The alignment of integrated management systems and business objectives: a case study approach applied to small and medium enterprises in Singapore

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The Alignment of Integrated Management Systems and Business Objectives: A Case Study Approach Applied to Small and Medium Enterprises in Singapore

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Submitted in fulfilment of the requirements for the degree of Doctor of Business Administration
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<td>BU</td>
<td>Business Unit</td>
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<tr>
<td>CSF</td>
<td>Critical Success Factor</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>IMS</td>
<td>Integrated Management System</td>
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<td>ISA</td>
<td>International Federation of the National Standardizing Associations</td>
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<td>ISO</td>
<td>International Organisation for Standardization</td>
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<td>ISO 9001</td>
<td>Quality Management System</td>
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<td>ISO 14001</td>
<td>Environmental Management System</td>
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<tr>
<td>MR</td>
<td>Management Representative</td>
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<tr>
<td>OHSAS 18001</td>
<td>Occupational Health and Safety Assessment Series</td>
</tr>
<tr>
<td>PDCA</td>
<td>Plan, Do, Check, Act</td>
</tr>
<tr>
<td>PQEHS</td>
<td>Project Quality Environment Health and Safety</td>
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<tr>
<td>QEHS</td>
<td>Quality Environmental Health and Safety</td>
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<tr>
<td>QESHMS</td>
<td>Quality Environment Safety and Health Management System</td>
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<tr>
<td>SGD</td>
<td>Singapore Dollar</td>
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<tr>
<td>SME</td>
<td>Small and Medium Enterprise</td>
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<tr>
<td>SOP</td>
<td>Standard Operation Procedure</td>
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<td>SSCP</td>
<td>Singapore Standard Code of Practices</td>
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Statement of Originality

I certify that the work presented in this thesis is, to the best of my knowledge and belief, original, except as acknowledged in the text, and that the material has not been submitted, either in whole or in part, for a degree at this or any other university.

I acknowledge that I have read and understood the University's rules, requirements, procedures and policy relating to my higher degree research award and to my thesis. I certify that I have complied with the rules, requirements, procedures and policy of the University (as they may be from time to time).

John Zaw Min
Print Name:.................................................................

Signature:.................................................................

19 June 2015
Date: .................................................................
Publications Arising from This Study


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Abstract

The Alignment of Integrated Management Systems and Business Objectives: A Case Study Approach Applied to Small and Medium Enterprises in Singapore

This research study explores and describes the factors crucial in aligning the business objectives and implementation of the Integrated Management System (IMS) in the context of Small and Medium Enterprises (SMEs) in Singapore. The achievement of business objectives are considered the primary aim whereas the goals of IMS are procedural and considered supportive functions. The main purpose is to obtain insights into the relationship between business objectives and IMS implementation.

This study involved six embedded case studies of three organisations in different non-manufacturing industries with 30 participants. The resultant model shows that the alignment between IMS implementation and the business objectives is a relationship that explains the causal phenomena and conditions, context, and the intervening conditions. The findings suggest that the causation factors and attributes are interchangeable due to the content of the business and the IMS, the context and the intervening conditions.

In summary, this study contributes to the extant literature in three ways:

1. The derived alignment model integrates and synthesises various aspects of business objectives and IMS by providing vital elements exhibited by SMEs. It does not dispel current literature on IMS or ISO. In fact, it further extends the knowledge of IMS by providing a rich understanding into the dynamics of social processes that influence the alignment or misalignment of business objectives and IMS.

2. The generation of the elements, themes, and dimensions of the IMS alignment model provide an understanding into the rationale of SMEs.

3. The derivation of a multi-dimensional and fourteen-measurement model provides both a simple and easy way of improving the alignment of business objectives and the IMS. Identification of the issues allows and enables any issues to be resolved objectively and without bias. In essence, SMEs will have on hand the potential to improve their long-term competitiveness.
Chapter 1: Overview

1.0 Introduction
This chapter introduces the study and specifically describes the elements and factors that demonstrate the alignment or misalignment between business objectives and the Integrated Management System (IMS). In this thesis, the acronym IMS will be used instead of Integrated Management System. This chapter also defines the fundamental research problems, key propositions, reasons for undertaking the study, provides an outline of the methodology including data analysis, the significance of the study, and the limitations and delimitations.

1.1 Background to the study
The aim of this study is to identify the alignment between business objectives and the Integrated Management System (IMS) within small and medium sized enterprises (SMEs) in the Singaporean context. The main contribution of this study is to provide practitioners with an understanding of how to align business objectives and IMS when implementing the latter. IMS is comprised of the integration of three systems, namely; Quality Management System (ISO 9001), Environmental Management System (ISO 14001) and Occupational Health and Safety Assessment Series (OHSAS 18001). Despite the fact that much has been written on isolated studies, which were limited in their attempts to identify factors that influence IMS implementation, there is only a brief indication of alignment or misalignment in the literature with reference to the focus area of this study.

In contrast, the literature indicates that there are substantial indications of the existence of functionality issues in the collaborative process in the organisation and appropriateness of the process. There are also other significant indications of IMS effectiveness in direct support of the organisational mission. In other words, instead of implementing the IMS deployment, there may be other alternative means that might better support the mission of the organisation. Last but not least, the main indicators are on the traceability, scalability and extensibility of
the processes, as per IMS focus extent. It will lead to greater efficiency and effectiveness of resource deployment during the IMS implementation. On the contrary, this study’s tangible approach is to explore the critical factors for success that link IMS implementation and business objectives in Singaporean SMEs, and to assist them in developing and becoming better enterprises. This approach is to understand the impact of IMS assistance on the progression of Singaporean SMEs. This seeks to identify and develop an appropriate progression enterprise model for SMEs in Singapore.

Therefore, the purpose of this study is to understand the key dimensions of the disconnection or misalignment between Integrated Management System (IMS) activities and the behaviour of the organisation in managing its goals. Given the limited studies examining organisational problems in the implementation process, this study aspires to be the first empirical study about the dimensions in aligning the business objectives and IMS within organisations in the Singaporean SME context. This study also contributes by providing guidelines for practitioners in the implementation of successful IMS in their organisations.

1.2 Summary of Literature Review

Evidence of disconnection or misalignment between IMS activities and the behaviour of the organisation in managing its goals is presented in this summary of literature review. To elaborate on the indications of disconnection or misalignment, there is a detached existence of functionality issues in the collaborative process in the organisation and appropriateness of the process. Besides the detached existence of functionality issues, the alienated IMS effectiveness in direct support of the organisational mission is often cited in the literature. Furthermore, the IMS focuses on the extent of traceability, scalability and extensibility of the process thereby isolating the issues between the business objectives and the implementation of the IMS process.

For example, a common theme over the last decade has been the inadequate alignment between IMS and organisational goals and objectives (Oliveira, Oliveira & Nadae, 2010; Zeng, Tam & Le, 2010; Zutshi, 2005). For example, Zeng et al. (2010, p. 172) suggested that the process of integration starts first with improving understanding and the shared use of systems. Effective integration depends on the alignment of alternative systems of
management and the big picture strategic management. However they also highlighted that there may be potential drawbacks from the running of parallel systems. These include “initial complexity, inefficient management, conflicting cultural backgrounds, hostility from employees, raised costs and human resource redundancies, inhibited sharing of information and unnecessary bureaucracy; all of which can be prevented with the implementation of IMS” (Zeng et al., 2010, p. 172).

As stated earlier, only a small number of studies have been found on the influence of IMS implementation (Reed, Lemak & Mero, 2002). There are studies proving that organisations which had deployed IMS for an extensive period of time, perceived more advantages than those that have only just been deployed (Tata, Prasad & Thorn, 1999). The mentioned researchers were advocate of IMS for highlighting how long term adoption reduces operational costs and wastage while raising overall efficiency and productivity.

However, alternative studies noted that many organisations had not experienced significant benefits or improvements from adopting IMS accreditations. Therefore ascertaining how IMS implementation can help an organisation particularly over an extended period is not a simple task. This is further complicated by lack of literature or academic study presently in this area. Hence it is required to determine whatever influence IMS may have on organisations. It is also necessary to analyse whatever benefits and challenges the organisations may come across during the process.

As observed by Asif, Searcy, Zutshi and Fisscher (2013, p. 9), IMS is being increasingly adopted by organisations; these standards are becoming increasingly homogenous which contributes to their mass adoption. Thus, the standards often involve common features such as the control of documents and records, internal audits, corrective and preventive action, management review and continuous improvement (Asif, Bruijn & Fisscher, 2008).

According to Tsai and Chou (2009), organisations find it more sensible to implement their IMS rather than to manage the ISO systems in isolation. In addition, empirical studies concerning the scope of integration reaffirm the idea that organisations would like to integrate rather than implement individual ISO systems. Therefore, IMSs are becoming more and more common in all industries (Zeng, Shi & Lou, 2007, p. 1760). Many standards now begin with
the ‘plan, do, check, act’ (PDCA) improvement cycle as their basis. This has become the norm for all the standard implementation, regardless of industry or geographical zoning.

Most of these studies are based on the contextualised environment, of which there are two basic types. The majority of the contexts are geographical while some are industrial. Of studies organised by geographical zoning, Zutshi and Sohal (2003) focused on the Australian context, and Oliveira, Oliveira and Nadae (2010) studied the Brazilian context. Similar studies have been conducted in European countries, such as: Bayazit and Karpak (2007) explored the Turkish context, and Bernardo, Casadesus, Karapetrovic, and Heras (2008) concentrated on IMS implementation in the Spanish context. Closer to Singapore, there have been IMS studies in Asia: Khanna, Laroyia, and Sharma (2009) focused on the Indian context; Asif, Bruijn, and Fisscher (2009) conducted studies in the Pakistani context; and Zeng, Tam, and Le (2010) concentrated on the Chinese context. There has been other research conducted in the area of industry specific IMS implementation activities. Fresno (2010) studied IMS implementation in specifically the airline industry in Spain, and Mackau (2003) conducted the research in the area of German Small Medium Enterprises.

The mentioned studies are concentrated only within the integration of different management systems into one consolidated integrated management system (IMS). However, none of the research has taken an approach to discover the factors that attribute to a misalignment between the primary business objectives and the IMS partial functions or holistic approach. It seems that the literature is brief about the misalignment of current business practices and the requirements of the IMS. Therefore, the only way to explain the study issues was to deploy an exploratory method, given the lack of material in the existing literature that relates to alignment or misalignment matters in IMS implementation.

Without alignment between IMS implementation and the business objective, it is impractical to achieve business success. In accord with Michaelson (2001), planning and speculation alone are not enough to achieve success. Michaelson further emphasised that predetermined approaches to achieve success must be conducted appropriately. He also stated that the separation of preparation and actual conduct led to problems, particularly with accountability. Therefore, in order to achieve a successful business, the combination of the right strategy and the professional execution of tactics must be aligned. Thus, it is necessary to explore and
identify the dimensions and measurement of alignment between the IMS and business objectives.

### 1.3 Objective of the Study

The objective of the study is to identify, list, and describe the dimensions used to support the alignment of business units and the implementation of Integrated Management Systems (IMS) in Singaporean Small and Medium Enterprises (SMEs).

### 1.3.1 Preliminary concept map

The preliminary concept map was drawn from the results of reviewing the literature. Oliveira et al. (2010) recognised both benefits of and difficulties with IMS. They recognised the benefits of the integration of management systems through internal processes improvement, products’ improvement, increase in customer satisfaction, decrease in non-compliance occurrences, increase in productivity and profits, improved resources’ management, enhancement of image, and reduction of costs and time. In contrast, the difficulties include resistance from employees, lack of top management commitment, misinterpretation of standards, and the integration of management systems. Oliveira et al.’s (2010) study found that Brazilian organisations failed to conceptualise the operation of IMS. This compromised the actual deployment of IMS. In general, inefficient implementation of an integration approach and monitoring as well as a poor understanding of IMS are the main contributors to weak management systems and can lead to such weak systems in various ways.

In the beginning, the first attempt to create a concept map to lay out the structure of the preliminary literature review in this study was to understand the parent disciplines. The contextualised ISO and IMS implementation in SMEs is considered as the parent discipline. With this background information, it was necessary to review the literature relevant to the effectiveness and efficiency of the alignment process.

This is done to understand how to implement the deployment of IMS integrated with the behaviour of the organisation to manage its goals. IMS itself is a ‘system of systems’; to create an integrated approach with other business objectives may be a more complicated
process. During the integration process, some dimensions of alignment will definitely be involved. Integration is a complex process and it is necessary to identify the key dimensions of the alignment during deployment of the IMS system. Based on the relevant literature on management and business, the alignment dimensions should be able to be identified.

This study will be using the case study exploratory qualitative method to analyse and focus on the key dimensions of the alignment. It will be a systematic approach to describe the interactive behaviour of the key dimensions that exist between the business units of the organisation and the implementation of IMS.

A case study approach applied to SMEs in Singapore will be used in this study. This approach is used to identify the dimensions of the alignment between the business objectives and the IMS. A major concern of top management is alignment, which is evidenced by the integration of the organisational accomplishments and assistive functions of IMS. This study’s goal is to identify the dimensions of the alignment between the business objectives and the IMS. For that reason, it is essential to describe the research problem for this study.

1.4 Research Problem

Section four presents the research problem. The research problem draws attention to the objective and primary concept of this study. There is one main research problem that needs to be addressed. This will be further discussed in Chapter 2. The research problem was a result of the literature review and the main research problem was that:

The alignment between IMS and business objectives seems to be poorly documented in the literature and in practice.

The appropriate research design method must be used for the exploration of the inquiries mentioned. Detailed discussion of the appropriate research design will be in Chapter 3.
1.5 Research Design

The main purpose of this section is to justify the use of qualitative case study methodology. This section provides an overview of the research design and justifications of the use of the case study exploratory qualitative method. An exploratory research approach is adopted to ascertain the unseen dimensions of alignment between the business objectives and the IMS implementation. A detailed research methodology will be explained in Chapter 3.

As a result of independent management systems for quality, environment, safety and health, replicated procedures of training, auditing and inspection arise. The respective individual management systems are organised into separate arms within organisations. As a result, it is necessary to integrate the individual systems into an integrated management system. In this study, the deployment of the IMS system, the preliminary findings of dimensions, and the elements of alignment are identified during the data collection stage. The data analysis stage creates themes by using the preliminary findings of various elements of alignment. Later, the study will confirm the model of alignment.

Based on the research inquiries, the impetus and advantages on adopting IMS for Singaporean SMEs was explored in order to grasp the key concepts and difficulties faced in these processes. The case study was embarked upon with the intention of clarifying the improvement of the sustainability of IMS implementation with regards to enterprises. According to Singapore’s Economic Development Board (2014), the country tops international rankings when it comes to the investment potential of cities and the general ease of doing business. Further, it also comes within the top three countries in terms of foreign trade and investment. The Economic Development Board is responsible for strategic planning and charting the direction for Singapore to take to cement its position as a global commercial centre. Singapore’s status in the commercial world justifies its use as a contextual boundary for this study.

1.5.1 Data Collection.

Detailed discussion will be provided in the data collection section of Chapter 3. There were three stages involved in data collection. During the first stage of this study, data collection was exploratory and concentrated on identifying the underlying factors that might shape the
alignment between business objectives and the IMS implementation process. The second stage involved an in-depth study based on the initial findings to establish the linkages between all the variables to look for empirical assertions supported by the data collected. During this stage, the researcher scanned all other reports, documents and articles available to triangulate the data. This was done by using the primary data as reference to connect this information to construct thematic themes. The final stage was to confirm the themes constructed during the in-depth study stage. This approach was adopted to ensure the integrity of the data and themes constructed during the study.

The clients of the organisations and the external parties were considered detached from this study and would not have had a perceptive frame of reference to identify and comment on the business objectives and the IMS’s role in the accomplishment of the organisation’s objectives. Therefore, clients and external supply chain personnel were not included in this study process.

The nature of the enquiries raised required a response. It was considered low risk to the participants with regard to the protection of their employment. Despite this, direct quotes were used with care so as to not expose the identity of the participants. The small working environment of the organisations produced a situation where certain phrases and words could readily identify the participants. Therefore, the removal of sensitive phrases and words would ensure their confidentiality.

All participants provided details and some examples during interviews. Some participants provided great details with examples only on the assurance that their identities would remain anonymous. There were no discussions of any information during the interviews that was prejudiced, disrespectful or left any negative impression with regard to any individual or organisation.

1.5.2 Data Analysis.

A more detailed discussion will be presented in the data analysis section of Chapter 3. This study used ‘Within Case analysis’ and ‘Cross Case analysis’. Within case analysis was used to explore the reasons for the elements of alignment that exist which explained beyond just the explanatory claims and assertions. As described by Mille (2001), the explanatory claims
and assertions is a narrow band that justifies an action or makes a causal statement. The ‘Cross Case analysis’ involves the use of the ‘if then test’ to confirm whether there is more organisational than individual concern. The cross case analysis was used to explore patterns to discover the emergent themes by the comparing emerging case organisations. The cross case analysis can be made based on predicted outcomes that are caused by different causes or have different effects that are related to the same causes. However, in this study the former was preferred and applied. As described by Mille (2001, p. 146), the cross case analysis is conducted by finding the patterns of temporal precedence (X precedes Y), constant conjunctions (when X always Y), and contiguity of influence (a plausible mechanism to link X and Y).

In this study, themes were explored by Cross Case analysis using the emerging case organisations. The emergent themes were constructed as a theory which is beyond the ideas of subjectivity, bias and multiple interpretations. The Cross Case analysis was also used to confirm the initial findings with another case from a different industry. This was purely undertaken for validation purposes, while triangulation was also imbedded within the cases. Triangulation used data from non-interview sources; such as IMS manuals, minutes of meetings and other relevant documents.

Both the Within Case analysis and Cross Case analysis were used for the data analysis process. The interviews were designated as primary data in the data analysis process. The primary data was then subdivided into themes, which were grouped as either an affirmative or negative response. Each positive or negative response was further broken down, relative to the degree of detail and a common statement based on an association, with key words within the responses being used for these groupings.

The written articles such as the IMS manual, minutes of meetings and other relevant documents were designated as secondary data in the data analysis process for triangulation purposes in within case analysis. The written articles were also used to validate if the participants’ claims were appropriate.
1.6 Significance of this Study

This section highlights the significance of this study. The initial gap analysis identified that while there were many previous studies on both business and the IMS concepts separately, there were no prior studies on aligning both the business objectives and IMS concepts; particularly in the context of SMEs in Singapore. This study makes a significant contribution by filling this knowledge gap. Business theories and concepts are well established whereas IMS concepts only have a relatively short period of history of a few decades. It was ascertained that such a study was necessary as it would enable SMEs to find out about the influencing factors of IMS implementation. Given the differences between business and IMS concepts, conflicts may result from the possible generation of misalignments within the organisation.

Therefore, there was a need to examine the IMS implementation process within SMEs. The main goal of such a study would be to focus on the SMEs’ business objectives and its IMS deployment procedures. The dimensions involved in the alignment process identified would provide further insights and recommendations for SMEs in their quests to be competitive in the long-term. While business objectives and IMS concepts complement each other in assisting SMEs improve their long-term profitability, these concepts are contradictory in nature. For example in business, objectives such as garnering a large market share and the quest for high levels of competitiveness are usually the primary considerations, whereas the goals of IMS are usually procedural and considered as supportive functions of the primary activities. Such a study would contribute significantly to the creation of a framework to identify the dimensions of the alignment between business objectives and the IMS within the organisation.

The main contribution to knowledge would be the development of dimensions and elements of the alignment between business objectives and the IMS in the context of SMEs in Singapore. It would be possible to rely on the outcomes to engage organisations in improving the alignment between business objectives and the IMS process.

The results of the study would also contribute to knowledge by addressing the issue of the Singaporean context SME’s attaining competitive advantage from the implementation of IMS, which has not been in the subject of any previous research. This knowledge would be
particularly aimed at and useful to the explicit group of the Singaporean SMEs, but would not be limited to only this classification.

The findings from the study should be developed into an applied instrument and tools for the organisations in the relevant industries. However, further empirical research efforts will be required to overcome the limitations of this study.

1.7 Delimitations of Scope and Key Assumptions
In this Section 7 the delimitations of this study are addressed. The main delimitation of this empirical exploratory case study was the boundary of the contextualised study. The sample was made up of Singaporean SMEs and the results may not be applicable to the practices carried out by other countries.

The relevant literature was limited due to the absence of academic examination being undertaken and published in this specific focus area. This meant that it was very challenging to quote the most applicable published journal articles available for this study. As stated previously, the literature is very thin in the study focused area. This has had a significant impact on the study and it necessarily demarcates the limits of the study. The remainder of this section indicates the limits of study and justifies these delimitations, which is supplementary to the fundamental assumptions, recognised in the Section 1.1 background of the study.

Clear boundaries are defined on IMS in this study such that it comprises Quality Management System (ISO 9001), Environmental Management System (ISO 14001) and Occupational Health and Safety Assessment Series (OHSAS 18001), as indicated in the background of the study. Although literature is isolated, studies have made an effort to recognise the factors influencing IMS implementation in various contexts. There is only brief suggestion of alignment or misalignment in the literature with reference to the focus area of this study. This study focuses mainly on how the alignment effect of IMS implementation associates with the organisation’s business objectives. It is appropriate to define the definition of IMS and limit the systems that make up the IMS. Upon defining and limiting the IMS, there is a need for further selection of the context.
The contextual boundary of Singapore is appropriately selected for the following reasons. According to Singapore’s Economic Development Board (2014), Singapore tops world lists when it comes to the investment potential of cities and general ease of doing business. Further, it also comes within the top three in terms of foreign trade and investment. The Economic Development Board is responsible for big picture planning and charting the direction for Singapore to take to cement its position as a global commercial centre. Singapore’s status in the commercial world justifies its use as a contextual boundary. However, there are diverse categories of business organisations in Singapore and more is needed to further delimit the study boundaries.

Even though Zahra, Neubaum and Naldi (2007, p. 309) emphasized the importance of SMEs and their contribution to the worldwide economy while also noting how much is still unknown about the relationship between ownership and governance. Zahra et al. (2007) sited from Organisation for Economic Co-operation and Development (OECD) report on the SMEs influences. Zahra et al. specified that SMEs account for sixty to seventy per cent of the workforce in developed economies, almost twenty-five per cent of SMEs involved in manufacturing operate in the global market and about ninety-seven per cent of all United States exporters are SMEs. This shows the significant role of SMEs in the world’s economy and justifies the selection of SMEs as one of the study’s boundaries.

The study intended to identify the dimensions of the alignment between business objectives and IMS. Specifically, exploration was carried out from perception of the stakeholders with regard to the alignment or misalignments of IMS and the core business activities. For that reason, the findings of this study were limited to the specific context and it may or may not be appropriate for the different contexts of the alignment process.

This study is focused mainly on the phenomenon of alignment within the organisation. The alignments with the external parties are excluded in this scope of study. This study delimits influences from the authorities, clients, downstream and upstream of the supply chain. As explained in Section 1.4 (Research Problem), the focus of the study was to discover the dimensions and measurements of alignment by defining the core business and IMS process, by attempting to discover the IMS effectiveness in achieving business objectives.
Alternatively it also attempted to identify the means of IMS replacement, and made an effort to determine the effectiveness of resources deployment related to IMS implementation.

The delimitation approach aims to produce a focused, flawless study area. The initial delimitation approach also eradicated conflicts and any ambiguity that may have arisen during data collection stage. The other concerns of delimitation relevant to sampling and other matters associated with methods are stated in Chapter 3. The significant and unintended practical restriction was on resources and time limitations in this study. There were unintended influences on the findings, the details of which are discussed in the final chapter of this thesis.

1.8 Organisation of Thesis

This last section of Chapter 1 presents the organisation of this dissertation. Beyond this chapter, there are further chapters that will present the details of this study. This thesis is organised in a total of six chapters instead of the traditional five-chapter presentation technique. The six-chapter approach is developed based on the needs of the exploratory approach. An overview diagram is illustrated in Figure 1.1.
Chapter 1 lays out and focuses on the introduction and justification of this study. Chapter 2 reviews the existing literature and identifies the gaps in the literature with regards to the focus area of study. To be precise, Chapter 2 reviews different viewpoints on the establishment of alignment, together with a description of the ISO series.
Upon identifying the gaps in literature, Chapter 3 presents selection of the research methodology of case study with a qualitative approach. It offers a rationalisation on the reasons for choosing the case study paradigm, the qualitative research method, and the phenomenology approach in this exploratory study.

Chapter 4 discusses the findings of data collection, which leads into the next chapter on data analysis. Chapter 5 presents the dimensions of alignment model matched with the definitions from existing literature.

The conclusion contains the most valuable information in the thesis. Chapter 6 is the final chapter which discusses the results of this study, the potential for future study, the constraints of this study and the benefits to the body of knowledge contributed by this study. Besides the discussion on the contribution to knowledge, a self-reflection of the study outcomes is correspondingly discussed in Chapter 6.

The next chapter will present the review of literature and identify the gaps in literature to further develop the focus area of this study.
Chapter 1: Overview

Research Design
(Developed for this study)

Identification of Further Research

Comparison with Extant Literature

Data Analysis
(Emergent Model - Contribution of Knowledge)

Data Analysis
(Emergent Themes)

Data Analysis
(Emergent Elements)

Data Collection Method
(Field Research)

Research Design
(Selection of Methodology)

Identification of Research Problem

Literature Review
(Gap Analysis)

Document Map
Chapter 2: Literature Review

2.0 Introduction

This chapter reviews the literature concerning the nature and value of IMS and business objectives in SMEs. Specifically, it concerns how they are aligned or integrated when IMS is implemented with particular reference to Singapore. The chapter is divided into five sections with the objective being to justify the research problem on which this study was focussed. In this chapter, Sections 2.1, 2.2 and 2.3 are the background literature of this study and research issues are discussed in Section 2.4.

2.1 Integrated Management System

This section reviews the literature related to IMS. The certification of Quality, Environment, and Safety and Health Management Systems (QESHMS also known as IMS) is the priority of many organisations in Singapore. It may be considered as a requirement for business survival and most SMEs view the certification of IMS as a symbol of success. However, given the limited resources of SMEs, operating multiple parallel management systems covering quality, environment, and health and safety management is deemed challenging. Furthermore, for the same reasons previously indicated, it is difficult to ensure the alignment of these management systems with the overall strategy of the organisation and its business objectives.

2.1.1 International Standard Organisation.

According to the ISO Quality Services Limited (2011) and their website ‘www.isoqsltd.com’, the organisation known today as ISO has its origins in 1926 as the International Federation of the National Standardising Associations (ISA). The primary aim of the organisation was the aim developing standards in mechanical engineering. The organisation briefly ceased between 1942 and 1946 owing to the Second World War but re-emerged as the ISO. It operates on a voluntary basis and its members represent their respective countries.
The further implication of the definition of ISO according to Min and Ng (2013) cited from the ISO Quality Services Limited website is that different languages would have different abbreviations for International Organisation for Standardisation. For example in English this would be IOS whereas in French it would be OIN (Organisation Internationale de Normalisation). It was agreed that a word based on the Greek concept of equality ‘isos’ would be adopted. A necessary result of standardisation would be equality. The use of this generic term avoids any possible confusion which may have arisen from the interplay of the multiple different languages involved in international use. Therefore, regardless of country and language, the acronym of the organisation's name is always ‘ISO’ (ISO Quality Services Limited, 2011).

2.1.2 ISO: a brief history.
This section contains a brief history of the ISO taken from the ISO Quality Services Limited (2011) official website ‘www.isoqsltd.com’.

According to the ISO official website, during the Second World War British industry was faced with serious concerns over quality. In the weapons industry, defective bombs were detonating on assembly lines. It was resolved to implement a system requiring factories to keep track of all their processes and to audit these records to ensure that all the necessary procedures were complied with. This overall standard was dubbed BS 5750 and came to be referred to as a “management standard” given that it did not dictate the product to be created but rather oversaw and managed the manufacturing process. Later in 1987, the International Organisation for Standardisation was encouraged to implement BS 5750 as their universal standard. This would eventually become ISO 9000.

*ISO 9000:1987 also was influenced by existing United States and other Defence Standards (MIL SPECS). ISO 9000:1987 was suitable for manufacturing industry. The emphasis tended to be placed on conformity with procedures rather than the overall process of management, which in all likelihood was the actual intent. Since then there have been three versions which have replaced the 1987 version: 1994, 2000 and 2008. ISO 9000:1994 emphasized quality assurance via preventative actions. Instead of just checking the final product, it continued to require evidence of compliance with documented procedures. As with the first edition, the downside was that organisations tended to implement its requirements by creating shelf-loads of procedure manuals and becoming burdened with ISO bureaucracy. In some organisations, adapting and improving processes could actually have been impeded by the quality system (ISO Quality Services Limited, 2011).*

Specific details of such incidents were presented in an earlier publication of this study’s researcher (Min & Ng, 2013). In addition, the website of Eurasia Consultis International ‘www.eurasia-consultis.com’ stated that:

*ISO 9001:2000 combines the three standards ISO 9001, ISO 9002, and ISO 9003 into one, now called ISO 9001. Design and development procedures are only required if an organisation does in fact engage in the creation of new products. The ISO 9001:2000 version sought to make a radical change in thinking by actually placing the concept of process management front and centre (Eurasia Consultis International, 2013).*

According to Pfahl (2008), process management refers to the overseeing and maximisation of all the processes of an organisation rather than just scrutinising its output. Participation by higher management is necessitated in the 2000 version. This is to ensure the business system functions with greater efficiency and that key tasks are not inappropriately left to junior staff to execute.
Efficiency can also be improved through the use of performance metrics such as analysing numerical measurements in order to determine the effectiveness of the processes. The British Assessment Bureau (2014) describes ISO 9000 as “expectations of continual process improvement and tracking customer satisfaction where made explicit”. Knowing Standards (2013) indicates that “ISO 9001:2008 standard was released in February 2008. As with the release of previous versions, organisations registered to ISO 9001 will be given a substantial period to transition to the new version of the standard”.

The mentioned development of the four versions of ISO 9000 series are in accordance with the publication from ISO Quality Services Limited official website. The official website of ISO Quality Services Limited (2011) states that organisations are judged according to an array of criteria among which are its sites, functions, products, services and processes. Management can be informed of problems through action requests or noncompliance. Provided there are no further complications, each geographical site inspected by the organisation will be awarded with an ISO 9001 certificate to prove that its proposed improvement plan has been considered acceptable (ISO Quality Services Limited, 2011). ISO Quality Services Limited further clarifies that “an ISO certificate is not a once and for all award but must be renewed at regular intervals. This is in contrast to the Capability Maturity Model where there are no grades of competence within ISO 9001” (ISO Quality Services Limited, 2011).

2.1.3 Environmental management.
IMS comprises the integration of ISO 9001, OHSAS 18001 and Environmental Management System (ISO 14001). The environmental management system (ISO 14001) is similar to the quality management system (ISO 9001). With environmental protection, the improvement of the organisation’s image and progress in quality of life either within or outside of the organisation comprise the main reasons to embrace implementation of ISO 14001. Therefore, organisations are attracted to paying attention to the significance of environmental concerns. Environmental protection includes ensuring compliance, executing recycling processes, improving the organisation’s image in the public interest, ensuring responsibility in the usage of natural resources and the prevention of environmental risks. These are the most important factors in implementing ISO 14001 particularly in SMEs.
Santos, Mendes and Barbosa (2011) studied IMS implementation in the Portuguese SME context. According to Santos et al. (2011), there are not many Portuguese SMEs with fully implemented and certified management systems. Santos et al. stated that the integration process in SMEs tends to rely on one person, which can make it difficult to identify priorities for managing concurrent tasks. Santos et al. reported that all the organisations that participated in their survey were ISO 9000 certified and had no justification for the need to obtain the quality management system. However, Santos et al. further reported that in the Portugal SME context, IMS is quite recent and the integration costs are very high. They further clarified that the primary motivation for SMEs to undergo ISO 14001 certification was inter alia to reduce or wipe out risks to the environment and raise public perception of the organisation. However, secondary motivations of Portuguese SMEs were to maintain clean and organised work environments, increase awareness of employees about environmental issues and generate less waste.

The organisation’s activities must be determined not only by quality, but must also be acceptable in regards to environmental protection. The protection of the environment is inseparable from and involved in every part of the activities within the organisation. The environmental policy of the organisation can have either positive or negative effects to the external and internal environment. The mentioned effects include but are not limited to pollution within internal premises, impacts on regional weather conditions and, in the worst case, contributions to global warming. An environmental management system greatly impacts the artificial environment for the people while they undertake their work processes and helps realise a good working environment for them. For instance, saving resources by implementing proper waste control systems and maintaining a comfortable level of humidity and temperature creates a conducive environment for the people involved in the process.

The environmental management system involves structures and methods that are similar to the quality management system. There are two levels of activities involved in the environment management system. The first level is application of products, and the second level is the realisation of individual process. Selection and application of products needs to be based on their acceptability to the environment and such products should not create negative effects to general health. Realisation of methods and technologies used in the individual process needs to have minimal negative impact on the direct and indirect environment. The systemic approach to these consequential responsibilities guides the environmental management system.
in addition to existing legal obligations, regulation and the latest instructions from relevant authorities. In reality, the environmental demand factors are related to internal and external customers as well as the whole society.

An illustration of a project incorporating environmental concerns is provided by Fresner et al. (2007) in Austria. This factory of the future project was supported by the Austrian Ministry for Science and Technology. The approach was remarkable. The key feature was to retrofit the existing galvanising plants aiming at zero emissions. This approach was beyond compliance of ISO 14001 and demonstrated the commitment of all stakeholders involved in this retrofitting project. ISO 14001 is concerned predominantly with environmental management and this project, which aimed to eliminate emissions, was very much aligned with the environmental management approach. It is expected that ISO 14001 certifies organisations that demonstrate the comparable approach. Regrettably these types of initiatives are very limited in number in other parts of the world including Singapore.

At present in the Singapore context, environmental management system certification in SME organisations is the exception (Singapore Standard, 2004). However, all organisations have to meet all juridical instructions or otherwise be faced with penalties. If the organisation is faced with penalty that would greatly affect its reputation and economic gain. Implementation of ISO 14001 certification is not requisite to the core business. This factor is desired to be observed. However, it is also necessary to realise the relevance of business objectives and ISO 14001 as part of IMS. In this study, it is obligatory to address the definition and categorisation of the processes that create and maintain the core business of the organisation. The exploration seeks to find the influencing factors that contribute to the alignment between business objectives and IMS.

2.1.4 Occupational Health and Safety Assessment Series.

The quality management system (ISO 9001) and the environmental management system (ISO 14001) have similarities in method and structure. The Occupational Health and Safety Assessment Series (OHSAS 18001) has some unique features that are not reflected in the ISO standards. However, there are international instructions, which make up the base for an adoption of national work and health safety management directions in organisations.
Tsai and Chou (2009) believe that adopting the OHSAS 18001 could help create and maintain a safe working environment by convincing workers of its importance and preventing accidents, illnesses or any harm from occurring at work. OHSAS implementation increases the appeal to prospective employees, improves the mindsets of existing employees and makes the overall operation more efficient (Tsai & Chou, 2009). This is aligned with the Singapore context as one government ministry and one statutory board are responsible for legislation of health and safety related matters. The ‘Ministry of Manpower’ and the ‘Workplace Safety and Health Council’ are the regulatory authorities that set the essential standards of health and safety management in Singapore. The standards establish the employer’s responsibility with respect to the safety policy. This standard is applicable to all industries in the Singapore context.

The organisational workplace health and safety policy is a document that presents the basic goals, plans and the organisation’s strategy for accident prevention, improvement work conditions and work environment (Zeng et al., 2007). This document also represents the work culture and personnel protection philosophy of the organisation. It sets out the responsibilities of the employer and personnel in the field of work and health safety improvement. The realisation program of the work and health safety organisation policy contains specific issues with particular terms and responsibilities.

Although most Singaporean SMEs are of the view that OHSAS 18001 contributes to the bottom line while also considering environmental concerns, the conditions in Singaporean SMEs and SMEs elsewhere converge with regards to resource constraints. Duijm, Fie’vez, Gerbec, Hauptmanns and Konstandinidou (2008) carried out a study in the European Union and showed that in small organisations integration takes place naturally. Yet, in small organisations, a single person is usually responsible for its management and often covers concurrent tasks making it difficult to identify priorities.

The Duijm et al. (2008) study focused mainly on the processing and manufacturing industry in the European Union. Duijm et al. (2008) also identified the goals and constraints in OHSAS 18001 and found that systems implementation is still driven by the management of constraints on this primary process, rather than a main objective. Hence, the workplace health and safety management system is the mechanism to assure correct arrangement, function,
systematic and continuous audit as well as continuous improvement. The components of this system are also regarded as instructions for the interested party to adhere to the activities that conform to safety and health requirements for the employees and society as a whole.

2.1.5 Integration of Management Systems.

The first approach to the understanding of Integrated Management Systems (IMS) is from a systems perspective. According to McElyea (2003), Systems Thinking was established halfway through the twentieth century in opposition to the existing management thinking. This fresh school of thought developed as a consequence of the general systems theory initially advanced from Bertalanffy (1968). General systems theory was described by Gregory (2003, p. 2) as:

... elements, which are in exchange, and which are bounded. These components constitute a ‘system’, which functions or operates within a field or an environment. Elements can be virtually anything you wish to label as such, the exchanges are any relationships that exist between elements, and the boundary is what you can see, hear, feel, or sense that separates ‘system’ from the background or environment.

This explanation reflects the precise description of how systems are implemented within organisations that adopt the systems. Emery and Trist (1965, p. 7) indicated that:

In the behavioural sciences, the first steps in building a systems theory were taken in connection with the analysis of internal processes in organisms. Systems Thinking for social environments or organisations, when the parts had to be related to the whole were developed by Emery and Trist (1965). Examples include the organismic biology of Jennings, Cannon, and Henderson; early Gestalt theory and its later derivatives such as balance theory and the classical theories of social structure.

The extension of systems analysis provides a way of making rational decisions within a complex environment and makes available decision making processes for the managers. Managers used the Systems Thinking method to make decisions. Supplementary contributions on bounded rationality, satisfying, and incremental decision-making recognised that a
complex environment is part of the Systems Thinking process. It has led to the recognition that traditional management thinking is not sufficient for organisational success. Systems Thinking interprets organisations as having complex interrelationships with their environments and other systems. A system is seen as having inputs, throughputs (process), outputs, and feedback. This tactic is to close the loop within the system and it is identical to the IMS approach of PDCA (Plan, Do, Check, Act) cycle.

The certification of quality management systems, environmental management systems, and health and safety management systems (QESHMS also known as IMS) is the priority of many organisations in Singapore (Quazi, & Padibjo, 1998). It may be considered a prerequisite for business survival and most SMEs view it as a symbol of success (Quazi, & Padibjo, 1998). Nonetheless, the task of concurrently running management systems governing quality, environment and health and safety concerns has not been simple to accomplish. Moreover it is difficult to ensure the alignment with the organisation's business objectives (Karapetrovic & Willborn, 1998). With regard to IMS implementation, Karapetrovic and Willborn (1998) outline three main elements of goals, processes, and resources to standardise IMS, thereby allowing it to be integrated at different levels.

Boyne and Walker (2002) argue that IMS function is better in manufacturing than service sectors. The adoption of IMS has proven difficult for many organisations (Yusof & Aspinwall, 2001). This has led to limited success in IMS implementation and the IMS model itself contains a means of self-evaluation but does not provide much more by means of guidance in achieving business excellence. Quantitative study conducted by Tata, Prasad and Thorn (1999) shows that half of all manufacturing organisations have benefitted with IMS. This can be attributed to the lack of attention paid to the cultural and structural elements of alignment that influence IMS implementation (Tata et al., 1999).

The implementation of IMS was a significant and common organisational development and transformational programme in the 1990s with regard to the perspective of organisational change (Reed, Lemak & Mero, 2000). Notwithstanding its reputation, there has also been criticism of IMS. Reed et al. (2000, p. 7) indicated that “it is vigorously pointed out and unanimously agreed by the authors that IMS will not work without the demonstrated long-term commitment of top management”.

Chapter 2: Literature Review ~ 25
Karapetrovic and Jonker (2003) conducted an empirical study that found a high level of IMS implementation regarding integration of the auditing, human resources, management system manual, objectives, and organisation policy. Their findings also include the processes of documentary control, management review and record control. However, comparative factors between IMS and business objectives are practically silent in their study.

However, Zutshi and Sohal (2003, p. 17) discovered a surprising lack of integration in elements such as the use of internal material at strategic organisational levels as well as general planning and identification of requirements, realisation of products and various other internal procedures. Zutshi and Sohal (2003) adopted case study methodology and study three Australian organisations. Similarly, Bernardo, Casadesus, Karapetrovic and Heras (2009) conducted an empirical study of IMS implementation in Spain. Yet again, comparative factors between IMS and business objectives are basically silent in their study.

Bernardo et al. (2009), citing the previous work of Wilkinson and Dale (1999), Karapetrovic (2003), Pojasek (2006), Jørgensen, Remmen, and Mellado (2006) and Jørgensen (2007), stated that a number of researchers advocate IMS benefits from the existing interactions and different levels of integration. Jørgensen et al. (2006) defined three different levels of IMS implementation: in the beginning with cross references to the internal coordination; followed up with understanding common processes and responsibilities in the management cycle; and finally the creation of a culture of learning, stakeholder participation and continuous performance improvement.

Andaloro, Salomone, Ioppolo, and Andaloro (2010) found that a majority of European organisations implemented management systems that are more distinct than homogenous. Casadesus, Karapetrovic, and Heras (2011) suggest that most organisations implement quality management systems before other management systems and follow-up with integration. The lack of any solid foundation makes it uncertain how these systems can be used together or combined cohesively. It was found that a framework approach to integrate IMS in organisations was an existing approach in the standards being implemented (Asif, Bruijn, Fisscher, & Searcy, 2010; Casadesus et al., 2011). An example is the plan, do, check, act (PDCA) cycle which clearly sets out the relevant elements through a process map or an organisation specific model.
According to Asif et al. (2010), at present many organisations are implementing IMS to operate in a more combined, efficient and effective way beyond fulfilling the minimum requirements of IMS standards. By doing so, organisations can expect to attain substantial internal benefits besides meeting any external demands. Zeng et al. (2010) state that the main internal benefits of implementing IMS include reduced paperwork, reduced management costs, reduced complexity of internal management and the facilitation of constant improvement. In addition, the views of the potential benefits of IMS to business structures are being increasingly held (Asif, Searcy, Zutshi & Fisscher, 2013).

To prevent the misapplication of IMS, it is imperative that organisations deal with the complications that may arise with the adoption and running of an IMS. Such complications may involve issues such as inefficient human resources or fiscal support and unnecessary fragmentation of the roles and priorities of the individuals involved (Zeng et al., 2007; Asif et al., 2010). The extant literature is specific about integration of the three systems in the context of IMS implementation itself. However, none of the extant literature has studied the focused area of alignment between business objectives and the IMS, despite the clear associations between them.

2.2 Effectiveness of the alignment process in the contextualised environment

This section reviews the literature related to alignment in the contextualised environment. This study attempted to combine the understanding of general and contextualised environments, which the literature has not revealed much about. A contextualised environment is based on a general approach to providing alignment which may be better suited to other areas such as incorporating IMS in SME sectors. According to the Ministry of Manpower website, Singaporean Minister Gan Kim Yong stated that “productivity and innovations are vital to the survival and profitability of SMEs in sharpening their competitive advantage” (Ministry of Manpower, 2011, para, 7). The Singaporean SME context was adopted for the significance of survival and profitability of SMEs in Singapore.

According to Ahmad and Seet (2009) the most common causes of failure in SMEs is a shortage of resources. This has triggered an examination of this phenomenon, as seen in numerous studies on this issue. Section 2.2.2 of this chapter presents the IMS implementation
in the contextualised environment. The next section introduces the definition of SME, prior to Section 2.2.2.

2.2.1 Definition of Small Medium Enterprise (SME).
SMEs tend to be entrepreneurial and use innovative business concepts (Zahra et al., 2007, p. 325). According to The Straits Times, Singaporean Prime Minister Lee Hsien Loong mentioned that “SMEs play a crucial role in this effort as they employ about 70 per cent of Singapore's 3.2 million workforce” (Flexi-work, 2012, p. B4). As a result, it is noted that SMEs are perceived as the key source for new job creation and on-going employment.

Most importantly, SMEs generate a huge proportion of worldwide Gross Domestic Product (GDP) that contributes significantly to world economic development (Ayyagari, Beck & Kunt, 2007). However, Ahmad and Seet (2009) citing Chak (1998) recognised that “SMEs are prone to failure and the most cited factor that causes SMEs to fail is a shortage of resources” (Ahmad & Seet, 2009, p. 99). This has caused many studies, for instance Spillan and Parnell (2006) and Zahra et al. (2007), to examine this phenomenon. Zahra et al. (2007, p. 212) examined the impact of ownership and governance structures on SMEs and their results reflected the short-term inefficiencies of resources.

Before going further, it is important to define the meaning of the term SME. The definitions of SME differ across countries and there is no single commonly accepted definition of SME. Usually SME is defined along three dimensions, in terms of employment, investment or turnover, or a combination of any two or all (Shanmugam, Ali, & Haat, 2012). It is not possible to compare SMEs according to size since there are many variations in describing the upper and lower size limits of an SME.

The most common basis for defining an SME is employment. Most researchers (Ayyagari, Beck, & Kunt, 2007; Parker, Redmond, & Simpson, 2011) define SMEs only in terms of the number of employees. The definition of SME varies extensively amongst countries as illustrated by Parker et al. (2011, p. 6):
European studies mainly use the European Union (EU) definition of SMEs ‘fewer than 250 staff’, while Australian studies use less than 200 staff, USA and South Korean studies use less than 500 staff and New Zealand studies use less than 100 staff.

With this differing interpretation of a SME, firms in New Zealand with 500 staff would be considered large firms by Korean standards. Closer to Singapore, SMEs in Malaysia are determined by their revenue, number of staff, range of activities and overall size (Shanmugam, Ali, & Haat, 2012). According to Shanmugam et al. (2012), agricultural and manufacturing SMEs typically have between Malaysia Ringgit ten million to twenty-five million in turnover and have fifty-one to one hundred and fifty full time staff. Those in the service sector and dealing with information technology and communications fall within the Malaysia Ringgit one million to five million range with twenty to fifty full time staff (Shanmugam et al., 2012).

Given the wide range of definitions adopted in different countries, it is necessary to address these inconsistencies by defining SMEs within the local Singapore context, the context of the current study. Singapore’s standardisation body named Spring Singapore is a government agency and local representative of ISO international. According to Spring Singapore (2012), the general definition of local SMEs requires that they must meet the conditions of a minimum local equity of thirty per cent, have an employment size of no more than 200 workers in non-manufacturing organisations, or annual revenue of less than 100 million Singapore dollars. In this study, all participating organisations are from the non-manufacturing sector and meet the mentioned criterion of SME.

2.2.2 Implementation of the management systems in SME context.

Santos et al. (2011) identified possible impediments to the adoption of IMS in Portuguese SMEs. In that quantitative study, a total of eighty organisations participated but only forty-six had been validated. The objective of Santos et al. study was to identify benefits and difficulties associated with the IMS certification process in Portuguese SMEs.

The main complication identified was the implementation process and insufficient ability to integrate individual standards. The main areas of complication involved the removal of unnecessary records and internal processes, the efficient allocation of manpower and
increasing the efficiency of auditing processes. They stated that there are a considerable number of certified SMEs, but their incorporation is contemporary. IMS implementation is still relatively uncommon. Therefore, effective integration of the three management systems in SMEs may not be a realistic task.

According to Santos et al. (2011), the benefits of integration experienced in Portuguese SMEs have also been streamlined processes resulting in better understanding, clearer and more cohesive records and the efficient focus of resources and attention on a single aim as opposed to diluting both with too many tasks at hand. This is supported by Bobrek, Majstorovic and Sokovic (2006), who identified benefits including improved internal systems and interdepartmental cooperation with less costs from replicated procedures. This is also in line with Wright’s (2000) findings that the assimilation of the different management systems into a unitary IMS results in substantial savings. Santos et al. (2011) appear to have confidence in the integration of the management systems of SMEs, which may allow for better resource allocation. Asif et al. (2010) focus on streamlining and cutting costs with regards to IMS in Pakistani manufacturing organisations.

This also results in lower management costs, the opportunity to amalgamate audits, clearer setting out of the roles and responsibilities of management which in turn reduces confusion, redundancy and possible conflicts in documentation, making it less likely to fall foul of regulations and supporting the image of the organisation. At the same time, some disadvantages were also noted; for example high costs at the onset given the need to upgrade existing processes and systems as well as friction and drawbacks in the management activity and incongruence between the different systems. Other difficulties in implementing these new policies such as difficulties in integrating the new standards were also identified. Their report further highlighted the increased expenditure involved in concurrently implementing all the new systems. Such massive revisions in the systems of management arising from fundamental operational adjustments result in complications relevant to organisational cultures.

Fresno (2010) studied IMS implementation in the Spanish context, specifically the airline industry. Their case study uncovered both tangible and intangible improvements from integration such as increased decisiveness, allocation of resources, clarity in communication, general morale including a greater emphasis on customers and an improved commercial profile.
Mackau (2003) also concluded in his study in Germany of the SME experience of IMS that the attitudes and drive of staff and key executives were abnormally raised during the conduct of the project. Moreover, the views of staff showed that IMS certification served as a motivation over the entire project. The motivation of organisations to implement IMS can be viewed in terms of the benefits gained from IMS implementation. These benefits could be broadly categorised as operational, financial, and marketing. However, it is difficult to find substantial research work on the corporate motivation for implementation of IMS. As indicated in the extant literature of IMS implementation in SME context, the motivation of management to deploy IMS can be separated into two different scenarios. In some circumstances, IMS was sought as a counteractive measure in response to dissatisfaction with operational outputs. In other circumstances, the stimulus came from repeated failures to comply with predetermined business (operational and financial) objectives. Both types of stimuli may possibly be considered as reactive intrinsic motivation.

Alternatively, extrinsic motives arise due to the requirements of customers. Competition in the global market forces organisations to adopt best business practices and insist on integrated management systems. Motives that originate from socio-technical and economic areas of an organisation could be considered intrinsic. Extrinsic motives are influenced from the outside environment. Singaporean SME motivation for the decision to implement IMS may be both intrinsic as well as extrinsic. However, extant literature revealed that intrinsic motives for the IMS deployment decision are more significant and this study focused on the same assumption as Mackau (2003), Bobrek, et al. (2006), Asif et al. (2010), Fresno (2010) and Santos et al. (2011).

This literature review reveals that there have been various diverse approaches used by different researchers to solve similar research problems. These approaches are from a systems perspective which involves ascertaining the critical success factors and IMS as interpreted from the different models. The purpose of the present study is to understand further whether dimensions of alignment between business objectives and IMS exist and whether they can be used for organisational transformation in the future. Therefore, realising which factors lead to the success or failure of IMS in the extant literature is important. These factors are discussed below with attention to the respective context by the global perspective.
2.2.3 The key dimensions of alignment.

Kaplan and Norton (2006) stated that aligning organisational units in order to generate value at the enterprise level gets overshadowed by value generating at the business unit level. Most models such as out-of-the-box thinking and the McKinsey 7-S Model focus on business units with their distinctive competencies, customers, markets, products, services, and technologies.

For an organisation to increase the value of its business units and integrated service divisions, it must accommodate and combine these operating and service entities to generate synergy. This is the crux of enterprise strategy, setting out how the head office enhances value. This approach is viewed primarily from the perspective of the business. One of the biggest mistakes that organisations have made is failing to recognise the intangible benefits (Hoque, 2002) of the alignment. The misalignment of operating and service entities can lead to expensive and irreversible effects.

Hobbs (2008) argues that in order for a leadership team to be aligned with a single common vision and able to mobilise its people and get everyone pulling in the same direction, it must share a collective sense of ownership. Trends are a particular force for change and many of them, such as e-mail, are irresistible. The challenge is to recognise and evaluate their potential effects early on, in a proactive way.

It is not very difficult to recognise change. Hobbs (2008) suggests that some drivers of change will become common knowledge but others may represent radical ‘out of the box thinking’. Both can contribute to the suggestion of new visions. ‘Out of the box thinking’ is not the only way to solve the problem, particularly in the achievement of successful business. Systemic thinking can also be adopted to achieve success. Greiner and Cummings (2009) define systemic thinking as being relative to strategy and can be traced to the McKinsey 7-S model, ‘strategy, structure, systems, shared values, skills, style, and staff’, in which most of the seven elements should be aligned and act as a system to achieve strategic success (Rasiel & Friga, 2001). In reality the 7-S model is a comprehensive performance measurement to flawlessly allocate responsibility and accountability. But 7-S is a static model capable only of measuring one of several elements of alignment to be aligned at any instant. Parallel measurement is not applicable in this model.
Productivity, quality, cost and environment are part of the business process. Profit is neither mission nor vision. Profit is the result of the business process and an objective. The objective set can be either financial performance or strategic performance. Strategic performance is increased if concerns such as quality, business continuity, commitment to environment control, safety and health are well managed. Strategy will shape the process and objective. The external forces will influence the internal structure and process as well.

Drucker and Stern (1999) hold that objectives are indicators of outcomes but are unclear as to input behaviour and actions. Henderson and Venkatraman (1999, p. 474) stated that “strategies are focused on the collaborative interaction of domain components designed to assimilate the activities of people, technologies, policies, and procedures to produce a continuous competitive advantage”. This approach involves the prioritisation of process above structure to form the basis for the alignment of activities with organisational objectives.

A total of ten business alignment models were studied from the available sources of literature. The approach taken was to explore the effectiveness of the contributions of a specific set of models used to outline precise conclusions. The ten strategic alignment models are representative of the state of the existing research literature retrieved for this study within the overall range of models. The purpose of study was to recognise the presence of these models. It was necessary to describe the complex nature of the alignment process as well. In order to determine the research problem in this study, ten strategic alignment models were identified and are discussed in the following sections.

2.2.3.01 Adhocracy model.
The distinct characteristic of members performing complex tasks is the unique feature of the Adhocracy model and this model is designed to accept the experienced members. This model can exist along with the other organisational models (Mintzberg & McHugh, 1985). In this type of Adhocracy organisation, the organisational goals and objectives necessitate that special members have developed the necessary skill sets over a number of years (Bilton, 1999).
2.2.3.02 Authoritative model.

In this model, the business unit and supporting facility systems share responsibilities. The positive relationship between the organisation and business units is represented in this model. However, due to different policies adopted within organisations, ambiguity between a particular organisation and its departments could be expected (Marr & Creelman, 2011). The measure of success for IMS implementation is the collaborative processes between the parent organisation and the business units implementing the system.

The authoritative model is the precursor to IMS governance within all organisation models. Investment and success related to IMS implementation indicates that department structure is the key to business success. The current model is mainly concerned with the structural environment. The success of the relationship between the parent organisation and the business units depends on the structural environment (Marr & Creelman, 2011).

2.2.3.03 Authoritarian model.

There are neither shared responsibilities nor shared knowledge in this model. There are no defined collaborative policies between the business and the supporting IMS system (Scott, 2003). The person in charge of the quality, environment, health and safety (QEHS) system makes all decisions relating to the IMS implementation with little consideration of organisational goals. This model overrides the decision making process in the organisations and QEHS is the prime directive of the business.

From the authoritarian viewpoint, policies are the written standards of practice. Authoritarianism treats procedures as the collection of processes used to support objective seeking. Similar emphasis is placed on decision making. From the authoritarian perspective resource allocation is the positioning of resources to create effective projected outcomes (Scott, 2003; Lackey & Brown, 2002). However, decreased innovation and creativity will lead to lower productivity due to exposure to over control. This model has an insignificant relationship between business objectives and the IMS structure.
2.2.3.04 Bureaucracy model.
Mintzberg (1979) developed a professional Bureaucracy model, signifying an organisation possessing the systematic management style including laws, regulations, rules, and hierarchy of management. Under the bureaucracy model, an organisation separates its labour into their respective objectives and the cohesion among them helps to attain business objectives (Mintzberg, 1979, p. 2). The Bureaucracy model can exist along within other models. These models require mutuality of knowledge and responsibility as well as the establishment of links between business objectives and IMS deployment of business units.

2.2.3.05 Clan model.
In the Clan Model organisational culture is well defined (Royer, Simons, Boyd & Rafferty, 2008). Each member has specialised skills and is expected to perform at a high level. Every member in the organisational culture is given his own trajectory but is still required to solve issues.

Royer et al. (2008) discovered that family culture in this context can be a valuable resource in business dealings. It can be further explained that a clan structure could be an efficient organisational form (Royer et al., 2008). A clan structure reduces transaction costs compared to organisations that practice chain of command in the market (Ouchi, 1980; Ouchi & Price, 1978). Certain family cultures produce similarities in objectives, shared assumptions and values, which create efficient organisation in an extremely insecure situation (Zahra et al., 2004). If family culture is transmitted into a family run business, the organisation is performing as clan model.

2.2.3.06 Cosmopolis model.
Members in the Cosmopolis model perform low tasks with little supervision. This type of organisation could be spread over a large geographical area. The individual tasks and responsibilities of the team must be clearly set out and disseminated by those in charge (Kusch, 2007). The IMS structural model is a good fit for Cosmopolis model organisations due to their nature of reduced supervision. Resource allocation involves the deployment of investments, infrastructure, personnel expertise, and the usage of appliance. Well-defined governance is the decision-making process in organisational focus, structure, and resource allocation.
2.2.3.07 Laissez-faire model.
The Laissez-faire model is the simplest amongst all the models. The end users influence the selection and allocation of resources in this model. This model does not aid the organisation to achieve what they want (Lackey & Brown, 2002). It is used in the initial stages of most organisations. There are no well-defined mission statements and the effect will be little or incomplete output and the result will never be successful (Lackey & Brown, 2002).

2.2.3.08 Maturity model.
According to Luftman (2003), communication, competency, governance, partnership, technology and skill are the six categories of maturity to form the basis for alignment. This model is based on the end user’s perceptive knowledge and experiences. Technical knowledge should support the organisation and interact with IMS.

However, it is noted that there are some actions and operations that are hidden from observation. Shared responsibilities are hidden factors and these factors can be used to justify the alignment within this model. The IMS support is not the sole responsibility of the business. Scott (2003) pointed out that shared responsibility in an organisational system can be attributed to the success of the organisation.

2.2.3.09 Organic model.
The Organic model necessitates shared responsibility of the members and knowledge. The members of the organisation in an Organic model have specialised experience, expertise, knowledge and originality of the working condition (Robbins, 2005). Synergy can increase a team’s assets further than the different team players. The individual members interact with a range of team players who see a problem from different standpoints. It occurs by conjointly crafting planning into feasible decisions. Teamwork involves sharing thoughts and distinguishing the value of each member's contribution is the feature of this model.

2.2.3.10 Structural model.
In the Structural model, structural flaws hinder the alignment between IMS and the organisation. The literature has been limited to the acknowledgement of such structural flaws. The Structural model’s main concern is on fragmented areas with limited attention to the essential area.
In short, task, identification of roles, and work flow are critical to the development of alignment. It is a pattern of interdependency within the organisation and model specific corrective measures adapted to business occurrences. Industry specific dependency can be identified by further investigation of the improvement of an effective portfolio management approach. The driver for the effective portfolio management model should be the priorities, plans, strategies, and obligations of the business units (Cowan, 1990).

Drucker and Stern (1999) defined the successful underlying factors for work prioritisation, work procedures, consignment and organisation structure, all of which are subject to the positioning of strategy. Strategy regulates the core business activities. In addition, strategy impacts the significant nature of business and is forward looking. It refers to the goals and objectives of the organisation.

2.3 Summary of the Review of Contextual Literature

The concept of alignment is identified as a system, a fabricated product of interconnected business and supporting system orientation drivers, meant to benefit organisational performance (Hoque, 2002; Kaplan & Norton 2006). The purpose of strategy concerns (goal seeking) is to lay emphasis on the profoundness underlying the sophistication of the alignment process and satisfying the long term trend of the organisation to be accountable for the undertakings of all its stakeholders (Houlden, 2000). Dale and McQuater (1998) believe that when concentrating on content, it is significant to make a distinction between which value is being added. The value being added to the organisation is the fundamental feature of the content and crafting of alignment.

An alignment structure is an entirety of individuals, their roles and responsibilities, organisational structures and limitations as well as clientele, coalitions, conglomerates, suppliers and other interested parties organised together in a way that signifies undertakings focused in the direction of attaining a purpose (Drucker & Stern, 1999). An aligned structure is focused on the problem of a complex system, measured from the perspective of the whole rather than from a partial fragment.
This review of the literature reveals it is impossible to seamlessly apply the Structural models of IMS, systems of allocating resources or methods of governance. A centralised mode of decision making occurs when a top down approach is adopted within the organisation. A mixture of the centralised and decentralised methods is likely to be adopted in an uncertain approach. A centralised approach is deployed when making decisions about infrastructure and supplies. A decentralised approach is deployed when considering the application and use of resources. At the local level, decision-making is made in the decentralised mode. Section 2.3 summarised the review of contextualised literature. The review of literature in Sections 2.1 and 2.2 cover the background literature of this study and research issues are identified in the next Section 2.4.

2.4 The field of study and major contributions

There is limited literature about country specific and industry specific systems integration leading to IMS as a single system. There is no explicit study on the alignment between IMS implementation and business objectives. This study aims to fill this gap. The main research issues are described below.

2.4.1 Identification of research issues.

The main purpose of the study is to observe IMS implementation process within SMEs. The process of observation is to focus on the SME’s business objectives and its IMS deployment procedures. It attempts to make an analysis based on observations followed up with conclusions as well as recommendations about the dimensions involved in the alignment process.

Business theories and concepts are well established. IMS concepts are less prevalent compared to business theories and have a short history over only a few decades. Business objectives and IMS concepts complement each other conceptually but contradict each other in practice. The business objectives and IMS theories coexist parallel to each other in the organisation. Business objectives are the primary consideration with IMS requirements as supportive functions of the primary activities. However there are human factors involved in
the process. This may create confusion over the prioritisation of primary or secondary functions.

Confusion creates conflict, generating misalignment as a result. Misalignment is based on the attributes of IMS deployment and implementation, which are included in the entire process. It is necessary to identify the misalignment (problems) prior to finding the root cause and its attributes.

The importance of this study is to find out the influencing factors involved in IMS implementation. The literature review shows that this aspect of study is the least explored area in IMS research. This includes the factors that facilitate as well as the factors that hinder IMS implementation. This study contributes to the field by identifying the dimensions of the alignment between business objectives and IMS within an SME. It could be useful to consider the creation of internationally recognised guidelines in the future.

Nevertheless, there is some isolated country specific studies and industry specific studies. Zutshi and Sohal (2005) focused on Australian context; Oliveira, Oliveira, and Nadae (2010) studied the Brazilian context; Bayazit and Karpak (2007) explored the Turkish context; Bernardo et al. (2008) concentrated on the Spanish context; Santos et al. (2011) studied the Portuguese SME context; Khanna et al. (2009) focused on the Indian context; Asif et al. (2008) studied the Pakistani context; and Zeng et al. (2010) concentrated on the Chinese context of IMS related research. These country-specific studies will be described below, followed by industry specific studies.

During the data analysis section of this thesis, this group of researcher’s arguments, observations, and suggestions will be taken into consideration to triangulate with this study’s findings in the Singaporean context. It is noted that the following literature consists of very heterogeneous studies conducted in different cultural contexts.

2.4.1.1 Australia.
Zutshi and Sohal (2003) studied IMS implementation of three Australian organisations with a case study methodology. Zutshi and Sohal (2003, p. 18) argued that the integration process was accompanied by difficulties. The usual encumbrances faced by organisations in implementation included different perceived customers and stakeholders; a clash of objectives
for safety, quality and environment; how the best result for customers did not always coincide with environmental progress; deficiencies in the allocation of resources and either excessive costs or the inability to attain the full benefits. It would thus be in the best interests for organisations to clear away as many impediments before engaging in the actual implementation process (Zutshi & Sohal, 2005, p. 18).

2.4.1.2 Brazil.
Oliveira, Oliveira, and Nadae (2010) studied IMS implementation of five Brazilian organisations with a qualitative case study methodology. Oliveira et al. (2010) observed that a variety of difficulties are faced by organisations in the processes of integration of management systems. These include reticence from staff, lack of conviction from upper management, high costs and the failure to internalise standards and integration. In general, most organisations do not have a real interpretation of strategic growth initiative yet. It is often inefficient such as by means of trial and error method to integrate and monitor their management systems in various ways (Oliveira et al. 2010).

2.4.1.3 China.
Zeng et al. (2010) studied effectiveness of IMS implementation in 400 large and medium size organisations within China with a quantitative research methodology. Zeng et al. (2010, p. 171) aimed to understand the challenges and critical issues involved in IMS processes. During analysis, the researchers noted that IMS could achieve reduced redundancies in the entire business process which would require less effort to maintain and incorporate the system. Practically, an understanding of generic processes and the different tasks in the management cycle is necessary in order for integration. Furthermore, the extent of integration depends on the development of a spirit of improvement and cooperation to achieve the available benefits and sustainable development. Zeng et al. (2007) pointed out that the three standards of ISO 9001; ISO 14001 and OHSAS 18001 have a common fundamental principle of continuous improvement that is built upon the PDCA cycle. According to Zeng et al. (2010), the management system has to concentrate on creating synergy among customer centric quality and the maintenance of environmental and corporate social responsibility. They concluded that the concurrent application of these standards may result in complications. Hence, an IMS was suggested.
Zeng et al. (2010, p. 176) revealed that the main motivation for implementing IMS was, ‘To cope with stress from competitors’, ‘To respond to government’s appeal’ and ‘To satisfy customers’ requirements’. The significant benefits achieved were: ‘Simplify certification processes’, ‘Decrease management costs’ and ‘Decrease paper work’.

2.4.1.4 India.

Khanna et al. (2009) studied IMS modelling of an Indian automobile manufacturing organisation with a case study methodology. Khanna et al. (2009) suggest that the drawing out of the certification process, unnecessary documentation and initial costs were the primary obstacles faced in integration. The critical indicators of success for the implementation of IMS are the prioritisation of stakeholders, conviction from management, availability of resources, education, control of processes and constant development (Khanna et al., 2009). These researchers believe that implementation of integrated management systems (IMS) is one of the challenges of the present-day.

2.4.1.5 Pakistan.

Asif et al. (2008) studied IMS implementation of Pakistani manufacturing organisations with case study methodology. Asif et al. (2008) tried to find out the reasons and influencing factors of IMS implementation in their study. They emphasised that probably the regulatory drivers, financial drivers, marketing drivers, operational drivers, and social drivers are the keys for corporate motivation for implementation of IMS.

2.4.1.6 Portugal.

Santos et al. (2011) studied IMS characteristic of 46 Portuguese SMEs with a quantitative methodology. According to Santos et al. (2011) the PDCA approach, focusing on quality, environment and safety, consistence with clear priorities, showing significant parts in the organisations, makes it easy to concentrate procedures and accountabilities on essential areas. Santos et al. further revealed that in the Portuguese context, IMS is a quite recent phenomenon and the number of SMEs with this certain kind of integrated system is very low given the high expenses of integration. In addition, only a few organisations have implemented an Occupational Health Safety Management System (OHSMS) and even among them merely a small number have been certified. In contrast, a huge number of organisations
have a proficient OHSMS system but they did not obtain either a quality or environmental system.

2.4.1.7 Spain.
Bernardo et al. (2008) studied level of IMS integration of 362 Spanish organizations with a quantitative methodology. Bernardo et al. (2008) found that contrary to the general literature, the actions of individuals were not critical for any amount of integration. They suggested further research to determine what other obstacles would be faced during implementation, particularly whether the process would be followed by the implementation model.

Simon, Karapetrovic and Casadesus (2012) examined the evolution of the implementation model in the Spanish context. It was noted that their study was based on the integration of two systems (ISO 9001 and 14001). Simon et al. (2012) acknowledged that only limited literature had been found in their focused area of study. Simon et al. reported that a majority of the organisations with more than one management system adopted IMS and there were differences in the levels of integration on account of inadequate implementation of the initial system. Simon et al. tried to explore the integration that evolved over time, but were unable to establish the cause owing to the absence of literature of a similar nature as their study.

Beckmerhagen, Berg, Karapetrovic and Willborn (2003) acknowledged that integrating standards and internal systems are generally disconnected. This issue was highlighted by Bernardo et al. (2008), where the misalignment of operational goals was one of the disadvantages of IMS in their study citing prior literatures.

2.4.1.8 Turkey.
Bayazit and Karpak (2007) studied IMS implementation of 250 Turkish large manufacturing organisations with a quantitative methodology. Bayazit and Karpak (2007, p. 93) noted in their research that:

... thirty two factors affect TQM implementation. Some of the factors initially stated by the survey participants to be the most important ones were not, interestingly enough. Because of interdependencies among the factors others turned out to be more important in the decision model.
Bayazit and Karpak (2007) identified thirty-two factors affecting IMS implementation. Some interdependencies turned out to be more important in the decision making process. They conclude that the degree of success in IMS implementation is related to the interdependency among the factors. Their findings require the addition and elimination of country-specific constructs to capture more realistic results. Prior to the adoption of the model generated by Bayazit and Karpak, it was necessary to measure the degree of IMS readiness.

### 2.4.1.9 Industry specific literature.

Other researchers have studied industry specific IMS implementation activities. Fresno (2010) studied IMS implementation in the airline industry in Spain and noted that the need for IMS started in middle of 1990s to achieve significant benefits. Any recourse to integration requires an internal model to analyse, harmonize and combine specific standard requirements as IMS is specific, almost personalised to each organisation (Fresno, 2010).

Fresno (2010) also discovered that integration also comprises certain drawbacks that should be noted. Some of the most common disadvantages include:

...misunderstanding of what integration means, thus focusing only on integration of documentation and records; lack of strategy, model and methodology; lack of relevant management commitment, especially from top-management; lack of adequate organisational culture; lack of resources, in quantity and in qualification (relevant expertise); lack of communication; people’s attitude, especially from those who lose ‘ownership’ of existing systems prior to integration; differences in the scope of the systems being integrated; and continuous change of regulations, and guidelines (Fresno, 2010, p. 632).

Mackau (2003) conducted research in this area on German SMEs in the construction industry. Mackau acknowledged that the close integration of employees and any change in an organisation, whether structural or process oriented, would be very complex. The dearth in employee involvement in IMS incorporation is more pronounced through the observation of non-transparent management systems that are not usually suited for particular organisations.
Management systems should not cease to operate outside the organisation. Interaction between suppliers and subcontractors should also be included. However it may not be simple to control or even judge suppliers (Mackau, 2003). Mackau also noted while integrating different management systems, past lessons were not contemplated. It has been shown that not all management systems satisfied the views of employees and employers (Mackau, 2003).

The extant contextual literature gave the impression that the alignment between IMS and business objectives is scarce. As such, there is another way to conduct a review on the different perspectives of problem solving methods with regard to IMS implementation. Section 2.4.2 reviews the different perspectives of concepts and models.

2.4.2 Propositions which may need investigation.

At present, IMS has become a part of business management. Rajkovic and Aleksic (2009, p. 1) defined IMS as:

**Integration is a harmony, strategy balance and work of any company. It means that various departments and levels speak the same language and they are on the same wavelength. In literature the integration of management systems (IMS) is discussed as joining of QMS, EMS, OHSAS and corporative society responsibility (CSR). Thus, to survive and have success in global competition, any company should consider any aspect of process including reduce of costs, welfare of any employee, work environment as well as effect of a company work to its neighbours local government. Moreover companies should present their own problems on product and service quality. The concept of the integration of management systems (IMS) has been developed from these needs.**

In the Singaporean context, quality is defined under the global coverage of IMS. The elimination of waste, eradication of hazard and continuous improvement are the current accomplishments.

The concept of quality has moved from being an aspect of the product or service to include all activities in the organisation. The core value of IMS assumes that each process of creation is
perceived as a connection between a customer and a supplier. The suppliers, whether internal or external to the organisation, need to meet the customer’s explicit and implied requirements and do so at reasonable charges.

The early development of IMS was influenced by a few key contributions to the quality movement. Nowadays IMS looks at the cohesions of concepts among different schools of thought. IMS considers that customer satisfaction and reducing costs are the two feasible consequences. Early identification of critical success factors (CSF) can be used to measure the organisation’s successful implementation of IMS. CSF is an attempt to find the influences on successful implementation of IMS. This attempt was empirically validated by Black and Porter (1996) and the study identified ten factors that affected the successful implementation of IMS. The ten factors identified by Black and Porter (1996) are: communication of improvement information, corporate quality culture, customer satisfaction orientation, external interface management, operational quality planning, people and customer management, quality improvement measurement system, strategic quality management, supplier’s partnerships, and teamwork structures.

Nevertheless, there have been other exploratory attempts to work out CSF in different contexts. Certain studies have restricted the contextualised significant practices to define CSF. The CSFs in the study (e.g. Wali, Gupta & Deshmukh, 2000) was constructed using a statistically validated instrument and factor analysis. The CSFs was not constructed by assembling a prior set of predefined CSF and then matching them with the actual practice (Wali et al., 2000). Instead, Wali et al. (2000) used a contextualised empirical case study to identify twelve factors of CSF practices. The detailed twelve factors are itemised below in increasing order of importance.

The least important factor was the interaction between employees and management personnel. From the CSF perspective, the dynamic interaction between employees and management personnel is significant. Management personnel arrange for the direction to improve and employees are consequently inspired to take initiative. In case of any difficulty, the employees cooperate with the management to improve the circumstances.

Another factor for CSF consideration is results and recognition. The organisation should recognise employee contributions and a reward system should be in place. It is essential to
make available a quick recognition system for the employees demonstrating outstanding performance. The recognition may or may not be purely monetary in form.

Conducive work culture is preferred. Conducive work culture is a component of CSF and the active interaction amongst the peers and support from supervisors creates a conducive environment. The employee’s involvement in the business process of an organisation should be built on the critical importance of their experiences and certainty of the business objectives. The most innovative ideas originate from employees actually doing the job.

Information and data management is another critical component of CSF. This factor emphasises the core business processes and is measured and quantified on a regular basis. Facts and information should be prepared and made available to all stakeholders involved in the process. It should provide an incentive for improvement and focus on a benchmarking approach. This benchmarking approach is crucial to the cost of management.

Employees should pay attention beyond meeting customer expectations. The concept of internal and external customers should be highlighted to employees. The attentiveness to meeting and exceeding customer expectations is obligatory to all stakeholders in the IMS implementation. There needs to be an emphasis on responding to feedback from customers is a critical component of CSF. Moreover, there must be impartial treatment of all. Values and ethics are imperative for the stakeholders in IMS implementation to live up to the highest ethical standards. The organisational code of conduct must be supplemented with appropriate values and ethical standards.

Communication is vital in aligning the work process towards shared expectations. Effective communication must exist concerning various business units across the organisation. Teamwork provides synergistic improvement. Teamwork is a critical component of IMS implementation. Employees must demonstrate good and cooperative practices with positive attitudes towards functioning as a team. The atmosphere at the organisation must be good natured to encourage active interaction. Employees must trust and recognise the abilities of one another. This aspect is considered as congenial interpersonal relations.

Delegation and empowerment are required in an IMS implementation. Both delegation and empowerment are prerequisites and individuals must exercise commitment for the success of
their efforts in the working environment. All individuals in the organisation must be aware of opportunities for continuous improvement. The contribution of individuals in the organisation is a principal concern in the attainment of customer satisfaction. Managing the business process is a key factor in engaging all individuals in the organisation. Satisfying customers is the core duty of all individuals within the organisation. Employees shall be accountable for the satisfaction of customers. This issue is labelled as ‘process improvement’.

The above factors are the findings of the study of Wali et al. (2000). These factors were not constructed upon the predefined CSFs, and are indeed additional measures of CSF. It was noted that Wali et al. adopted the exploratory research method to discover them. Accordingly, this study adopted a similar approach to address the literature gaps in this study. There is a detailed discussion of the approach in Chapter 3.

There are other approaches besides CSF, one of them being Systems Thinking. Bauer, Reiner and Schamschule (2000) developed a quality model from the perspective of Systems Thinking. They attempted to understand IMS from the Systems Thinking perspective. Systems Thinking is a specific mechanism to capture interaction and predict consequences. To elaborate further, Systems Thinking is capable of capturing the interactions surrounded by a variety of system elements. Systems Thinking assists in predicting the consequence of each interaction over a period of time. Bauer et al. (2000) used Systems Thinking as a method to study the influence of strategy, structure, decision-making and delay on the progress and stability of organisations. They demonstrated the interdependence of diverse organisational structures using the Systems Thinking approach in the context of quality.

Cao, Clarke and Lehaney (2003) studied IMS-based organisational change programmes and found the tactics for organisational change can be categorised into four factors. These are: changes in values (cultural), changes in functions (structural), changes in process, and changes in authority within the organisation. This approach of addressing all four types of changes may improve success in IMS implementation. However, a systemic method is needed for the successful implementation of IMS. For that reason, Cao et al. (2003) concluded that the success of IMS implementation is the serious observable gap in its acceptance.

indicated that a lack of essential quality measures to monitor important factors was often the cause of IMS failure. The important factors were the satisfaction of both customers and suppliers and the ability of management to raise the spirits of employees as well as ensure the standards of outputs through their leadership (Khanna et al., 2009, p. 94). Khanna et al. argued that a system dynamic model is the key to overcome the IMS failure. They specified system dynamic tools as “leadership, strategic planning, information management, human resource focus, supplier focus and process management” (Khanna et al. 2009, p. 95).

The current study first outlines the generally recognised values of an IMS in theory and practice, with the support of accessible literature. This approach is to determine what in reality constitutes on IMS. This is followed by an argument on the inquiry of literature on IMS. This inquiry of the literature is expected to categorise the characteristics of IMS which have been exposed in research and the contemporary position of research in IMS implementation.

The focus in extant literature was to examine the integration of quality, environment, and safety and health management systems. The alignment between IMS and business objectives appears to have been barely recognised in the extant literature. As such, the only alternative is to conduct exploratory field study to realise the factors that outline alignment between IMS and business objectives. Given the nature of the extant research, the current study will add to the growing case study database about this phenomenon.
Research Design
(Developed for this study)

Identification of Further Research

Comparison with Extant Literature

Data Analysis
(Emergent Model - Contribution of Knowledge)

Data Analysis
(Emergent Themes)

Data Analysis
(Emergent Elements)

Data Collection Method
(Field Research)

Research Design
(Selection of Methodology)

Identification of Research Problem

Literature Review
(Gap Analysis)

Document Map
2.5 Chapter Summary

Based on the review of literature, it is noted that, in general, the strategic alignment model components are: the business strategy, the IMS strategy, the IMS infrastructure and process, and the organisational infrastructure and process. These four interactive components are the core organisational competitiveness and fundamental content to achieving alignment across the organisation. No studies were identified that examined the misalignment between IMS implementation and business objectives. In addition, much of the research was highly contextual.

Karapetrovic and Jonker (2003, p. 453) clearly stated that “the existing literature on the theoretical aspects of IMS is still pretty thin”. In fact, IMS is a relatively new area of research and the existing literature in this area is almost absent. Consistent with the review of contextual literature, identification of research issues and as suggested by Karapetrovic et al. (2003), this confirms that in both the extant literature and in practice, documentation of alignment between IMS and business objectives appears to be insufficient.

The extant literature was exhausted and none of them gave the impression of having paid attention to the alignment between the IMS implementation and business objectives. As such, the research problem was identified as:

**The alignment between IMS and business objectives seems to be poorly documented in the literature and in practice.**

Grounded on the research problem, the research question was crafted as:

**What are the factors that enable alignment between IMS and business objectives in SME's in Singapore?**

Given that much of the research on IMS implementation involves detailed case studies that contribute to both theory and practice it was decided that a further case study approach would be undertaken. In this case, the context is Singapore and SME’s in particular. The next chapter describes the case study methodology in detail.
Research Design
(Developed for this study)

- Identification of Further Research
- Comparison with Extant Literature
- Data Analysis
  (Emergent Model - Contribution of Knowledge)
  - Data Analysis
    (Emergent Themes)
  - Data Analysis
    (Emergent Elements)
  - Data Collection Method
    (Field Research)

Research Design
(Selection of Methodology)

- Identification of Research Problem
- Literature Review
  (Gap Analysis)

Document Map
Chapter 3: Methodology

3.0 Introduction

Chapter two identified the research problem as being that the alignment between IMS and business objectives seems to be poorly documented in the literature and in practice. This chapter displays an explanation of the research design adopted to explore the factors that enable alignment between IMS and business objectives in SME’s in Singapore. It details the justification for using case study methodology, the approach of research design, data collection method and data analysis method to achieve an answer to the research question.

This chapter is divided into seven sections. Section one presents the justification for using case study methodology. Section two explains the adopted case study approach used in this study. It includes research design, samples, and instruments used. Section three describes the data collection method and section four presents the approach taken for data analysis. Section five presents the quality of study issues and discusses how to triangulate the collected data. Section six discusses the ethical considerations in this study. Section seven provides a summary of the chapter. Justification for selection of case study approach is detailed in the next section.

3.1 Justification for using case study methodology

Miles and Huberman (1994, p. 10) described the strength of qualitative data as “data with their emphasis on people’s lived experience are fundamentally well suited for locating the meanings people place on the events, processes, and structure of their lives and for connecting these meanings to the social world around them”.

This qualitative study is focused on people’s lived experience associated with the process of Integrated Management System (IMS) activities, directly and indirectly related to the business objectives. This study investigates the alignment of business objectives and IMS
implementation processes in Singaporean SMEs. Specifically, the researcher will identify the
dimensions of the alignment between the IMS process and the objectives of the organisation.

As mentioned above, a qualitative case study approach was adopted as the basis for this study. Yin (1994) describes the case study research method as a study into specific factors by analysing recent occurrences in a limited and specified area. The case study research method employs numerous alternative sources where it appears that the observed patterns and general context are not obvious.

Qualitative research case studies have proven to be valuable in providing a rich source of data in situations where little is understood about a phenomenon (Yin, 1994; Zach, 2006). Furthermore, the case study approach is seen as a substantial methodology in its own right (Denzin & Lincoln, 2005). Given their complexity, case studies can generate multiple sources of data for analysis. Researchers use the case study method to construct theory, to produce new theory, to argue theory and in some instances test theory.

Additionally, case studies may describe specific situations. Eisenhardt (1989, p. 535) claims that case studies can be used to achieve a number of objectives to provide description, test theory or generate theory. Kidder and Fine (1987) suggest that case studies can be used to provide explanation for observed phenomenon and every day events. According to Pinfield (1986) and Anderson (1983), case studies can also test theories if appropriately designed. In general, Gersick (1988), as well as Harris and Sutton (1986), state that case studies have the potential to generate theory.

Three types of case studies are identified by Yin (1994): namely, descriptive, explanatory and exploratory. The strength of a descriptive case study is that it offers a detailed representation of the phenomena under study. But a descriptive case study does not have strength to test or build theoretical models. In an explanatory case study, research is based on the theory that certain knowledge is probably impossible. This approach is to explain the differences within the assumed knowledge. The strength of an exploratory case study is that it can be used as a basis for formulating theory or testable hypotheses. Descriptive, explanatory and exploratory case studies are equal amongst each other as an approach depending on the situation and desired outcomes. According to Yin (2003), an example of a study with excellent descriptive and explanatory qualities is Street Corner Society by Whyte (1943). This example expressed
that the case study approach is not restricted to only one type. A number of good case studies are a combination of descriptive and exploratory, or descriptive and explanatory.

The exploratory case study approach was selected for this study because the research problem is that the alignment between IMS and business objectives seems to be poorly documented in the literature and in practice, making it necessary to find the factors that influence the research problem. However, this does not mean that the adopted case study approach is inclined towards the exploratory type alone. This present study uses a descriptive and exploratory approach. Hakim (2000) states that descriptive case studies may also be exploratory when comparatively little research has been done in the focus study area.

Hakim (2000) further states that descriptive case studies may be either typical or selective in nature. A selective, descriptive case study may focus on a very precise phenomenon with the purpose of filtering understanding in a very specific extent. It is used to enhance understanding of fundamental procedures. The selective case study may possibly address how and why concerns.

According to Stake (1995), the characteristics of case studies are primarily collective case study, instrumental case study and intrinsic case study. A collective case study approach is used to understand a phenomenon, population or general condition by studying a few cases conjointly (Stake, 1995). It is often referred to as a multiple-case study. Instrumental case studies are intended to provide insight into a subject matter or problem or to improve a theory. In an instrumental case study, understanding a subject matter or problem is a top priority and understanding the complexities of the case is ancillary to a subject matter or problem (Stake, 1995). An intrinsic case study is expected to recognise a specific case for the reason that the case itself is of interest. A case may be of interest because it has specific features (Stake, 1995).

The approach in this case study was both instrumental and collective research in an exploratory approach. It was expected to provide insight into the dimensions of alignment between the business objectives and implementation of an Integrated Management System. To summarise, an exploratory case study qualitative approach with both instrumental and collective characteristics was the selected methodology adopted in this study. This approach therefore provided the opportunity to find the factors that enable alignment between IMS and
business objectives in Singaporean SMEs. This chapter justifies and describes the methods used in this study. The next section explains the methodology adopted for this study.

### 3.2 The adopted case study approach

As concluded in the literature review, the focus of this study is on a relatively new area and there is sparse literature concerning the alignment of IMS implantation and business objectives. The research question was identified as being to explore the factors that enable alignment between IMS and business objectives in SMEs in Singapore.

Existing research tends to be based on quite disparate case studies that have varying focus and findings. Thus, given the lack of substantial theory in the area, an exploratory method is the most appropriate approach to address the research question derived for this study. An exploratory approach enables the collection of in-depth knowledge from qualitative field research. It was also thought that carefully selected case studies would provide the best opportunity to obtain rich data.

In this study, the exploratory case study qualitative approach was used to develop an alignment model between the IMS and business objectives. The literature, interviews and document analysis were all used to enable triangulation of the findings. During the initial stage, the original research design intended was a single case study with in-depth interviews and extensive document review for triangulation purposes, using a within case analysis method.

However, at the beginning of the data collection stage, there were complications arising from the case Organisation A. The first complication was that participants were not comfortable with participating if voice recorders were used to record the conversation in the course of interview sessions. Furthermore, participants were not agreeable to cooperating with a request to provide copies of IMS and business related documents for the purpose of document review. Participants quoted reasons that IMS manuals were classified as controlled documents and the existence of nondisclosure contract agreements between the client and the Organisation A.
After careful consideration, the researcher decided to modify the tactics of single case and made modifications to the initial intentions of the research design. The actual process of detailed research design, data collection method and data analysis method are presented in the remainder of this section and in sections 3.3 and 3.4 respectively.

### 3.2.1 Research design

An exploratory case study methodology was selected and the actual research design deviated from the initial research proposal due to the reasons stated earlier in Section 3.2. The actual research design was that three case organisations were chosen from two different industries. Each of the three case organisations was embedded with two case studies consisting of an IMS standpoint and an operational standpoint. The reason for selecting the embedding of two different case studies within an organisation was to provide some rigour to the findings. The IMS standpoint and operational standpoint are not the same and would undeniably provide the opportunity to triangulate by a cross case analysis method. The operation staff members are responsible for the operation matters and IMS compliances are not focused in their daily routine. While IMS staff members concentrate on IMS compliance, they may be not fully familiar with operation matters.

The emergent case studies were worked in the following way. The initial plan was communicated to people in the first case organisation and then guided questions were established for the second and then third case organisations. Detailed discussion of the guided questions is presented in the Section 3.2.3. The theory emerged as the researcher communicated with different people in different contexts as it enabled the researcher to find the similarities and differences between people in the embedded cases on the one hand, as well as between the case organisations on the other. This straightforward method worked well with the exploratory case study methodology, qualitative approach. The researcher was looking for emergent themes and differences. The emergent themes are the commonalities that express evidence about the alignment between IMS implementation and business objectives.

The case studies were selected based on a theoretical sampling approach to facilitate theoretical generalisation, instead of random selection of cases (Yin, 2003). In this study,
selection of sampling used only one condition. An intention of the embedded case selection was to create a representative sample of the alignment process existing at each case organisation.

Eisenhardt (1989, p. 545) stated that “there is no ideal number of cases and a number between four and ten cases usually works well”. Eisenhardt further stated that “with more than ten cases, it quickly becomes difficult to cope with the complexity and volume of the data” (Eisenhardt, 1989, p. 545). Likewise, Eisenhardt was of the opinion that the number of cases includes the several mini-cases within the case itself and quoted an example of Mintzberg and McHugh’s study of the National Film Board of Canada (Eisenhardt, 1989, p. 545). In line with Eisenhardt, in this study the actual research design selected three case organisations with two embedded cases each, a total of six case studies. Six embedded case studies was considered as an appropriate number, with specified theoretical sampling and representativeness conditions. More cases would increase the practical and research complexity.

3.2.2 Sample.

There were three selection criteria for the potential case organisations. The potential case organisation must have gainfully implemented Quality Management System (ISO 9001), Environmental Management System (ISO 14001) and Occupational Health and Safety Assessment Series (OHSAS 18001) in the nature of IMS and must not obtain certifications as three different standalone certifications. ISO annual report (2008) stated that the integrated use of management system standards (IMS) is proving highly successful. It is justifiable to set another criterion. The second criterion was that the potential case organisation would be required to attain the integrated use of management system standards for a minimum of five years. The last criterion was to meet the category of a Singaporean SME. The three participating case organisations met all criteria.

The three participating SME organisations belonged to two types of industries. The participating case Organisation A and participating case Organisation B were from the engineering services industry and the participating case Organisation C was from the clean technology industry providing specialist clean technology and products.
Contact Singapore, an alliance of the Singapore Economic Development Board and the Ministry of Manpower, classified eighteen key industries in Singapore (Contact Singapore, 2013). Contact Singapore’s website stated that:

_Singapore engineering services industry accounted for about 1.2% of Singapore’s Gross Domestic Product (GDP) in 2011, and employed about 35,000 people. Highly exportable and scalable, the engineering services industry required specialist knowledge, process know-how and investments in human capital. This is in line with Singapore’s vision to develop a knowledge-based economy. The vibrant engineering services industry comprise the sub sectors of engineering design and project management, control automation, and testing and certification services…_(Contact Singapore, 2013)

Singapore has identified the clean technology industry as “a strategic economic growth area. By 2015, the clean tech sector is expected to contribute Singapore Dollar 3.4 billion to Singapore’s GDP and employs 18,000 people” (Contact Singapore, 2013). Therefore, the participating organisations were in industries considered significant in Singapore.

The selection of potential participants within each case organisation was based on three criteria. The interviewees were carefully chosen on the basis of their job accountabilities and awareness of the organisational mission. In this study, there were a total of thirty interview participants. Many of these came from different levels and responsibilities with at least one year of IMS experience in the business process. The minimum standard of one year IMS experience fulfilled the criterion related to job accountabilities and awareness of the organisational mission.

The second criterion was to ensure a desired mixture of hierarchy level groups within the case organisations. This approach was to provide different perspectives in terms of practical views across the diverse organisational hierarchy. The desired mixture depended on the individual organisational structure. The higher hierarchy level could acquire lesser participants and lower hierarchy level had more available participants. There were predominately twelve (40 per cent) participants in each group who were performing management roles. They were employed as middle or senior managers in SMEs within the engineering services industry and
clean technology industry. The remaining eighteen (60 per cent) participants belonged to the rank and file group and were not strategic decision makers.

The third criterion was to ensure a desired mixture of job description of the participant groups within the case organisations to ensure conceivable formation of embedded case study design. This criterion depended on the IMS structure. Every organisation would have staff members from different levels focused in the specific areas of quality management (ISO 9001), environmental management (ISO 14001), health and safety (OHSAS 18001), as well as the role of management representatives. Thus, a mixture of six staff members representing the operational sector and four staff members representing IMS within an each case organisation was preferred.

The first category of operational staff members are the mainstream participants in this study. The second category of staff members representing IMS were of two types, some whose roles and responsibilities were related only to IMS and others which were a mix of IMS and operation. The staff members representing IMS acted according to their duties and responsibilities. Their views were from different perspectives and their reporting system correspondingly not the same. Most importantly, their key performance indicators were not identical to the operational staff members. This meant it was necessary to conduct cooperative activities between the IMS team and operation team.

Amongst them, twenty-four (80 per cent) of the participants were male and six (20 per cent) were female. The total time taken to conduct these interviews was five months, and the duration of each interview averaged an hour and a half. The profile of participants is illustrated in the Table 3.1.
3.2.3 Instruments and measures.

The research problem identified in Chapter 2 was that the alignment between IMS and business objectives seems to be poorly documented in the literature and in practice. This raised a research question related to exploring the factors that enable alignment between IMS and business objectives in SME's in Singapore. As such, the research question of “what are the factors that enable alignment between IMS and business objectives in SME's in Singapore?” was the main concentration of this study.

In order to answer that question the first focus was to understand the processes of the organisation. The aim of this focus was to recognise the existence and functionality of the collaborative processes in the organisation. It was also to discover the relevance of the business process and implementation of the IMS. The second focus was to discover the effectiveness of IMS in direct support to the organisational mission. It was also necessary to explore the possible alternative means that might better support the objectives of the organisation. The third focus was to explore how efficiently and effectively resources were deployed during IMS implementation. The aim of this focus was to explore the IMS strategies for resource deployment.
Based on the above mentioned three areas of focus, interview guiding principles were developed. The first and second interview guiding principles were built upon the first focus area and stated the principles as “identifying the organisation’s core business” and “identifying the processes required to create and maintain the core business of the organisation”. The third and fourth interview guiding principles were built upon the second focus area and stated the principle as “identifying the effectiveness of IMS in direct support of the organisational mission” and “identifying the other possible alternatives to IMS, in order to support the organisational mission”. The last three interview guiding principles were built upon the third focus area and stated the principle as “explaining the resources deployment during IMS implementation”, “explaining the efficiency of the resources deployment during IMS implementation” and “explaining the effectiveness of the resources deployment during IMS implementation”.

These interview guiding principles were used to monitor the interview sessions. Interview guiding principles are shown in Appendix 2. Participants received a prior notice of interview. This letter reflected the detailed role of their participation and the study focus objectives. The letter of notice is attached as Appendix 1.

The sources of information for this study were the current literature, face-to-face interviews, and written documents. These sources were used to identify and explore the various dimensions of a successful integration of organisational objectives with IMS procedures. The questions, ‘how’, ‘what’, ‘when’ and ‘where’ were used to define certain concepts, to formulate themes and hypotheses.

The investigation focused on an examination of three Singaporean SMEs by undertaking ten interviews in each case organisation. The interviewees involved one senior manager, three middle managers, and six staff members each for every single case organisation. Thus a total of thirty interviews from three SMEs were conducted. This approach aimed to study the perspective of the alignment in different organisational hierarchy levels.

However, the persons at the highest management level could not be interviewed due to their busy schedules, except for the case Organisation B. The participants listed by position held were illustrated in Table 3.1 in the last subsection. These positions are illustrated from highest to lowest. The rank of positions does not represent the sequence of interviews. A number of
interview participants had similar positions in each business process or IMS implementation. As stated in the research design, total participants consisted of forty per cent (40\%) IMS staff members and sixty per cent (60\%) operational staff members. This breakdown was to ensure the obtainment of embedded cases within the case organisations. On the other hand, participants were spread through the different hierarchy levels and the participants from the rank and file level were also interviewed. This latter group provided information from their perspective and this differed from the views of senior management. They did not know much about the management perspective and corporate level phenomenon. However, they provided valuable information intended to be investigated. For instance, rank and file staff members were able to provide inside information about the practical points of view. One of the rank and file staff member participants offered to the researcher to opportunity to observe the difference between actual process and IMS procedure in the manual. This was a rare occurrence and, had the participant been managerial staff, it was most unlikely to happen. Most managerial staff members were able to explain the process without exposing the real process, whereas rank and file staff members preferred to demonstrate the live scenario.

Data was accumulated from different levels of management with different responsibilities for planning and strategising within the organisations (one interview participant per case); managers from different branches but active in the implementation process (three interview participants per case); and rank and file employees (six interview participants per case). This information was compiled through field notes, which were write down after each visit. Interviewees were not asked for personal particulars, except their appointment and involvement in the IMS procedure related to their duty of business. Most middle or senior managers were management representatives for the IMS implementation and had other duties and responsibilities related to the core business of the organisation.

In Singapore, it is challenging to obtain internal documents related to organisational procedure if the research program is not supported by a local authority such as the government of Singapore or its statutory boards. During the development stage, two participating organisations allowed the researcher to view documents after the interview sessions. The researcher had asked for the supporting documents during interview. However, document review was conducted after the interview sessions. The documents available for review were the organisation’s vision and mission, organisation’s safety policy, organisation’s commitment to sustain the environment, organisation’s effort to contribute the recycling.
programme, minutes of IMS audit meeting, project quality environment health and safety management system (PQEHS), training guide, a partial copy of IMS manual and the IMS certifications.

Data from the organisations’ internal documents and archives were viewed, and recorded via field notes for the purposes of triangulation. Participants declined to extend copies of documents due to nondisclosure policies. Most participants quoted that their projects were subject to legally and contractually binding non-disclosure agreements with their clients. Data from the internal documents provided strong evidence of decision-making actions and organisational strategies. Data concerning the benefits of implementation were also collected from all participants through questions based on the information retrieved in the course of document review.

The researcher requested detailed IMS manuals and audit reports, but participants declined to provide any for review. The documents allowed for review were the overview of the subject matters and contained no detailed indication of the day to day activities. It was not a comprehensive enough view to verify participant claims but nevertheless it provided an adequate amount of evidence to compare and contrast the participants’ claims during interview sessions. For instance, a copy of an internal training guide was provided for review and the researcher noted the statement. This example is provided in Section 4.1.14 of Chapter 4.

The participants were not named or identified by any distinguishing features other than the scope of their employment in order to preserve their anonymity and were only known to the researcher. Interviews were conducted at the convenience of participants and as little time were taken as possible.

Some available organisational documents were examined after the interview sessions, if necessary. The interview approach also made assurances of impartial observation during the course of interviews. For instance, participants were presented with scenarios relating to environmental issues, and the researcher had the opportunity to compare and contrast their interview conversation with their PQEHS document contents.
Multiple reference points are necessary in qualitative investigations to validate responses as much as possible. Thus, a documentary analysis was undertaken along with interviews. Those written documents included were business objectives and IMS planning constraints, statements related to convergence of IMS and core business strategy, business units’ strategy and goals, IMS expenditure analysis, IMS governance, summary of strategic objectives, summary of strategic directions, IMS infrastructure, IMS steering committee recommendations, IMS audit report, and analyses of available options.

Two main results were obtained. First, the main critical alignment factors of IMS were identified. Second, the identified critical alignment factors were traced along the IMS implementation process to ascertain a framework of alignment.

Conclusions were arrived at separately. Firstly, the primary alignment elements of IMS were recognised. Next, the critical alignment dimensions were traced along the IMS implementation process to ascertain a pattern of alignment. The resulting framework displayed the critical alignment factors’ effect in each dimension of the IMS implementation process.
Research Design

(Developed for this study)

Identification of Further Research

Comparison with Extant Literature

Data Analysis
(Emergent Model - Contribution of Knowledge)

Data Analysis
(Emergent Themes)

Data Analysis
(Emergent Elements)

Data Collection Method
(Field Research)

Research Design
(Selection of Methodology)

Identification of Research Problem

Literature Review
(Gap Analysis)

Document Map
3.3 Data Collection Method

Initially, this study intended to use single case study and hence the ‘within case analysis’ method. Interview protocols were used for three tiers: top and senior managers, middle managers, and employees. Originally, the study relied on various streams of information such as the conduct of interviews, analysis of internal documents, general observations and the compiling of archives within a case.

As the study developed, there were complications related to the multiple data sources, especially in the area of availability of internal documents and archives. Although the assertion of confidentiality and anonymity was given to the first participating organisation, it was a great challenge to convince management to disclose the internal archives and documents related to IMS implementation. The organisation did not wish to provide the evidence of misalignments and their internal IMS process. Further, all case study organisations quoted non-disclosure agreements with their clients and the researcher was unable to obtain the sufficient relevant documents for triangulation.

As a consequence, in the course of the data collection stage, it was decided to adjust the multiple case study method by increasing the initial single case to a total of three case organisations with two embedded mini case studies. The embedded mini cases are mainly operational viewpoints and IMS viewpoints. Researcher undertook 30 interviews of three different SMEs to see if there was any consistency in responses or to see if there were differences.

The initial approach was to record the interview with a voice recorder and have it transcribed. However, there were objections from the first participants leading to changed tactics immediately upon request and instead taking field notes. After receiving similar objections from another two more participants, the researcher stop using a voice recorder and decided to adopt field notes for all interview sessions. The main reason was to create a consistent and non-discriminatory process. All the six mini cases within the three case organisations were conducted using face-to-face interviews.

The thirty direct interviews were done to ensure confidentiality, each lasting about ninety minutes a session. As explained in earlier sections of this chapter, three main groups were interviewed, senior management, departmental management and the rank and file employees.
Table 3.1 exhibits the stakeholders’ individual roles and responsibilities with regards to the IMS implementation in their organisation. The clients of the organisation and the external parties were considered detached for this study and would not have a perceptive frame of reference to identify and comment on the business objectives and IMS’s role in the accomplishment of the organisation’s objectives. Therefore, clients and external supply chain personnel were not included in this study process.

The interviews were conducted in privacy. Each and every interview session was recorded with field notes. The information collected during this study may be considered as sensitive in nature. It is acknowledged that there may be latent effects on the organisation and the individual participants. Therefore, the direct employees of the organisations were recorded anonymously with a unique code. The field notes were used to record the responses. All participants had an opportunity to review their responses as recorded in the field notes. There was no direct identification of either the organisation or the individuals.

The nature of the enquiries raised required a response. It was considered low risk to the participants with regards to the protection of their employment. Although low risk to the participants, direct quotes were used with care so as not to expose the identity of participants. The nature of the small working environments of the organisations produced a situation where certain phrases and words could readily identify a participant. Therefore, the removal of sensitive phrases and words would assure confidentiality.

All participants provided details with some examples. Some participants provided great details with examples only with the assurance that their identity would remain anonymous. There were no discussions of any information during the interviews that was prejudiced, disrespectful or left any negative impression with regards to any individual or the organisation.

The factual evidence was collected from field research conducted, IMS documents, and existing organisational documentation related to the topic of this study. This technique distinguishes between primary and secondary sources of data. Primary sources were the participants’ feedback during interviews. Secondary sources were any previously published materials including organisation reports, letters, e-mail messages, faxes, memos, and newspaper articles. The documentation and records of persons involved in the alignment process between the organisation and IMS were used as a third source of information. The
focus of this study was to explore and identify the effectiveness of the alignment process between the organisation and IMS activities, based on the findings and further analysis of the data that was collected.

The researcher observed the participants’ presentation during interviews and requested relevant documents to support their claims before completing the interview sessions. There were some situations in which participants were unable to provide the relevant documents on account of a few reasons. Some participants quoted reasons of confidentiality, applicability of nondisclosure agreements and that they did not have the time to locate the requested documents. No participants were agreeable to showing their internal emails and minutes of meetings from their laptops or computers. All of the document reviews were conducted after the interview sessions.

Participants brought the requested documents to the interview room and allowed the researcher to review and record the contents by writing field notes. This procedure was accompanied by the participants and assisted by them to expedite the detection of accurate supporting documents. The researcher had the opportunity to immediately seek clarification.

In some cases, the researcher requested copies of the document to shorten the amount of waiting time. Unfortunately, no participants agreed to make the originals available for photocopying. However, participants allowed the researcher to come back to their office on other days to find out more relevant information. Prior appointments were required to be made in order to re-examine the requested documents and the researcher had the chance to observe actual daily routines only on two occasions. The specific two participants were of the opinion that instead of showing their relevant documents, it was more appropriate to show the actual process. It resulted in better understanding of the organisations’ processes and first-hand knowledge of the implementation processes. The onsite observation was not part of the data collection method but unexpectedly on two occasions, participants briefly gave details of the actual quality control process compared to the IMS documentation. This factor was not taken into the consideration in analysis as the process was not applicable to all case organisations.

The case study approach was used to explore, identify, and define the effectiveness of the alignment process between the organisation and IMS. This approach was similar to the study
method of Zutshi, and Sohal (2003). Data from interviews was treated as a primary source and data from documents was treated as secondary source to confirm or disconfirm the data from the interviews. In addition, there were different roles, responsibilities, and hierarchy levels of the participants within each case organisation that enabled the opportunity to triangulate the data. Triangulation concerns including comparison with extant literature are explained in Chapter 5.

3.4 Data Analysis Method

The research method described by Zutshi and Sohal (2003) was used as a precedent for the interview process. Document analysis was used along with the literature to triangulate the findings of the interviews.

In this case study approach, there were three stages of data analysis. The first stage was a study that was purely exploratory and attempted to find out the underlying factors that might shape the alignment between the business objectives and the IMS implementation process. The first stage of the analysis commenced with exploring the emerging elements that shaped the entire alignment process. This was subsequently followed with another stage of the analysis to further develop themes of the dimensions of alignment between the business objectives and IMS implementation. The second stage of the analysis was followed by cross case analysis with the emerging case organisations to confirm and contrast the findings of the study.

Four emergent central themes were developed during the emerging case organisations and confirmed with other case organisations from a different industry. These emergent central themes were supported and verified to produce comprehensive critical dimensions. Further, the causal phenomena of the alignment between the business objectives and IMS implementation were identified. The second stage was based on the findings from stage one and explored the linkages between all the elements of alignment and looked for support for the empirical assertions from the interviews through document analysis. This data was then used to construct themes. The last stage of the analysis was to verify the findings and deploy the case study methodology to explore the critical dimensions between the business objectives and the IMS implementation. The final stage of analysis was to confirm the themes
constructed during the in-depth study stage. This approach ensured the integrity of the data and themes constructed during the three stages of analysis. During the final stage of analysis, the findings from first and second stage (elements of alignment and dimensions of alignment) were compared and contrasted using Cross Case analysis.

In other words, in the first stage of the analysis, the methods involved exploring and constructing emergent themes from the data collected. The following second stage of the analysis explored these themes further and triangulated the interview findings. The final stage of the analysis concluded meaning of the themes for this study and constructed the entire model as well as ensured affirmative findings. Dawson (2009) stated that the analysis of study data is heavily dependent on the integrative powers of the researcher. The focus of the interview sessions was to ascertain the substantive responses of the participants and analyse their perceptions. This process involved these perceptions being further differentiated and bracketed the common patterns. As previously discussed in the Instruments and Measures section, the key critical focus intention of the alignment process (the core business, IMS effectiveness, and effective resources deployment) was used to group as similar patterns and themes. The researcher delineated to incorporate identifying key words or phrases. This approach is to form the bases for the coding scheme and further reference as themes.

The analytical process was focused on the documented impressions of the participants’ perceptions. The data collected from the interviews was focused more on the participants’ recognition of their perception. According to Yin (1994), data analysis consists of examining, categorising, and tabulating to address the initial propositions of a study. If this were not the case, data analysis consists of recombining the evidence to address the original propositions of a study. According to Ivankova, Creswell and Stick (2006), data analysis breaks down chunks of information presenting it in an organised manner before this is interpreted with some scheme.

Qualitative data analysis poses its own difficulties. These difficulties include reducing the data, structuring the data, detextualising the data and triangulating (Hussey & Hussey, 1997). Reducing the data aims to condense and make controllable the series of data collected. This process involves some sort of generalisation which could need coding. The use of this type of condensing and controllable data process may provide a deep understanding and result in the collection of rich data. In this study, the interview guiding principles (Appendix 2) were
developed before the actual in-depth study fieldwork. This enabled the data to be condensed from the interviews. It also enabled the researcher to check all aspects required to be explored, prior to initiating data analysis and to ascertain the dimension of alignments.

Miles and Huberman (1994, p. 17) stated that “structuring the data is beneficial if a framework for structuring the data is developed before commencing the field work” and a hypothetical outline may deliver such an arrangement. However, the use of this type of preemptive data reduction may limit and restrict the collection of data. In this study, the selection of organisations was established before the fieldwork. It consisted of the appropriate organisation to examine the research problem. It also facilitated a check and balance of all the aspects which needed to be explored prior to initiation of fieldwork.

According to Miles and Huberman (1994), a lengthy script is not always an appropriate form of exhibition or analysis. Miles and Huberman (1994) suggest that it may be appropriate to transform the script into diagrams or tables and this is also known as detextualising the data. In this study, the interview field notes were converted into text, mapping charts and models. This comprised cognitive plotting and data presentations. Data presentations may also be tables for grouping and linking patterns. The methods of data presentation consisted of placing data into diverse ranges, constructing a matrix of classifications and putting the evidence within such classifications, flow charts and formulating the occurrence of diverse occasions. These detextualising methods were appropriately used in the analysis stage of this study.

Miles and Huberman (1994, p. 91) also highlighted the reasons for implementing such practices as opposed to a lengthy text case report. Lengthy text is considered a weak and bulky form of exhibition. The text is disseminated over various pages, making textual comparisons difficult, and text may be poorly sequenced and ordered.

It is imperative for case study analysis to adopt a general analytic strategy. The evidence must be treated impartially to produce persuasive analytic conclusions and to exclude alternative interpretations. These are the critical objectives of this strategy. The role of the general analytic strategy is to decide between the various available processes to successfully satisfy the analytic aspect of the research (Yin 1994). During the analysis of the data, the researcher distinguished between the factual and the personal judgment of the participants. Extracting
useful patterns from the data was necessary to develop a clear picture of the perceptions of senior managers, line managers and line employees. This study used a combination of Within Case analysis and Cross Case analysis.

### 3.4.1 The within case analysis.

In this study, ‘the within case analysis’ was used to explore the reasons for the elements of alignment that exist. This aims to explain beyond the explanatory claims and assertions. As described by Miles and Huberman (1994), the explanatory claims and assertions is a narrow band that justifies an action or makes a causal statement. Scientific explanation of human behaviour is an even narrower sub-band. It depends on certain conditions and is limited to the specific contexts. It makes sense for a series of events to become teleological judgments. Teleology is any philosophical interpretation that holds the final causes that exist in nature. The meaning is comparable to purposes found in human actions. The human action is inherent in nature and leans toward definite ends. This shows an empirical basis, such as ‘effect of the alignment is caused by the content’.

The within case analysis was used for the emerging case Organisation A study to explore the potential elements of alignment. In conclusion, elements of alignment will evolve and stick to all the available relevant data. There has been indication of dialogue between ideas (Theory) and evidence (Data). It is replicated in the within case data which displays the emergent codes and the pragmatic sources supporting the finding.

The next step was to differentiate the individual and organisational concerns by partitioning the data according to the predefined elements of alignment. This was done by empirical clustering within each of the two broad categories, noting patterns and themes. Such findings led back to other cases to test ideas (Theory) by conducting “if-then tests”. The within case data exhibits the emergent pattern and the patterns must be matched with the different scenarios.
3.4.2 The cross case analysis.

The cross case analysis was the implementation of the ‘if then test’ to confirm whether there was more organisational than individual concern. The cross case analysis was used to explore patterns to discover the emergent themes by comparing emerging case organisations. Cross case analysis can be made based on the predicted outcomes that are caused by different causes or different effects that are related to the same causes. However, in this study the former was preferred as it was more applicable. As described by Miles and Huberman (1994), Cross Case analysis is conducted by finding the patterns of temporal precedence (X precedes Y), constant conjunctions (when X always Y), and contiguity of influence (a plausible mechanism to link X and Y).

Themes were explored by Cross Case analysis using emerging case Organisations A and B. The emergent themes were constructed as a theory. The theories are beyond the ideas of subjectivity, bias and multiple interpretations. In this study, theory is described as a model and the model predicted the pattern of events within the context of the Singaporean SMEs. According to Yin (2003), theory is a sort of map that seeks to generalise the story. It is consistent with the interpretation of theory in this study.

A newly displayed emergent model can be created by partitioning the data by time and concern, or by clustering the data into different types of concerns. It is necessary to classify any variation in the types of concern over time and rate as primary or secondary concerns. As advocated by Yin (1994), the replication approach of theoretical frameworks is used to study in depth cases. A following case is then examined to determine whether the same pattern is found as in that of the previous cases. It is useful to examine the case where the pattern is expected where theoretical basis is to be absent. The Cross Case analysis was used again to confirm the recent findings with another case from within the same case organisation and the other case organisations. It was purely for confirmation purposes and triangulation was imbedded within the cases. Triangulation used data from non-interview sources such as IMS manuals, minutes of meetings and other relevant documents.

Both the Within Case analysis and Cross Case analysis were used for the data analysis process. The interviews were designated as primary data in the data analysis process. The primary data was then subdivided into themes which were grouped in accordance with either an affirmative or negative response. Each positive or negative response was further broken...
down, relative to the degree of detail and a common statement based on an association, with key words within the responses being used for these groupings.

After deconstructing prior conceptions of a particular phenomenon, the researcher collected multiple instances and then bracketed them. Within the brackets, the researcher cautiously inspected particular phenomenon of essential elements or components. The elements were then rebuilt into an ordered whole and put back into the context. This approach finds the patterns through multiple elements of alignment. The issue is not so much analysis as interpretive synthesis. Cross Case analysis between organisations would be using ‘reputational synthesis’ method. In this respect, the first step was to preserve the configuration of each case. The network of conditions, causes, effects, outcomes, and their temporal sequences within each case were protected during analysis. Such networks may need clarification and simplification but should not be deconstructed into the parts. There will always be multiple cases of multiple effects, some of which become further causes of later effects. It is necessary to see the whole picture.

The approach of cross case comparison involves the formation of groups or sets, inspecting the individual instances to determine whether they fall into the various subsets displaying similar features. The clusters can be sorted along some dimensions. Families or types can be formed from quite complex configurations, and can be sorted out into similar scenarios on the basis of each case’s causal network. It is assumed that the cases are somehow similar. The other approach of Cross Case analysis between the emerging case organisations is one of synthesising interpretations across cases, even if the cases were in different contexts. This approach includes making reciprocal translations within the different industries. Walsh and Downe (2005) describe this approach as ‘meta-synthesis method’.

The written documents of the procedures and processes of the organisation were used for validation of participants’ claims. According to Yin (1994) there are two types of common analytic strategies; namely, propositioned focused strategy and case focused strategy. Proposition focused strategy requires the use of conceptual postulations and the observation of pertinent issues throughout the various cases. Case focused strategy emphasises the case itself, and analysis is conducted within the case. Case focused strategy is preferred in this study. This involves employing a descriptive context to analyse the study and is valuable when the theoretical suggestions are lacking. This study implemented the case focused
strategy as the general analytic strategy. Nevertheless, quite a few analytic strategies can be used. According to Yin (1994) the four dominant modes of analysis of pattern-matching, explanation-building, program logic models and analysing embedded units are the stated particular analytic strategies.

Comparisons between empirically based patterns with an anticipated prediction forms the basis of the pattern-matching analytic strategy. This strategy also compares a number of different predictions. If the patterns are matched, the results can benefit a case study by strengthening its credibility. Explanation-building is a distinctive category of pattern-matching. The objective of explanation-building is to analyse the case study data by constructing a reason around the case. The final explanation is an outcome of a sequence of replications. This approach is applicable to the various instances and the outcome of the explanation-building process is the development of a pervasive and overarching understanding and analysis.

In this study, the emerging case organisations were analysed by repeated observations. Observations were made on the case within the case for every single study problem. Results from individual instances were further analysed by employing pattern-matching and explanation-building techniques. The patterns for the emerging case Organisation A were subsequently compared across the emerging case Organisation B and emerging case Organisation C, following the repetition tactic for multiple cases. From this analysis, assumptions were drawn on the study problem of the alignment between business objectives and IMS. The essential code was the mapping of data with comparisons back to the study concerns. Throughout the process of analysis, the researcher repeatedly conducted the activities of taking study concerns, reviewing the interconnected queries, interpretation and observing the relevant responses made and repeating for each participant.

Yin (1994, p. 150) also describes time-series analysis as it directly corresponds to the analysis conducted in experiments and quasi-experiments. The important reasoning fundamental to a time-series design is the match between trends of data points, compared with a theoretically substantial trend indicated before the initiation of the exploration versus some opponent trend. It is also specified earlier trends versus any trend based on some risk to internal validity.
The time-series analysis can also be adopted using program logic models. A program logic model is a mixture of time-series analysis and pattern-matching. The program logic model may use three less substantial approaches of analysis. The three approaches are analysing embedded units, making repeated observations and doing a case survey.

The first emerging case Organisation A was conducted by within case analysis and the appropriate analysis method is using the embedded units. The interpretation was made of the outcomes at the single-case level. It was preserved at the single-case level as either pattern-matching of a number of factors or explanation-building analysis. The exploration of the patterns for each single-case was compared across other cases. This was then followed up with the replication approach for multiple cases. As a final point, the outcomes drawn from the multiple cases became the conclusions for the overall study.

Repeated observations are made on a cross-sectional basis. For instance, repeated activities are observed for other embedded units of analysis within the same case. The case reviews are applicable only to those circumstances when several case studies are accessible for analysis. The closed-ended coding mechanism is improved by the case review approach and this approach was deployed to every single case in this study.

In this study, the researcher personally conducted interviews with all the participants in the emerging case Organisation A, B and C. Based on the evidence from the qualitative study cases, the researcher employed table top linking to develop the study issues using the Cross Case analysis method. The drawing of graphs and tables was not considered essential. As such, the use of computer aided special programmes was not necessary for the data analysis except for the use of excel sheets for data recording purposes.

In summary, the analysis in this study focused on exploring the study issues established in the emerging case organisations data collecting stage, presented in Chapter 4. The descriptions of the emerging case organisations are also included in Chapter 4 to provide a context for the analysis. Data linking the cross cases and responses within cases is also presented. The association of the analysis back to the theories from literature review and development of conclusions about the research issues and findings is detailed in the conclusion (Chapter 6) of this thesis.
3.5 Quality of Study

Usually quality of study is measured by the validity and reliability of the report. The terms validity and reliability are commonly associated with the quantitative research approach due to the measurement and quantifying of data. However, data collected are not quantifiable in the qualitative research approach. Instead of numbers, qualitative researchers use the quality of the argument to evaluate validity.

According to Yin (1994), four methods have been commonly used to establish the quality of case study research: construct validity, internal validity, external validity and reliability. However, there are various different schools of thought. In particular, Denzin (2009) states the necessary criteria for comparing research methods and research evidence using terms like credibility (internal validity), transferability (external validity), dependability (reliability) and confirmability (objectivity). In this study, Denzin’s approach is adopted to explain quality of study issues.

Qualitative researchers bolster the strength and credibility of their findings by employing a range of triangulation processes and sources of information (Kholeif, Abdel-Kader, & Sherer, 2008). In this case study, three complementary data sources were used to establish the credibility, transferability, dependability and confirmability of the participants’ perceptions. The three complementary data sources are: employees related to the core business; employees related to IMS; and written documents as outlined in the sample section. This approach was used to ensure that credibility, transferability, dependability and confirmability were established in the qualitative data collected. Data from similar occurrences may be employed to generate differing views. The complementary sources of information focused on the same event may be used to form different perspectives.

The selected case study research was designed to provide findings and a viewpoint beyond scrutiny. The rationalised components of the research design are credibility, transferability, dependability and confirmability. These terms demonstrate a considerable amount of discrepancy with different research philosophical viewpoints adopted (Wojnar & Swanson, 2007).

Given that this study is qualitative and exploratory, the research question was based on a phenomenological viewpoint. As a consequence, the detection of reliability and validity will
not be the same as for studies in the positivist and quantitative paradigms. In general, phenomenological research approaches begin without any preconceived notions and seek to illustrate rather than to explain (Wojnar & Swanson, 2007).

Phenomenological methods are mainly useful in extracting particular views and experiences from individuals. This poses a genuine challenge to normative assumptions. The incorporation of a further interpretive dimension allows phenomenological research the capacity to expand into practical theory, in turn allowing for the generation or disestablishment of policies and measures. The positivist viewpoint of validity focuses mainly on instrument measure, whereas the phenomenological viewpoint focuses on gaining full access to the meaning and knowledge of participants.

In terms of dependability, assuming that there is no real change in what is to be measured, the positivist viewpoint emphasises the results on different occasions. But then again, phenomenological viewpoint may emphasise similar observations on different occasions. With regards to transferability, from the positivist viewpoint, external validity anticipates that the identified phenomenon in individual cases will prove to be case in the broader range of instances. Alternatively, the phenomenological viewpoint of transferability pays attention to how the concepts developed in a particular environment may also apply in others.

There has been criticism that case studies often lack objectivity when it comes to their fundamental components and that there are no functional alternatives. Therefore, construct validity requires the development of procedures to rectify the issues at hand. A multitude of alternatives are employed through numerous bases of evidence. For example, in the course of the data collection stage, this study used different participants in each group and reviewed the emerging case Organisation A study report during the cross case study stage. Exploratory cases are meant to ascertain associations and links. The relationships between individual parts distinguish them from unrelated aspects. In order to achieve credibility (internal validity), in this study, pattern matching and explanation matching are embedded in the data analysis process.

Case study concerns whether the present findings of a study are applicable beyond its own confines. This is required to develop a more general and universal concept. This transferability (external validity) issue was considered through the research design and using
multiple case studies from different industries to comply with generalisation. The objective was to ensure that the same procedures were used across all emerging case organisations. The same findings and patterns that appeared in emerging case Organisation B also appeared in emerging case Organisation C.

The aim of dependability is to ensure impartiality and precision in a study. To establish dependability, during the data collection stage, case study protocol was engaged to develop the data base. This required illustrating how the key features of this study such as the gathering of findings could be replicated identically. This approach aimed to ensure that the quality of the argument was established clearly while defending the position of validity and reliability. In summary, the key critical component areas were credibility, transferability, dependability and confirmability of the sources of the data collected.

3.5.1 Triangulation.

The written documents such as the IMS manuals, minutes of meetings and other relevant documents were designated as secondary data in the data analysis process for triangulation purposes in case analysis. The written documents were also used to validate if participants’ claims were appropriate. The documentary analysis and the extant literature were the main sources of triangulation in this study. This approach was used to confirm or disconfirm the data from the interviews. The related detailed discussions are explained in Chapter 5, Section 5.4.

The main triangulation in this study used data from other sources and not from other cases. However, the three case organisations were used to confirm the methodological point of view. The first emerging case Organisation A was used to explore the emergent codes and match patterns to create elements of alignments. The second case, emerging case Organisation B, was used to generate themes to discover measurements and dimensions of alignment by means of cross case method. Any discrepancies from case A were triangulated by the case B. The third emerging case Organisation C produced a check and balance to authenticate the discoveries from cases A and B. This provided triangulation to the findings of this study and acted to safeguard against potential ambiguities.
3.6 Ethical Considerations

There has been no direct identification of any of the organisations or the individuals who participated. The researcher acknowledged the potential impact on the organisations and the individual participants, due to the sensitive nature of the information collected during this study.

As noted in an earlier section, the interview sessions were conducted in the privacy of the individual’s offices and took approximately within an hour and a half to complete each session. Each and every interview session was recorded with field notes and stored in a secure location. The field notes were transferred to written recorded files for further usage. The researcher presented these back to the participants for accuracy checking before the end of interview session. This approach aimed to summarise the discussion and confirm the participants’ contribution. Each participant had an opportunity to review their responses to the questions prior to data being used in the analysis.

After the field notes were transferred to written records files and verified by the participants, the field notes were destroyed to preserve the anonymity of the organisation and individuals. The records of written recorded files were kept as softcopies and were password protected. The researcher’s university supervisory team and examiners will have access to only the individuals’ significant analysis of the data, if it is necessary.

3.7 Chapter Summary

The literature review identified the research problem as “the alignment between IMS and business objectives seems to be poorly documented in the literature and in practice”. In this chapter, the case study methodology qualitative approach used to explore the factors that enable alignment between IMS and business objectives in SME's in Singapore was justified. Research design allowed for three case organisations with two embedded mini cases within an each case organisation.

Interview guiding principles were generated based on the research question and these guiding principles were used to conduct in-depth interviews. A total of thirty interview participants
from three case organisations were formed proportionately representing their roles, responsibilities and hierarchy levels. The significance of the three selected case organisations was also justified in this chapter.

With the interview guiding principles, this study discovered the factors that enable alignment between IMS and business objectives. Close attention was paid to the quality of the study, the appropriateness of triangulation and comparisons with the extant literature were conducted with the data. These approaches led to design of a theoretical model from this data. As a result, an alignment model was emergent.
Chapter 4: Findings and Analysis

4.0 Introduction

The literature review presented in Chapter 2 showed that alignment between business objectives and IMS implementation has been poorly researched. It will be recalled that the research question derived from the literature review was “what are the factors that enable alignment between IMS and business objectives in SME's in Singapore”. Chapter 3 described the methods used to answer this question. This chapter will explain the findings.

This report does not disclose any personal particulars or information from the contributing organisations from the study. This study concentrated on the fundamental issues relating to the business objectives and the integrated management system alignment process. This process is critical in order for an organisation to maintain its relevance and continue to expand in its industry. This study addressed two main results through interviews and analysis of three case organisations with embedded cases. The next section will present the findings of the interviews.

4.1 Findings from Case Organisations-Stage One (Elements of Alignment)

There were a number of themes that emerged from the study of emerging case organisations. A total of three stages were involved in this procedure. The first stage identified the elements that shaped the alignment between business objectives and IMS. The second stage discovered the central themes that emerged from the elements from stage one. The third stage realised that the relationship patterns amongst the emergent themes from stage two. As a final point, a theoretical alignment model emerged from all three stages of the study.

The elements of alignment namely ‘Certainty, Comfort, Cooperative, Discipline, Environment, Eradication, Experience, Magnification, Misconception, Remedies, Resources, Results, Support, and Training’, were identified during the first stage of analysis of data from emerging case organisations.
The emerging case organisations presented the findings and from them the fourteen elements of alignment were discovered. Common themes for the causes and the attribution of alignment between the business objectives and IMS are explained individually in Section 4.2 of this chapter. Triangulation of the emerging case organisations was conducted within the case analysis using different sources of data. The different sources of data refer to data collected from diverse hierarchy levels of participants including staff members belonging to IMS and staff members belonging to the operation divisions. The following are the elements of alignment that outline the alignment of IMS and business objectives.

4.1.01 Element of alignment-1 (Certainty of the content).

From the emerging case Organisation A, Participants A-02, A-03, and A-09, stated that ‘certainty’ was the key to the alignment between business objectives and the IMS implementation. The nature of this connection is the likelihood of achieving positive results relying on their level of confidence during the creation of the result followed by using it to increase the chances of engaging the business process during the implementation process. For instance, Participant A-05 inferred that misalignment is based on uncertainties which mean there is confusion with IMS procedures about how to get things done. Participants A-06 and A-07 explained ‘certainty’ as if their involvement in the process was unsure and the likelihood of the results tended to be negative.

As Participant A-08 pointed out:

The more I am certain about the IMS content, the more I can positively influence when dealing with the implementation process rather than something you do only, when you have no choice. The IMS manual would only give a positive outcome when I am confident about the implementation process. Certainty is a sort of assurance. I strongly believe in that. For instance, filling up the IMS form for audit purpose only would have no link to IMS and our core business (Participant A-08, personal communication, May 23, 2012).
Furthermore, Participant A-01 commented that, ‘certainty’ is an interface between the participant and the content of IMS and the business process. In the Singaporean SME context, this describes why strengthening certainty takes effort and time.

4.1.02 Element of alignment-2 (Experience of the content).

Experience is a distinctive form of interaction in IMS implementation. In the Singaporean SME context, operational procedures were formed through the accumulation of existing industry norms.

A complex SME culture consists of every single interaction amongst individuals. Participants A-03 and A-06 pointed out that experience is not formed through the accessibility of the content only but also the priority to adopt the IMS process during the implementation. It is indeed based on the real-time reactions.

Alternatively, Participant A-01 argued that alignments or misalignments are based on experience of the organisational procedures. It is an undeniable fact that experience is a kind of endorsement and that alignment or misalignment will not occur without valid reasons. When IMS is just used for monitoring purposes, criteria such as traceability, shared benefits and common obligations which can further the purposes of IMS, might be overlooked.

Furthermore, Participant A-10 explained that experience related to the content of IMS is unique to the culture of Singaporean SMEs. The understandings of experience could be vastly inconsistent between the managers and the rank and file employees.

As Participant A-04 said:

> During yearly audit, I noticed that all nonconformities will lead to misalignments of the core business and conformity will gain alignment between business and IMS. But if I have an opportunity to choose, preferably business practice instead of IMS procedure, because most IMS forms are double entry data and it is not productive at all (Participant A-04, personal communication, May 7, 2012).
Hence, it is difficult to describe what constitutes positive experiences toward alignment as every participant in the case organisations had their own interpretation.

4.1.03 **Element of Alignment-3 (Magnification by the content).**

Participants A-05 and A-08 indicated that effects of alignment may arise from even minor compliances. Misalignment may arise from even a tiny nonconformity. However, the organisation that made corrective action as per ‘plan, do, check, act’ (PDCA) cycle will regain the alignment. This normally happens during and after audit sessions and only if corrective action was taken for potential lapses.

Furthermore, Participant A-02 revealed that the smallest potential lapses should not be neglected during corrective actions. Potential lapses accumulate slowly over time and have a huge impact on the alignment of business objectives and IMS. Internal causes seemed involved in the magnification, but there was no evidence of external influences found in the SME context. Participant A-04 emphasised that:

> Our organisation may have good reputation, prosperous business and healthy financial status but employees are not familiar with the system implemented within the organisation. Moreover internal disorder still exists within the organisation and it will trigger the impact of malformation by the amplification factor (Participant A-04, personal communication, May 7, 2012).

In addition, Participant A-01 also mentioned about how the escalation of tricky situations is a norm in the Singaporean SME context and this can be usually defined as negligent activities of the business process with regards to the content of IMS.

4.1.04 **Element of alignment-4 (Misconception of the content).**

Participants A-03 and A-10 pointed out that inexperience and poor understanding of employees may generate misinterpretation of IMS content. Some employees do not have experience and they are unsure about the processes but assume that even though nonconformity exists, alignment can still be attained during the IMS implementation process.
The evidence showed that alignment does happen just on account of compliance with the IMS content and procedure. However, some participants believed that alignment between business objectives and IMS is not intertwined with the conformity of the IMS requirements.

Nonetheless, the perceived misconceptions were in accord with the evidence. Participant A-02 added that it was challenging to define the cause of misconceptions, whether they are due to variances in subjective perception, individual practice or distinct situations. Participant A-04 emphasised misconception of the content as:

*The aim of good business is to establish a profitable income, a successful organisation, good image of the organisation, and stable business with the partners. So, why must we be trained to know the content of IMS, since we already know the business process? IMS provide only the evidence; it does not provide tangible benefit, so we can just obtain certification and forget about the actual implementation practice* (Participant A-04, personal communication, May 7, 2012).

However, according to Participants A-07 and A-10, the alignment between business objectives and IMS also consists of a number of conditions such as understanding the true meaning of being able to differentiate the steps during the course of action and the purposes of usage in different conditions. It is imperative to understand these conditions, so that it is conceivable to distinguish between the true meaning of alignment and otherwise. In general, alignment is the accumulation of experiences established into associations between business objectives and IMS.

**4.1.05 Element of alignment-5 (Comfort during the process).**

Participants A-05 and A-07 indicated that ‘comfort’ is fundamental to alignment. This involves crafting a content working environment and by means of that comfort to increase the chances of attaining the business objective in the process of implementing the IMS. For example, Participants A-08 and A-09 stressed that alignment built on comfort means having proper steps that are indicated in the IMS document in order for them to get things done easily during the implementation process.
Participants A-06 and A-08 considered alignment as the easy recall and traceability of documents. As Participants A-06 and A-08 pointed out, the easier it is to trace the documents, the more you can positively influence during the implementation of IMS. The process will only provide a positive outcome if there is a significantly higher comfort level in the implementation process. For this reason, participants strongly believed that alignment is a kind of comfort level rather than something that happens only when participants have no choice but to implement it, such as for example, using the IMS as compliances to protect personal interests.

In addition, Participant A-02 commented that alignment is an interaction between the process and the participants’ comfort level in the IMS content. This explains why building up alignment takes effort and time. Alternatively, Participant A-09 argued that if alignment is only a sort of comfort level, then individuals may overlook compliance criteria within the IMS contents, such as non-conformity and observation of errors, which are used to conduct audits on the IMS.

4.1.06 Element of alignment-6 (Cooperation during the process).
Participant A-04 described employees’ resistance to cooperate. Similarities and differences of employee resistance to cooperate between the colleagues were explored. Participant A-02 presented both the common phenomenon of cooperation amongst their colleagues.

Different degrees of cooperation produce different results and practices. For instance, a pleasant and warm level of cooperation between two parties will certainly enable individuals to appreciate earnest involvement during the implementation (Participant A-07). Conversely, if the cooperation of operational personnel and Management Representatives (MR) is not harmonious or leads to division then an unpleasant result (such as delay in project delivery) will be experienced by them (Participant A-10). Thus, the employee views cooperation as a prerequisite of the alignment.
Apart from good experience during the implementation, Participant A-09 also suggested that:

*Everyone should be attentive of others, and in actual fact, everyone must know how to work together with others. It is considerable to continuously maintain an attitude to dedicate eagerly. What is more, do not consider the support offered by your colleagues as something invaluable. No one is capable of completing everything* (Participant A-09, personal communication, May 30, 2012).

Besides that, Participant A-08 pointed out that every person should offer service and support with the intention of maintaining good cooperation. The working relationship will collapse if someone consistently plays the role of contribution, while the other is demanding (Participant A-06).

As a consequence, it is important to be concerned about colleagues, the significance of their actions and to cooperate with them. Therefore, the experience would result in alignment (Participant A-05). In other words, cooperation is another requisite element of alignment.

### 4.1.07 Element of alignment-7 (Environment of the process).

Participant A-03 stated that the authorities (Government agencies) are the driving factor to implement IMS but there is no direct impact on business improvement. The organisation has to provide two separate departments to assist this issue (struggle over control within two different departments): the operational department and the other department that oversees the activities of IMS that deals with predicaments as and when they arise. Predicaments were frequently related to the issues of customers and the management representative from the IMS department provides a tool for an assessment and discussion to be conducted.

Participant A-10 offered two possible scenarios for change in the supportive role of the management representative:

*The operation staff members meet often to review monthly reports and decide what you have to do for the external and internal operation. So I think there are two separate ways that they may go about doing it, but both will have to change. I think they both
demand changes and improvements, but one of them involves a changing of human resources as well, retraining and attitudes and everything. This is the way of the surroundings of present position. I would guess they are going to change the direction but I don’t know. It will be interesting to see. Anyway, definitely the current environment needs to change, if we want to align business with IMS process (Participant A-10, personal communication, April 20, 2012).

Participant A-04 indicated that senior management has established key performance indicators (KPIs) for the organisation as one of its business plans and they have initiated pointers for the IMS performance as well. The organisation’s IMS procedure is questionable, as such, and the client raised further questions on the usage of the case organisation’s KPIs, which were not interconnected with the IMS manual. This was a tactic that the management representative used to keep up their approach to gain capability. The organisation may not be able to make certain that it maintains its capability to manage itself well by implementing the case organisation’s KPI. Environmental factors influence the operational and IMS process. This would shape the alignment between business objectives and the IMS implementation.

4.1.08 Element of alignment-8 (Resources available during the process).

The weakness behind the organisation’s commitment to IMS was described by Participant A-01 in these terms:

We don’t do the IMS implementation for every project level quality, environment, health and safety (PQEHS), we had a session two to three years ago and we just thought, it was not a right time to start and need to do something about the scarcity of resources first (Participant A-01, personal communication, April 16, 2012).

Participant A-01 revealed that there are different levels of IMS certifications involved. IMS certification is not a one for all certification for the entire organisation. Some projects’ implementation are not within the headquarter premises and required project level IMS certification (PQEHS). However, this particular case data explained that resources availability is a key factor to the implementation of IMS. Participant A-07 addressed the concept of resources like this:
Most definitely we’ve identified some obstacles, zero defects by IMS implementation but what does that really mean? And, will the IMS handle all projects? And what is the product and service that we’re delivering in future? Is it a trend to do lips service without having the resources? Or are we into a whole different product and performance (Participant A-07, personal communication, May 16, 2012).

Participant A-02 said:

I was amazed how other organisations were strong on their commitment to the business, because they knew they were going to roll out innovative services they put in the arrangement, they prepared invoices in advance for some of the projects but they delivered for those with outstanding payments (Participant A-02, personal communication, April 21, 2012).

It was rather inconceivable that there were several IMS functions that had not been attended to by management. The shortage of resources with the limited amount of assets contained within the organisation was the reason behind it and urgent attention was needed to be given to this by management. There were no reference numbers in the internal correspondences between operational departments and this is a significant factor in IMS implementation. IMS emphasises traceability but the internal documents did not hold the essential information due to limited resources. There was a similar situation relating to the accountabilities, consultation, performance, and proficiency features. It was noted that another crucial area of project planning activity had recently commenced and was due for completion within three months. This meant that resources were limited for both IMS and operational requirements. The specific role configuration can be challenging without robust resources and result in excess of reliance upon the individual. Particularly in the absence of resources management, the alignment practices of the organisation were influenced by resource availability.
4.1.09 Element of alignment-9 (Results oriented approach).

The business focus is always on the end result. Managers were overseeing the operational process but the entire operation relied on a results-oriented process. Participant A-10 offered an example of how they managed the results oriented approach by stating that:

*I needed some equipment for doing trials. I needed computers, two laptops, but the first thing they made known to us was an IMS, and I don’t know how IMS can help us, I can’t produce the services required to be delivered. I have operational ready people. They looked through the IMS manual eight to ten times and it doesn’t provide the solution and procedure* (Participant A-10, personal communication, April 20, 2012).

One of the Participants A-06 began with extending the concept of a result-oriented mind set expressed during the interview. He said:

*Reminds me of the last few days; it happened that during the new project outset meeting, keeping my boss happy was my highest priority. I had the perception that the client should deserve what they desired, but I felt concern for the client. I was anxious that they would criticise me to my manager. Hence this criticism may go to my boss. This would mean proceeding with old-fashioned procedures is the right way to achieve the favourite result. These are definitely not the right procedures spelled out in the IMS manual* (Participant A-06, personal communication, May 9, 2012).

The actions that leaned towards a customer oriented result was explicitly stated in the IMS manual but the actual situation was superficial. However, Participant A-06 believed that it was necessary to change ways of thinking and the approaches during the process by expressing that: “I believe that we had been continuing with our out-dated result oriented approach. I had always known that we should be customer focused rather than be result oriented” (Participant A-06, personal communication, May 9, 2012).

The participants intensively deliberated on the results oriented approach to achieve alignment of the IMS and business objectives. Participant A-02 stated that:

*Without emphasizing the results, I guess the answer would be no for IMS and no for the business too. I believe the business attempts to become competitive in a number of ways,*
but IMS knowledge is not one of them, and is not of intentional interest to them (Participant A-02, personal communication, April 21, 2012).

The participants’ approach to achieve a result can be described in a non-operational way. The management representatives and managers oversee operations but the focus is on the end result. It was acknowledged by the participants that the results, indeed the whole organisation, were depending upon a results-oriented process. Accordingly, despite this dependency, the organisation had no proper alignment of ideas for the IMS.

4.1.10 Element of alignment-10 (Eradication).

Participant A-08 gave the example of eradication as a strategic approach to IMS implementation by stating:

*The paper work in our department we do again and again because an update of the IMS manual was not done properly. It was in an inactive state and the IMS guys insisted to me that was not the case, and I said oh, I’m a manager here so I’ll tell you what the case is. So the staff working on that is now frustrated, because we need to redo again and it is beyond our control. I’ve always seen this in IMS personnel as arrogance in years working in the business environment. This type of attitude has to be eliminated* (Participant A-08, personal communication, May 23, 2012).

Participant A-10 held a very different perspective of strategic communication channels by stating:

*Communication channels between the IMS guys and operation personnel needs to be in place, but also needs to have a certain degree of flexibility but the trend [here] is towards rigidity. But then again on the other side there is an unrealistic expectation of flexibility. And so finding that balance I think is really difficult, a tough challenge. I don’t think we can put an end to it* (Participant A-10, personal communication, April 20, 2012).
This viewpoint reiterated the perception of Participant A-08 with respect to the organisation’s strategic direction. No further investigation was conducted to discover what was going on but the few instances raised the suspicions of senior management who felt that something needed to be done to get rid of this type of situation. An incident that senior management would have been aware of was the delay in service delivery and the resultant redundancy of resources (Minutes of meeting, personal field notes, May 23, 2012).

4.1.11 Element of alignment-11 (Remedies).

Participants expressed that part of the problem was a limitation in corrective actions and Participant A-03 expressed it in this manner:

No, not at the department level because, in many instances, one [operation department] doesn’t know what the other [IMS] is doing, nor appears to care. I had a document tracing issue and people from the IMS came and discussed the issue. This was a year ago and no one ever got back to me how to rectify it (Participant A-03, personal communication, April 21, 2012).

Participant A-06 addressed remedial issues with:

I think by and large there is corrective action but I do believe there is a disconnection. Because I think we have not addressed some of the requirements that they have, both for the IMS and for the operational strategy (Participant A-06, personal communication, May 9, 2012).

Participant A-06 also mentioned a concern about workplace health and safety issues.

I suppose I would say that if there was, I don’t know if I want to call it that, but maybe at the senior management level, the General Manager is informed that if you guys have some difficulties in the ISO 18001 documentation, then please bring it up to us and we can come and meet with a group from your department and find the solution with you on that. But, I don’t feel there is counteractive action between our operation department and our IMS Department (Participant A-06, personal communication, May 9, 2012).
To better understand the complexity and importance of remedies, examples are reflected within the organisation documents. The concern conveyed by Participant A-06 was not described in detail but the evidence was related to a shortage of appropriate remedies. Participant A-06 indicated the limitation leading to the difficulties about the wellbeing of the operational staff members. There were also uncertainties about the aptitude of some safety personnel meeting their obligations under the Workplace Health and Safety Act (Participant A-06). Moreover there was a conversation about an occurrence of failure by a management representative of IMS. A management representative of IMS failed to plan a future provision with a realistic level of quality. A reason given for this failure was the limited involvement of IMS members. However, it is noted that extra resources were essential to attend to concerns. It was unclear whether or if at all they could enhance IMS. Furthermore, providing more resources was not imperative. Senior management would also have been aware of another incident in which the organisation policy was inconsistent with sensible management practice (Internal email circulation, personal field notes, May 9, 2012).

4.1.12 Element of alignment-12 (Discipline).

The atmosphere of the audit was more likely to influence all people in the organisation to participate in IMS practices and to be aware of the importance of compliance, a well-disciplined working environment. Participant A-08 stated that:

I was surprised how other staffs were supportive on their commitment to IMS, because they knew that management will roll out new IMS audit guidelines. They placed the document that the auditors easily can pick up. Otherwise the management would take disciplinary action. I’m sure this is the top management plan to implement discipline

(Participant A-08, personal communication, May 23, 2012).

Participant A-04 added to the discipline issues with: “I believed that tactically managing the IMS is difficult for the organisation, if there is defiance from many persons. That will contribute to lapse and affect the entire system of the entire company” (Participant A-04, personal communication, May 7, 2012).
As a result, in the Singaporean SMEs the internal auditing department assisted in the management of their IMS. Participant A-09 emphasized the discipline issues by stating that:

*I think the knowledge backgrounds of the persons are not so important, as long as they have a willingness to work together with us in disciplined manners. As an internal auditor, I found that the IMS manual is not too complicated for all persons to understand* (Participant A-09, personal communication, May 30, 2012).

Evidence from Participants A-01 and A-03 revealed that the internal auditing departments assisted the IMS team in resolving the potential nonconformity issues.

*I asked an internal auditor to set the procedure for potential nonconformity issues* (Participant A-01, personal communication, April 16, 2012).

*The internal auditor furnished us the very useful suggestions on how to manage and control the documents relating to potential nonconformities issue* (Participant A-03, personal communication, April 21, 2012).

4.1.13 Element of alignment-13 (Support).

Participant A-04 explained the IMS department’s structure and support system:

*Unlike the other operation departments, the IMS department has a special section to specifically undertake the internal audit. Within the internal auditing department structure, this section employed specialist staff members, who have knowledge and skills in engineering, to specifically undertake the quality, environmental and safety audit. The internal auditing department has a section to undertake internal audit specially, which is different from the other operation departments* (Participant A-04, personal communication, May 7, 2012).
Participant A-06 explained that IMS audit was too time consuming to enable proper implementation of the IMS and support system:

*These internal auditors stated that their department had a specific section to undertake the internal audit, and had specific job descriptions, aims and audit plans for auditing IMS issues. Besides, these internal audit plans were detached from other audit plans, such as financial audit plans and administrative audit plans. They scrutinised details of IMS risk factors in each division, the possible impacts of these risk factors, and whether each division’s structure conformed to corporate strategies. However, how do they determine IMS risks on other areas of the organisation; such as a corporate financial performance, and impaired assets? It is ridiculous to use so many resources and yet they leave a lot of unsolved questions* (Participant A-06, personal communication, May 9, 2012).

Participant A-06 clarified that a staff had integrated the environmental audit into the operational audit for the entire operational audit program. Hence, the internal auditor had no separate audit plan to backup in detail for auditing environmental issues. Indirect involvement of the IMS representative indicated that this internal auditing department had only indirect participation in conducting environmental audits:

*Someone similarly assessed whether strategic plans established by each division are to protect and mitigate satisfactory environmental problems. This is the responsibility related to the environmental issues, as the operations in the environmental framework affected the operations of the entire organisation. The audit plan for IMS needs to care for the entire organisation. They need to ensure the effectiveness of the management system by supporting the operational department structure* (Participant A-06, personal communication, May 9, 2012).

4.1.14 Element of alignment-14 (Training).

Participant A-03 indicated that the in-house training department had indirect involvement in conducting training included as part of the integrated knowledge management plan for the entire organisational operation. He pointed out that no specific training program was
associated with the IMS issues. However, the IMS procedures were presented in conjunction with the other operational procedures:

To train the entire organisational operation, it is impossible to avoid the training of environmental, safety and quality issues. For example, if I were to conduct the training of the project quality at my site, I would include the safety management system and environmental issues as well (Participant A-03, personal communication, April 21, 2012).

Participant A-03 emphasised training as an alternative way to promote the quality, environmental issues, and safety related areas within the organisation. The evidence showed that the in-house training department collaborated with both operational and IMS departments. The in-house trainers contacted the relevant parties to gain information about the quality process, safety compliances, and environmental control systems, to enable the effectiveness of the entire organisational operations, management and control systems.

... sometimes ask MR [Management Representative] what the new legislations relating to our business that should be considered.... also asked the managers of our subcontractors to ensure these subcontractors’ works conform to the relevant regulations (Participant A-03, personal communication, April 21, 2012).

Furthermore, through in-house training, the staff also gained information relating to quality, environment, health, and safety (QEHS) issues from external experts who were employed to consult and assist the IMS team. Participant A-05 highlighted that: “When my company employed the external lawyer to advise on environmental legislation relating to our business, I also reviewed his reports about the necessary legislation that my department must comply with” (Participant A-05, personal communication, May 7, 2012).

However, no evidence was provided to show that the organisation’s policy and intention was in place, in order to conduct training to improve IMS implementation. Instead it appeared that the focus was a reaction to the authority guidelines.
A copy of the training guide was provided by the organisation during interview. It comprised the following declaration:

*The organisation is responsible for ensuring that there is efficient and appropriate training of the staff. In this respect, the organisation must ensure that good training procedures are in accordance with the Singapore Workforce Skills Qualifications (WSQ) frameworks and standards* (Training guide, personal field notes, May 7, 2012).

The fourteen elements of alignment between IMS and business objectives have been identified data from the case organisation and the next step is to find out the similarities amongst the elements. Deeper examination into the similar nature of elements generated the central themes and the emergent themes, which are displayed in the Section 4.2.
Research Design
(Developed for this study)

Identification of Further Research

Comparison with Extant Literature

Data Analysis
(Emrgent Model - Contribution of Knowledge)

Data Analysis
(Emrgent Themes)

Data Analysis
(Emrgent Elements)

Data Collection Method
(Field Research)

Research Design
(Selection of Methodology)

Identification of Research Problem

Literature Review
(Gap Analysis)

Document Map
4.2 Findings from Case Organisations-Stage Two (Emergent Themes)

The elements of alignment; namely ‘certainty, comfort, cooperative, discipline, environment, eradication, experience, magnification, misconception, remedies, resources, results, support, and training’ were identified during first stage study of emerging case organisations. The second stage of analysis involved the data from emerging case organisations that display evidence of emerging themes related to the elements of alignment between the IMS and business objectives. There were a number of themes that emerged from the study of emerging case organisations.

The second stage of analysis on the data from emerging case organisations that display evidence of emerging themes related to elements of alignment between the IMS implementation and business objectives are considered in turn: ‘content, process, strategy and structure’.

Four elements of alignment, namely ‘certainty, experience, magnification, and misconception’, belong to the emergent theme of ‘content’. Five elements of alignment, namely ‘comfort, cooperative, environment, resources and results’, belong to the emergent theme of ‘process’. Three elements of alignment, namely ‘discipline, eradication, and remedies’ belong to the emergent theme of ‘strategy’. Two elements of alignment, namely ‘support and training’ belong to the emergent theme of ‘structure’. Table 4.1 states the relationship between the elements of alignment and the emergent themes.
According to the data collected from in-depth interviews of emerging case Organisation A and emerging case Organisation B, the two organisations have relatively similar operational approaches in terms of IMS implementation. All of their divisions operate their IMS deployment in various ways, apparently without any control by senior management. Table 4.2 summarises the situation of IMS implementation in relation to the relative elements of alignment of the IMS implementation.

<table>
<thead>
<tr>
<th>Themes / Elements</th>
<th>Content</th>
<th>Process</th>
<th>Strategy</th>
<th>Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certainty</td>
<td>√</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Comfort</td>
<td>x</td>
<td>√</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Cooperative</td>
<td>x</td>
<td>√</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Discipline</td>
<td>x</td>
<td>x</td>
<td>√</td>
<td>x</td>
</tr>
<tr>
<td>Environment</td>
<td>x</td>
<td>√</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Eradication</td>
<td>x</td>
<td>x</td>
<td>√</td>
<td>x</td>
</tr>
<tr>
<td>Experience</td>
<td>√</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Magnification</td>
<td>√</td>
<td>x</td>
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<tr>
<td>Misconception</td>
<td>√</td>
<td>x</td>
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<tr>
<td>Remedies</td>
<td>x</td>
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<td>√</td>
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<tr>
<td>Resources</td>
<td>x</td>
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<tr>
<td>Results</td>
<td>x</td>
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<td>Support</td>
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<td>√</td>
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<tr>
<td>Training</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>√</td>
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</tbody>
</table>

Legend:  
X - Denotes no relationship  
√ - Denotes relationship
### Dimensions and Measurements of Alignment

**Table 4.2**

The first column shows the name of the elements of alignment, followed by the emergent central themes in the second column. The third and fourth columns present the link between the themes and their functions. The relationship levels of the element of alignment and emergent central themes are identified in the last column. Detailed relationships in Table 4.2 are discussed in Section 5.3 of Chapter 5.

All participants had direct involvement in the IMS process and managed both the operation and IMS implementation. All participants had been involved in the IMS implementation for at least one year and both the organisations had launched their IMS implementation for more than ten years. It is worth noting that there were similarities and differences within the case organisations in terms of relationships between IMS and business practices. The researcher will cover these issues before moving on to further discussion of the emergent themes.

Participant A-01 said that the case Organisation A had a comprehensive management system that acted as a winning ticket to obtain many successful business deals. The IMS manual was considered a controlled document and there was no reason to disclose the documentation for academic studies, unless it was mandatory to comply with the authorities. Therefore, the interviews were conducted without reviewing the IMS manual in the case Organisation A.
Moreover, the overall IMS content influences the organisation’s standard operational procedures except for one operational department which did not fully comply with the IMS content. That particular department was allowed to and used in-house rules set by the client, which was similar to the IMS content. Both the department and the client’s organisation shared an online portal at their sites (Minutes of meeting, personal field notes, April 16, 2012).

Most of the IMS content only allowed staff to view the forms and procedural information which lacked any online interactivity. Another interesting finding from case Organisation A was the engagement of an external consultant to craft the initial IMS manual and there was little or no contribution from the separate departments within the organisation to take responsibility for the IMS implementation. Case Organisation A had limited human resources dedicated during the initial stage.

Overall, IMS implementation of both Organisations A and B were in the mature stages in terms of length of IMS deployment, function, and human resources. However, within the two organisations, emerging case Organisation B had a more advanced IMS system than emerging case Organisation A and C.

### 4.2.1 Emergent theme - Content.

Participants B-01, B-03, and B-06 from Organisation B stated that content was the key to IMS implementation. The relationship of the elements of alignment of ‘certainty, experience, magnification and misconception’ would increase the chances of enhancing the importance of the business objectives and the IMS content. It would also directly affect the alignment between the core business objectives and the IMS implementation. For instance, participant B-06 highlighted that: “One must be certain about the content, which means having confidence with the IMS manual in order to choose the correct form (content)” (Participant B-06, personal communication, June 7, 2012). Participant B-06 saw certainty as a content related issue.

Moreover, Participant B-03 commented that: “Misconception is an interaction between the IMS content and the business content in terms of operation procedure. This can explain why building up IMS implementation takes effort and time” (Participant B-03, personal
communication, August 15, 2012). Alternatively, Participant B-01 argued that if the IMS content was a kind of reference then people may ignore the day-to-day operational criteria within the company’s culture. Reciprocity, and mutual obligations are used to build and maintain the business standard. Furthermore, Participant B-04 explained that:

IMS content is a kind of unique content; the clarification made by MR [management representative] to define what content is can be very different due to the differences in experience, intensification, and so on. Sometimes, MR may have the misconception about the content (Participant B-04, personal communication, August 15, 2012).

Thus, it is appropriate to delineate the elements of alignment of ‘certainty, experience, magnification and misconception’ to constitute, and emerging from them, the central theme of ‘content’. This was indicated by participants in the case organisations. Participants from Organisations A, B and C, expressed over and over again, certainty, experience, magnification and misconception of the content belonging to IMS and business objectives, would generate consequence, be they positive or negative which would have impacts on the effectiveness of the day-to-day business life.

4.2.2 Emergent theme - Process.

The process of IMS implementation has the responsibility for administering the business process and control over the quality, environmental and safety related compliances. These compliance issues are incorporated under the IMS implementation process. As mentioned in the emerging case Organisation A, management had a limited perspective and could not envisage its role beyond the monetary side of operations. No initiative was taken with regards to IMS implementation.

The only regular contact that management had with the IMS implementation was through the filing process of the IMS documentation. There were two other situations whereby the management team would be involved in the IMS implementation: when the IMS auditor notified an opening and closing of audit meeting and when a client requested changes to their IMS procedure. The two examples just involved the necessary forms being lodged and filed.
Emerging case Organisation B revealed that the duty and responsibility of the management representative was limited to being responsible for the integration of the IMS structure. The management enforces only partial authority requirements upon the management representative. In response to that restricted authority, the management representative focuses on and monitors compliance with a reporting system. There was no recommendation made in their internal report for an enhanced role for IMS implementation. There was no suggestion that organisations should pursue appropriate process to fill in this gap. The implication was that the management representative sees no difficulty with the existing arrangements.

As a result, it is appropriate to allocate the elements of alignment ‘comfort, cooperative, environment, resources and results’ to establish a central theme as ‘process’. This was in accordance with the data from case organisations.

4.2.3 Emergent theme - Strategy.

The common themes regarding the intervening conditions in the implementation of IMS in three elements of alignment are related to the emergent theme ‘strategy’. The emergent theme ‘strategy’ consists of ‘discipline, eradication, and remedies’ to align the IMS process and business objectives.

4.2.3.1 Discipline.

It was found that there were differences between the causes of resistance to the strategy of corrective actions. One Participant B-02 in case Organisation B stated that there appeared to be many people involved in the IMS process who worked inappropriately. Participant B-02 believed that compliance with the strategy of IMS was the appropriate approach. Another participant put it another way considering that most people do not like to be disciplined as it had not been done in the past.

Lack of strategy to discipline properly was mentioned by the participants in case B as one of the main causes of conflict in the implementation of IMS strategy planning. The participants in case B believed that discipline was needed to implement the IMS strategy. However, they perceived that there were certain people who still lacked a willingness to comply with
restrictions and disciplinary actions. A similar perception was also evident in the emerging case Organisation A.

One Participant B-08 in case B stated that it was difficult to promote strategy to implement disciplinary action. Another Participant B-09 held the opinion that the lack of willingness to adopt a strategy to implement disciplinary action was a habit amongst many staff. Participant B-05 also expressed the belief that there were certain staff members who did not want to change the way they worked. The sources of discipline interconnected to the strategy included a lack of support from the leaders, and inadequate provision of guidance and willingness. It was concluded that the staff who were involved in the IMS alignment process with the business objectives needed guidance to provide discipline to implement the strategic plan.

4.2.3.2 Eradication.

The participants in case Organisation B perceived that lack of ability to strategically eradicate potential non-conformity was one of the main causes of resistance to the implementation of IMS strategy and planning. In the operation department, it was thought that many people downstream including the IMS consultant and in the entire organisation lacked the ability to prevent potential non-conformities of IMS implementation strategy and planning. One Participant B-07 stated that: “The ability of many people in the downstream, the IMS consultant and in the entire organisation to prevent potential non-conformity is still limited” (Participant B-07, personal communication, June 12, 2012).

Participant B-03 expressed this lack of ability to strategically eradicate the inappropriateness by using several terms such as ‘incapable of purge out’, and ‘incompetent to eliminate’. For example, one Participant B-03 affirmed that the management representative was unable to eliminate the problems associated with the IMS implementation strategy.

The management representative is responsible for conducting a cross-functional role involving project management, administrative, and business development tasks. According to the operation manual of Organisation B, the management representative’s responsibilities are to maintain the management systems to ensure their effectiveness and to monitor corrective and preventive actions against system non-compliances. Participant B-03 was referring to the management representative’s responsibility to ensure effectiveness of system compliances.
Similarly, another Participant B-08 stated that many of the IMS staff members were incapable of purging out the potential nonconformity strategically. He added that this lack of strategy caused difficulty in implementing many aspects of the IMS system. Eradication is considered part of a strategic approach to influence the IMS process to be aligned with the business objectives.

4.2.3.3 Remedies.

Similar to Case A, in Case B, the participants also considered the limited effectiveness of remedies in the IMS departments. Senior management and middle management caused refinement to the implementation of the plan. In fact, management always find ways to improve. One Participant B-06 from case Organisation B stated that: “Because the resources are limited, how can we conduct IMS process properly? Management should provide counteractive plan to influence the smooth process” (Participant B-06, personal communication, June 7, 2012).

In Case B, it was also perceived that there were still many staff members that did not have the ability to prepare and implement the IMS process and in addition that it was necessary to make corrections to the strategy plan. One Participant B-03 admitted that many IMS internal auditors were unprofessional in their conduct. He added that these IMS internal auditors did not have the ability to manage their time or to manage the people involved in the IMS process. Another Participant B-07 stated that the strategy related to IMS implementation was ‘difficult to prepare’. In conclusion, the strategy involved in the IMS process needs to provide remedies and alternatives to assist the alignment process.

All participants interviewed believed that the emergent theme ‘strategy’ was the intervening condition to the IMS process in terms of fine-tuning alignment with the business objectives. The three elements of alignment ‘discipline, eradication, and remedies’ influence the emergent theme ‘strategy’ to be responsible for the alignment process.
4.2.4 Emergent theme - Structure.

All participants in Case B acknowledged concerns with the organisational structure that had connections with the attributes (IMS process and intervening conditions) shaping the alignment between the IMS implementation and business objectives. All participants interviewed in Case B believed that the elements of alignment, ‘support and training’ are the part of the structure of the organisation.

Participant B-06 believed that the IMS structure did not fully support the organisational goals and there was an underlying belief held by all respondents that support and training could be improved to support the competitiveness of the business. Participants also realised that the structure of the IMS made it difficult to obtain a consensus on how the IMS should be restructured in the process. All participants in Case B conveyed a message of the effectiveness of the ‘support and training’ that started the exchange of ideas within the IMS implementation and business objectives. Participant B-10 reported inconsistency in the organisation’s IMS structure and how sometimes he failed to obtain the necessary support from the relevant parties within a reasonable time frame. Another unambiguous perception repeated is summarised by Participant B-04 remarks:

Sometimes people conduct training here even if they are not the best fit for a particular subject matter. It is changing but I think there has been a little bit of that sort in the area of IMS training. I would say the management support has not been maximized probably to the best that they could to accomplish this. Just clicking numbers of training hours may meet the target set but it does not really help much, because the training structure is just based on the numbers of training hours (Participant B-04, personal communication, August 15, 2012).

The perceptions of Participants B-05 and B-09 were representative of the views of Participant B-10, who did not believe that the organisational structure focus for the IMS was being used to advance the competitiveness of the organisation. Participant B-09 summed it up best with this statement:

I think that the management does an excellent job as far as forming the structure [IMS] that is right for the organisation. So I think that IMS platform has been a great vehicle for us to use through the establishment of SOPs [Standard Operation Procedure] that
really meets the needs of the organisation, meets the needs of the staff and ultimately meets the needs of the customers, but has fallen way short in regards to [IMS] implementation. Our organisation structure is insensible in that area. Yet again we need a competent person to coach us and the provision of a competent coach is a decision made only at the top management level (Participant B-09, personal communication, June 19, 2012).

The participants perceived a problem in the area of organisational structure with respect to training and support from the organisation, which directly affected the IMS process and the retention of organisational goals. This perceived problem is believed to have an impact on the competitive edge of the organisation. A plausible explanation for this impact is the gap between the training and support structure of the organisation and the high expectations from customers of IMS certified organisations. The emergent theme ‘structure’ acts as an intervening condition to the alignment process. The detailed discussion of linkages between the elements of alignment and the emerging themes are presented in Section 4.3.

### 4.2.5 Summary of emerging themes.

It was concluded that the theme ‘content’ was the cause of alignment or misalignment and the other three emergent themes ‘process, strategy and structure’ were attributed to the effect of alignment or misalignment between the IMS implementation and the business. However, strategy and structure were intervening conditions to the process within the attributes. Section 4.3 discusses the detailed relationship amongst the four emergent themes.

### 4.3 The Relationships amongst Emergent Themes

Both emerging elements and themes were examined and the sections that follow present the ‘Cross-Case analysis method’ to confirm and contrast the relationships among the emergent themes. Table 4.3 lists what the emerging case organisations and their embedded cases showed about the relationships amongst the emergent themes. This table uses the list of relationships such as causal phenomena, causal conditions, and intervening conditions, which were revealed by the participant interviews. It displays the themes, such as ‘content, process, strategy and structure’, placed under the relationship conditions and case organisation as
whole or embedded mini-cases. It is evident that the emerging case organisations display and support the relationships between the emergent themes and exhibit the reliability of the features of the elements of alignment from the emerging case organisations.

(Developed from the findings of this study)

<table>
<thead>
<tr>
<th>Relationship Case</th>
<th>Major contributing factor</th>
<th>Context</th>
<th>Intervening condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation A</td>
<td>Content</td>
<td>Process</td>
<td>Strategy, Structure</td>
</tr>
<tr>
<td>Embedded Cases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMS</td>
<td>Content</td>
<td>Process</td>
<td>Strategy, Structure</td>
</tr>
<tr>
<td>Operation</td>
<td>Content</td>
<td>Process</td>
<td>Strategy, Structure</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationship Case</th>
<th>Major contributing factor</th>
<th>Context</th>
<th>Intervening condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation B</td>
<td>Content</td>
<td>Process</td>
<td>Strategy, Structure</td>
</tr>
<tr>
<td>Embedded Cases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMS</td>
<td>Content</td>
<td>Process</td>
<td>Strategy, Structure</td>
</tr>
<tr>
<td>Operation</td>
<td>Content</td>
<td>Process</td>
<td>Strategy, Structure</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationship Case</th>
<th>Major contributing factor</th>
<th>Context</th>
<th>Intervening condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation C</td>
<td>Content</td>
<td>Process</td>
<td>Strategy, Structure</td>
</tr>
<tr>
<td>Embedded Cases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMS</td>
<td>Content</td>
<td>Process</td>
<td>Strategy, Structure</td>
</tr>
<tr>
<td>Operation</td>
<td>Content</td>
<td>Process</td>
<td>Strategy, Structure</td>
</tr>
</tbody>
</table>

**Comparison amongst Cases**

Table 4.3

Some of the elements of alignment were discussed in view of what the Cross-Case analysis in the emerging case organisations revealed. However, as will be seen there were some significant underlying factors that shaped the relationship amongst the emergent themes.

### 4.3.1 Relationship between the emergent themes process and content.

As Table 4.2 showed (repeated below for convenience as Table 4.4), the emerging case organisations established that the relationship between the contexts of the IMS
implementation ‘process’ and the major contributing factors of content were in place to form
the alignment between the IMS implementation and the business objectives.

<table>
<thead>
<tr>
<th>Elements of alignment</th>
<th>Emergent Themes</th>
<th>Influence</th>
<th>Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certainty</td>
<td>Content</td>
<td>Cause</td>
<td>Causal phenomena</td>
</tr>
<tr>
<td>Experience</td>
<td>Content</td>
<td>Cause</td>
<td>Causal condition</td>
</tr>
<tr>
<td>Magnification</td>
<td>Content</td>
<td>Cause</td>
<td>Causal phenomena</td>
</tr>
<tr>
<td>Misconception</td>
<td>Content</td>
<td>Cause</td>
<td>Causal condition</td>
</tr>
<tr>
<td>Comfort</td>
<td>Process</td>
<td>Attribute</td>
<td>Context</td>
</tr>
<tr>
<td>Cooperative</td>
<td>Process</td>
<td>Attribute</td>
<td>Context</td>
</tr>
<tr>
<td>Environment</td>
<td>Process</td>
<td>Attribute</td>
<td>Context</td>
</tr>
<tr>
<td>Resources</td>
<td>Process</td>
<td>Attribute</td>
<td>Context</td>
</tr>
<tr>
<td>Result</td>
<td>Process</td>
<td>Attribute</td>
<td>Context</td>
</tr>
<tr>
<td>Discipline</td>
<td>Strategy</td>
<td>Attribute</td>
<td>Intervening conditions</td>
</tr>
<tr>
<td>Eradication</td>
<td>Strategy</td>
<td>Attribute</td>
<td>Intervening conditions</td>
</tr>
<tr>
<td>Remedies</td>
<td>Strategy</td>
<td>Attribute</td>
<td>Intervening conditions</td>
</tr>
<tr>
<td>Support</td>
<td>Structure</td>
<td>Attribute</td>
<td>Intervening conditions</td>
</tr>
<tr>
<td>Training</td>
<td>Structure</td>
<td>Attribute</td>
<td>Intervening conditions</td>
</tr>
</tbody>
</table>

**Dimensions and Measurements of Alignment**

(Developed from the findings of this study)

Table 4.4

Four elements of alignment, namely ‘certainty, magnification, experience and misconception’,
are the major contributing factors of the alignment effect between the IMS and business
contents. However, as identified in Section 4.2, all four elements of alignment belong to the
theme of ‘content’. The individual detailed explanations of elements are indicated in the Sub-
section 4.2.1.

Five elements of alignment, namely ‘comfort, cooperation, environment, resources and
results’, are the context and attribution factors of the alignment effect between the IMS and
business process. The individual detailed explanations of elements are indicated in the Sub-
section 4.2.2.

Three elements of alignment, namely ‘eradication, remedies and discipline’, are the
intervening conditions of the alignment effect between the IMS and business strategy. These
three elements shape the alignment between IMS and the business objectives via the
implementation process. The individual detailed explanations of elements are indicated in the
Sub-section 4.2.3. The detailed explanations of connection are discussed further in Section 4.3.2.

Two elements of alignment, namely ‘support and training’, are the intervening conditions of the alignment effect between the IMS and business structure. Those two elements create the alignment or misalignment as a consequence via the context of IMS implementation process. The individual detailed explanations of elements are indicated in the Sub-section 4.2.4. The detailed explanations of connection are discussed further in Section 4.3.3.

The relationship between ‘process and content’ requires some interpretation as it contains several lines of evidence for the relationship between them. It is likely to be realised more in the precise context due to the evidence being collected from the specific context. The data from the emerging case organisations revealed that amongst all other attributes, only context (process) had a relationship in place with its major contributing factor (content). It also showed that both intervening conditions of ‘strategy and structure’ had a connection to fill either opportunities or weaknesses in the context (process). The detailed explanations of connection are discussed further in Sections 4.3.2 and 4.3.3.

Emerging case Organisation B undertook no proactive approach associated with the IMS implementation whereas emerging case Organisation C undertook proactive approaches to exercise its functions. However, emerging case Organisation C undertook proactive approaches which were limited only to its quality environment health and safety (QEHS) employees. The data from emerging case Organisation A suggests that management representatives should refer to the stakeholders and make corrections to the content as per the ‘plan, do, check, act’ (PDCA) cycle. It would regain the alignment significantly through consultation with the stakeholders.

During the implementation process, stakeholders carried out their duty and responsibilities based on the contents (IMS manual and business procedures). As discussed in Sections 4.2.1, 4.2.2, 4.2.3 and 4.2.4 the elements of alignment and their relationships to the emergent themes were established. The following Sections 4.3.1.1 to 4.3.1.4 discuss the relationship of elements that belonged to the theme content with the emergent theme process.
4.3.1.1 *Element of alignment-certainty.*
Emerging case Organisation C had implemented an appropriate practice that responded to the certainty of content feature. The checklist from the emerging case Organisation C had an attached explanatory note. The request for an inspection form had a list of qualification criteria prior to the actual inspection in its quality manual. This list went beyond the conditions required to address the inspection and safety assurances. No relevant experience was registered that related to the skill components of the safety features. However, it can be noted from the case data that the supervisor played an essential part in helping the inspection related to safety practices. This is evidence of a causal phenomenon relationship between the emergent theme content and process.

4.3.1.2 *Element of alignment-misconception.*
The data from case Organisation C revealed considerable ‘misconception’ over content took place during the result oriented process approach. The management set Key Performance Indicators (KPIs) for the department as a whole. The monthly assessment of the performance indicators served to highlight and re-examine the existing compliances and procedures. However, the monthly reports from the case Organisation did not reflect the KPIs. This instance displays the failure of the prospect of examining the compliances and practice in place. Operational staff members had mistaken beliefs about KPIs and the monthly reports had briefly mentioned the KPIs as an on-going progress of the departmental performance. This is evidence of a causal condition relationship between the emergent theme content and process.

4.3.1.3 *Element of alignment-experience.*
In emerging case Organisation C, it was noted that the hierarchy of the employees was dependent upon experience of the organisation procedures and this raised questions about experience related to the content. That means, case data revealed that the length of working experience and understanding of the IMS manual (content) did not have a relationship. The case data also revealed that no one was able to commit to provide proper procedural services and at the same time to meet the client’s expectations. They primarily performed based on their past experience and did not associate with the organisation’s quality performance approach as stated in the IMS manual. This is more evidence of the causal condition relationship between the emergent themes ‘content and process’.
4.3.1.4 Element of alignment-magnification.

The magnification effect of the content and process associated with alignment or misalignment of the business objectives is related to the beliefs of the organisation. The emerging case Organisation C data revealed that an effect of misalignment may arise from even a tiny mistake which escalates tricky situations and it can be defined as negligent activity. It cannot be ascertained how the organisations came to the conclusion of a misalignment of the business objectives. None of the three organisations had shown any evidence of the intended beliefs, but they assumed that the business tradition itself provided a set of principles and beliefs.

The three emerging case organisations and their embedded cases were used to compare and contrast the data belonging to different divisions within the organisation and different industries. However all participants placed high importance in their beliefs and all of the case organisations claimed that their misalignment activities were influenced by the negligent undertakings and events. In each case organisation, there were corrective actions to be followed-up with the audit findings. Those corrective actions were influenced by the organisation culture and the beliefs of the employees. Corrective actions also had an influence from the view of the top management. The values of the organisation resulted from interpretations of the organisation’s vision statements. However, the data from emerging case Organisation C revealed that management was equivocal in demonstrating exactly how the vision of the organisations would effect upon the way the organisation was managed. The case data displayed that in order to demonstrate the organisational vision there must be an existence of regulatory outline. Such a regulatory outline would empower a management team to be unambiguous in taking into account to the organisation’s vision when working out their tasks. The organisation’s vision was important and there must be prescribed regulatory outline in place. This normally happens during and after the audit sessions and only if the corrective actions were taken seriously for the potential lapses. This was explicit evidence of a causal phenomena relationship between the emergent themes ‘content and process’. The mentioned explicit evidences of linking between the themes ‘content and process’ were emergent from the case data.
4.3.2 Relationship between the emergent themes strategy and process.

The emerging case Organisation C had certified the underlying factors of alignment between the IMS implementation and the business objectives. However, some of the evidence shows misalignment and how the business objectives were not established or achieved. The data from emerging case Organisation C revealed that there were significant inconsistencies between the strategy and the process that Organisation C had in place.

The first inconsistency was that management had set disciplinary action to eradicate potential shortcomings and remedies for inadequacies as a corporate strategy. However, during the process it was not implemented for unknown reasons.

Another inconsistency was that emerging case Organisation C had a brief disciplinary action plan and statement for nonconformity, whereas emerging case Organisation B had a detailed and comprehensive plan that covered each and every step of the operation procedure including the continuity measures. However both cases had shown evidence of flaws in the relationship between the emergent themes, strategy and process. The data from emerging case Organisation C indicated that none of the supervisors undertook broader strategic planning activities during the implementation process or scanning for any potential nonconformity. It is suggested that there would be advantages in integrating the strategy and the actual practices during the process in order to achieve alignment between IMS implementation and the business objectives.

The third inconsistency was that of the role and responsibility of the management representative. The title management representative (MR) was used in most organisations to describe the responsibility of the management position in the IMS implementation. Each organisation had a permanent member of staff in the position of MR. Top management delegated significant responsibility of the IMS strategy, and to oversee the entire process, to the MR, who was an ordinary employee and was not authorised to craft the IMS strategy.

This was reflective of both the authority and operation of the IMS process. Top management participated in each of the case organisations and indicated that the MR played an integral part in providing the necessary guidance for IMS implementation. In addition, it was identified in all the case organisations that the MR had a role in monitoring and acting as an authority, showing that the organisation had adopted the integrated management system. When it came
to MR performance, it was noted that all MRs were permanent employees made up of administrative employees who had other duties and responsibilities to satisfy their remuneration package. As such, the implementation of disciplinary action to senior employees may have been challenging to the MR. However, in the emerging case Organisation C, the MR reported directly to top management with regards to IMS implementation issues and also undertook the role as a general manager overseeing the business objectives. It would be tactically demanding for the MR, if there was non-cooperation, which would also contribute to lapses and affect all business objectives.

The fourth and final inconsistency was that of the organisation as a whole in eradicating discrepancies. Emerging case Organisation B was the only case organisation to have a mechanism in place to evaluate organisational performance in terms of IMS implementation. The MR from emerging case Organisation C provided the yearly report on IMS implementation. A similar report was generated by the MR from emerging case Organisation A, which complied with the standards of the IMS accreditation body. Emerging case Organisation B used its KPIs to determine how well it had done against its initial forecasted approach. However, it focused mainly on customer satisfaction and was somewhat related to the IMS implementation strategy and process. These are evidences of an intervening conditions relationship between the emergent themes ‘strategy and process’.

4.3.3 Relationship between the emergent themes structure and process.
Emerging case Organisation C showed a distinct relationship between the emergent themes ‘structure and process’. The emerging case Organisations A and B showed the indirect involvement of support and training to promote IMS and focus was a reaction to the authority guidelines with its IMS. None of the emerging case organisations deployed a comprehensive relationship framework for the emergent themes ‘structure and process’.

IMS requirements on the importance of customer satisfaction were extensively presented. However, in comparative terms, this account was specifically emphasised when it came to the training and support that were included in the emerging case Organisation C. The gaps of IMS training and support have been revealed in the emerging case Organisations A and B.
Despite the case studies identifying gaps that provided evidence of the relationship between the emergent themes ‘structure and process’, the case data revealed that they did have in place practices through which gaps were being managed. For example, they all had in-house training in place. Emerging case Organisation C also had practices which could be regarded as forming support structure, for example providing for a competent management representative to manage the IMS implementation.

Case studies show all the case organisations had practices in place that address the feature of the IMS supporting structure. There were three reasons suggested from the case data for this. The first, from emerging case Organisation A, was that the management representative’s responsibility to top management in the area of IMS implementation, especially auditing, was well acknowledged by top management. Top management knew that they needed to ensure the effectiveness of the IMS by supporting the IMS structure and employed competent staff and many other resources.

The second reason was that the establishment of a standard operation procedure (SOP) by the case Organisation B had plunged and the organisation structure was unresponsive in that area. The support structure for all the case organisations placed emphasis on financial commitment and made limited reference to the business operating features. Top management was conscious that their ability to continue in their positions was at stake if the IMS requirements were not met.

The third reason that organisations had support structures under control was the focus on the reaction to the authority guidelines, which had to include independent external audited reports. It was a requirement that the briefings to top management were recorded to ensure that they were aware of the audit findings. The audit finding reports provided to top management by external independent auditors were very similar to the observations and non-conformities. There were some variances when it came to the observations across three organisations.

However, none of the audit reports were used to justify industrial norms or other benchmarking standards. Neither had any of the case organisations moved to train and adopt the best practices using the Singapore Standard Code of Practices (SSCP). They all continued to respond to the audit reports. Ensuring compliance was a fundamental concern in all case organisations. No case studies had evidence in place for effectiveness of the support and
training that interacted within the IMS implementation and business objectives that were connected to their strategic plan. The practices relating to training and structure were conveniently separated from the auditing measures undertaken by all the organisations and the continual improvements which were not shared by all.

4.4 Chapter Summary

The case data revealed that the participating organisations had only partially implemented practices associated with the alignment feature between the IMS and the business objectives. The alignment feature between the IMS and business objectives outlined the specific roles and responsibilities of the employees and the management. This information included reference to the ISO 9001, ISO 14001 and OHSAS 18001 only and the other ISO standards are excluded in this study.

In addition to the above information with regards to the dimensions of alignment, there was a component of the data from literature review that was observed during the interview sessions. The comparison between case data and the data collected from the literature review are discussed in Chapter 5. In this thesis, the compilation of data observed from the participating organisations and the researcher’s personal assessments are also included.

The evidence shows that participants had varying perceptions about the elements of alignment within their organisations. Their responses indicated that the participants generally perceived that the organisations had average practices compared to the other similar organisations. There were few responses indicating good practice, which allows for further improvement in the alignment exercise in all of the cases. The need for improvement was also evident from the diverse variety of practices. Some participants from the case studies perceived certain alignment practices of their organisations as inadequate and suggested for urgent remedial action to improve these areas. In summary, Chapter 2 identified research problem as: The alignment between IMS and business objectives seems to be poorly documented in the literature and in practice. In this chapter the findings revealed four types of implementation dimensions and fourteen measurements that shape the alignment of IMS and business objectives.
Research Design
(Developed for this study)

Identification of Further Research

Comparison with Extant Literature

Data Analysis
(Emergent Model - Contribution of Knowledge)

Data Analysis
(Emergent Themes)

Data Analysis
(Emergent Elements)

Data Collection Method
(Field Research)

Research Design
(Selection of Methodology)

Identification of Research Problem

Literature Review
(Gap Analysis)

Document Map
Chapter 5: Discussion

5.0 Introduction

Scientific studies enable decisions to be made based on reliable and available evidence. In this study, interviewees contributed their perceptions and experiences, which along with a documentary analysis provided the evidence. This consisted of those factors associated with the alignment of IMS implementation with business objectives as described in Chapter 4. This chapter examines these factors in more detail to address the research question. It will be recalled that the research question for this study was:

What are the factors that enable alignment between IMS and business objectives in SME's in Singapore?

Chapter 2 explicitly stated that the existing literature is very thin and this study would most likely be the first of its kind to explore this phenomenon. As such, exact matches and comparisons to the most up to date findings within the existing body of knowledge are not plausible. The prior literature only performs a supporting role to the researcher’s argument in this study.

This chapter is divided into five sections. Section 1 presents an overview of the findings. This includes newly discovered emergent alignment models and it explains the contributions to knowledge. Section 2 discusses the relation of elements of alignment in the emergent model, reviews all elements of alignment and examines the emergent patterns. This approach aims to develop a deeper understanding of the emergent themes and reconstitute the matching patterns. It is a partial reflection of the researcher’s views and it also summarises the four constituents within the emergent model. Section 3 presents and analyses the relationships between emergent themes developed from the study. The details of these relationships were described in Chapter 4 and Section 5.3 of the current chapter will proceed to re-examine the relationship of all elements, themes, causes and their effects. Explaining similarities and differences between emergent elements and emergent themes also form part of Section 3 and the section does intend to ascertain this study’s significance and contribution to theory. Section 4 will compare and contrast the emergent data from this study and the extant literature. The findings
will be triangulated with the literature, explaining the emergent model’s similarities and differences with the aim of stating the body of knowledge. Section 5 summarises all information from this chapter.

5.1 Emergent Models

The emergent models (presented in Figure 5.1 and Figure 5.2) show the alignment between the IMS implementation and the business objectives as a relationship explaining the existence of the causal phenomena and conditions, context, and the intervening conditions. The models express the cause and effect of the IMS content differing to its business objectives. In other words, the contents of IMS and business coexist in day-to-day business life and the contents of IMS and business have to be harmonised. The IMS content comes into reality depending upon other factors, such as context (process) and the intervening conditions. In the models, the emergent themes of ‘strategy and structure’ of the organisation influence the process of IMS implementation and incidentally shape the existence of alignment conditions. The findings of this study explain the relationships between existing different segments coming into coexistence. Such relationships influence the alignment of IMS implementation and its business objectives.

Figure 5.1
The findings revealed four types of implementation dimensions and fourteen measurements. The four types of implementation dimensions (emergent themes) were content (a major contributing factor with a number of elements and conditions), process (context), strategy and structure (intervening conditions).

Figure 5.2

Data from the case studies revealed that the emergent theme ‘content’ was the cause of alignment and the emergent theme process (context) was a contributing factor to alignment by its relationship (causal phenomena and conditions) with the emergent theme ‘content’. Indeed, the emergent theme ‘process’ (context) itself was influenced by the both emergent themes ‘strategy and structure’ (intervening conditions) and acted in response accordingly. The findings form this study gives an in depth account of the attributes including context and the intervening conditions.

Fourteen measurements (elements of alignment) were discovered from the case data. The fourteen elements of alignment formed the four emergent themes, which influenced the alignment or misalignment conditions. The emergent theme ‘content’ is a factor found to be diversified along with emergent theme ‘process’ (context) to generate alignment. The combination of the emergent theme ‘process’ and the intervening conditions with the content is significant. This causal phenomenon and the causal conditions are a common way to facilitate alignment.
The data indicates that, specifically in the Singaporean SME context, business emphasis on vague sequences of events tends to invest in any opportunity with available resources in a dynamic causal aspect. The data points toward the emergent model of alignment. It has been observed from the data that the alignment effect fluctuated depending on the emergent central themes. Likewise, the relationships amongst all four emergent themes also affected each other like a complex system. Yet the relationship between the emergent themes ‘content and process’ was unique compared to the relationships amongst emergent themes ‘strategy, structure and process’. The emergent themes ‘content, strategy and structure’ were not linked to each other in the data collected (Table 5.1).

<table>
<thead>
<tr>
<th>Themes</th>
<th>Content</th>
<th>Process</th>
<th>Strategy</th>
<th>Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Process</td>
<td></td>
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<td>√</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend: X - Denotes no relationship between the two emergent themes
√ - Denotes relationship between the two emergent themes

**Relationships amongst Emergent Themes**

Table 5.1

That said, one can still say that, in every case, there were precursors in the sequence of conditions and they influenced the consequences. This has been the implication of specifying the relation between the terms in the ‘content, strategy, structure and process’ orderly. The case study data showed that the emergent theme ‘content’ was the adequate precursor to the emergent theme ‘process’. The attempt to specify exactly the nature of alignment in each case probably led to the development of the model of the alignment and the emergent themes.

5.2 A Relation of Emergent Themes of Four Constituents

There are four factors involved in the relationship of emergent themes. The first factor is which of the emergent themes are related. The next factor would be to which emergent themes are related. Third is the relation pattern of the emergent themes and the fourth factor refers to those emergent themes that do not come under such relation. The first emergent
theme is technically named ‘content’; the second is ‘process’, the third emergent theme ‘strategy’ and the fourth ‘structure’. There are fourteen types of elements of alignment relations, which have been enumerated, explained and illustrated in the models (Figure 5.1 and 5.2, repeated below for ease of reference).

Both the elements of the alignment model and the dimensions of the alignment model are identical in principle. It has enabled factors to be differentiated by the elements of alignment that formed the emergent themes, on the one hand, and patterns of relationship amongst all emergent themes on the other. The individual descriptions of these elements of alignment their relationships are discussed in detail in the following sub-sections.

5.2.01. Certainty.

Certainty is one of the four elements of alignment within the emergent theme ‘content’. The element of alignment ‘certainty’ is associated with the substantial effects produced by the content of business and/or IMS. The relationship between ‘certainty’ and the alignment effect is a major factor contributing to a number of elements. The element of alignment ‘certainty’ belongs to the central emergent theme ‘content’ and the factor contributing to the context of alignment. The four elements of alignment, ‘certainty, experience, magnification, and misconception’, are associated with content and they generate the effect of alignment or misalignment via context.
The alignment effect is generated by a combination of two elements of alignment belonging to each emergent theme ‘content and process’. The main contributing factor between the two elements is ‘certainty’. The other element is an attribute. Nonetheless, in order to achieve alignment, there needs to be at least one of each contributing factor from both emergent themes (content and process). For instance, in the reversed mode, uncertainty generates discomfort within the context. Discomfort stimulates negative results. Negative results work to move away from the business objective, generating misalignment.

5.2.02. Experience.

Experience is a unique form of interaction in IMS implementation. In the Singaporean SME context, operational procedures are formed through the involvement of an accumulation and generation of industry norms. Experience is also one of the four elements of alignment in the emergent theme ‘content’. Any one of the four types of elements of alignment in the emergent theme ‘content’ is a causal phenomenon and condition associated with a number of relationship factors, which arise following that event. For example, an employee refers to ambiguous content during a course of action. Immediately, negative impact arises for the product or service that is intended to be delivered. At this juncture, gaining experience of the ambiguous reference is the causal condition and the negative impact on the product or service that was intended to be delivered is the effect. The result of the relationship between the two is misalignment.

5.2.03. Magnification.

Magnification is a type of variation in which an effect of alignment may arise from even minor compliance and the result of having the potential to gain influence. In this case the element of alignment ‘magnification’ that belongs to the emergent theme ‘content’ is the major factor contributing to a number of elements, the associated effects of alignment. The organisation made corrective action as the PDCA cycle (Plan, Do, Check, Act) may have been the example.
5.2.04. Misconception.

Misconception is a type of variation in which the element of alignment ‘misconception’ belongs to the emergent theme ‘content’, which is the preceding factor and the alignment is the succeeding factor. For example the opposite effect of experience and conceptualised ideas may generate misinterpretation of the IMS content in the course of implementation.

5.2.05. Comfort.

The nature of the emerging element ‘comfort’ is creating a content working environment and then by means of that comfort increasing the chances of attaining the business objective in the process of implementing the IMS. It matches with the environment in terms implication, the difference being only in respect of taxonomy. The process of alignment is concerned with the succession of states of achievement, and the element of alignment ‘comfort’ belongs to emergent theme ‘process’, which supports the positive progressive sequences. Again, alignment refers to the aspect of succession while the element of alignment ‘comfort’ refers to the absence of any complications between the emergent theme ‘process’ and the succession of alignment.

5.2.06. Cooperation.

The element of alignment ‘cooperation’ is a type of relationship in which the emergent theme ‘process’ and the succession of alignment are simultaneously intuitive. For instance, harmonious or undivided working relationships represent this type of element. In contrast, uncooperative manners within the workplace create unpleasant effects, such as misalignment.

5.2.07. Environment.

This is a type of element of alignment in which the emergent theme ‘process’ and the surrounding periphery supports each other in maintaining their existence to achieve the alignment. The example of tree roots supporting the tree trunk may help in understanding this phenomenon. Environmental factors within the workplace influence the business operation and IMS process, and this shapes alignment.
5.2.08. Resources.

Resources are a type of element of alignment in which the emergent theme ‘process’ becomes the base for alignment. The over reliance upon the individual in a particular role without robust resource configuration is challenging, especially where resource management is lacking or absent. Again, the element of alignment of ‘resources’ becomes the base of the emergent theme ‘process’, which leads to alternative effects of alignment or misalignment.

5.2.09. Results.

Results are a type of element of alignment in which the emergent theme ‘process’ serves as a sufficing condition for the alignment. The previous elements of alignment ‘environment and resources’, which come up a later stage of the process, are related by this element of alignment. It is articulated as the reliance of the alignment process upon the results oriented process.

5.2.10. Discipline.

Discipline is a type of element of alignment in which the intervening conditions of emergent theme ‘strategy’ are reiterated to bolster the strength and proficiency of the alignment. It can be illustrated by an example of setting house rules in the beginning and having a surveillance system in place throughout the process.

5.2.11. Eradication.

Eradication is a type of element of alignment in which the intervening conditions of the emergent theme ‘strategy’ are the guiding power to purge away undesirable conditions to attain alignment. Eradication is the path to eliminate all types of nonconformity and concomitants arising.
5.2.12. Remedies.
Remedies are a type of element of alignment in which the alignment is subsequently negative and the intervening conditions of the emergent theme ‘strategy’ appear prior to it. All the worthwhile assets co-existing with the types of nonconformity should not be eradicated. Remedies are applicable to this element of alignment. Remedies can be illustrated by an example of corrective action prior to the action taken by the enforcement team.

5.2.13. Support.
Support is a type of element of alignment in which the intervening conditions of the emergent theme ‘structure’ and the alignment are the result. The harmonious state among them is maintained. It means that the element of alignment ‘support’ is a type of nutrient and alignment is the consequence of energy generated by it. The element of alignment ‘support’ is one of the stimulating factors and alignment is an effect arising out of that.

5.2.14. Training.
Training a type of element of alignment in which the intervening conditions of the emergent theme ‘structure’ is an accomplishment and the alignment is its achievement as well as having had substantial value created by the element of alignment. The four emergent themes are grounded on the aforementioned fourteen elements of alignment and more is needed to further understand their relationships. This is discussed in the next section.

5.3 Relationship of the Emergent Themes
These are the fourteen types of elements of alignment relationships among that involve the reciprocal communication and practical operation of the emergent theme ‘content’ (major contributing factor) and another emergent theme ‘process’ (context as well as attributing factor). The emergent theme ‘process’ is influenced by the intervening conditions of the third and fourth emergent themes ‘strategy and structure’.
It was noted in the Section 4.3.1 that (refer to the Table 5.2, a reproduction of Table 4.4 repeated here for convenience) some of the elements of alignment have associated with the central emergent themes ‘content’ and ‘process’. But the remaining elements of alignment appear to be the influencing factors to the emergent theme ‘process’. The remaining elements of alignment indeed belong to the third and fourth emergent themes ‘strategy and structure’. The evidence illustrated that these two emergent themes were connected only to the context (emergent theme ‘process’) and were not associated with the emergent theme ‘content’. In fact, the emergent themes ‘strategy and structure’ are the intervening conditions to context.

<table>
<thead>
<tr>
<th>Elements of alignment</th>
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<th>Influence</th>
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<td>Experience</td>
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<td>Cause</td>
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<td>Comfort</td>
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<td>Cooperative</td>
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<td>Training</td>
<td>Structure</td>
<td>Attribute</td>
<td>Intervening conditions</td>
</tr>
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### Dimensions and Measurements of Alignment

(Developed from the findings of this study)

Table 5.2

The emergent themes ‘strategy and structure’ predominantly intervene with another emergent theme ‘process’. That is the reason why the emergent themes ‘strategy and structure’ have a strong influence on alignment whereby five elements of alignment associated with these emergent themes. It seems that three elements of alignment of ‘discipline, eradication and remedies’ have an impression on the interrelation between the three elements of alignment and the emergent theme ‘process’. Similarly, the other two elements of alignment ‘support and training’ also appear to stretch out their influence into the emergent theme ‘process’.
The four elements of alignment ‘certainty, experience, magnification and misconception’ are belonging to the emergent theme ‘content’. They reveal a relationship with the emergent theme ‘process’, together with the five elements of alignment ‘comfort, cooperation, environment, resources, and result’. In the emergent theme ‘process’, there are five types of elements of alignment: ‘comfort, cooperation, environment, resources and results’.

A total of fourteen elements of alignment account for the causal correlation that shapes alignment or misalignment as an effect of dealing with a wide variety of relationships. It appears that the emergent theme ‘process’ went further to generate either alignment or misalignment of relations, while the emergent theme ‘content’ was fulfilled with the causal phenomena and conditions of the most important forms of relations constituted of the four elements of alignment. It is prominently indicated in the elements of alignment model Figure 5.1, reproduced below for convenience.

5.3.1 Relation pattern of the emergent themes.

It may be presumed that there were no findings on the relation pattern of the emergent themes during the first stage of this study, which focused on identifying elements of alignment.
Emergent findings came during the second stage, which focused on forming the emergent themes. One certainly cannot find an elaborate model of relations during early stage research. Yet even then, a relationship can exist in the character of precedence, dominance and proximity. During the second stage, the grouping together of elements of alignment to form themes, in contrast, obliged a focus on relations rather than broad details because of their extensive classification of events. Without a process of synthesis, the information and sorting would have left a mass of disconnected events. The model of relations amongst emergent themes thus serves the same function as that of the relationship between elements of alignment during the first stage of study. The model of relations of the emergent themes points out that the emphasis on the causal conditions is not on origin but on influence and conditions. It was noted that the emergent theme ‘content’ is the causal phenomena and conditions. The third stage of the study compared and contrasted the relationship of elements of alignment with all the emergent themes. The relationship between two emergent themes ‘content’ and ‘process’ explained the factors that influenced and conditioned the alignment effects.

The emergent theme ‘process’ asserts that its reliance on the precursor is marked by the simple state of dependence on its predecessor emergent theme ‘content’. The model of relation is assumed with reference to the existence of conditions that relate those themes to one another. This reference has been made by the above Section 5.2.05 to 5.2.09, which experienced mixed relationships with the above Section 5.2.01 to 5.2.04. The variety of elements of alignment may sometimes assume escalation to an inaccurate distinction between the relationships, taking the former to stand for the term ‘cause’ and the latter for the term ‘attributes’. Although elements of alignment are in a single list, their relationships are not the same. They belong to the different emergent theme group ‘content, process, strategy and structure’. The emergent theme ‘content’ depends on a major contributing factor that has a number of elements that produces certain conditions. The emergent theme ‘process’ is such that the influence is established by the emergent theme ‘content’. The emergent theme ‘content’ has the characteristic of a major contributing factor. The emergent theme ‘content’ contributes a number of elements that lead either to alignment or misalignment as the causal condition. Thus, ‘content’ is a condition of origin and the cause that influences the elements of alignment that belongs to the emergent theme ‘process’.
Within the group of attributed elements of alignment defined as context and intervening conditions, the original circumstance of the emergent theme ‘content’ is enacted as a major factor contributing to a number of elements and conditions. By condition, it is the cause of ‘contents’. During analysis, attributed elements of alignment of the ‘context’ and ‘intervening conditions’ arose through modification to the state of alignment. The former is the cause of the latter. The emergent themes ‘strategy’ and ‘structure’ intervene with the ‘process’. These occurrences took place without having any relationship with the emergent theme ‘content’, and the two emergent themes ‘strategy’ and ‘structure’.

One of the above Sections 5.2.10 to 5.2.14 also deals with the distinction between ‘strategy and structure’. One of the emergent themes ‘process’ is influenced by the other emergent themes of ‘strategy and structure’. Of the emergent theme ‘process’, the ‘strategy and structure’ have the characteristics of being unique and the emergent theme ‘process’ has the characteristic of being standardised or generalised. The strategy and structure of the case organisations cause the evolving of the alignment or misalignment while the process is being standardised in the context of Singaporean SMEs’ IMS implementation. The distinction concludes that the essential nature is the process, stimulating the nature is the strategy and structure of the case organisations. That means the emergent theme ‘process’ is essential and the other emergent themes ‘strategy and structure’ are the stimuli. The intervening conditions influence the context to be transformed. The intervening conditions are unique in each case organisation and the context of the IMS implementation is generalised amongst all case studies. This is a clear pattern of the evolution within the attributed elements of alignment of the context by the intervening conditions. It leads to understanding the clear pattern of the emergent themes in the IMS implementation of Singaporean SMEs. The distinction between the emergent themes ‘strategy and structure’ seems noticeable from the case data and the indication of the emergent themes ‘process’ has had huge metamorphosis from the other emergent themes within the attributed elements of alignment.

In analysing the relationship originating from the data, the researcher noted the causes between the emergent theme ‘content’ and the attributes. The attributes were the emergent themes ‘process’, ‘strategy’ and ‘structure’. The emergent theme ‘content’ was the independent nature (self-sustaining), whereas the attributes were the dependent nature (reliance). The emergent theme ‘content’ was the basis to the stream of activities and subsequently created either alignment or misalignment. However, the emergent themes
‘process, strategy and structure’ were the array of activities interdependent with the emergent theme ‘content’.

Furthermore the data revealed that the relationship in alignment with the emergent theme ‘content’ was the cause and the relationship in alignment with the emergent theme ‘process’ that was the context of the IMS implementation. On the other hand, the emergent themes ‘strategy and structure’ were the intervening conditions in the context of IMS implementation. Amongst the emergent themes ‘process, strategy and structure’, only the emergent theme ‘process’ was the dependent aspect and the other two were performed with no direct dependence factor to the alignment effect. This scenario is relevant not only to the alignment effect but also to the misalignment effect.
5.4 Comparison between the Case Data and the Literature

As stated in the early chapters, the literature related to the study focus area is relatively thin and as a result a comparison between case data and contemporary relevant literature would be a very challenging task.

In the review of literature, the concept of alignment was identified as a process, a perceived construction of complex, interdependent business and supporting system orientation drivers designed to have a positive impact on organisational performance (Hoque, 2002; Kaplan & Norton, 2006). The case study data showed that alignment is drawn between the business objectives and IMS implementation, and that both are synonymous. The alignment is constructed on an existence of business objectives and IMS content, co-existence of process and organisation distinctiveness of strategy and structure whereas process, strategy and structure are considered attributes to the alignment. The co-existing attributes and the ‘content’ are deliberately meant to have an impact on organisational performance by way of immediate contiguity. There are similarities in the meaning of alignment concepts between the findings and the literature.

One of the strategic alignment models outlined in the literature review, the Bureaucracy model, describes the shared responsibility between IMS and business objectives. The case data also revealed that shared responsibility between business objectives and IMS deployment of the business units existed within the case organisations. Business objectives indicated the deliverable (effects) and IMS deployment of the business units nurtured (attributes to) the deliverables (Mintzberg, 1979). For instance, the case study data revealed that the environmental management system, part of the IMS, can be attributed with having the effect of establishing a reputable organisation (business deliverables). That means the emergent theme ‘content’ is the cause. Again, the emergent theme ‘content’ is regarded as shared domain knowledge and connection between business objectives and IMS deployment of business units. The emergent theme ‘process’ is a functional factor and alignment is designated as an effect.

Stoychev (2013, p. 2) indicated that:

*When the instructions and manuals are registered in a formal system, some people may refer to this description of the system as system management. But there is a danger in*
this approach, since the description of the system may not reflect the actual practice and in many situations, especially when there is manuals full of cumbersome procedures this is true. It is even worse when by reference to the description as system, an accepted view changes from motor to achieve planned results (cause and effect) to storehouse of policies and rules for organisation management.

Stoychev (2013) emphasises the importance of the relationship between content and the actual process. This is supported by the data collected from this study.

The case study data showed a distinct relation between the emergent themes ‘content’ and ‘process’. From the data, the researcher articulated a model of four elements of alignment belonging to the emergent theme ‘content’ and the five elements of alignment belonging to the emergent theme ‘process’. The four elements of alignment are ‘certainty, experience, magnification and misconception’. The five elements of alignment are the ‘comfort, cooperative, environment, resources and results’. It is shown that the data reflects a distinct relationship between the emergent themes ‘content and process’. The list of four elements of alignment seems to be a later source of originating influencing factors of the five elements of alignment.

The research findings of Olaru, Pirnea, Hohan and Maftei (2014) reinforce the emergent model of this study by emphasising the importance of resources and results, the two elements of alignment belonging to the theme process. Olaru et al. (2014) state that small and medium enterprises with an integrated management system are largely concerned with performance indicators relating to financial results.

The Authoritarian model was also described in the literature review. It can be interpreted as having no shared responsibilities or IMS knowledge of isolation, at that platform of model, between what a cause is and what the attributes are (Scott, 2003; Lackey & Brown 2002). In the Authoritative model, IMS contents are the written standards of practices to support goal attainment. These IMS contents are the main focus during decision making and resource allocation to produce effective results. As per the case study data, these approaches generate comfortable levels of implementation, cooperative factors during the process, influential factors to the contextual environment, prominent factors to allocate resources, and result-oriented approaches.
According to the case study data, there are also five remaining elements of alignment 10 to 14 (eradication, remedies, discipline, support and training) belonging to the intervening conditions. Amongst the remaining five, three elements of alignment are intervening conditions to the emergent theme ‘process’. The intervening condition of purging errors (Eradication), the formation of factors of stimuli (Remedies), and the persuasion factors to the stakeholders (Discipline) are manipulating factors. Therefore, they formed an emergent theme ‘strategy’ and are predominantly capable of intervening with the emergent theme ‘process’ and affecting alignment via context.

The emergent theme ‘process’ is also positioned to be embraced by the other quoted elements of alignment (eradication, remedies and discipline) which release the mode by the expediency of successive condition. Perhaps this condition is similar to the alignment, but is not exact. It is supported by the literature that the organisation’s strategy is the reason to intervene in the alignment between the IMS and the organisation. As stated in Chapter 2, according to Marr and Creelman (2011), successful implementation of the IMS in an Authoritative model depends on the collaboration between the parent organisation and its business units. That means that business units and parent organisations have to share responsibilities and divergent strategies adopted by business units may create ambiguity within the organisation. This is determined by the strategy of the parent organisation and its business units.

The data from the case studies also showed that there are another two remaining elements of alignment (support and training) that belong to the intervening conditions. These two elements of alignment are intervening to the emergent theme ‘process’, but are not related to the emergent theme ‘strategy’. The intervening condition of the complementary factor (support) and forming the source of homogenous factors within the organisation (training) are the remaining intervening factors. These two elements of alignment contribute manipulating alignment effects via the emergent theme ‘process’ by intervening condition.

This finding is supported by the literature in one of the strategic alignment models, the Structural model, reveals that a structural flaw is the key hindrance to the alignment between the IMS and the organisation (Drucker, 1999). The central issues are neglected and fragmented methodologies used to correct these flaws, which are responsible for and dependent on the benefit of the business objectives. The two elements of alignment, support
and training, grasped those concerns and therefore they were clustered as the emergent theme ‘structure’. This last emergent theme, ‘structure’, involves intervening factors to the emergent theme ‘process’ and influencing alignment as a result.

The literature review revealed evidence that not all management systems fulfilled the expectations of both employers and employees (Mackau, 2003). This issue did not arise in the context of the IMS implementation in Singaporean SMEs. In this study, a general proposition turned out to be in the representative explanation of a differential comparison of an unexpected series of factors that influence the alignment. This proclamation addressed the research question of “what are the factors that enable alignment between IMS and business objectives in SME's in Singapore?” However, this is also an unprejudiced report about the occurrences of Singaporean SMEs in the course of the IMS implementation.

In this emergent alignment model, the emergent themes were grounded on the elements of alignment. The data from the case study approach revealed that elements of alignment precede the four emergent themes in the context of IMS implementation in Singaporean SMEs. It was interpreted from the case studies’ data that all elements of alignment had condensed the relations into two in the model, namely causal conditions and alignment attributes between business objectives and IMS implementation. The attributes consisted of context and intervening conditions. The intervening conditions were sub-divided into two emergent themes. As such there were four relationships of emergent themes, namely:

(i) Content (a major factor contributing that has a number of elements and conditions),
(ii) Process (context),
(iii) Strategy (intervening condition one) and
(iv) Structure (intervening condition two)

It is noted that in the Chapter 2 literature review one of the strategic alignment models, the Organic model, necessitates shared responsibility and knowledge. Members have specialized knowledge, experience, originality, and expertise (Robbins, 2005). So these four elements of alignment relations in the Organic model differ from the four emergent themes’ relations discussed earlier. This raises an inquiry to know why the latter four elements of alignment relations from the Organic model differ with the four emergent themes’ relations in IMS implementation in the Singaporean SMEs context.
It seems that in the process of functioning in business activities, some of the elements of alignment within the emergent themes are similar, though for the sake of understanding they have been given different names in the organic model. A close comparison reveals that relationship in different names during the study of the organic model. There is also a possibility that there may be some fine points in understanding the underlying sequence and ideas of these relations. It is determined that the emergent alignment model of the four emergent theme relations is capable of being simplified in this analysis.

This condition stands for the objective support for the expression of alignment phenomena. Other researchers have examined the problem related with the alignment at both the enterprise level and the business unit level. Kaplan and Norton (2006), for example, believed that aligning organisational units to create value at the enterprise level generally gets less attention than creating value at the business unit level. They draw attention to certain distinctions between the different conceptions of the alignment. Alignment concerns not the production of entities but the relationship of physical processes. Alignment is not physical causality and connections between the different levels of management and not a perception of connection between the different levels of management. This study finding concluded that the emergent model of alignment is not about causation at all in the sense of alignment creation but rather it is intended to account for the individuality of each and every element of alignment as a capacity of a certain control event that occurs within a network of inter-relations of causal phenomena and conditions. The case studies’ data suggests the involvement of complexity since emergent themes individuate elements of alignment only if they are already individuated.

The data from the case studies emphasises that there appears to be no grounds for distinguishing between the enterprise level and the business unit level as cause and condition respectively in the emergent alignment model. Such a distinction is characteristic of the four elements of alignment that belong to the emergent theme ‘content’ and the attributes even though the data suggests that to some extent, the distinction is found within the database. It is arguable that the emergent theme ‘content’ and subsequent understanding of the context and the intervening conditions has a certain affinity with the arguments of Kaplan and Norton (2006). On the contrary, Hoque (2002) suggested that the alignment approach should solve the problem up front by aligning before the processes within the organisation. But this approach is not to be interpreted in terms of a network of interrelated environments. It
nevertheless does involve some sense of mutual acclimatisation. It is deemed to be expensive and irreversible if misalignment exists within the system.

The data from the case studies express disparity with Hoque (2002), referring to an essential causal condition in which the emergent theme ‘content’ can be equated with some sense of mutual acclimatisation. The data presents the emergent theme ‘content’, which articulate that causal phenomena and conditions refer to the way in which four specific elements of alignment ‘certainty, experience, magnification and misconception’ act as cause in relation to certain elements of alignment that are associated with it and that have ascended together with it in the same moment.

Hesselbein, Goldsmith and Beckard (1997) describe objectives as outcome measurement markers that do not necessarily define input behaviour or actions. Their obtrusiveness appears to be based in part on conflating the credentials of the intervening conditions to the context as the cause of the alignment. Thus the position of input behaviour or actions in the specific development within the context remains challenging. In this chapter, the critical argument with the intervening conditions of the context is the conduct of Singaporean SMEs. Those arguments from Chapter 2 seem not to be based on exclusively Singaporean SMEs’ conduct.

It was also noted in the Chapter 2 literature review that Greiner and Cummings (2009) interpreted alignment as the McKinsey 7-S model of ‘strategy, structure, systems, shared values, skills, style, and staff’, in which most of the seven elements should be aligned and should act as a system to achieve strategic success (Rasiel & Friga, 2001). Data from the case studies indicated that the attributes are one of the reasons to generate alignment. The ten elements of alignment formed the attributes and their effects, created by the context and the intervening conditions. Thus, it can be established that there was no variance in principle between the McKinsey 7-S model and the emergent alignment model as aligned and as a system to achieve strategic success in the IMS implementation. However, there are some distinctions between the McKinsey 7-S model and the emergent alignment model in the context of Singaporean SMEs which are evident in the observations from the case study data. There are resemblances to the McKinsey 7-S model based upon a system to achieve alignment and its interpretations with the concepts of seven elements of alignment. However, it is noted that McKinsey 7-S model is static, making strategy only one of several elements of
alignment to be associated. In the Chapter 2 review of literature, there is an alternative noticeably different school of thought from McKinsey’s model, system thinking.

System thinking is a set of diverse elements that collectively perform a function as a group. The component elements are unable to perform on their own, except the operation of the system, no emergent properties would exist. A system to produce emergent properties by the function of interconnected elements would be complex. For example, the illustration of an engine, the different parts of the transmission and the wheels do not consider them as a system. In the context of system, the component elements must possess the complexity of being designed and then to be interconnected in a specific manner. At that juncture, the component elements become a system called vehicle. The vehicle provides the emergent property means of transport. It makes emergent value of transportation. As a result, it defines a system and makes it valuable. The complexity increases the value of emergent property which describes a system and appreciated by the effect.

However, the researcher interpreted that complexity is the source of problem. Complexity saddles the limits between stability and turmoil. A small amount of discomposure can push the system one way or the other. In addition, a system with the order of complexity can produce disorganised performance. The three elements with two interconnections per element can be considered as basic complexity. Discomposure can be anticipated in complexity. The complex system may degenerate into either a state of discomposure or a state of stability. But a state of stability might be undesirable. During their life span, humans may encounter a state of discomposure, but at the end of their life span, humans will die. Death is a state of stability but an undesirable state. Accordingly, the complexity generates discomposure at a point of interface where two elements organised together and exchange something.

Interface is the significant factor to design an effective system. The interfaces should be well-defined and should be simple. Simple interfaces produce effective results. Complicated interfaces means to develop around the complication. For that reason in an organisation, a complicated and complex interface within different processes, results in managing a poor interface of the process. It will lead to evolving to handle a personal relationship. The ambiguous interfaces are subject to interpretation and it will result in discrepancies. Higher degrees of complexity and imprecise interfaces will result in tragedy. In general, the ideal
situation for an efficient system is that each component must be as independent as possible, as well as a high order of internal complexity and a low order of external complexity.

Good reaction control mechanisms can be defined as a good system. Reaction control is used to preserve and improve the system. But then reaction control is correspondingly a source of complexity. As such reaction control mechanisms have benefits and risks. A good system manages agitation and changes as a system. The end result of system will be a malfunction or a stable but undesirable state if the system’s reaction control mechanism effects agitation but does not terminate before the next agitation.

The systems view of alignment between business objectives and IMS within the organisation is embedded in this study’s emergent model. It shows measurements of alignment in which the main categories of systems have major contributing factors that themselves have a number of elements and conditions (cause), attributes and effects. There are two sub categories within the attributes. Intervening conditions and contexts are the sub categories of this group and further categorise the strategy and structure as part of the intervening conditions.

In accordance with the systems school of thought, the quality judgement is a judgement made at the interface between the business system and the IMS system, about what is permitted through the interface. In addition, whether an output is a desired product or undesired product is an outcome on its quality. A reasonably satisfactory output is a desirable product. An output which cannot be used by the user system is a waste or undesirable product. Undesirable products can assemble in the IMS system, or in the business system or both. Nature often becomes the business system of the waste.

Cao, Clarke and Lehany (2003) define four types of organisational change within the organisational boundary. According to them process, structural, political and cultural changes interact within the organisational boundary. Interactions make static influences and the dynamic influences are in a unique state of reliance. The accumulation of the influences will generate high quality impacts. Static influences are broad in spectrum to all interconnected businesses. The static influences are not in a unique state of reliance. Absence of static influences will generate an unfortunate impact on business. This position from the literature is supplemented with the emergent alignment model in this study.
In the context of Singaporean SMEs’ IMS implementation, the systems approach has made a lasting impact. According to this study, the delivery of alignment models was likely to form a high performance organisation in terms of the point of view of the systems school of thought. This study also developed the system of insightful cognitive knowledge together with the alignment model.

Systems Thinking in the literature advocates that management should implement a holistic approach instead of reductionist tactics. It is not possible to have a single model with full apprehension of an organisational situation. Fundamentally the inter-relationships within an organisation can be achieved by implying some of those systems. It depends on the effectiveness of the loop within the model. The appropriate of those systems would complement the focus on customers by improving the values of IMS and the entire process, as well as raise participation rates of employees.

From the Systems Thinking perspective, IMS should be effectively put together within the uncluttered and coherent systems. For that reason, IMS is a system with interactive mechanisms. IMS is not committed to create the anticipated effects in a separate portion of the system. From the Systems Thinking perspective, IMS is more than a process. IMS is more than content. IMS is more than strategy. IMS is more than structure. Indeed, it is all of those aspects collectively working together. Besides successful implementation of IMS, there are prerequisites to formulate the correct state of balance for each organisation’s objectives and determinations. Therefore it is appropriate that each organisation explores its own needs for process, strategy, structure and content.

As per Reed, Lemak and Mero (2002), implementing a complex integrated management system is a difficult task. IMS with all its subsequent interactions and a number of weaknesses can additionally contribute to failure to implement and manage as a system of systems. This may not be the reason of any inherent defect or indispensable faults in the system and its components.

The emergent alignment model developed in this study has precise distinctions between the causal phenomena and conditions, and the attributes, which were the outcome of the contemporary intellectual ambiance, determined by the Singaporean SMEs’ context and rationalised analysis before and after the four emergent themes were finalized.
5.5 Chapter Summary

In summary, the emergent alignment model is comparable in nature to the existing literature. The contextualised emergent alignment model is encroached by the specific nature of IMS implementation and the country specific approach. This specific nature is guided by the response from the diverse industries in the SME context. On the contrary, the existing literature is focused mainly on specific business management models and alignment is applicable only to the respective models. The literature is fully reliant on the array of business management models and is unable to fulfil the broad view.

The emergent alignment model fills the gaps in gaining a broad view of the alignment approach in the IMS implementation of Singapore context SMEs. This could be one of the strategic alignment models and an emergent theory to the alignment phenomena as explicated by the pragmatic relations, not only of one of the particular categories.
Chapter 5: Discussion ~ 146

Research Design
(Developed for this study)

Identification of Further Research

Comparison with Extant Literature

Data Analysis
(Emergent Model - Contribution of Knowledge)

Data Analysis
(Emergent Themes)

Data Analysis
(Emergent Elements)

Data Collection Method
(Field Research)

Research Design
(Selection of Methodology)

Identification of Research Problem

Literature Review
(Gap Analysis)

Document Map
Chapter 6: Conclusion and Recommendations

6.0 Introduction

This chapter is divided into six sections. Section 1 highlights the limitations of this study. This approach focuses on the study area and develops the affiliated study. Section 2 emphasises the implications for the practitioner. This section describes the practitioner’s views of the findings and future opportunities. Section 3 makes suggestions on areas of improvement for policy makers. Suggestions come from the findings of this study. Section 4 emphasises the implications for further research. This section defines the potential future research opportunities beyond this focus area of study. Section 5 presents reflections on this study from researcher’s viewpoint. The last section, Section 6, summarises this chapter and the entire study. The summary of the chapter and conclusion describes the final contribution to knowledge and summarises all issues related to this study.

The purpose of this study was to identify, describe and explain the critical dimensions that assist in the alignment of business objectives with IMS implementation. In Chapter 2, the literature review, a detailed discussion about IMS, business models and alignment processes was presented. The literature is rich on the importance of the integration of management systems within IMS but sparse about the alignment between the business objectives and IMS implementation. Furthermore, the literature on how to achieve alignment between business objectives and IMS is generally absent. As such, an exploratory empirical study was undertaken to find out the critical dimensions involved in the alignment of business objectives and IMS deployment within the organisation.

This study takes a first step towards exploring the process of implementing IMS within SMEs in the Singaporean context. The IMS implementation proceeds through a number of challenges and is accompanied by behavioural changes. The findings revealed four types of implementation dimensions and fourteen measurements.

Prior to this study, it had been acknowledged that the keys to success lie in good management of system development, well-designed IMS implementation within the organisation, prudent selection of allied organisations, close relationships with partner organisations, good
management analysis, management and elimination of barriers, top management commitment and continuous improvement in the alignment practices (Bilton, 1999; Kusch, 2007; Lackey & Brown, 2002; Marr & Creelman, 2011; Mintzberg, 1979; Robbins, 2005; Royer et al., 2008; Scott, 2003). This study has illustrated management practices in the Singapore context by covering six embedded case studies from three case organisations, these organisations being local SMEs from non-manufacturing based different industries in Singapore. Case studies were used to obtain detailed data about the relationship between business objectives and IMS implementation.

The alignment between the business objectives and IMS is an immature area and further research is required on this topic. Future research could focus on whether these results are able to be replicated in other contexts. The link between content, strategy, structure and process unveiled in this study also requires further research. This study has implications mainly for the quality, environmental, health and safety management systems. It reveals different possibilities of further study regarding the individual characteristic of academia, policy makers, and practitioners. It also discovers the benefits of having aligned IMS and core business objectives, such as the optimised use of resources and the synergies created among the systems.

From the results of this study, it is essential that managers and practitioners become aware of the challenges and obstacles of IMS and the alignment of business objectives. Recommendations for managing alignment include obtaining genuine commitment from top management (strategy and structure), implementation (process) and having cohesive content in the IMS manual. In addition, having IMS is especially important for organisations willing to move towards continuous improvement and business excellence as it can help organisations to effectively tackle quality, environmental, health and safety issues more efficiently and systematically.

6.1 Limitations
One of the major limitations of this empirical exploratory case study is that the study’s boundaries are limited to Small Medium Enterprises (SMEs) within only the Singaporean context. Thus, the findings are not generalisable to other businesses or contexts. However,
this study was intended to be exploratory, given the paucity of the literature in the area, to
guide further research and practice.

Another limitation of this study is the methodology that leads to the contextualisation. The
researcher’s objective was to identify the dimensions of the alignment between the business
objectives and the Integrated Management System. In specific terms, the study was carried
out in order to explore the perception of the stakeholders in the organisation regarding the
alignment or misalignment of IMS and the core business activities. Therefore, the findings of
this study were contextualised and may or may not be applicable to the other contexts.
Moreover, very little research has been undertaken regarding IMS implementation and the
alignment of business objectives. This made the literature review very challenging and the
task of finding academic support for the data collected in this study difficult.

The above mentioned limitations are related to the body of knowledge and have direct
impacts on the subject matter. However, there are unintended impacts to the findings due to
the practical limitations. The principal practical limitation was on funds and time limitations
during the study. This study had no funding and was not supported by any government or any
organisation. Therefore, monetary and time expenditures on this study were limited.

6.2 Implications for Practitioners

This study contributes to knowledge by identifying dimensions of the alignment between the
business objectives and the Integrated Management System (IMS) within the organisation. It
could be useful to create internationally recognised guidelines in the future. This study
identified the underlying factors of the alignment process. The new versions of systems can
include these in measures for improvement.

This study found that the context (process) is affected by the source (content) and the
importance of alignment. The alignment process also affected the risk exposure to the
business. Participants often carried out improper work that was influenced by the contents.
This phenomenon has nothing to do with the working experience or the educational
background that they possessed. The alignment problem has been identified in this study and
practitioners need to pay attention to potential problems in the future and figure out practical solutions.

Participants informed that they did something that was not hypothetical, the reason being that their course of action was influenced by the intervening conditions (strategy and structure). Participants were inspired but they became indecisive during the process. This study revealed that if the alignment between the business objectives and IMS is in place, the above-mentioned potential risks could be eliminated from the outset.

The study concluded that participants with lower levels of responsibilities were less tolerable to the intervening conditions. The decisions they made were concerned with risk influence. However, owing to the nature of their work, participants with higher levels of responsibilities had slightly more control over this type of situation. For organisations that experience misalignment carried out by staff on account of the disconnected processes of the business, the findings suggest an alignment approach between the business objectives and IMS to stop the misalignment practice. It would also be necessary to include the alignment practice in the management review as stated in the plan, do, check, act (PDCA) cycle immediately.

This approach is likely to apply not only to the experience of SMEs’ but also to larger organisations such as multinational enterprises. This is different from suggesting that organisations should try to rid themselves of all misalignment activities in their day to day operations. The study showed that it is necessary to pay attention only to those activities that are relevant to their context (process).

Larger organisations are likely to have with well-structured processes. However, this does not mean that all obstacles leading to misalignment are removed from their contexts. It is necessary to identify and rectify accordingly the obstacles that are related to the alignment process.

The emergent alignment model suggests that under different conditions, different contexts of needs give rise to salience. The contexts of needs are arranged in the horizontal and vertical linkages. Content related fulfilment is the salient dimension which introduces attention for this study. However, the moment it becomes fulfilled, it seems to cease to be important.
In its highest level formulation, the model contains four dimensions of linkages from content to effect as illustrated in Figure 6.1: content, process, strategy and structure. Thus if the ‘content’ prerequisites are unsatisfied, they are the most important and attract most of the attention. But as they become satisfied they fade into the background and the next dimensions comprising the ‘process, strategy and structure’ requirements come to the fore. The physical dimension in content is usually defined to cover such needs as the ISO manual, standard operation procedures and those associated with such daily activities as operation process, reporting systems and the like. A need for decisions is an edifying example. It is a need that is most pressing when it is unsatisfied, but people tend to neglect it and take it for granted when the situation is not at risk.

One of the remarkable features of the emergent alignment model is its persistent attractiveness and the comprehensive presence of empirical support. With reference to the Chapter 2 literature review, there have been several studies of which a handful provides some measure of support. It is alleged that the increasing benefits arise for some intentions, which have a tendency to affirm existing attitudes. The wide gap between experimental and practical attitudes may be one of the potential extents. There are many individuals who are not well versed in reading experimental literature. Some individuals who were supposed to initiate the alignment may fall into this category. From the practitioner’s view point, many approaches...
may be interpreted as not viable for alignment. In actual fact, everyone in the practical world is waiting for and would like to have a straightforward instructional guide to solve a problem so as to avoid having to read theoretical viewpoints to formulate achievable solutions.

The other possible intention of using the emergent alignment model is naturally satisfying. It accords with people’s experience that their needs are persistent when not met, but otherwise almost completely disregarded. The concluding extent of result may be found in the practical implications which can be drawn from the theory, and which again accord with the practitioner’s experience. As more people mature in the work force, they often switch their attention from process driven activities to their desires, and then in turn to their superiors’ prerequisites.

The remainder extent literatures are either ambivalent or undesirable. Tsai and Chou (2009) acknowledge that creating and maintaining an interconnected working environment increases the efficiency of work processes, improves employee perceptions and leads to high recruitment attractiveness. In the expression of such foreseeable extent and intentions, however, one would by now have expected the emergent alignment model to disappear into waste. Perhaps it has something to offer and is worth further study.

However, there are differences between a model for researchers and a model for practitioners. The model of physical science is often carried out by identifying a dimension at a time. This can be achieved by analysing and formulating a rule. It was captured because of the diverse effects were adequately close to attributes. Analysing one dimension at a time allows a researcher to increase understanding. To illustrate, one can predict the path of a flying object by analysing separately the effects of gravity and wind resistance. The combined effects of gravity and wind resistance could be identified only upon understanding the individual dimensions. The reductionism fabricates better understanding and prediction. In the business environment, individually or collectively, this is less often the case. A more realistic initial speculation is that everything affects everything else except proven otherwise. In such a scenario, reductionism may spread out the dimensions to estimate the forthcoming of an occurrence. It will make the model cumbersome.

This concern comes to be predominantly significant if the prerequisites of practitioners are correspondingly taken into account. It is not advisable to apply alignment models as it
explains many fields of practice. Given swiftness of business nature, it explains every so often exceeding the handling capacity of the organisation. For instance, it may be a comparable scenario as a golfer to speculate about the hitting the golf ball some distance. Such an approach is ineffective given the unfamiliarity of the surroundings and the nonexistence of practical experiences.

The alignment model is useful to practitioners who have limited dimensionality so as to be within the extent of apprehension. They are spontaneously satisfying so they can be acted on without conscious analysis. For a practitioner, adopting an idea of greater generality may render an experience more rather understandable. It is the opposite of the reductionism approach.

In summary, it can be assumed that the alignment model is applicable towards the general end of a meta-theory range stretching from precise micro-models of narrow focus to logic and macro-models of high generality but consequently with some fuzziness. An assumption to be drawn is that one would not expect such a model to advance itself easily to pragmatic hypothetical tests. Most of the practitioners are likely to favour other criteria than the researchers. It is also understandable that a given model may suit certain contexts while being quite inappropriate for others. In these circumstances, the alignment model can be explored in further detailed study by the policy makers.

### 6.3 Implications for Policy Makers

The study findings highlight that the four key components of measurements, content, process, strategy and structure, may play a decisive role in influencing the breadth and depth of aligning IMS in an organisation. In fact, IMS is often applied to isolated parts of an organisation rather than as a whole. Therefore its effectiveness is questionable because it is implemented piecemeal.

It is necessary for policy makers to assess the control measures of quality, environmental, health and safety, impacts and risks during the implementing stage. This study also revealed a substantial number of tangible and intangible benefits from integrating IMS with the business objectives. Most of the common obstacles encountered by the organisations during the
implementation process of IMS were related to the measurements for identifying quality, environmental, health and safety aspects.

The use of the case study method is multi-dimensional and complex. The interview sessions were conducted within private places and not exposed to the outside reality. Participants stated that understanding and complying with procedures, standards, and knowledge was the key to the development of business but the management representatives neglected the perception, assumptions, expectations, and knowledge of the staff. This issue could have led to the deviations of work life culture in the Singapore context and it may require expert opinion from social and political scientists. The social and political aspect of work life culture is not in this study scope and further research may focus on this area. Further research on the connection between organisational hierarchy levels related to the work life culture and influencing factors of alignment process is suggested.

6.4 Implications for Further Research

The intent of this study was to explore the dimension and measurements of the alignment between business objectives and IMS implementation. The finding of this study probably requires further hypothesis testing in the Singaporean and other contexts.

In reality, it was beyond the control of the study to attain a close fit of the theoretical model. Whether a close fit or otherwise is not dependant on the qualities of the model, especially since the deviation in some physical phenomena is so insignificant that almost any specimen can perform as a correct pattern for the model.

If the field of application is naturally narrow in the model, the dimensions it describes are likely to be those which are most relevant. Such a model should yield precise and accurate predictions. A hypothetical test may have a high probability of confirming the model if it is an ideal replication of the measurement from which it was derived.

Yin (1994) stated that various sources of evidence contribute to a strong case study approach. Actual triangulation occurs when the researcher is able to collect information from different sources to corroborate the same fact or phenomenon. The use of a case study approach to
explore the benefits of alignment evolves over time. This case study approach allows for the understanding of the impacts on alignment and whether they have been act in accordance with the alignment process.

Some issues with regards to the integration of other management systems were not addressed in this study. These issues required an analysis beyond the scope of this study. This study presented the most remarkable enablement factors of alignment and urgent issues of the gaps in literature which required answers and explanations. The research question of “what are the factors that enable alignment between IMS and business objectives in SME's in Singapore” was fulfilled in this study.

In this study, all the findings and criteria are assumed to be of equal importance and the level of IMS integration was not emphasised during interviews. Future study should explore the possibility of prioritising them in order to better estimate the overall impact level as well as the risk level for each stage or project. The latest IMS literature suggests that there is a relationship between the complication of integration process and the level of integrations (Bernardo, Simon, Tarí, & Molina-Azorin, 2015; Abad, Dalmau & Vilajosana, 2014; Bernardo, Casadesús, Karapetrovic & Heras, 2012). However, relationships between the emergent elements and level of IMS integration were not detected in this study. Therefore, future research should explore the connection between the elements of alignment and the level of IMS integration. For example, prioritisation might differentiate the importance of business financial loss and the threat to corporate image.

This approach can be undertaken by creating classifications of the business objectives and IMS alignment performance into descriptive categories. The range of performance could be obtained by accessing numerous case studies. The immediate causes of the alignment process include the factors that can cause business failure physically and directly, whether the failure has been realised or not. The classification tactic can be illustrated among the immediate causes of failure and the same applies to the intervening conditions. In this study, the immediate causes of failure are not further acknowledged within the content, process and intervening conditions. This case study methodology focused only on the dimensions and measurements of alignments, and did not attempt to explore the possible immediate causes of failure.
Before further research can be undertaken on the emergent model, it is necessary to clarify the exact nature of the emergent model. In brief, it can be argued that this model is essentially taxonomy. To be precise, it is the emergent model with certain suggested relationships among the grouping of the interrelationships. On this ground, it is emphasised that further experimental research may not provide an appropriate result. A significant argument about the emergent theoretical model is that it pronounced functions as a nomenclature of interrelationships. In this respect, the emergent model shares more in the features of prudence than of the type of conception that is critically verified by means of the conventional approaches of behavioural inquiries.

Models contrast greatly in their simplification. Therefore perceive a range broadening from specific to abstract models. Formation of the tangible explanations of specific experimental data is found at the range of the specific end. The other abstract end can be well defined by context free models, such as rationalities, logic and other comparable factors. The generic term logic is not usually thought of as a model.

However, some models labelled as theories and classifications are very close to models. Nonetheless, further research is required to be carried out. This is to explore the inclusion of the probability and frequency of contributing causes of alignment and intervening conditions. The focus dedicated to the assessment of each measure could be enhanced. There would be added advantages to the individual dimensions and measures if the system allowed for the importing of necessary data from the alignment of measurement model during the implementation stage.

This would maximise the practicality of the business IMS alignment process. Data collected in previous audits and assessments could be reused in order to refine future research, with particular reference to the significant limits of the impacts and risks. However, the case studies analysed only reflect the viewpoint of the SMEs and not that of the multinational enterprises. This could be the possible challenge of the richness of the data collected.

The essential uniqueness of SMEs is that they are nurtured entrepreneurship with innovative business concepts and the diffusion of operation and production venues may hamper the implementation of IMS in SMEs. This is in addition to the general implementation barriers that may affect all sectors. The current IMS structure in SMEs tends to be vertical and
separate for business objectives and IMS. However, this study has suggested that the alignment between business objectives and IMS is able to overcome the duplication of management tasks. Moreover, it has been demonstrated that IMS could be amalgamated with core business processes into an overall merged system.

There are at least three grounds on which further research might be carried out. One is the sustainability of the research itself. In view of the extent of the research and the high fraction of findings related to the interrelatedness, this seems likely to be successful. It shall be dealt with here carefully. Another is the appropriateness of the research to the nature of the context. In this respect it is arguable that it is the sort of model which is not easily amenable to crucial test of other contexts. This would usually be seen as a limitation. However, it can be argued that, on the contrary, it is one of the qualities which give the model influence. The third ground is that the model itself can be refined.

Before exploring further the implications of the newly found alignment model, there are two other issues to be addressed. The diversity is in the effect of a meta-theory. Before it can be used to cast light on the nature of the alignment model, there are two other factors to be noted. One is the interconnectedness of the ‘process, strategy and structure’ making up an attribute. The other is the cause and effect interconnectedness with the influence of the attributes.

Although a significant lack of literature on the alignment between business objectives and IMS has been detected, the current integration approaches focus presumably on the alignment process within organisations. The alignment process is mostly performed as a combination of IMS and business practices through structural similarities, although full integration can be expected. This study also suggests using risk identification and assessment as an amalgamation factor. After presenting everything and prior to the conclusion of this chapter, it is sensible to present the personal reflection of the researcher.

6.5 Reflection on this Study

This section provides the researcher’s reflections on undertaking this study. The first experience of note was in the beginning stage of this study where specific tasks were set but were not perceived in the same way. Collaboration between tasks was at risk because of this
perception. The Integrated Management System (IMS) is perceived as a category of grouping the systems and there was no link between the IMS and the objective of business, despite the evidence of studies that focused only on the integration part. This was the first challenge and the relevant literature was unable to be found. This challenge led to the initial plan to conduct explanatory case study methodology to exploratory case study methodology and was considered a good challenge in the initial stage. Hopefully, this study attained positive results.

There was another issue that was related to the empirical study. The preliminary idea was to conduct a single case study. However, in order to improve the progression, it became desirable to provide a total of three case organisations with embedded cases to enhance the reliability and validity of the methodology. It would almost certainly enhance the quality of study by improving credibility, transferability, dependability and confirmability of the study. Fortunately, this tactic was advantageous to the quality of the study.

Initially, this study was designed to conduct interviews including voice recordings and for the recordings to transcribed for analysis. However, during the interviews, the participants were not keen to contribute when they were informed that their voices would be recorded. Furthermore, there was resistance from the participants who were not comfortable to provide copies of the documentation related to the IMS implementation. Participants cited that some procedures could be confidential. However, participants were willing to share documents during the interviews which were relevant to the conversation and allowed the researcher to read and generate field notes from them. This conduct was inherited from their audit processes. Participants had the perception that the researcher was not an authorised person and therefore had no right to request copies of the documents that belonged to the organisations. It was undeniably a great obstacle for the researcher. However, in order to overcome this, the researcher had to write field notes instead. This experience enhanced the understanding of essential information during the field trips and would be beneficial to the analysis process.

The next challenge emerged during the data analysis process. There was an overflow of data without the assistance of special software to carry out the analysis. However, this study was a worthwhile experience and provided a better understanding of the elements that shaped the alignment in the case studies. Exclusively, there was an extreme encounter during the course of analysing the emergent themes by using the Cross Case analysis. This experience steered
the researcher to generating the emergent alignment model. The entire journey was a progressive and cognitive achievement considered as self-actualisation. Much has been reflected on in the journey of this particular study. This point provides a juncture to wrap up the entire discovery of this study and the emergent model in general.

6.6 Summary of the Chapter and Conclusion

The objective of this study was to identify, describe and explain the critical dimensions that assist in the alignment of business objectives with IMS implementation and has addressed the conclusions about exploratory study findings and discussed the research problem. This chapter also presented the implications of this study in terms of theory and for practitioners and policy makers.

Chapters 1 and 2 stated the research problem as being that the alignment between IMS and business objectives seemed to be poorly documented in the literature and in practice. This was followed up with the research question of “what are the factors that enable alignment between IMS and business objectives in SME’s in Singapore?”

This exploratory study revealed four types of implementation dimensions and fourteen measurements. The findings provided a contextualised theoretical model of alignment. The successful completion of this study has derived an outline for further research into the concern of aligning the business objectives and the internationally recognised management system by fulfilling the needs and promoting the IMS.

As stated in the methodology chapter, there were three focus areas in order to answer the research question. The first focus was to understand the processes of the organisation; the second focus was the effectiveness of IMS direct support to the organisational mission, and the third focus was to find out how efficiently and effectively resources were deployed during IMS implementation. The data from case studies pointed out that the concept of alignment is identified as a process. The theory of alignment is a perceived construction of complex, interdependent business and the supporting systems. This includes continual processes of evaluation and improvement and tracking of customer satisfaction. In general, the entire process is the integration of quality into the business system. The effectiveness of the processes performance needs to be measured utilising the appropriate activities and resources.
Process performance effectiveness management is the monitoring and optimising of an organisation’s activities and resources, instead of just inspecting the final product. The emergent themes strategy and structure have similarities in the connections to the context (or process) of the alignments. The themes strategy and structure act conceptually as stimulation factors to the context.

The emerging model represented the characterised connection between the causation factors and the attributes which stimulated the alignment or misalignment as an effect. Accordingly the causation factors and attributes were interchanged by the content of the business and the IMS, the context and the intervening conditions. This model has important imperative implications for IMS implementation and business objectives for Singapore organisations in terms of the alignment process. It shows that the IMS oriented alignment initiative should generally be supported by the business objectives. Further, the researcher linked the positive alignment with the stimulation factors of strategy and the structure of the IMS and business.

Business objectives and IMS concepts complement each other in assisting SMEs improving their long-term profitability but these concepts are contrary in nature. For example in business, objectives such as bringing in a large market share and the hunt for high competitiveness are usually primary considerations, whereas the goals of IMS are usually procedural and considered as supportive functions of the primary activities. This study contributed significantly in creating a framework to identify the dimensions and measurement of the alignment between the business objectives and the IMS within the organisation.

The indications from the literature review in Chapter 2, there was no previous theory or model on the phenomenon under this study. The dimensions and measurement of alignment to implement IMS is a reasonably new subject matter in the IMS literature. The employment of a case study approach in the context of Singaporean SMEs is a methodological contribution within the IMS literature.

There is no perfect fit with regards to the IMS structural models, resource allocation, and governance models. Given the differences between business objectives and IMS concepts’ composition, this may create conflicts resulting from possible generation of misalignments within the organisation. The dimensions involved in the alignment process identified provide
further insights and recommendations for SMEs in their goal to be competitive in the long-term.

The study has enabled the development of dimensions and measurement of the alignment that attempts to illustrate the alignment between the business objectives and implement IMS in the context of Singaporean SMEs. This study contributes to knowledge as the dimensions and measurement of alignment to implement IMS have been identified. The study outcomes also contribute to knowledge on the issue of SMEs in the Singapore context achieving competitive advantages from the implementation of IMS, which has not been addressed in any earlier research.

Therefore, this study concludes that it is possible to rely on the findings to engage organisations in the improvement of alignment between the business objectives and the IMS process. This study recommends the holistic approach of deploying the whole model of dimensions and measurements, such as the causal phenomena, the causal conditions, and the intervening conditions, to improve the context (process) to achieve alignment between the business objectives and the IMS, in particular targeting the specific category of the Singaporean SME but not limited to just this one category.

Based on the study, it is argued that the holistic approach of deploying entire alignment dimensions and measurements is likely to be more successful in engaging Singaporean SMEs. It is also recommended that such a model as defined in this study should be developed into an applicable instrument and tools for the organisations in the relevant industries. Future research will need to assess and observe diversified categories directed at different types of organisations to ensure that they are effective and respond to the needs of their target audiences. Empirical research efforts will be needed to fully establish the grouping of organisation categories and their reactions towards alignment processes.
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Appendices

Appendix 1 (Organisation invitation letter)

Appendix 1-a

Organisation Invitation Letter

Southern Cross Business School
Southern Cross University
AUSTRALIA

For further information:
Mr John Zaw Min, Phone: +65 8288 8076, Email: j.min 11@scu.edu.au
Dr Keith Ng, Phone: +65 9021 4323, Email: keith.ng@scu.edu.au

Date:

NAME
POSITION
ORGANISATION

Subject: Invitation to participate in a research project entitled “The Alignment of Business and Integrated Management Systems - A Case Study of Small and Medium Enterprises (SME) in Singapore”

Dear Sir/Madam,
We seek permission from you to invite your staff from the organisation to take part in a study which is being conducted by Mr John Min and Dr Keith Ng from Southern Cross University. The purpose of the study research is to identify, list and describe the dimensions used to enable alignment of the business units and the implementation of Integrated Management System (IMS) in Singapore Small Medium Entreprises (SME). IMS comprises of Quality Management System (ISO 9001), Environmental Management System (ISO 14001), and Occupational Health and Safety Management System (OHSAS 18001). We would greatly appreciate your permission to invite staff members from your organization to participate in the study.

The data-collection process involves interviewing organizational members in order to explore, identify, and define the behaviour surrounding the activities associated with alignment of business and the IMS. It should take approximately thirty minutes to complete the interview. We would need to arrange a 15-minute information session for potential participants. At this session, the researcher will provide a brief explanation of the study.

Attendees at the information session will be informed that if they wish to participate in the study, a date will then be arrange for the interview to take place. All potential participants will be informed that participation is voluntary, that their responses are confidential and that they will not be disadvantaged in any way by not participating. Please refer to the attached Participant Information Letter.

We are interested only in the impressions of the participants’ perceptions. The data collected from the interviews will be focused more on the participants’ perceptual recognition. The
Appendix 1-b

confidentiality of responses is assured as only the researchers will have access to the recorded
interviews. After the data have been transcribed, the digital records will be destroyed.

On completion of the study, we will provide you with a report, which we recommend is made
available to all staff members. The findings of this study may be published in a scholarly
journal or presented at academic conferences. However, it will not be possible to identify the
individual participants or organisations from any publications related to this study.

Complaints about this research
This project has been approved by the Southern Cross University Human Research
Ethics Committee, ECN No.: ECN-12-058
Should you have concerns about your rights as a participant in this research, or you
have any complaints about the manner in which the research is conducted, it may be
given to the researcher, or, if an independent person is preferred, you can contact the
Sue Kelly, Human Ethics Office, Division of Research, R3.15, R Block, Lismore,
Southern Cross University NSW 2480, Australia, telephone +612 6626 9139, email
ethics.lismore@scu.edu.au.

If you agree to allow us to invite your staff members to take part in the study, please
complete the Organisation Consent Form, which is attached, and return it to us via email. For
further information, please contact John Min or Keith Ng.

Thank you for taking the time to consider this invitation.

Yours sincerely,

John Min          Keith Ng
Appendix 2 (The interview guiding principles)

Guiding principle 1
Identify the organisation’s core business.

Guiding principle 2
Identify the processes required to create and maintain the core business of the organisation.

Guiding principle 3
Identify the IMS effectiveness in direct support of the organisational mission.

Guiding principle 4
Identify the other possible substitution of IMS, in order to support the organisational mission.

Guiding principle 5
Explain the resources deployment during IMS implementation.

Guiding principle 6
Explain the efficiency of the resources deployment during IMS implementation.

Guiding principle 7
Explain the effectiveness of the resources deployment during IMS implementation.