Committee decisions are requested for the following:-

1. Endorsement of Strategy 1
2. Chart of Accounts (Strong Chart of Accounts vs. Localisation)
3. Concept of Zero Balances vs. Balance Sheet split by BQ
4. Executive Level Process Owner
5. Manipulation of Legacy (Fixed Business Process, Additional Accounts (DL, AP, AR))
6. Obtaining future agreements on resulting inter Company Transactions

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## Appendix 16



## Critical Success Factors

- Use of standard and consistent SAP processes for business units – 80-90% template
- WESAR project team trained and skilled in SAP processes
- All infrastructure installed and operational in the required time-scales (ERP & Infrastructure Project)
- Data required by the SAP system effectively formatted and cleansed
- Effective test planning, management and sign-off of the system/procedures
- Change Management approach and end user education/training

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*Blurred for anonymity and confidentiality purposes*

# Appendix 17

*Blurred for anonymity and confidentiality purposes*

From: [Redacted]  
Sent: 21 November 2007 09:17  
To: [Redacted]  
Subject: [Redacted]

Subject: [Redacted]  
Attachments: [Redacted]

Dear all,

I am pleased to advise you that the Corporate IT Steering Committee headed by the President has granted its approval for the strategy of implementation highlighted in the attached as the revised project plan.

With this plan, we will launch:

- 1. The ERP Financial Suite to all 5 Sites by end of June 2008
- 2. The complete ERP functionalities to Cargo & Catering by end of January 2009
- 3. The complete ERP functionalities plus the HRM to HR & the Airlines Sites by end of May 2009

During the blue print, the above milestones might be adjusted to include CRM in the first outcome and the exact additional functionalities would also be determined.

Congratulations to all of us and may Almighty Allah help and assist Mabat to achieve these aggressive timelines.

# Appendix 18

*Blurred for anonymity and confidentiality purposes*

From:	SIT Hq. Org.		
Sent:	10 December 2007 11:05		
To:	Respected names are intentionally hidden		
Cc:			
Subject:	HR/HRM Workshops	SIT/HRM Implementation Project - SAP Business Blueprint	
Importance:	High		

**Continuation**

As you are aware the official preparation phase for the project was kicked off 1<sup>st</sup> of December 2007 and since then we did hold a series of preparation work shops with your help and assistance.

The second major and most important phase in the entire implementation is the **BUSINESS BLUEPRINT** phase which is planned to begin Saturday 12<sup>th</sup> January 2008 right after Hq. Holiday. The Business Blueprint phase will commence with one week of training for those **Key SMEs** who are full participants and will directly contribute & influence the success of this phase.

Immediately after the one week training, and starting with the week of Saturday 12<sup>th</sup> January 2008, the actual workshops will commence and will extend until middle of March 2008.

In order to meet HR/HRM's strategic business objectives and deliver the actual business blue print of the system for Phase I of the implementation (SAP Finance Modules Implementation), we will require the valuable help, assistance and full time participation from those **Key SME** of each respected SME.

**Participants**

1. Target SME – Airlines, TMC, Cargo, Catering, and GMS
2. Participation – Key SMEs from each core function and areas:
  - a. Finance
    - i. TR/MS
    - ii. AP
    - iii. AR



- ix. BI (Bank accounting)
- x. CO & FM (Budgeting / CC)
- xi. COFA (profitability analysis)
- xii. CC / CS (consolidation)
- xiii. FI
- xiv. GL

#### **6. Materials Management**

##### **a. Sales & Distribution (Selling)**

1. All workshops will start at 09:00 and end at 16:00
2. Venues will be announced 1 week before the start date
3. There will be an estimated number of about 120 workshops to be conducted between the 15<sup>th</sup> January to 15<sup>th</sup> March 2008
4. For each functions listed above there will be multiple workshops
5. Multiple workshops will be running in parallel for different core functions and sub-areas
6. The need to run a tightly controlled session thereby we require only 1 or maximum 2 SMEs from each SME for each workshop
7. Participants will have to be fully competent with the subject matter (Core Function / Area) and will have to be empowered by their SME to make business decisions
8. Each workshop will nominate a business facilitator who will keep records of the decisions and important issues to be presented at the end of each workshop

#### **Requirement**

We require the lead SME representatives to carry out a diligent exercise to identify the key SMEs (1 or maximum 2) for each sub-area listed above to participate in these workshops and give them an advance notice about their expected involvement and long term engagement in this project. Please note that it is a **must** that these SMEs would be assigned on full time basis for the project in order to master the new business processes and become acclimated with SAP functionalities so that they would become the main "Business Change Agents" and "Champions" for these core functions and sub-areas within their SME.

Once completed, I would like the lead SME representatives to send me the names and full contact information of their selected key SMEs.

We will be distributing more detailed information about this crucial phase of the project and we wish all of you a Happy May Day and wonderful holidays.  
May Allah accept all your good deeds.

***Blurred for anonymity and confidentiality purposes***

# Appendix 19

*Blurred for anonymity and confidentiality purposes*

From: [redacted]  
Sent: 07 January 2020 14:33  
To: [redacted]  
Cc: [redacted]  
Subject: [redacted]  
Attachments: [redacted]  
Importance: High

Good morning,

Please register your input so we could consolidate the final schedule and publish it for the attendees with advance notice.

You can review the attached [redacted] of the schedule which has more details in regard to the Workshop Management (M&M & Sales and Distribution (M&S).

I would really appreciate your help and support in providing your input as soon as possible to help close this issue.

## Appendix 20

Week 1			Week 2			Week 3			Week 4			Week 5			Week 6			Week 7			Week 8			Week 9			Week 10			Week 11			Week 12			Week 13			Week 14			Week 15			Week 16			Week 17			Week 18			Week 19			Week 20			Week 21			Week 22			Week 23			Week 24			Week 25			Week 26			Week 27			Week 28			Week 29			Week 30			Week 31			Week 32			Week 33			Week 34			Week 35			Week 36			Week 37			Week 38			Week 39			Week 40			Week 41			Week 42			Week 43			Week 44			Week 45			Week 46			Week 47			Week 48			Week 49			Week 50			Week 51			Week 52			Week 53			Week 54			Week 55			Week 56			Week 57			Week 58			Week 59			Week 60			Week 61			Week 62			Week 63			Week 64			Week 65			Week 66			Week 67			Week 68			Week 69			Week 70			Week 71			Week 72			Week 73			Week 74			Week 75			Week 76			Week 77			Week 78			Week 79			Week 80			Week 81			Week 82			Week 83			Week 84			Week 85			Week 86			Week 87			Week 88			Week 89			Week 90			Week 91			Week 92			Week 93			Week 94			Week 95			Week 96			Week 97			Week 98			Week 99			Week 100			Week 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*Blurred for anonymity and confidentiality purposes*

Job Number	Project Name	Project Manager	Project Engineer	Project Designer	Project Checker	Project Approver	Project Status	Project Date	Project Location	Project Description	Project Details	Project Notes
1001	Project A	John Doe	Jane Smith	Mike Johnson	Sarah Lee	David Brown	Completed	2023-10-27	New York	Project A Details	Project A Notes	Project A Comments
1002	Project B	John Doe	Jane Smith	Mike Johnson	Sarah Lee	David Brown	In Progress	2023-10-28	New York	Project B Details	Project B Notes	Project B Comments
1003	Project C	John Doe	Jane Smith	Mike Johnson	Sarah Lee	David Brown	On Hold	2023-10-29	New York	Project C Details	Project C Notes	Project C Comments
1004	Project D	John Doe	Jane Smith	Mike Johnson	Sarah Lee	David Brown	Completed	2023-10-30	New York	Project D Details	Project D Notes	Project D Comments
1005	Project E	John Doe	Jane Smith	Mike Johnson	Sarah Lee	David Brown	In Progress	2023-10-31	New York	Project E Details	Project E Notes	Project E Comments
1006	Project F	John Doe	Jane Smith	Mike Johnson	Sarah Lee	David Brown	On Hold	2023-11-01	New York	Project F Details	Project F Notes	Project F Comments
1007	Project G	John Doe	Jane Smith	Mike Johnson	Sarah Lee	David Brown	Completed	2023-11-02	New York	Project G Details	Project G Notes	Project G Comments
1008	Project H	John Doe	Jane Smith	Mike Johnson	Sarah Lee	David Brown	In Progress	2023-11-03	New York	Project H Details	Project H Notes	Project H Comments
1009	Project I	John Doe	Jane Smith	Mike Johnson	Sarah Lee	David Brown	On Hold	2023-11-04	New York	Project I Details	Project I Notes	Project I Comments
1010	Project J	John Doe	Jane Smith	Mike Johnson	Sarah Lee	David Brown	Completed	2023-11-05	New York	Project J Details	Project J Notes	Project J Comments

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# Appendix 21

*Blurred for anonymity and confidentiality purposes*

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From: [REDACTED]  
Sent: 02 January 2008 11:11  
To: [REDACTED]  
Subject: [REDACTED]

Re: [REDACTED]  
Subject: [REDACTED]  
Attachments: [REDACTED]  
Importance: High

Abdullah Alkhalaf

As per previous correspondences and in accordance with the executives' approved implementation project plan, we will hold the kick-off meeting on Tuesday 02<sup>nd</sup> January 2008 at the Sheraton Hotel.

This is a major milestone for the project and it is intended to share with the business sponsors and participants the overall project approach, methodology and implementation plan. Given that the business units are the rightful owners of the implementation plan, this is a critical step in explaining the anticipated roles and responsibilities and the actual contributions as expected from the business side.

Thus, I urge the Executive Business Process Sponsors and the business SMEs and BU representatives to kindly embrace us with their kind presence and active participation to make this a successful event.

Please ensure that all BU SMEs who have been identified as Business Blueprint Workshops participants to attend this kick-off meeting which will be followed by 1 week training leading to the actual commencement of the workshops on Saturday January 19<sup>th</sup> 2008.

Should you have any query, please contact me

## Appendix 22

*Blurred for anonymity and confidentiality purposes*

[illegible]

Please note that SMEs' names and contact details have been intentionally hidden

Account	Account Description
100000	Fixed Management
100001	Fixed Capital Accounting
100002	Fixed Capital Accounting
100003	1000
100004	1000
100005	10
100006	10
<b>Investment Management</b>	
200000	20000
200001	20000
200002	20
200003	20
200004	20
200005	20
200006	20
200007	20
200008	20
200009	20
200010	20000
200011	20000
200012	20000
200013	20000
200014	20000
200015	20000
200016	20000
200017	20
200018	20
200019	20
200020	20
200021	20
200022	20
200023	20
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Please note that SPIEs names and contact details have been intentionally hidden

## Appendix 23

*Blurred for anonymity and confidentiality purposes*

### **General Support Services**

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#### **Description**

**General Support Services Division** is responsible for providing quality services for all **WISCONSIN** business units. Services include **fleet**, planning, designing and operations as well as **fleet** maintenance and technology services. Other services include building and contracting as well as providing administrative services such as mail services, transportation and other services, graphic arts services, audio visual services, printing services, general and software procurement, etc.

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# Appendix 24

*Blurred for anonymity and confidentiality purposes*

From: [REDACTED]  
Sent: 14 December 2017 08:29  
To: [REDACTED]  
Subject: [REDACTED] Statement of Needs

Dear [REDACTED],

On behalf of General Support Services Division, I would like to thank you for the successful meeting we had with you last Tuesday (December the 12<sup>th</sup>).

I just wanted to kindly remind you to email me [REDACTED] Statement of needs (the RUPD Statement of Needs), so we can make the necessary arrangements for our next meeting.

Thank you in advance,

[REDACTED]

From: [REDACTED]  
Sent: 14 December 2017 18:28  
To: [REDACTED]  
Subject: [REDACTED] Statement of Needs (RUPD)  
Attachments: [REDACTED] RUPD - RUPD - RUPD.pdf

Dear [REDACTED],

I am sorry about this late reply but I will your pardon because of my engagement that has been recently keeping me busy.

Thank you,  
[REDACTED]

## Appendix 25

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From: DDF Hq. Org.  
Sent: Sunday, July 13, 2008 9:08 AM  
To: JDS/J  
Cc: JPM 2, JPM 3/05  
Subject: RE: General Procurement System - Service Buyer Participants

Dear JDS/J

As far as I am aware, there is no "buyer organization" in the system for the Contracting and Bidding Dept. Please double check with Corporate Services mail mg. JPM 3/05 for more clarification. Thank you

DDF Hq. Org.

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From: JDS/J  
Sent: Sunday, July 13, 2008 2:16 PM  
To: DDF Hq. Org.  
Cc: JPM 2, JPM 3/05  
Subject: General Procurement System - Service Buyer Participants

Dear DDF Hq. Org.

Attached are the participants from Bidding and Contracting Department that need to take the training for the General Procurement system "from the buyer's perspective" as they represent the buyers of services for the Airlines BU.

I would really appreciate it if you could arrange this for them so they can avoid themselves into the new procurement procedures.

Regards,  
JDS/J

*Blurred for anonymity and confidentiality purposes*

# Appendix 26

*Blurred for anonymity and confidentiality purposes*

From: [REDACTED]

Sent: 14 July 2020 10:40

To: [REDACTED], [REDACTED] Hqs Org., [REDACTED]

Cc: [REDACTED], [REDACTED]

Subject: RE: General Procurement System - Service Buyer Participants

[REDACTED]

This was not what agreed on in the meeting chaired by [REDACTED]

Best regards,  
[REDACTED]

From: [REDACTED]

Sent: Monday, July 14, 2020 10:40 AM

To: [REDACTED], [REDACTED] Hqs Org., [REDACTED]

Cc: [REDACTED], [REDACTED]

Subject: RE: General Procurement System - Service Buyer Participants

Dear all,

What has been configured in SAP for Airlines is:

- 1. Airlines Purchasing Organization
  - a. General Procurement Purchasing Group
  - b. Sales & Contract Purchasing Group

Regards,

From: [REDACTED]

Sent: Monday, July 14, 2020 9:40 AM

To: [REDACTED] Hqs Org., [REDACTED]

Cc: [REDACTED], [REDACTED]

Subject: RE: General Procurement System - Service Buyer Participants

Dear [REDACTED] Hqs Org.

It should be noted that all the dependencies of **General Support Services** have "Group 100"

especially Sales which is the Buyer for almost all the Airlines services.

[REDACTED] please clarify

Best regards,  
[REDACTED]

# Appendix 27

## *Blurred for anonymity and confidentiality purposes*

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From: [REDACTED]  
Sent: 19 July 2020 11:32  
To: [REDACTED]  
Cc: [REDACTED], [REDACTED], [REDACTED], [REDACTED]

Subject: [REDACTED] General Procurement System - Service Buyer Participants

Dear [REDACTED],

We, everybody, should realize that [REDACTED] doesn't mean changing legacy systems only, but also, changing legacy ideas, which doesn't work with [REDACTED].

[REDACTED] is a change of management.

So, all those, who think that they have purchasing group, while they don't, should stop. Because they practice purchasing wrongly, it is not their function.

For those, [REDACTED] should say loudly, "there isn't any purchasing group in [REDACTED] Support Services unless except those which exists in the following 2 departments -

1. [REDACTED] and Contracting
2. Corporate Administration Services

And loudly also, they should be asked, why we haven't seen your representatives during the workshops, and during developing the system?

To them also, please don't stop us and delay the project, by arguing about purchasing groups, this will affect the business, and give negative impacts to the production.

To the rest, please let's keep going and don't listen to them, whenever they are within they legitimize their existence as buyers, which is against the concept of centralizing purchasing.

It is really dangerous if every CC head, wants to purchase material or services, create his purchasing group and ignore the real concerned purchasing groups.

These practices, from the system engineering point of view, shouldn't happen and I don't recommend it, even if top management passed it below.

Finally the previous wrong purchasing practices should be stopped and done correctly through the right channels.

Best regards

[REDACTED]

## Appendix 28

### *Blurred for anonymity and confidentiality purposes*

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From: [Redacted]  
 Sent: 12 January 2008, 14:27  
 To: [Redacted]  
 Cc: [Redacted]  
 Subject: MSAP-2007 to MSAP Implementation Project  
 Attachments: Phase 1 Business Blueprint Workshops and Timeline v11.pdf; MSAP-2007 to MSAP High Level Project Plan.pdf  
 Importance: High

Alkhalaf Alkhalaf

It pleases me to inform you that we have held the project kick off meeting yesterday which was a milestone signifying the end of the "Preparation" phase of the implementation. The meeting main audience were the project's Executive Business Process Sponsors (FIN, HR, TSV & Corp. Sec.) and the business subject matter experts (SMEs) from the various related units.

The meeting agenda covered the overall project plan, approach, methodology and approach. It also covered the crucial elements of the implementation in terms of required business participation and involvement in all the stages of the of this business project. It was a success by the measure of number of attendees, the level of interest, excitement and issues raised by the audience. Such active engagement is highly required and indeed is appreciated.

**Saturday 12<sup>th</sup> January 2008** is the starting date of stage two (Business Blueprint) and to make this stage successful and deliver the expected outcomes for Phase-I of implementation of the SAP Financial by June end 2008. The business SMEs must participate in intensive series of workshops on full time basis and cover the total number of tracks/specialties needed for the SAP Finance Modules.

It is a necessary requirements to ensure proper representation level throughout the project to ensure continuity and consistent information-exchange leading to the eventual end-users training and participation in the testing of the system before the Go-live milestone. Once the cutover is achieved, these SMEs will be the bedrock of business knowledge in the new SAP best practices and business processes; they will be the core business team to facilitate, support and propagate financial transactions knowledge across all the specialties for the Finance Sections of each BU.

## Appendix 29

### *Blurred for anonymity and confidentiality purposes*

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From: [REDACTED]  
Sent: 19 January 2008 11:00  
To: [REDACTED]

Cc:

Subject: Re: HEDS2007 & HEDS Implementation Project

Importance: High

In reference to our extended discussion yesterday during the kick-off meeting and in further reference to our previous correspondence dating back to before HEDS holidays, and in line with the below message to your executives, please be sure that the following issues are communicated clearly within your divisions and business units:

1. Business participation is vital to implement the project as per the contractual agreements between HEDS and the GPF Consortium.
2. The business SMEs are required on Full Time basis through the Blueprint phase, training, testing and the go-live preparation.
3. The project milestones, deliverables and critical success factors were all agreed with the business executives back in February 2007.
4. The placement of specific end users across for the GPF modules were agreed with each business unit during the evaluation study led by HEDS. Such numbers specified the anticipated number of users for each module and as such have been required. Now you need to ensure that enough business resources are assigned to participate in this transition and become well trained in the new processes to carry out and conduct business for their SME.
5. The aggressive plan of the project requires that many activities get carried out in a parallel manner thereby limited resources will not be able to cover multiple activities at once.
6. It is highly NOT recommended by the implementers that single business expert/user be responsible for multiple roles where conflict of interest can arise. From an accepted business practices, audit and IGA perspectives it is recommended to segregate roles and responsibilities to ensure checking, due diligence and appropriateness of business conduct. Mixing business roles, responsibilities and authorities in some cases are even internationally not acceptable.

Kindly remember that Phase II (Human Resources, Payroll, Training, etc) will kick off in February which will demand even more business resources to be engaged on full time basis.

Please do your utmost effort to secure the needed manpower to ensure successful implementation of the system in your organizations.

As always, your efforts are highly visible and undoubtedly appreciated.