

## **Abstract**

The advances in information technology have affected the lives of most of the human beings in their day-to day lives. With the passage of time, the technology has evolved immensely and so have the opportunities. Information Technology is being used in the business activities for improving the efficiency and effectiveness of the people and the business on the whole. The increasing demand of IS IT has made the management of the more and more complex and difficult. In order to manage the IS/IT based systems, it is important to have an appropriate strategy that defines the systems and provide means to manage the systems. Strategic information systems planning (SISP) is an effective way of developing and maintaining the IS/IT systems that support the business operations.

This research examines the key aspect of SISP in the changing business scenario. The alignment of the IS/IT plans and the business plans is essential for improved business performance.

The research employs a triangulation approach to identify key aspects of the study in New Zealand. The data sets included the questionnaire to the IT and business managers of the three companies and their views are compared with the literature and the available business documents for consistency and answering the research question. The questionnaires were sent to the respective IT and a business manager of the three companies and other data was collected from the company websites, and annual reports.

There was similarity in terms of planning and implementation of the IS/IT and business processes and the use of ERP, SCM and CRM applications to support the business processes.

The conclusion reveals that there is no formal planning process in the three companies and the IS/IT and business planning is done on an ad-hoc basis. There is a move towards the alignment of the plans. However, the companies are yet to use SISP to achieve the alignment of IS/IT plan and business plans.

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## List of Abbreviations

BP	-	Business Planning
CIO	-	Chief Information Officer
CRM	-	Customer Relationship Management
EC	-	Electronic Commerce
EDI	-	Electronic Data Interchange
ERP	-	Enterprise Resource Planning
HR	-	Human Resource
HRM	-	Human Resource Management
IS	-	Information Systems
IT	-	Information Technology
SCM	-	Supply Chain Management
SISP	-	Strategic Information Systems Planning
SME	-	Small and Medium Enterprise
SQL	-	Sequential Query language
TPS	-	Transaction Processing System
VoIP	-	Voice Over Internet Protocol

# 1 Introduction

Over the years IT is increasingly becoming an integral part of everyone's working and personal life. According to Ward and Peppard (2002), IT provides a sense of connectivity that was hard to visualise ten to fifteen years ago. The technology has evolved swiftly over recent years providing major advances, providing organizations with various options and opportunities. The opportunities provided the businesses to integrate IT with the business activities.

In the present world, most organizations in all sectors of industry are dependant on the information systems (IS). Rockart (1988) thinks that, IT is becoming an "increasingly important part of the ongoing, integral operations of the business." The organizations are not only looking at the use of technology to support the existing business operations. They are also looking to create new opportunities that will provide a source of competitive advantage.

In past few years, the importance of the information systems and technology has changed and the need to manage IS/IT strategically has increased. Many organizations are looking at IS/IT and are concerned about obtaining acceptable rate of returns from the investments. They are concerned about meeting the current and future business requirements. These concerns require effective planning and management in the changing business environment.

The use of Strategic Information Systems Planning (SISP) process can address the concerns related with the implementation of IS/IT systems and provide communication between the IS/IT and the business function.

This research looks into the aspect of alignment of the IS/IT plans and the business plans to improve the business performance. The important aspect of the study is to identify the extent of alignment (if any) in the companies based on the use of IS/IT in the company.

The research findings are used to answer the research questions, in order to understand the effective utilization of the planning and implementation of the IS/IT systems. A comparison of the results obtained from a detailed questionnaire to the three New Zealand companies with the available literature is presented as research findings.

This report is divided into five chapter's namely-Introduction, Method, Results, Analysis and Discussion. The answers to the research questions have been provided in the conclusion.

The first chapter of introduction includes the literature review, which presents the key terms and concepts in the field of information systems as they are applied in the business. In the literature review along with the outline of key terms, the importance of SISP and alignment of IS/IT and business planning and the use of applications to support the business objectives has been highlighted. The method describes the approach taken to conduct the study. It also discusses the means of data collection and analysis. The third chapter presents the results obtained from the questionnaire and the published information of the selected three companies as case studies. The questionnaire responses are presented as the concerned personnel answered them from the companies.

The following chapter provides the analysis of the results and relating it back to the literature and available company documents.

The fifth chapter of this paper provides a discussion about the summary of findings obtained from the analysis and suggestions for further research on the topic.

## **1.1 Literature Review**

The literature review reports on the need for alignment of IS/IT plans and business plans in the field of information systems from 1980's until recent times which marked the growth of IT in business operations. The following section provides a description of the terms and concepts related to the study as drawn from the literature.

## **1.1.1 Defining basic terms**

### **1.1.1.1 Information Systems:**

“An information system (IS) collects, processes, stores, analyzes, and disseminates information for a specific purpose” (Turban, Mclean & Wetherbe, 2004). In order to give outputs, an information system uses technology to process the inputs. Like all other systems, IS operating within an environment require people, procedures and material facilities.

As cited by Cano (2003),

- (i) “An *IS* is a *system* composed of subsystems of hardware, programs, files and procedures to get a shared goal” (Senn, 1989, p. 23);
- (ii) “An *IS* is a *system* composed of software application, support software, hardware, document and training materials, controls, job roles and people that use the software application (Hoffer, George, & Valacich, 1996, p. 8)”.

Georgetown University (n.d.) has termed information systems as “A system for managing and processing information, usually computer-based”. It is not necessary that all information systems are computerized; however, almost all of them are computer based. For the purpose of this study, the focus will be on the computer based information systems.

In this research, IS can be defined as a computer based system for managing and processing information to support a shared business goal.



### **1.1.1.2 Computer based Information system**

A business information system often uses a computer to perform its tasks. It may use a personal computer or a number of computers that function in conjunction with other devices such as printers over a network and uses databases and software.

The basic components of an information system are:

- *Hardware*
- *Software*
- *Database*
- *Network*
- *Procedures*
- *People*

(Turban, Mclean & Wetherbe, 2004)

As mentioned above, an information system has a specific purpose; it uses all of its components in a social context to provide a solution to the business problem. There is a social context involved, as the successful application of an IS requires an understanding of the business environment and the values and culture of the people involved.

### **1.1.1.3 Information Technology**

IT is generally referred to as the computer systems used within an organization. It can be defined as the technological part involved with the information systems. Information technology refers to the hardware, software, network, databases used in the information systems. Edwards, Ward and Bytheway (1991) think that, if information systems are the demand that identify the needs of the business, IT is the supply that satisfies the needs of the applications. Turban, Mclean and Wetherbe (2004) suggest IT as a sub-system of IS and suggest that IT and IS are often used interchangeably. Since IT is used to satisfy the needs, it may be termed a *facilitator* of the organizational activities and processes.

#### **1.1.1.4 Strategy and Tactics**

Strategy relates to long-term issues that need to be addressed by the senior management. The word ‘strategy’ is derived from Greek, meaning “the art of the general.” In the words of Edwards, Ward and Bytheway (1991), strategy can be defined as “an integrated set of actions aimed at increasing the long-term well being and strength of the enterprise”. It involves creation of vision, and policies that allow organizations to reach the vision in future.

Tactics involve the operational issues that are addressed by the middle management on a regular short-term basis. Tactics involve application of rules and policies to reach to that vision or a goal.

#### **1.1.1.5 Strategic Information Systems**

Clarke (2005) defines strategic information system (SIS) as “an information system which supports an organization in fulfilling its business goals”. According to Ward and Peppard (2002), SIS functions in ways that are similar to data processing and management information systems, however, it is the impact it causes on the business due to the continual changes the enable or cause that makes the difference. SIS help improve business competitiveness by changing the way business is conducted.

#### **1.1.1.6 Business Strategy**

As a strategy is a framework, Pearlson and Saunders (2004) define a business strategy as a “*well-articulated vision of where a business seeks to go and how it expects to get there. It is the form by which a business communicates its goals. Management constructs this plan in response to market forces, customer demands, and organizational capabilities.*”

A business strategy can thus, be defined as the process that the organization takes to make decisions about the business direction.

### 1.1.1.7 Business Plan

According to SBA (n.d.), “A business plan precisely defines your business, identifies your goals, and serves as your firm's resume. It helps you allocate resources properly, handle unforeseen complications, and make good business decisions”.

In the words of McNamara (1999), a business plan includes the following:

1. *“Describe the venture (new or current organization, product or service), often including its primary features, advantages and benefits*
2. *What the organization wants to do with it (buy it, expand it, etc.)*
3. *Justification that the plans are credible (e.g., results of research that indicate the need for what the organization wants to do)*
4. *Marketing plans, including research results about how the venture will be marketed (e.g., who the customers will be, any specific groups (or targets) of customers, why they need the venture (benefits they seek from the venture), how they will use the venture, what they will be willing to pay, how the venture will be advertised and promoted, etc.)*
5. *Staffing plans, including what expertise will be needed to build (sometimes included in business plans) and provide the venture on an ongoing basis*
6. *Management plans, including how the expertise will be organized, coordinated and led*
7. *Financial plans, including costs to build the venture (sometimes included in business plans), costs to operate the venture, expected revenue, budgets for each of the first several years into the future, when the venture might break-even (begin making more money overall than it has cost), etc.*
8. *Appendices (there are a wide variety of materials included in appendices, e.g., description of the overall organization, its other products and/or services, its current staff, etc.)”*

Thus, before writing a business plan, it is important to consider:

- Type of service or product business provides
- Potential customers

- How to reach the customers
- Available financial resources.

### 1.1.1.8 What is IS/ IT Strategy?

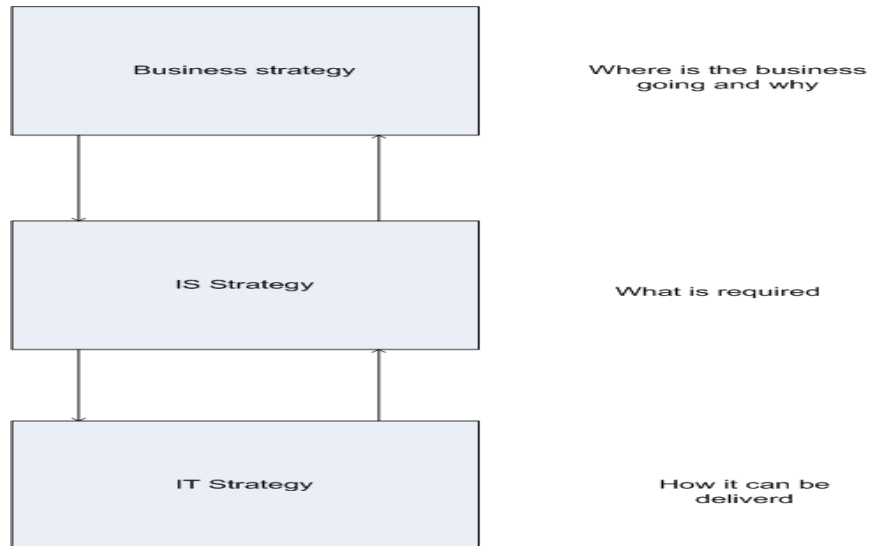


Figure 1: IS/IT Strategy. The figure describes the where, what and how of the planning  
 Source: Edwards, Ward & Bytheway, 1991; Ward & Peppard, 2002, p.41

IS strategy is business based and application oriented. It provides support for the business directions and helps achieve the business goals and objectives. Whereas, IT strategy provides the infrastructure, services and is activity based and is more focused on the technology. If business strategy is the *Where*, then IS strategy is *What* and IT strategy is *How* (Earl, 1989 in Sabherwal & Chan, 2001).

IS strategy can be defined as a strategy to implement information systems that recognizes organizational requirements, in other words ‘demand’ for the information and systems to support the overall business strategy and its plan to gain or maintain the advantage (Rackoff, Wiseman & Ullrich, 1985; Ward & Peppard, 2002; Edwards, Ward & Bytheway, 1991). An IS strategy should include the business needs for the future aligned

closely to the business strategy. It should also define and prioritize the investments needed to achieve the application portfolio.

As discussed before, IT strategy is the supply to the demand created by IS strategy. It “outlines the vision of how the organization’s demand for information and systems will be supported by technology” (Ward & Peppard, 2002). They further suggest that the IT strategy is concerned with the IT capabilities and services like “IT operations, systems development and user support”. Luftman (2003) refers to the IT strategy as “a set of decisions made by IT and functional business managers that either enable or drive the business strategy. It leads to the deployment of technology infrastructure and applications, and human competencies that will assist the organization in becoming more competitive.”

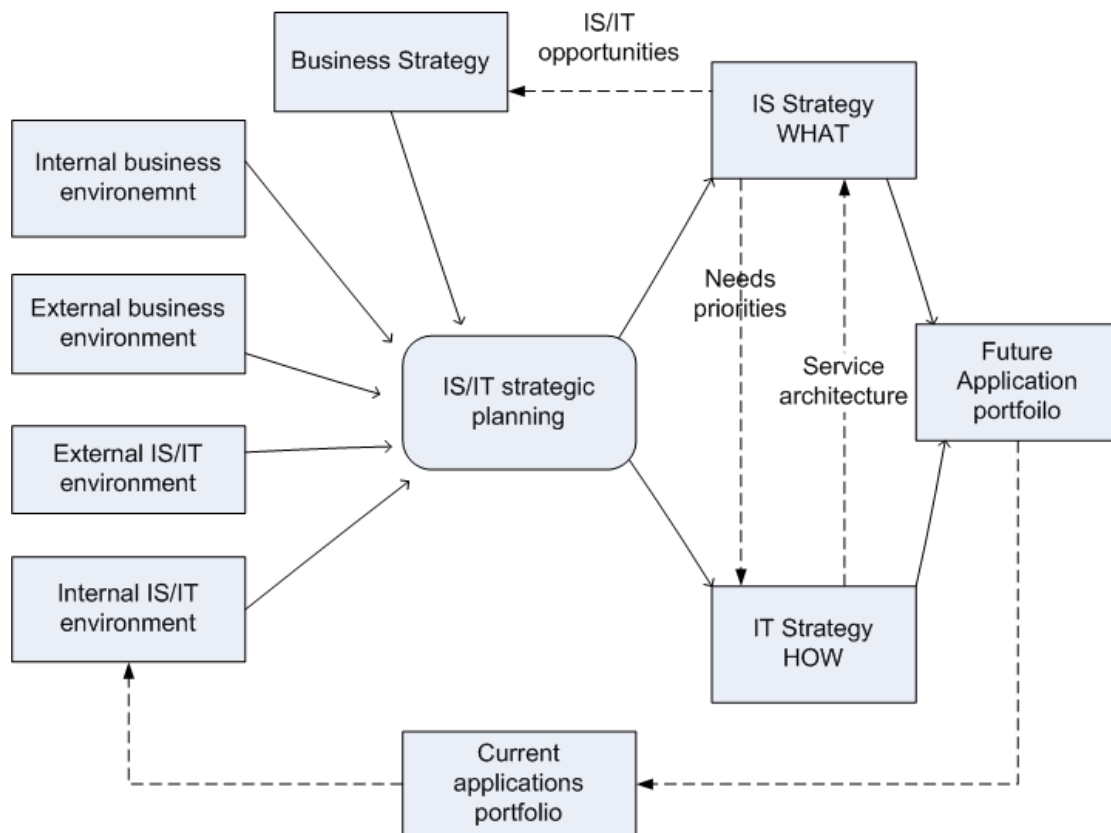


Figure2: Inputs and outputs of IS/ IT strategy

Source: Edwards, Ward & Bytheway, 1991

The above figure 2, outlines the inputs and outputs of the IS/ IT strategy, that clearly indicates a continuous cycle and with planning needed in order to get the outputs that will realize the business functions and objectives.

### 1.1.1.9 Strategic Information Systems Planning

Strategic Information Systems Planning (SISP) has been defined as “a process of identifying the IS requirements of an organization at a high level” (McBride, 2004). Lederer and Gardiner (1992) describe SISP as “the process of identifying a portfolio of computer-based applications that will assist an organization of executing its business plans and realising its business goals.”

Fidler and Rogerson (1996) and Wilson (1989) (as cited by McBride, 2004) suggest that SISP provides an understanding of the information needed to support the business aims and a framework to implement the systems. Construct-IT (n.d.) also suggests, “Information strategy planning also examines how the systems relate to the organization’s general business environment”.

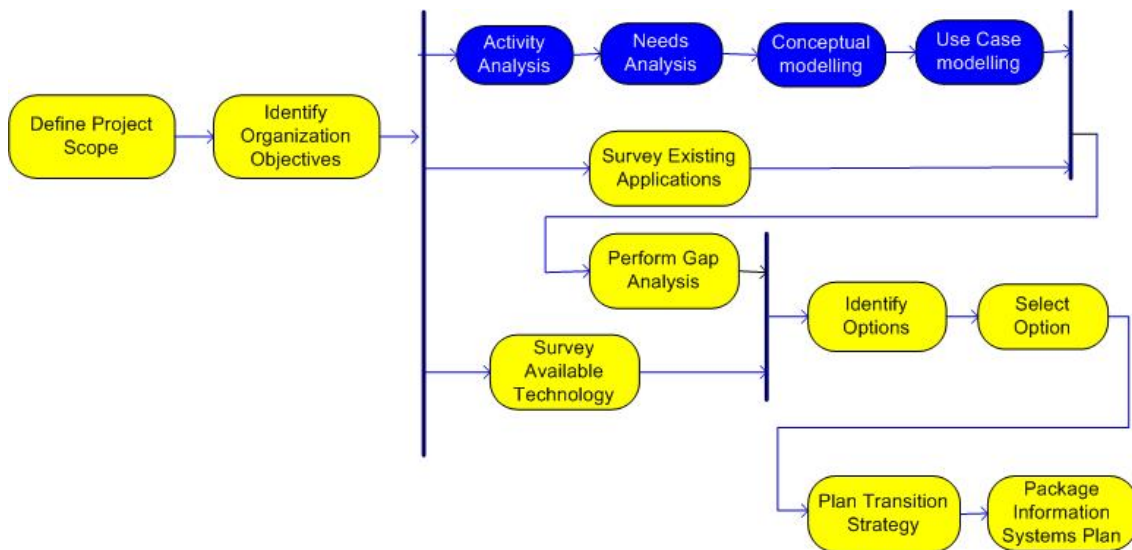


Figure 3: Stages of Information systems planning

Source: Lonsdale Systems (2002).

An information systems plan is usually made for an entire enterprise or a business unit within the enterprise. The plan has a wide scope and involves development of core products. Figure 3 outlines the different stages of developing an IS plan, starting from defining the project scope that involves description of the business requirements. Then analysis of the existing environment and applications is done, followed by identifying new options and then finally evolution of a strategy and an IS plan.

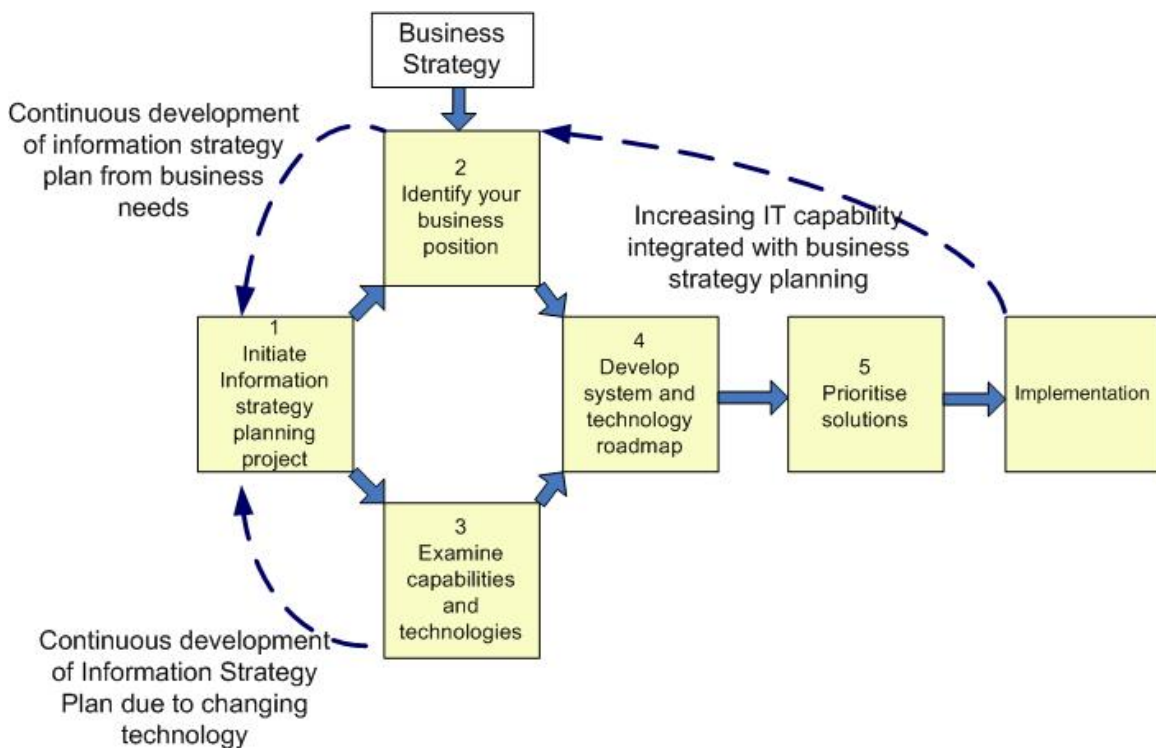


Figure 4: Five stages to an information strategy planning process

Source: Construct-IT (n.d.)

These are the five key stages identified by Construct-IT to develop an information strategy. The course of the stages must be followed by the implementation. The emphasis on the phases may depend on the company sizes and working procedures. It is not necessary to give importance to all stages, and some may be beyond the scope of the companies. However, it is important to realise the importance of all stages.

### **1.1.1.10 Competitive Advantage**

Kearns and Lederer (2000) have cited Boar (1994) defining competitive advantage as “competencies, capabilities, and resources that provide a distinct attraction to customers and create a superiority over competitors”.

According to Johnston and Carrico (1988), “competitive advantage depends on the interaction between industry conditions and the internal capability to identify and exploit conditions.”

After having defined the basic terms used in the field of use of IS/IT in business, the next part presents the case for SISP describing the importance of SISP and subsequently problems and issues related towards the use of SISP.

## **1.2 Use of SISP**

In view of Clarke (2005), “The role of Information Systems (IS) has developed during the years. The original conception was of automation of existing manual and pre-computer mechanical processes. This (automation of existing manual processes) was quickly replaced by the rationalisation and integration of systems. In both of these forms, IS was regarded primarily as an operational support tool, and secondarily as a service to management”

Clarke (2005) further suggests, “Information Technology (IT) had been critical to the implementation of an organization's strategy. The dominant sense in which the term is used is that a strategic information system (SIS) is an information system which supports an organization in fulfilling its business goals”.

Ward and Griffiths (1996, p1) say that it is essential for the organizations “to understand how the role of technology based information systems has evolved”. With time, organizations have realised that there is a need to approach IS/IT more tactically by



understanding the role of IT in business, and making IT a part of business. As suggested by Ward and Peppard (2002, p1) the organizations are looking at the “application of technology not only to underpin existing business operations but also to create new opportunities that provide them with a source of competitive advantage” and propose a strategic approach for managing their systems. Kearns and Lederer (2003) have supported the critical and strategic role of IS/IT by stating that, “Recent surveys of CEOs (Chief Executive Officer) have shown that, despite numerous failed investments, information technology has assumed a critical and strategic role in their organization”.

If IS/IT is to fulfil its role, the CIOs (Chief Information Officer) need to adopt Strategic Information Systems Planning. SISP began during 1970s and organizations began using IS/IT in ways that changed the functioning of their businesses. Bruns and McFarlan (1987) thought that, Information Technology has done more than just enhancing the existing processes within the organization. IT has provided the spark that caused the managers to rethink their business strategies. The organizations that have changed their control systems and structures have seen a transformation in the effectiveness of the business processes. Bruns and McFarlan (1987) further suggest that, “they have found ways to channel the power of information to the muscles of their corporations. As a result they have boosted their efficiency and overall competitive position”. Ward and Griffiths (1996, p19) perceived that, the use of IS/IT “changed the balance of power in their industry with respect to competitors, customers and suppliers”. Thus, IS/IT is being regarded as a strategic business weapon.

The purpose of SISP is to help implement information systems. It assists in transforming information into a usable form for coordinating the workflow within the organization, and helps in decision making and solving other problems (Laudon & Laudon, 1991).

According to Kearns and Lederer (2000), “IS based applications can create a competitive advantage based on the generic strategies of cost leadership, product differentiation and market focus”.

There are different frameworks for developing strategic information systems plans such as the Zachman framework, FAST framework, Foundation by Arthur Anderson and Construct-IT. Porter's five forces is another model that can be used to formulate the strategies. There is a conflict over the use of methodologies applied by organizations using SISP. On the one hand, there is a certain division over the use of methodologies. Mintzberg and Waters (1985) have suggested that formal methodologies are not effective in changing market conditions; also, McBride (2004) has suggested a complete overhaul in the planning process and said the critical analysis of the classical theory suggests that it is inadequate for organizations subjected to continuous change. On the other hand, Kearns and Lederer (2004) citing the research conducted by Sabherwal and King (1992) suggest the formal or rational process "can be appropriate under such conditions".

However, the use of a framework depends on the approach taken towards the IS/IT strategy that in view of Ward and Peppard (2002) is business led, method driven, technological, administrative and organizational. The above-mentioned frameworks have been termed as classical strategies, require a formal approach that according to McBride (2004) requires a stable environment, and with the changing environment are not suitable in the present market conditions. He says that those strategies may be useful if the company is stable, but they do not take care of the complexities of the organization. McBride (2004) says, "The current SISP methods are out-of tune with trends in strategic management and with the practical problems and environmental changes facing organizations".

To improve business performance organizations, need to establish a relationship between the business and SISP practices.

Baker (1995) suggested that even though there has been much SISP research, the same kind of problems appear repeatedly. There is a mismatch in the process that separates the plans and expectations of IS strategists and the actual results obtained on implementation of the strategies (Hackney & McBride, 2002 in Hartono, Lederer, Sethi & Zhuang, 2003). The lack of effective implementation of the IS/IT plans aligned with the business

strategies leave the organizations with unsatisfactory SISP and generates problems for maintaining future SISP priorities.

Kearns and Lederer (2004) have also identified a contextual relationship between IT focus and using IT for competitive advantage. As IT investments are based on the recommendations of the IS/IT plan, they should be aligned with the business objectives laid in the business plan.

### **1.3 IS/ IT- Business Alignment**

For an organization to achieve competitive advantage it is important that the business use IS/IT to support the main business processes and become dependant on IS/IT. It is also important that there is IT participation in business planning (BP) and vice-versa. Chan and Huff (1993) say alignment of an IS plan and the business plan is very important and it leads to IS efficiency and value. A closer look at the aims for adopting a IS/IT strategy according to Ward and Peppard (2002) suggests that the SISP process is used for aligning IS/IT with business and gain competitive advantage from business opportunities created by using IS/IT.

Ingevaldson (2004) claims that alignment of IT with the company strategies is not easy, it requires the senior management to take a different approach towards IT and devote certain amount of time, understanding the usage of IS and IT in the business. It is important for them to understand that IT is not only important for the corporate strategy, at times it is the strategy. On the other side, Telesca (2001) suggest that, to improve the IS/IT –business alignment, it is important for IT to understand its business industry. The author further suggests, “sometimes, creating an understanding of the business means creating an atmosphere that reflects the business focus.”

However, not all IT projects are implemented and many factors have been identified that contribute to IT failures. One of the main failures that have been highlighted is that the

failure to implement is due to the planning process and its practices (Hartono et al., 2003). Another major problem that has been seen in SISP is “failure to translate goals and objectives into action plans” (Teo & Ang, 2001 in Hartono et al., 2003) and lack of support for IT architecture and also the duration of SISP have been viewed as factors contributing to low rate of implementation.

In the words of Lutchen (2004), “The main reason IT organizations and CIOs fail to deliver value to the business is their inability to focus sufficient attention and resources on the area in the middle—the *IT Delivery Gap*.”

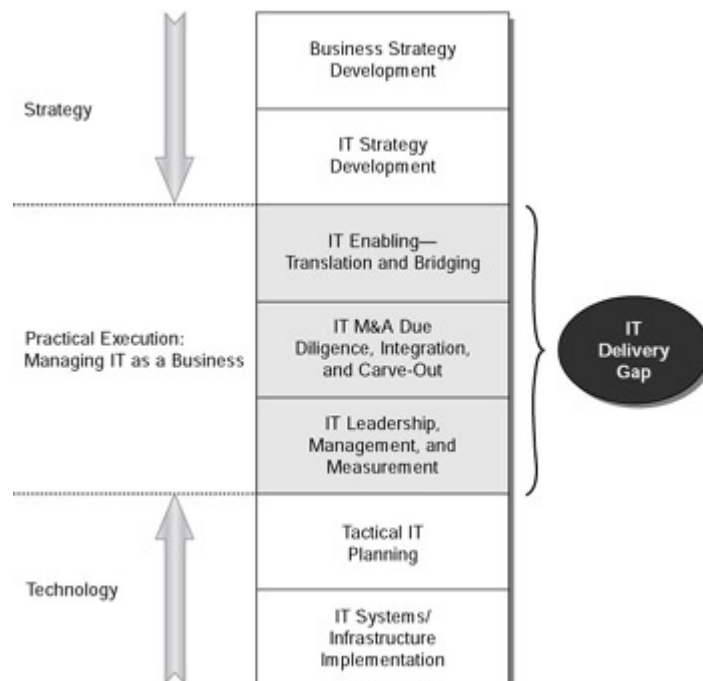


Figure 5: IT Delivery Spectrum  
Source: Lutchen (2004)

As mentioned above both IS/IT and business executives should work closely to ensure strategic IT alignment, which according to Reich and Benbasant (1996) is a process. It is unique to each organization and uses both the IT and business knowledge to support business objectives. Thus, it is important to bring IT into the main business stream and let IT function as an entity in the business. For this to happen, the senior executives in the companies must work together and define the business needs and frame an IS/IT and business strategy to support the business goals and objectives.

Thus, for an organization to achieve competitive advantage and improve business performance it is important to align its IS/IT plan with the business plan, and IS/IT systems should be used in accordance with the resources and the capabilities of the organization in times of environmental changes. SISP is a way to implement those IS/IT systems not only to achieve competitive advantage but also for proper functioning in the ever-changing business environment.

As Kearns and Lederer (2004) have suggested that there is a need to align the IT plans with the business plans to improve the organizational performance.

Powell (1993) suggests that the main aim of the information systems and the SISP is to influence the organization positively. Lederer and Salmela (1996) (citing King, 1988; Venkatraman, Henderson & Oldach, 1993; Chan, 1992) say, “indication of such favourable effect is that the implemented projects fit organization’s objectives”. This fit may be termed as an alignment.

The next section outlines the systems that can be used for satisfying the organizational requirements.

### ***1.4 Organizational Applications***

With the improvement of computer-based solutions, many organizations are implementing IS/IT applications to improve the efficiency and effectiveness of the business operations. The implementation ranges from the use of small functional information systems to large enterprise-wide systems such as ERP and CRM.

ERP or Enterprise resource planning is “a process of planning and managing all resources and their use in the entire enterprise. The software is comprised of a set of applications that automate routine back-end operations, such as financial, inventory management and scheduling” (O’Leary, 2000 as cited by Turban, McLean & Wetherbe, 2004). Koch (2006) suggests that ERP has nothing to do with resource and planning. The most

important part is enterprise. “The software attempts to integrate all departments and functions across a company onto a single computer system that can serve all those departments’ particular needs” (Koch, 2006). Turban Mclean and Wetherbe (2004) also imply that the “term *enterprise resource planning* is misleading because the software does not concentrate on either planning or resources”. As Stratman and Roth (2002) say, the main objective of ERP is to “integrate all departments and functions across a company” on a single computer system to serve organizational needs.

The implementation of ERP allows organizations to work around business processes and thus, making the alignment of IT and business goals more likely.

Kansal (2006) argues that, the implementation of ERP is “usually large, complex projects, involving large groups of people and other”. Thus, ERP’s are suitable for large organizations.

Organizations also use another type of IS that helps in sufficing the business objectives. Customer relationship management is a “corporate wide approach to understanding customer behaviour, influencing it through continuous relevant communication and developing long-term relationships to enhance customer loyalty, acquisition, retention, and profitability” (Sharp, 2003). CRM identifies customers at the core of the business.

Ward and Peppard (2002) conclude, “the main operational processes of the business such as customer order entry and fulfilment should be well designed both in business process and technical terms”. Transaction processing systems (TPS) provide support to the operational business processes. TPS “monitors, collects, stores, processes and disseminates information for all routine core business transactions” (Turban, McLean & Wetherbe, 2004).

The concept of supply and demand was combined under a single name as supply chain. As the purpose of supply chain increased, the concept of adding value came into existence. Nowadays organizations use SCM to serve the business direction. Supply

chain management (SCM) is the “design, maintenance, and operation of supply chain processes for satisfaction of end-user needs” (Ayers, 2002). SCM software supports specific segments of the supply chain. These segments include manufacturing, inventory control, scheduling and transportation. The main goal of implementing SCM software is to minimize the risks in the supply chain and maximising the value in the supply chain.

There is extensive use of high potential systems such as CRM, SCM and ERP. Most of these systems are being used across the industry. Nowadays, customer satisfaction is becoming the main goal for many organizations, thus CRM helps the organizations to view customers as the core of the business and company’s success depends on the relationship with them (Brown, 2000 in Turban, McLean & Wetherbe, 2004).

### ***1.5 Gap in the research***

There is a need for an effective approach to SISP that matches the current position of the organizations. There is a gap in the research reporting about the alignment of the plans to increase business performance. There is a need for more literature about SISP in New Zealand and the way organizations integrate their IT/business strategies.

Tan (1999) explored the views of executives with respect to business-IT alignment. The study uses a repertory grid to explore the “nature of social dimension of alignment”. Tan (1999) suggests that for business-IT alignment, relationship between the people is more important rather than the strategy. The main purpose of Tan’s research was to introduce the method of repertory grid to IS researchers. The main purpose of this research is to focus on the strategy and the type of systems used to support the business objectives.

Norman and Scadden (2005) conducted the study on a suitable strategic model for small and medium enterprises in New Zealand. They developed an IT strategic plan for an electrical contract company to explore the application of theory in real-life. The study concluded that the Small and Medium Enterprise (SME) business operators do not

recognize strategic planning as relevant to day-to day running of business activities. Very little research has been conducted for the development of planning in SMEs.

The NZ State Service Commission (SSC) provides the guidelines for managing and monitoring major IT projects. The guidelines lay an importance of alignment of major IT projects to the government direction and not providing an outline for the NZ business operators (State Service Commission, 2002).

The next section describes the method adopted to address the research question on the alignment of IS/IT plan and the business plans within New Zealand companies.



## 2 Method

This chapter of the study starts with the initiation of the research leading to the research questions based on the research model that describes the purpose of SISP. This section describes the methodology and the research design adopted for the completion of the research.

### 2.1 Initiating the research

The research started with the selection of the area of research leading to the problem of whether there is an alignment between business plan and IS/IT plan. The main research question evolved from a series of interesting research questions, followed by sub-questions that laid the foundation of this study. There has been a lot of research in the area of SISP, relating to use of IS for competitive advantage, implementation problems, and importance of knowledge sharing. However, being unable to locate similar research related to the alignment of IS/IT and business plans in the past and the keen interest in this topic led to the research.

### 2.2 Research Model

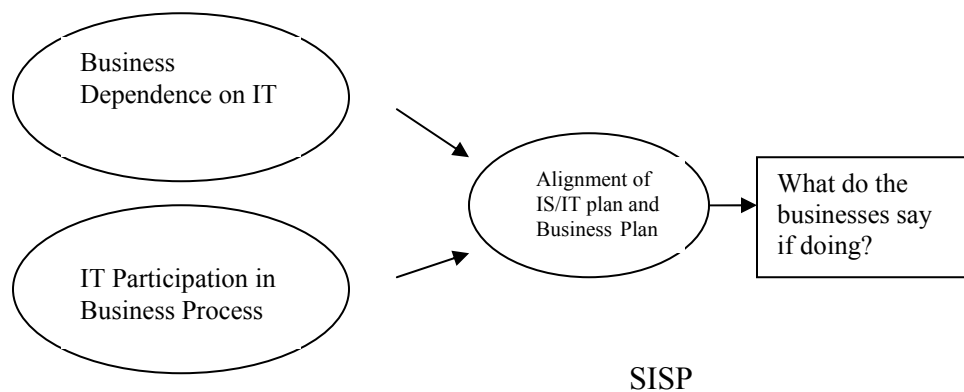


Figure 6: Research Model

The research model describes the purpose of SISP, which is the alignment of IS/IT plan and the Business plan. The focus on alignment arises when businesses use IT in main processes and rely on them for survival, and the extent of participation of IT in company's planning process resulting in agreed goals, objectives and strategies.

The research questions in the next section of this chapter are an outcome of the research model.

## **2.3 Research Questions**

Given:

SISP *“is a process for developing a strategy and plans for aligning information systems with the business strategies for an organization”* (Strategic Business Planning, 2004).

The following questions laid the foundation of the research:

Main research question:

*What evidence is there that the IS/IT plan and business plan are aligned in three NZ companies?*

In addition, the study will be focused on the following sub-questions as well.

- 1. How do the IT people report about current IS/IT planning within each business?*
- 2. How do business planners report about the current business planning within each business?*
- 3. How do IT people report about IS/IT systems?*
- 4. How do business planners report about current business processes?*
- 5. What is the effect of the implementation of IS/IT systems on the business?*

Once the research questions have been defined, the next step was to describe the methodology and the research design. The following sections describe the research design and the data collection process.

## **2.4 Research design**

In this study selected stakeholder's views (people involved in the SISP) from the company are the focus of interest. The study will be based on what is known about Strategic Information Systems planning, related to the need for alignment between IS/IT plan and business plan.

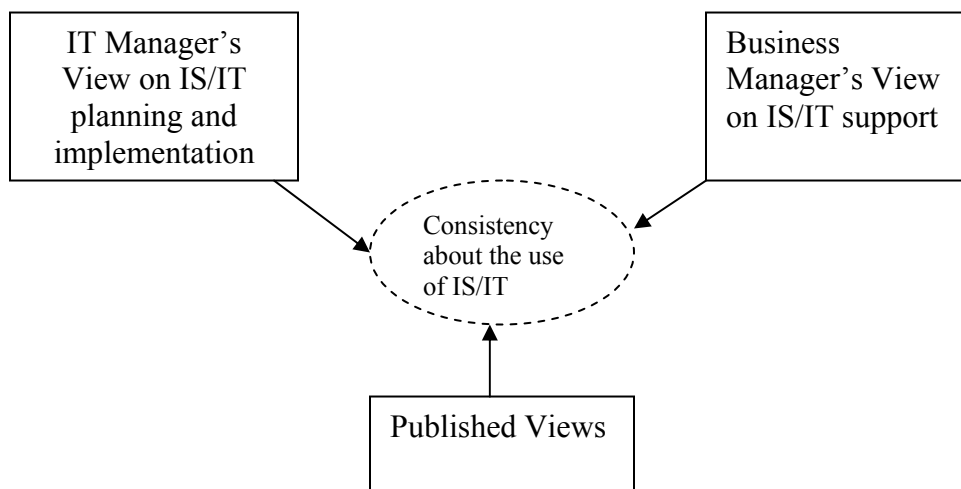


Figure 7: Research Design

Research design involves collecting and analyzing the data and then reporting it accordingly. An exploratory study will be done using a questionnaire to collect data to answer the research question about the alignment of IS/IT plans and business plans.

## 2.5 Data Collection

According to Creswell (1994), “the data collection steps involve (a) setting the boundaries for the study, (b) collecting information through observations, interviews, documents, and visual materials, and (c) establishing the protocol for recording information.”

The research investigated the use of SISP and the extent of alignment between the IT and business planning on business processes in three NZ companies. As mentioned above, the study is based on what is known about SISP, related to the alignment and stakeholder’s view from the company are the focus of interest.

Thus, for the research, two main data collection methods have been used. The first method used to record the secondary data was from the existing literature and that has been summarized and presented in the previous chapter, indicating, “what is already known”. The primary data was collected by using questionnaires and from the company websites.

### 2.5.1 Participants

An invitation was sent to 20 New Zealand companies selected during a random search on the Internet. Out of twenty, three companies agreed to take part in the research. The companies represent different sectors of the business community. The selection of companies was based on the use of computer technology in the business activities.

New Zealand companies can be categorized on the basis of the number of employees.

The classification can be made on the following basis:

<b>Enterprise</b>	<b>Number of employees</b>
Micro	Less than 5
Small	Less than 50
Medium	Less than 100
Large	More than 100

(Massey, 2004)

Table 2.1: Size of companies

The following table classifies the three companies selected in this research:

<b>Company</b>	<b>Enterprise</b>	<b>Number of employees</b>
A	Large	Around 420
B	Small	50
C	Large	Around 6000

Table 2.2: Size of selected companies

## ***2.6 Gathering existing literature***

Gathering existing literature is an important and major part of the data collection process. The summarization and analysis of the existing literature forms the basis of the research and provided the reader of the known facts about the research. The literature provides different views and aspects in the field of SISP and aligning IT and business strategies. The source of collecting the literature was through the libraries, books, journal articles, and the Internet.

The literature available provided concepts evolved over the years in the area of research and the views on what needs to be done to improve the collaboration of IT and business. However, there was limited research found that see how the companies were using IS/IT to support the business processes.

After examining the existing literature, the primary data needs to be collected. The following section details the primary data collection process.

## **2.7 Primary data collection**

The main data sources for the research are the questionnaire, company websites and the annual reports.

The data collected from the company websites and the annual reports were descriptive in nature and provided company information. Most of the data collected found on the websites were statements. These included the mission statements, goals and objectives.

The questions guiding the document search were:

1. Number of employees in the organization.
2. Type of business
3. What are the products and services provided?
4. What is the business goal and objective?
5. What is the gross spend on IT and business processes?
6. What is the number and type of projects planned and implemented?
7. Benefits from IT expenditure.

As stated in the research design, the study requires views from the people involved in the planning process, two sets of questionnaires was used to gather data representing both sectors involved in the study-IT and business. In all, there are six respondents to the questionnaires.

The questions sent to the IT people in the companies were based on the following categories:

1. Role in the planning and implementation of IS/IT systems.
2. Planning and strategy used to implement the systems.
3. Type of systems being used for the business processes
4. Inter relation of IS/IT and business plan
5. Effects of implementing the systems
6. The perception of alignment
7. Future implementations.

The questionnaire template is attached in appendix 1

The questions sent to the Business managers in the selected companies were based on the following categories:

1. Role in the planning and implementation of IS/ IT systems.
2. Planning of the business processes
3. Role of Business planning in implementing IS/IT systems.
4. Inter relation of IS/IT and business plan
5. Effect on business.
6. The perception of alignment
7. Current and future expectations from IS/IT.

The questionnaire template is attached in appendix 2

### **2.7.1 Data Collection issues**

It became evident early in this research that gaining data about SISP was likely to be difficult. Fully developed SISP goes to the heart of business activities and competitiveness. Attempts to gain interviews were unsuccessful. Hence, pre-prepared questionnaire was adopted as a less intrusive data-gathering tool. From this tool, responses were gained from two people in each of the three companies.

#### **Main research question:**

*What evidence is there that the IS/IT plan and business plan are aligned in three NZ companies?*

In order to answer this question, it is important that planning is done by the company and IS/IT play a role in the company. For the purpose of this question both the IS/IT and business plans must be made in accordance to each other and thus it is important to know the content of the plans. If the plans are inter-related and implemented satisfactorily, then it can be suggested that there is an alignment between IS/IT and business. The content of the plan and the views of the IT and business managers in respect to the alignment also provided data to answer the question. To answer the main question, it is important to answer the sub research questions.

**Sub-question 1:**

*How do IT people report about current IS/IT planning within each business?*

The first step to be able to have IS/IT and business alignment it is necessary to have a planning process. To start the process there is a need to understand the business direction and requirements that drive the information systems and architecture.

This question was answered from the data collected from the first part of the questionnaire to the IT manager of the companies. The data required to answer this question will be the type of planning done, strategy or model used for planning, and the procedure for implementing the IS/IT systems. Additional data will be collected from the IS/IT plan.

**Sub-question 2.**

*How do business planners report about current business planning within each business?*

This question will be answered from the questions related to the planning and implementation of the business planning to support IS/IT.

**Sub-question 3.**

*How do IT people report about IS/IT systems?*

To be able to answer this question, responses to the questions related to the type of IS/IT systems being used to support the business processes from both the IT and business managers will be used.

**Sub-question 4.**

*How do business planners report about current business processes?*

The responses from the business managers to the questions relating to planning and design of business processes, type of business processes being used in the companies will answer this question.



**Sub-question 5.**

*What is the effect of the implementation of IS/IT systems on the business?*

The implementation of IS/IT does impact the business activities. There is a certain effect on the business processes and the overall business. To answer this sub-question, the responses from the IT and business managers will be considered. Their views on the effects of the implementation of the systems on the business processes and the overall business will be compared.

**2.8 Triangulation**

As the main source of the data is the questionnaire, there is a possibility of vested interest in the study as the respondents could be biased. Thus, it is necessary to validate all data. To serve the purpose the process of triangulation will be used to reduce the bias by checking for consistency of questionnaire responses with published documents.

“Triangulation is the application and combination of several research methodologies in the study of the same phenomenon” (Crane, n.d.).

Although triangulation is combination of several research methodologies however, as suggested by Crane (n.d.), “Often the purpose of triangulation in specific contexts is to obtain confirmation of findings through convergence of different perspectives. The point at which the perspectives converge is seen to represent reality”.

In this research, the triangulation process included data sets from IT and business managers’ perspective and the published documents.

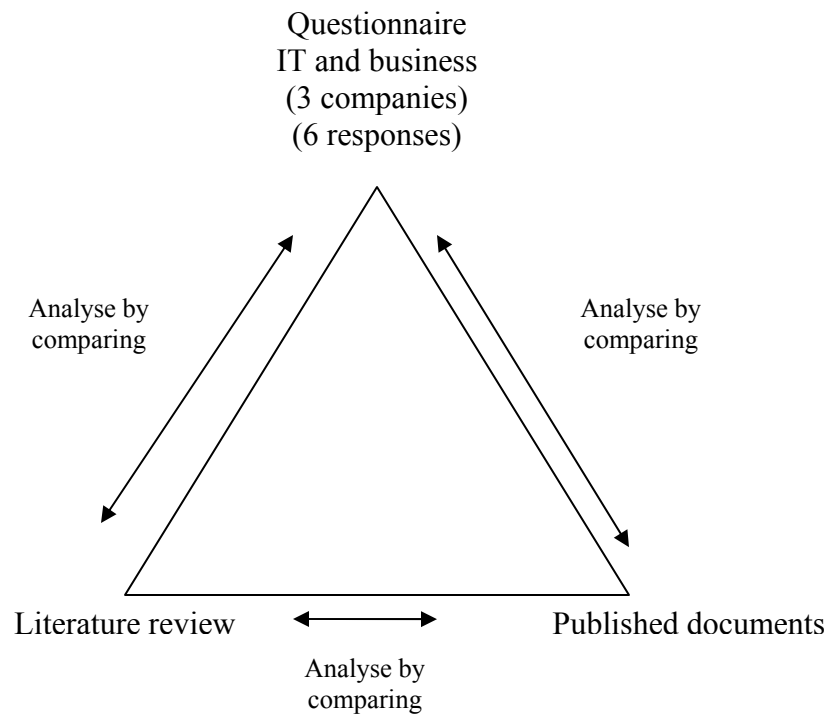


Figure 8: Triangulation of data sets. It shows the relationship amongst the data sets and shows the comparison between the data sets.

After describing the method for data collection by using literature review, company published documents and the questionnaire; the next chapter will present the results of using different tools.

## **3 Results**

The previous chapter provided details of how the data has been collected to answer the research questions. This chapter presents the published company information and the responses by the IT and business managers from the three companies to the questionnaire in relation with the main research question:

*What evidence is there that the IS/IT plan and business plans are aligned in the three New Zealand companies?*

This chapter has been divided in three parts- Information in public sources, Views of the IT personals and finally views of the business managers. All the three parts are sub-divided company wise.

### ***3.1 Information in public sources***

This section outlines, for each company, its profile and strategy. The strategy includes the company's main goal, vision and objective.

#### **Company A**

##### **Profile**

The company is a leading manufacturer, distributor and marketer in both Australia and New Zealand. It delivers fashionable surface solutions. The company is in business over 70 years. However, it opened its first plant in New Zealand in 1959. Since then the company has grown immensely and now has 5 plants across New Zealand. The company employs over 400 people in New Zealand, thus it can be categorized as a large company.

##### **Company Strategy**

The company's vision is to be an innovative organization in delivering surface solutions. The main aim is to be cost effective and innovative along with building customer relationship. Company strategy includes improving their earnings, ensuring the reliability of earnings and also achieving value, thus creating growth. Performance improvement is also a part of the company strategy.

## **Company B**

### **Company Profile**

The company is a Small enterprise and employs 50 employees. It has been in the business of manufacturing and design of electronic assemblies for past 6 years. The company provides its customers a complete range of electronic manufacturing service. In addition to these services, the company also allows engineers to test the prototypes and cater for fast service to its customers by stipulating the time frame according to customer requirements. The company provides its services in the area of microprocessor design, PCB layouts and compliance and Certification. Company's main goal and objective is to be New Zealand's leading electronic contract manufacturer.

### **Company Strategy**

The company has a simple strategy to provide quality and gain exponential growth. They continue to provide custom manufacturing of electronic assemblies to a wide range of its clients. In order to provide quality they form a synergy of committed people and state-of-the-art equipment and technology.

## **Company C**

### **Company Profile**

It is one of the leading fast food service retailers in the world. It is amongst the world's leading brands. The company began its NZ operations in the year 1976 and has grown ever since. The company on the whole employs around 6000 employees both part-time and full-time. Considering the number of employees, it can easily be termed amongst the largest employers in New Zealand. It has 136 stores all around the New Zealand, however, most being in Auckland. The company operations are managed from Auckland. The company's prime objective is to satisfy its customers.

### **Company strategy**

The company's sole mission is to be its customer's favourite place and way to eat. The company aims to provide fast, accurate and courteous service to its customers. To serve its aim and objective, the company opts for innovation and use of technology. The

company strategy is to streamline its SCM and bring together its partners. The company strives to provide 100% customer satisfaction, increase market share and profitability.

### ***3.2 Results from the questionnaire***

This section has been sub-divided in two parts, the first presenting the responses from the IT managers of the three companies and the second presents the responses from the business managers.

#### **3.2.1 Views of the IT managers**

The questionnaire included 16 questions, which would give the views of the manager on the planning and implementation of IS/IT.

##### **Company A**

###### **1. What is your role in the planning and implementation of the IT systems?**

IT Manager for NZ, reporting to Group IS Manager in Australia. Responsible for IT planning and implementation of systems in NZ, through an infrastructure team and an applications team.

Main strategic IT choices (e.g. ERP's) are made by Australia, but we are also part of a parent company based in NZ (i.e. Our business division-> Australian business group -> NZ parent company). Consequently some strategic direction also come from the NZ parent company, especially network infrastructure.

###### **2. What planning is done for implementing IT systems?**

Major project planning is done in Australia

Local implementations are planned 3-6 months in advance, or longer depending on the scale of the project.

Where appropriate (e.g. applications projects), people from the business are consulted or co-opted into the project team.

Approvals go through a strict process depending on project value. Over \$500K, all IT projects are subject to a "peer review" by the parent company CIO and two

other company IT managers. Over \$1M, all project are also subject to a “Major Investment Project” review to cover risk and return.

**3. What strategy model or theory is used for developing a IS plan?**

No particular theory or model.

We consult the business managers to talk about specific and/or general business direction, and translate this into possible IT application development. We also look at infrastructure technology and the age of our own systems and develop ideas of directions which get firmed up into capital budget items and then into projects.

**4. What is the procedure for implementing IT systems?**

We don't always follow the process in order!

Business Case and Project Scope develop side-by-side

Following approval, a project plan, and identification of resources, especially for applications projects.

For infrastructure projects, acquisition of equipment and bench-build, pilot, rollout.

For applications projects, gap analysis, specification, standard SDLC.

Post implementation review.

**5. Which business processes are automated using IT systems?**

- (i) Standard desktop e.g. email, meeting planning, resources
  - (ii) Manufacturing (process flow and MRP2)
  - (iii) Order Fulfilment and Logistics, including Electronic Commerce via EDI (larger business partners) and Web (smaller business partners)
  - (iv) Financials – integrated with manufacturing and order fulfilment
- Others: Reporting – data warehouses and automated reporting.

**6. What kinds of IT systems are being used currently?**

- (i) ERP systems
  - (ii) Order Fulfilment systems including Electronic commerce
  - (iii) Maintenance systems
- Others: Reporting and ad-hoc systems (Access and SQL)

**7. How long have they been used?**

Oldest since 1990.

Other systems installed in 1993, 1997, 2004.

New ERP scheduled for 2006

**8. Were the systems implementation in-house or outsourced?**

Normal pattern has been to use a vendor for system design and coding, with a business/IT project team to do functional specification, testing and implementation.

**9. Are the implemented systems upgradeable?**

The older systems are heavily modified and are not upgradeable.

The recent systems are lightly modified, with a view to future upgradeability.

**10. What of the business plan are reflected in the IS/IT plan?**

Major projects must follow business plans in order to justify themselves (i.e. produce business benefits). Infrastructure plans tend to be driven by availability of new technology (e.g. Citrix, Exchange 2003, MPLS).

**11. What are the effects by implementing a new IT system?**

- (i) Business process changes
- (ii) Redeployment of people
- (iii) Resistance to change, or inability to manage the change process
- (iv) Skilled resource shortages during the project as people have to be divided between keeping the business going and ensuring the success of the project.

Others: Opportunities for those who get in at the beginning to become masters of the new systems and processes.

**12. How do you adjust for these effects?**

Communication, documentation, training, redeployment, replacement, backfilling, customer and supplier liaison etc.

**13. How does the alignment affect the business?**

Generally productive, but resource shortages and different expectations of delivery time can cause friction.

**14. Do the IT staff realise the expectations of the business?**

Yes, through direct communication, both for infrastructure and applications.

**15. Describe the overall effect of IT systems implementation in the business?**

The purpose of IT implementations is to improve company performance and profitability, so that is the objective.

The business generally expects IT to deliver perfectly. Experience, skill and good planning can make this happen most of the time. We are lucky and the business is generous with positive feedback. Sometimes this is not possible, but again we are lucky and the business is pretty reasonable when there are problems. We try not to hide things, give communication and help people, sometimes going the extra mile for them. Over a period of years, good communication and goodwill builds up, which makes it more likely to get good outcomes and more acceptance when things go wrong.

**16. What other business processes could be improved by IT proposals?**

- (i) Supply Chain, but needs the trust of business partners
- (ii) Telephony
- (iii) Planning and Forecasting



## **Company B**

### **1. What is your role in the planning and implementation of the IT systems?**

IT manager-responsible for all IT planning and implementation.

### **2. What planning is done for implementing IT systems?**

Requirements and capacity planning

### **3. What strategy model or theory is used for developing a IS plan?**

No particular strategy-just attempt to meet business needs.

### **4. What is the procedure for implementing IT systems?**

Requirements specification

Development plan

Implementation/roll out

### **5. Which business processes are automated using IT systems?**

(i) Order entry

(ii) Production

(iii) Inventory

(iv) Factory data acquisition

Others: Accounts etc.

### **6. What kinds of IT systems are being used currently?**

(i) Database solution-SQL

(ii) Office automation software

(iii) Custom in-house production management system

### **7. How long have they been used?**

4 years

### **8. Were the systems implementation in-house or outsourced?**

In-house

### **9. Are the implemented systems upgradeable?**

Yes-with continued up gradation

**10. What of the business plan are reflected in the IS/IT plan?**

Support requirements for business processes

**11. What are the effects by implementing a new IT system?**

- (i) Unified system- consistency of working
- (ii) Visibility of what is happening in production
- (iii) Accurate order tracking
- (iv) Accurate inventory control

Others: better customer relations management.

New Support requirements.

**12. How do you adjust for these effects?**

Employ staff to support the system. Staff spend more time on other aspects of business

**13. How does the alignment affect the business?**

Well-aligned systems improve business operations by supporting business processes in manufacturing and administration.

**14. Do the IT staff realise the expectations of the business?**

Yes- IT all in-house and integral part of the business.

**15. Describe the overall effect of IT systems implementation in the business?**

Improved efficiency- better service to customers through better control and visibility of business processes.

**16. What other business processes could be improved by IT proposals?**

- (i) Documentation control
- (ii) CRM
- (iii) EDI

## Company C

**1. What is your role in the planning and implementation of the IT systems?**

IT analyst, part of the technology team. Identify key requirements and plan and implement the appropriate technology solution.

**2. What planning is done for implementing IT systems?**

Major planning done in Australia. Local needs discussed with the operations management. Analysis of the current infrastructure. Review of plans by the executive management.

**3. What strategy model or theory is used for developing a IS plan?**

Most planning is done based on the requirements and Australian direction. Use of Porter's five force model to identify business situation.

**4. What is the procedure for implementing IT systems?**

Requirements and feasibility analyses,  
CBA and review,  
Pilot implementations and finally phased implementations

**5. Which business processes are automated using IT systems?**

- (i) SCM
  - (ii) Finances, Sales and ordering process
  - (iii) Sales
  - (iv) Ordering
- Others: Standard office functions

**6. What kinds of IT systems are being used currently?**

- (i) Integrated sales and inventory management systems- Back office support
- (ii) EDI

(iii) Mail exchange

Others: Reporting- Word and Excel

**7. How long have they been used?**

2 years, old system lasting for 10 years

**8. Were the systems implementation in-house or outsourced?**

Both in-house and external support

**9. Are the implemented systems upgradeable?**

Yes-with continued up gradation

**10. What of the business plan are reflected in the IS/IT plan?**

Business goals and objectives, environmental factors both internal and external, and the business and the customer requirements

**11. What are the effects by implementing a new IT system?**

(i) Increase in efficiency of staff

(ii) High cost of training

(iii) Change in business processes

(iv) Resistance to change

Others: increase in speed and accuracy

Rise in effective communication

**12. How do you adjust for these effects?**

Invests heavily in training of its staff, and providing complete documentation for future support. Major tasks are outsourced.

**13. How does the alignment affect the business?**

Helps achieving business goals and providing quality service to staff and customers

**14. Do the IT staff realise the expectations of the business?**

Yes, along with the technology partners

**15. Describe the overall effect of IT systems implementation in the business?**

The overall effect has helped us streamline our supply chain and the use of IS and IT at all levels we enjoy improved communication, integration of business activities. It allows transparency, fast and effective service, improved monitoring and most important efficiency in business management.

**16. What other business processes could be improved by IT proposals?**

No plans, continue improving current processes

### 3.2.2 Views by the business managers

In order to perceive IT-business alignment, it is important to know the business perspective. Thus, the focus is now on the business view from the three companies.

This section presents the responses by the business managers from the three companies.

The business managers were asked on their views about the planning and design of business processes and how the IS/IT systems provided support to the processes.

The questionnaire comprised of 12 questions, starting from the role and planning involved in business processes to the effects of implementing the IS/IT.

#### **Company A**

**1. What is your role in the planning and implementation of the IT systems?**

Overall responsibility for planning and implementation of IT infrastructure and applications.

**2. What are the business processes in the organization?**

(i) Manufacturing including S&OP

(ii) Procurement including domestic and import

(iii) Order fulfilment and logistics (domestic and export)

(iv) Financials – AP, AR, GL, Cash, Fixed Assets

Others: Marketing/Product Management, IS&T, Bathroom/Kitchen Design, Plant Maintenance

**3. What planning is done for designing business processes?**

- a) Study processes used in Australia to ensure compatibility.
- b) Study requirements for New Zealand to ensure efficiency and customer satisfaction.
- c) Study capability of ERP systems to minimise modification and ensure upgradeability.

**4. What is the contribution of Business planning function in the implementation of IT systems?**

To ensure efficiency and customer satisfaction; however it must be reconciled with Australasian compatibility, and minimisation of modifications.

**5. Which IT systems automate business processes?**

- (i) BPCS – used in manufacturing
- (ii) Quanta – used in distribution and order fulfilment
- (iii) MPAC – used for plant maintenance
- (iv) Promix used for manufacturing & order fulfilment (separate division)

Others: Small databases using Access, SQL or Notes for non-ERP functions. Visual Elk, used for CRM.

**6. What is the effect on business processes by the implementation of new IT systems?**

- (i) May become more or less efficient
- (ii) Can affect customer perceptions – try to minimise this
- (iii) Existing processes may suffer during implementation because resources are drawn away from everyday operations.

**7. How do you adjust for these effects?**

- a) Employ more staff, or move staff around
- b) Communication and expectation setting
- c) Use of contractors

**8. What of the IS/IT plan reflected in the Business Plan?**

Not a lot – it tends to be the other way around. In this industry, IT is an enabler more than a transformer. Possible exceptions to this are data warehousing and electronic commerce, but the effect is slight.

**9. What is the effect of alignment on business?**

Helps to standardise on processes and procedures, but may also make some operations less efficient.

**10. What expectations do the business planners have from the IS/IT?**

- (i) Infrastructure should work perfectly and keep up with organisational changes.
- (ii) Application implementation/support should keep the business up to speed and compensate for loss of staff knowledge through attrition of key users.
- (iii) IS/IT running costs should not be more than around 1.5-2% of revenue.

**11. Describe the overall effect of IT systems implementation in the business?**

IS/IT is a primary determinant of how efficiently the business can operate, and acts to lock in many business processes through the way in which applications work.

To a large extent IS/IT (particularly IT) is invisible – like the power socket it is just there, and only becomes noticeable when it is missing.

**12. What new IT developments could help improve the business processes?**

- (i) Fewer systems requiring fewer interfaces and greater visibility between manufacturing and distribution.

- (ii) Better communications between businesses (i.e. EC)
- (iii) Faster and cheaper bandwidth (including wireless), and connectivity between devices, to extend the availability of company IT solutions further outside the offices.

## **Company B**

### **1) What is your role in the planning and implementation of the IT systems?**

Managing Director, Identifying key business requirements and providing details and supervision during the planning and implementation.

### **2) What are the business processes in the organization?**

- (i) Production Management
- (ii) Accounting
- (iii) Purchasing
- (iv) Ordering

### **3) What planning is done for designing business processes?**

Study the business requirements, Analysis of current and future business goals and objectives, Study of market trends. In addition, analysis of current infrastructure and customer requirements is done.

### **4) What is the contribution of Business Planning function in the implementation of IT systems?**

Provide guidelines to ensure efficiency in product quality and customer satisfaction.

### **5) Which IT systems automate business processes?**

- (i) Custom built in-house production management system
- (ii) SQL based data base management system
- (iii) MYOB for accounting



**6) What is the effect on business processes by the implementation of new IT systems?**

- (i) Improved monitoring and transparency
- (ii) Improved customer satisfaction
- (iii) May result in reduction of employee efficiency

**7) How do you adjust for these effects?**

Employ more staff and in some cases out-source the implementation. Try to solve issues internally.

**8) What of the Information systems (IS)/IT plan reflected in the Business Plan?**

There is only one plan and it includes the business requirements and objectives, policies. IS/IT budget allocation is done based on the project requirements.

**9) What is the effect of alignment on business?**

Cost reduction, Consistency, Evolving quick decisions, Streamlining the process and improved administration

**10) What expectations do the business planners have from the IS/IT?**

- (i) Fast and accurate systems
- (ii) Reliability
- (iii) Support business requirements

**11) Describe the overall effect of IT systems implementation in the business?**

Speed and accuracy in work, Provides support to the business and helps in improvement and expansion of the business

**12) What new IT developments could help improve the business processes?**

- (i) Integration of ordering and production line
- (ii) Use of CRM

(iii) Cheaper Network technologies for future expansion

## **Company C**

### **1. What is your role in the planning and implementation of the IT systems?**

Business operations manager, responsible for business activities around the stores.

Provide business direction and requirements to the IT team. Plan for training.

### **2. What are the business processes in the organization?**

(i) Supply chain

(ii) Human resource

(iii) Sales and inventory

(iv) Accounting

Others: marketing

### **3. What planning is done for designing business processes?**

Most of the business decisions are made in Australia. The business processes are adopted from the parent body and local decisions are made pertaining to the business requirements.

Past reports are analysed, SWOT analysis, financial status of the business.

### **4. What is the contribution of Business Planning function in the implementation of IT systems?**

Outline requirements, goal and objectives. Help select appropriate solution to improve functioning capabilities.

### **5. Which IT systems automate business processes?**

(i) e-BOS Custom built integrated SCM and sales and ordering IS

(ii) Online HRM

(iii) Outlook mail exchange

(iv)

Others: Webapps (Intranet), Word, excel

**6. What is the effect on business processes by the implementation of new IT systems?**

(i) Streamline Supply chain

(ii) Accuracy in data

(iii) Improve customer service

Others: Effective communication, resistance to change, increased costs

**7. How do you adjust for these effects?**

Focus on documentation and training. Even distribution of costs over the years.

Re-allocate staff sometimes, Use of contractors

**8. What of the Information systems (IS)/IT plan reflected in the Business Plan?**

Not much mainly the Costs involved in maintenance.

**9. What is the effect of alignment on business?**

No great deal of alignment, however, close relationship of business and IT helps in better understanding of the IT and business functions. With the use of technology we can aim to achieve our standards and goals.

**10. What expectations do the business planners have from the IS/IT?**

(i) Provide support to business activities

(ii) bring in current and effective technology

**11. Describe the overall effect of IT systems implementation in the business?**

IT to continue support business activities; just act as a facilitator to improve the working of the staff. It helps improve the business relationship.

**12. What new IT developments could help improve the business processes?**

(i) Use of ERP systems

(ii) Cheaper network technologies deployed for increased connectivity and communication

## **4 Analysis**

The third chapter presented the results of the data collected from the public sources and the questionnaire sent to the IT and business managers of three companies.

Once the data had been collected, there was a question of consistency and inconsistency amongst the people from companies. This chapter analyzes the literature, published company documents and the questionnaire themes and compares the results from individual companies. In the comparison, the chapter deals with five aspects.

Firstly, the chapter will present the analyses of business planning, secondly the business process. Thirdly, the planning and implementation of IS/IT systems, fourthly the effects of the implementation and finally the use of SISP.

The chapter begins by analyzing the business planning and the business processes in the three companies.

### ***4.1 Analysis of business planning and business processes***

A business plan is a definition of the business. It identifies the goals and objectives of the company. It allows allocation of resources and helps in making decisions. A business plan helps in making the strategies that provide direction to the business (see section 1.1.1.7).

According to Scherr (1993), business processes are the means by which an enterprise conducts its business. The purpose of business process is to assure predictability and consistency.

Looking at the company strategies of the three companies, it is clear that all of them have a clear vision and have definite goals and objectives (see section 3.1).

An overview (see section 3.1) of the objectives of the three companies indicates that customer satisfaction is the most important aspect of the business. In order to meet their objectives, the two large companies aim to innovative. Both, the small manufacturing concern and the fast food chain aims to use technology to provide customer satisfaction. To fulfil their business goals and objectives, the three companies have different business processes.

Although, the selected companies belong to two different industry sectors, there are some common business processes identified from the results. The major business processes in the manufacturing concerns are manufacturing, production, procurement, purchasing, accounting and ordering and order fulfilment. Where as in the business organization in the food industry, the business processes range from supply chain, HR, Sales and inventory, accounting and marketing. It is evident that accounting is a major business process in both industry sectors.

The senior management conducts the business planning. The two participating large companies study the business processes in the parent organization. All three companies study the NZ business requirements, review the business direction to ensure efficiency and customer satisfaction. SWOT analysis is also conducted in the fast food company to review its position in the market (see section 3.2.2 Company C). In all three of the companies, the Business Planning function provides support to ensure efficiency and customer satisfaction and functioning capabilities of the business.

Scherr (1993) further stated that, business processes “provide context for the deployment of computer technology”. The IT managers were asked to identify the automated business processes. Looking at the type of business processes being automated from the questionnaire responses by the implementation of IS/IT systems, there is a similarity in the use for certain processes such as financing and sales, whereas, manufacturing and production being specific to the type of business.

All three companies have their order entry and fulfilment system automated. This business process strategy indicates that the companies rely heavily on supplies from their business partners as well as providing their customers with relevant information on their products. For the manufacturing concerns, the manufacturing and the production processes form the core of their business. Standard desktop applications are an integral part of the business activities. There is however, variation in the combination of processes such as integrated sales, inventory and ordering (see section 3.2.2 Company C) in the fast food company depending on the nature of the business.

On the other hand, the business managers were asked to identify the information systems that automated the business processes. There are different kinds of IS/IT systems automating the business processes in the companies. Company A, uses ERP systems for manufacturing, Quanta Ordering system for distribution and order fulfilment (see section 3.2.2 Company A). The company also uses a plant maintenance application; there is also use of standard MS office desktop applications for reporting purposes. The company also uses CRM software. Company B uses a production management information system and a Data management system along with office applications. Company C uses SCM, web based HR management system, mail exchange for written communication, and a custom built sales, inventory and order management system.

After analyzing the business planning and business process, the following section relates to the planning and implementation of IS/IT in the three NZ companies.

#### ***4.2 Analysis of the planning and implementation of IS/IT***

There are some basic components of an IS/IT plan just like the business process plan. The plan consists of identifying the current situation of the business and the IS/IT infrastructure, a description of strategy identifying the future direction, and the implementation of the strategy of how to get to the future.

(Cassidy, 1998)

The IT managers and the Technical analyst provided the questionnaire responses from the three companies. Looking at their role in the planning and implementation of the IS/IT systems in their organizations, the IT managers from the two companies suggested that they had the overall responsibility for the planning and implementation of the systems. The Technical analyst from the third company is a member of the technical team that identifies key requirements working closely with the operations team to provide the solution to the business processes. For both company A and C, majority of strategic decisions are made by the Australian concerns. In contrast, the IT manager from company B has the sole responsibility of providing IT based solutions to their business. The business operations managers and the top management play an important role in the planning and implementation of the IS/IT. They provide the business direction, and provide the IT people with the budget and goals and objectives of the business. They help the IT people to provide the essential support required by the business processes.

With respect to the use of planning and use of strategy for IS/IT implementation, there were some generalizations as well as contrasting views from the IT personal from the three companies. There is no particular strategy or theory being used for the development of IS/IT plans in the companies, except for the fact that company C uses the Porter's 5 force model (see section 3.2.1 Company C) to identify the new entrants, competitors, substitutes, buyers and suppliers. Rackoff, Wiseman and Ullrich (1985) said, "Porter's model is helpful in thinking about the firm's competitive environment and the generic strategies it may follow". Thus, it is evident that the company understands the nature of the environment and is working towards achieving their business goals. In addition to that, the similarity found in relation to the planning process, all companies are working in close relationship with the business consultants to identify the business direction. Leaving the Small Enterprise, which is an independent organization, the two large companies decide their strategies and conduct their planning in relation to what is done in the Australian head office operations. They are under direct control of the Australian operations, with planning of strategies modified by the local market. For example, different personal and cultural designs and menus reflect local preferences.



Irrespective of the size and the type of business of the companies, there is a great deal of similarity in implementing the IS/IT systems. Large companies taking a bit more detailed path as compared to the small company by conducting capability and requirements study, also analyzing past results, where all companies performing the requirement analyses and developing a business case and then getting the approval of the plans. For the infrastructure they are mainly following the acquisition and trial out and rollout procedure for implementation and for applications standard development life cycle (SDLC), rollout and only in one case post implementation review. Even though there is no standard hierarchy of implementation being followed, the companies do plan after conducting the requirement and technical analyses (see section 3.2.1).

With regards to the kind of systems being used, there are different types of systems being used to support the business processes in the selected companies. There is use of ERP systems, database systems based on SQL, order fulfilment systems, SCM system, remote access systems, and offices automation packages. The companies are also using custom-built information systems to support the business activities e.g., e-BOS as an integrated package for back-office support (see 3.2.2 Company C).

According to Kumar (2001), SCM has become a total approach for managing the entire supply chain. Turban, Mclean and Wetherbe (2004) suggest that the benefit of having a SCM is to positively affect the inventory controls, business processes and customer service. Thus, the use of SCM in the companies seems to be justified, as the main objective is customer satisfaction and building a relationship.

In relation to the implementation of ERP systems, Stratman and Roth (2002) view that ERP's are used to integrate all departments and functions across the organization, thus serving the entire enterprise needs. Davenport (1998) suggested that ERP is the "most important development in technology in 90's". As ERP's require a huge investment and the success rate of the ERP systems has been very low, Turban Mclean and Wetherbe (2004) suggest that those organizations that want to use ERP, should develop an

integrated system combining the existing functions or programming a new system (custom- built).

There is an interesting pattern in relation to the implementation of the systems. The large companies have an external vendor for the design and coding of the systems and internal implementation. In case of Small enterprise there is no information about the development of the production system, it is more likely to be outsourced, but with the restriction of funds, the development could be in-house as is the case with the implementation. The small company is looking for suitable IS/IT people as well as others to provide their skills for the company. All systems implemented in the companies have been designed for future upgrading.

During and after the implementation of IS/IT, the companies experience some effects due to the changes in the business. The next section analyses the effects of the implementation of IS/IT.

#### ***4.3 Analysis of the effects of implementation***

With the implementation of IS/IT systems to support the business processes, there are certain effects experienced by the people working in those processes. There is a mixture of views obtained from the results from the companies. The use of IS/IT systems in the small organization could prove to be highly beneficial as it will help in increasing efficiency and accuracy in the working and as Yetten (1994) in Levy, Powell and Yetten (2001) advocate, IS and information technology (IT) in a SME could play a critical role in innovation.

The two large companies indicating a business process change, which would be obvious as introduction of a computer-based system, would bring changes in the functioning of the business. Company A identifying resistance, redeployment, and skill shortage during the implementation process (see section 3.2.1 Company A). However, the other two companies suggesting positive results indicating having unified systems, increased

accuracy, efficiency, and transparency in the business processes. They also suggest improvement in the customer relationships.

However, irrespective of the difference in the effects, there is a similarity in the means of adjusting to the effects. The large companies use effective communication, training and documentation. Where as, the small enterprise opting for the employment of more staff, so that the existing staff could concentrate on the other aspects of the business. The large manufacturing concern also adopting the method of redeployment and replacement of staff during the implementation of the IS/IT systems.

Comparing the effects of the implementation of IS/IT systems on the business processes, there are contrasting views from the business perspective. The effects experienced range from improved visibility and monitoring to no or reduced efficiency. The effect of the implementation in the fast food chain has been on the supply chain; the company respondent reported a streamlined SCM and improved communication process. The company has also been able to integrate its sales, ordering and inventory management processes.

The business managers view that the effects of the implementation can be minimized by employing more staff and providing appropriate training and use of contractors, so that the internal staff base in the existing business processes is not affected.

IT is still viewed as an enabler and not a transformer in the companies and the IS/IT investments are a part of the overall costs in the infrastructure and there is no monetary value assigned to the benefits from the IS/IT investments. Even though, the IT is being viewed as an enabler, the business planners expect that the investments in the IS/IT should provide them with stability and reliability in the business activities.

Overall, the companies expect that the IS/IT systems provide efficiency to the business. The business managers believe, with their input and collaboration, the IS/IT infrastructure would act as a backbone to the business functioning.

#### ***4.4 Analysis of use of SISP***

According to Lederer and Sethi (1988), “SISP is the process of deciding the objectives of organizational computing and identifying potential computer applications which the organizations should implement”. Effective SISP can help achieve business objectives and goals, however, failure in carrying out the planning may result in loss of opportunities and resources. As discussed in the literature review, organizations can follow any of the methodologies. The three companies do not follow any particular strategy for the planning of the IS/IT. None of the three NZ companies suggests the use of SISP, however for the two large companies, where the strategic direction is provided by the Australian operations, SISP may be used.

McBride (2004) suggested that, the correct approach to SISP is to develop a plan that can respond to rapid business changes. In relation to this, the companies develop their IS/IT plan relating to the company strategies and business direction and the future requirements.

Another major use of SISP is the alignment of business planning and information systems planning.

A main questionnaire theme is concerned with the main research question of this study, the IT persons were asked to reflect the business plans in the IS/IT plans. As discussed above the companies are not using any formal strategy to develop the plans, there is nothing major specified in the results. All IS/IT project plans for the companies are focused on the business plans and specify the business requirements. The technology selection is based on the market trends. Earl (1989) in Sabherwal and Chan (2001) suggested that, the IS strategy is concerned with providing applications to cater the business needs and the IT strategy is concerned with the architecture and standards in the company.

On the other side, the business managers reported that not much of the business plans are reported in the IS/IT plan, the plan mainly constitutes the budget allocated for the projects.

On the matter of alignment, there is no conclusive answer such as one company suggesting general productivity. The other IT managers indicate that the alignment of IT and business result in well-aligned systems and improved business operations. This helps in achieving business goals and providing quality, service and value to its staff and customers.

The business managers suggest IT is still viewed as an enabler and not a transformer in the companies and the IS/IT investments are a part of the overall costs in the infrastructure and there is no monetary value assigned to the benefits from the IS/IT investments. Even though, the IT is being viewed as an enabler, the business planners expect that the investments in the IS/IT should provide them with stability and reliability in the business activities.

Goldsmith (1991), emphasized that ISP should be integrated with business planning. Planning at the same time would result in co-ordination and better understanding of the issues, problems and thus can lead to improved and effective management. Goldsmith (1991) further suggested that to have competitive advantage, the IS/IT strategies should be developed in the same process and at same time as business strategies. Thus, resulting in the alignment and leading to improved business performance.

The above comparison of the literature, published documents and the questionnaire results of the three NZ companies' shows that the companies use IS/IT to support the business processes and the overall strategies. However, there is no formal planning and integration of the IS/IT and business plans. The IS/IT continue to support the business and the business continue to regard IT as a support operation rather including it as another business process. There is an approach to achieve SISP and the results provide

and insight of the direction, however, there is still a long path to travel to achieve complete SISP and strategic alignment.

From the analysis of the results, the following chapter presents a discussion on the summary of findings.

## **5 Discussion**

The analysis chapter of the research compared the findings from the data collected from the companies. This chapter introduces the discussion about the summary of findings produced from the results of the questionnaires, published descriptions and the literature and the analysis of the results.

An important point to note in this study is that the views are totally based on the selected three companies. The companies do not represent the industry overall, thus it would be improper to compare the results between the companies and their industry sector.

Even though, the three companies belong to different industry sectors, certain similarities among them can be observed.

### ***5.1 Summary of findings***

#### **5.1.1 Role in planning and implementation of IS/IT systems**

It was seen in all the three companies, the executive management was responsible for planning and the implementation of the information systems. The IT managers had the overall responsibility for the planning and implementation of the IS/IT and the senior business operation managers who formed the executive committee provided them with the business directions and the opportunities.

“The role of the Executive Committee in the planning process is to provide Information systems with the strategic direction and priorities” (Cassidy, 1998, p14).

Even though, the planning and implementation was carried out at the senior and middle management level, the executive management from the Australian operations of the two large companies provided the strategic direction. In case of the selected small enterprise, the top management was working directly with the IT manager for the development and growth of the company.

### **5.1.2 Business processes**

There are certain processes that are common to all businesses, with some being industry specific. For the manufacturing concerns, production and order entry and fulfilment are the main processes. Whereas, sales and inventory management being a focus of the food service company. Financial and Office automation processes being common to all three companies.

### **5.1.3 IS/IT systems**

It is important to focus on one target rather than aiming at all at once. There is a need to prioritize the solutions. When providing a solution the three companies need to identify the key business processes that affect the functioning of the business function. In the study, the companies have ERP, SCM, financial processing systems in place to support the business activities. The companies are using vendor based ERP and CRM solutions. For all three companies, customer satisfaction is a key to the business strategy, thus the use of CRM software is among the high potential applications to support the business objectives.

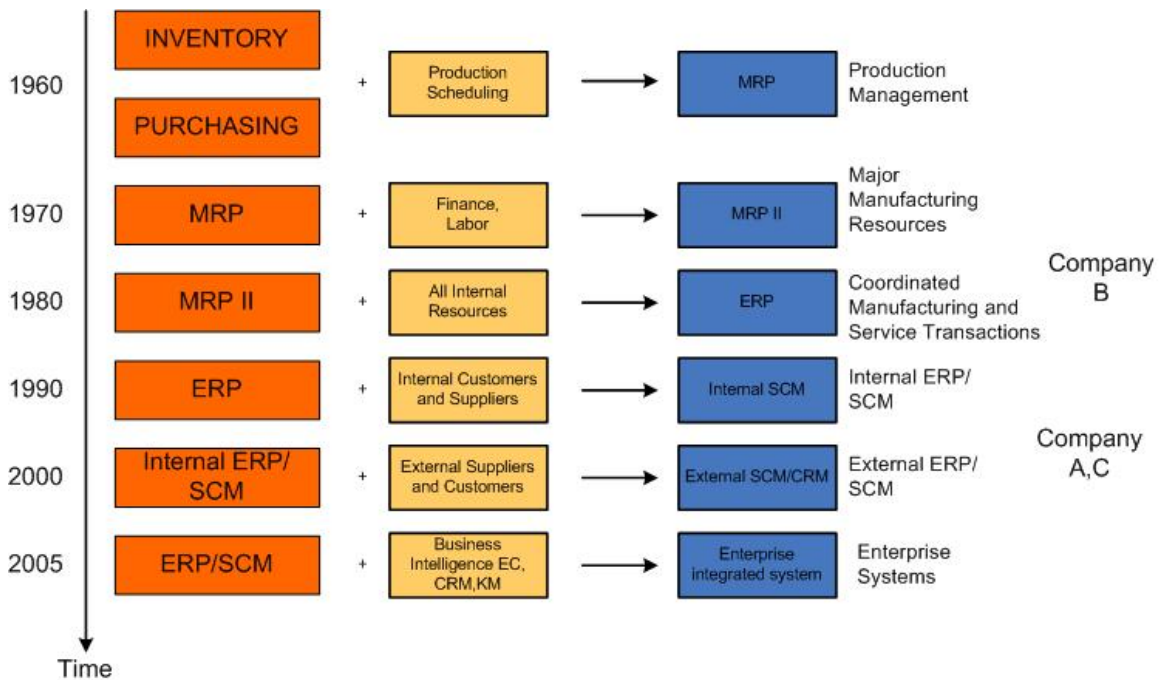


Figure 9: Evolution of Integrated systems and Position of companies on the use of systems

Source: Extended from Turban, Mclean and Wetherbe (2004, p367)

### 5.1.4 Effects of implementation of IS/IT systems

When automating a business process, a change in the functioning is bound to happen. The change could be positive, negative, or mixed. The planning for implementation and implementing the IS/IT system for the business process may be beneficial or may not be. According to Turban, McLean and Wetherbe (2004), there are certain drivers for the process of change. The drivers range from streamlining the supply chain, improving customer service, reducing costs and most important cost savings.

The three companies also experience the effects of IS/IT implementation. Most of the effects are positive and help companies achieve their business goals. The companies have improved their efficiency and effectiveness by the means of implementation. However, some of the effects are not so beneficial. The questionnaire responses from the IT and business managers from the two manufacturing concerns suggest (see section 3.2.1, 3.2.2 Company A and B), they redeploy or hire more staff during the implementation which takes resources out of the business processes. The two large companies also experience



resistance to change. With effective communication and training, they overcome this effect.

### **5.1.6 Alignment of IS/IT plan and Business plan**

Teo and King (1997) suggested that Information systems planning is becoming important as the “organizations attempt to leverage IS applications to improve efficiency, reengineer business processes, gain competitive advantage, and compete more effectively”.

It was interesting to know that there was no particular strategy being used for the development of plans. Even though all three companies had different plans but the process they followed were similar. The business managers were consulted for IS/IT planning. It is an interesting fact that there was an alignment between the IT and business managers, in relation to the development and implementation of IS/IT systems in all three companies.

There exist two types of strategic alignment- IS plan and business plan (ISP-BP) and BP-ISP (Kearns & Lederer, 2000). For the three companies it was seen that there is an existence of ISP-BP alignment as the IS/IT resources support the business objectives. According to Premkumar and King (1991), the alignment of IS plan and business plan results in information resources supporting the business objectives and taking advantage of the opportunities arising from the use of IS. Kearns and Lederer (2000) also state that, “the alignment of the IS plan with the business plan, is the direct reference in the IS plan to the business plan’s mission, objectives and strategies”.

### **5.1.7 IS/IT growth model**

Nolan (1979) gave this model. He suggested that the organizations go through the six stages of the IS/IT growth. Each stage has four active processes- application portfolio, user’s role and awareness, IT resources and management planning. The growth rate is compared with the expenditure.

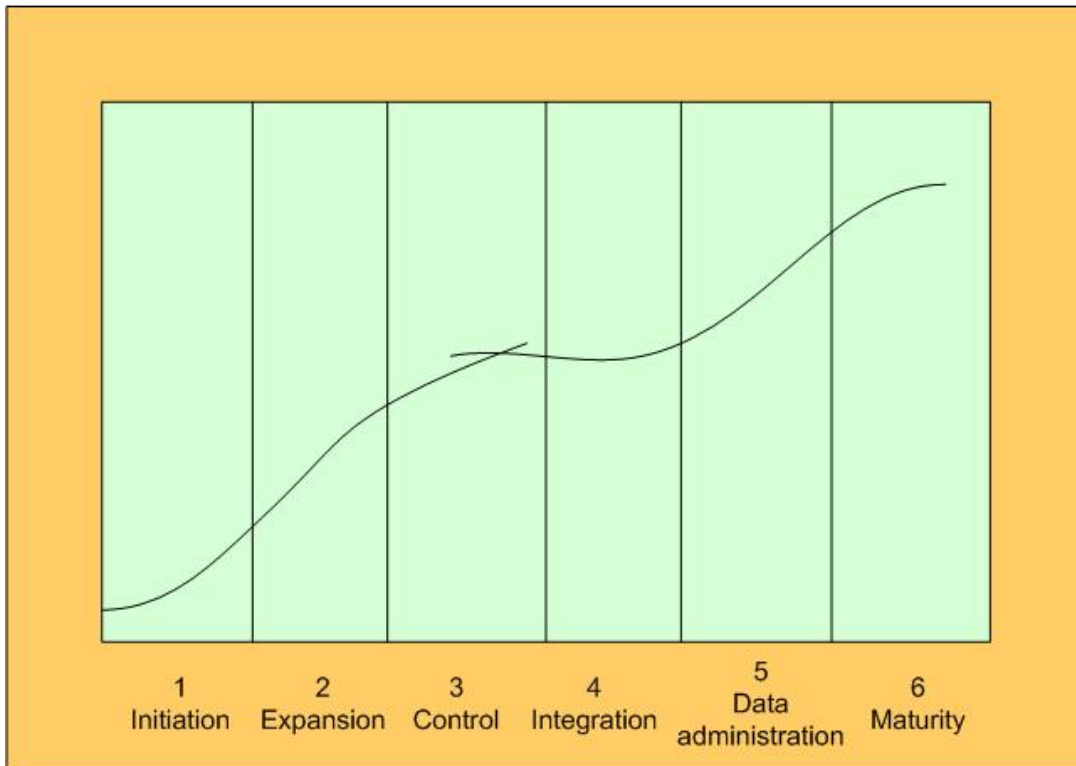


Figure 10: Nolan's six stages IT growth model

Source: (Turban, Mclean & Wetherbe, 2004, p 405)

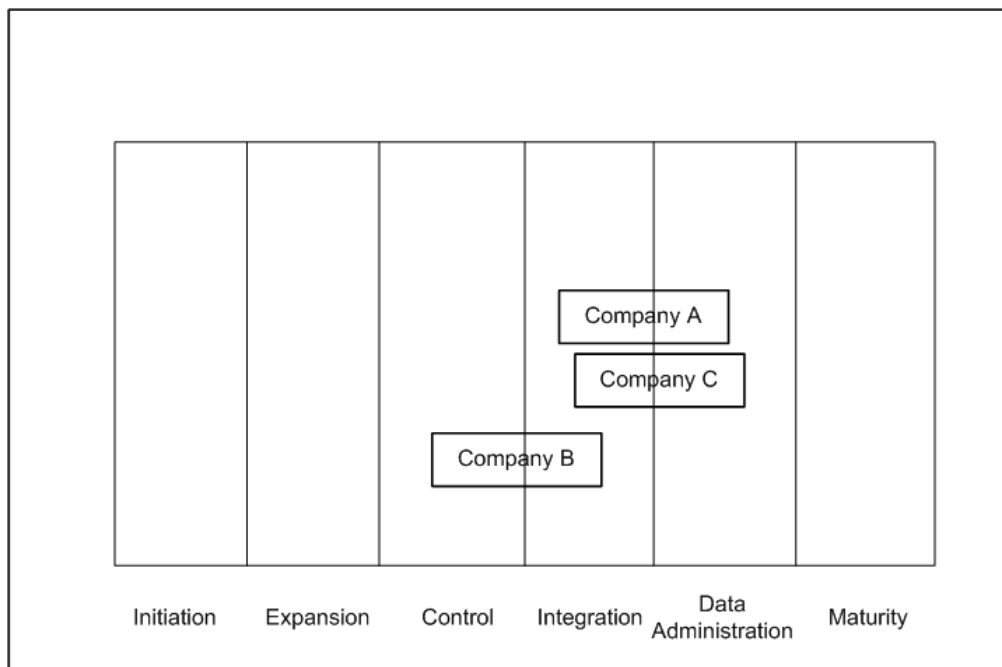


Figure 11: Position of companies in relation to the use of IS/IT

(Adapted from Nolan's six stages IT growth model)

The above figure 5.2 also indicates NZ companies' progress towards using SISP and the alignment of IS/IT plan and business plan.

## **5.2 Further research**

Even though there has a lot of research in the field of information systems, there is still scope to investigate other sub-areas under the field. The literature suggests that there is a need to align the IS/IT and business planning processes and vice-versa. This study focused on the extent of alignment of the plans to support the business process in three companies. Further studies have great potential to investigate the impacts and the extent of alignment across the industry sectors. A comparison of the use of SISP and the alignment of IT and business in different industries could also be done.

The research focused on the views of the Internal planners, what are their views on the alignment of IS/IT plan and the business plan. The research could be extended to include the IS/IT and business consultants and look at how they perceive the whole process.

Another area of research could be on the use of the integrated information systems and their purpose in the companies.

## 6 Conclusion

The analysis of the questionnaires sent to the IT and business managers of the three NZ companies and the review of available company documents have shown interesting aspects to the process of IS/IT and business planning.

From the questionnaire responses, it was interesting to note that irrespective of the size and the type of business, there were similar pattern of planning between the companies.

The review of the strategies, of the three companies highlighted the point of customer satisfaction as a major business objective. All The companies also have an objective to grow. However, the manufacturing organizations, want to be innovative and use state-of the art technology to provide customer satisfaction. According to Tyre and Orlikowski (1993), innovation is a strategic decision and it is important to be competitive, “it reopens or exploits the window of opportunity”.

None of the companies are using any particular theory for the development of IS/IT plans, and a study of the business requirements is done before planning. The IT managers consult with the business executives to identify the business process needs and direction for the planning and implementation of IS/IT plans.

The results of the IT related questionnaire viewed that IT is still an enabler to the business, rather than a transformer. IS/IT systems still act as support systems instead of being the business processes. On the other hand, the business managers, understand the importance of IS/IT systems, however, the review of company documents does not indicate direct influence of the use of IS/IT systems. The company documents such as the annual reports do not indicate the actual amount of expenses and the benefits realised from the investment in information technology.

The overall benefits that the companies could get are the improved business processes, increased efficiency, accuracy and transparency of the business processes and increased customer satisfaction. However, to realise the benefits, the business processes need to

undergo certain changes and there have to be ways to adjust to the effects of the implementation process.

It can be rightly said that, the IS/IT systems are being used to automate the business processes and companies are using the systems to improve the efficiency and effectiveness of the business activities.

Below are the research questions with the answers, to conclude the study.

Main research question:

*What evidence is there that the IS/IT plan and business plan are aligned in three NZ companies?*

The analysis of the results from the three companies shows that, the management is working together to identify the business requirements and provide a solution to improve the business processes. There is lack of alignment between the plans. The companies have to formalize the planning process. The planning process needs to be aligned and then utilize the integrated plans to support business processes and improve the business performance.

There is no conclusive result that shows the evidence of the alignment between the IS/IT plan and business plan, however there is an approach towards alignment and the companies are progressing towards achieving the goal of aligning the plans.

Research Sub-questions:

*How do the IT people report about current IS/IT planning within each business?*

The companies do not have a formal planning process. The two large companies, plan for the systems, based on the strategic direction provided by the Australian operations and then link the local strategies for consistency.

*How do business planners report about the current business planning within each business?*

In the study, the companies review the business direction, requirements and after analyzing the market, situation and trends lay out the appropriate plan for the business processes. The company also look at the capability of the systems that would be implemented in the business processes.

*How do IT people report about IS/IT systems?*

In this research, the main systems implemented are ERP, SCM, CRM and financial systems.

All the companies have emphasized on the use of CRM and develop a long-term relationship with their customers. In addition, the need to improve the communication and value chain is a key agenda.

*How do business planners report about current business processes?*

Many of the business processes are specific to the industry and are being used by all three companies, however, the automation and utilization depends on individual companies.

The key processes depend on the type of industry of the companies. All the companies report that the key business processes are automated and the companies have plans to use IS/IT to develop other business processes in future.

*What is the effect of the implementation of IS/IT systems on the business?*

The findings of the research suggest that the most of the effects of implementing IS/IT systems have been positive and helped business achieve business goals. The companies have experienced improvement in the effectiveness and efficiency of the staff and business processes.

Contrary to the positive effects, the manufacturing companies also report about hiring more staff to cater for resource mobilization. The companies spend more efforts and time in training to overcome the effect of resistance.

In the end, for the companies to realise full potential of the IS/IT systems, they need to understand the importance of planning. Furthermore, IT and business need to understand each other and then it is up to the executive management to align and implement the IS/IT and business planning to improve the business performance and gain competitive advantage.

# Appendices

## Appendix 1: Template of IT related questions

<b>1. What is your role in the planning and implementation of the IT systems?</b>
<b>2. What planning is done for implementing IT systems?</b>
<b>3. What strategy model or theory is used for developing a IS plan?</b>
<b>4. What is the procedure for implementing IT systems?</b>
<b>5. Which business processes are automated using IT systems?</b> (i) (ii) (iii) (iv) Others:
<b>6. What kinds of IT systems are being used currently?</b> (i) (ii) (iii) Others:
<b>7. How long have they been used?</b>
<b>8. Were the systems implementation in-house or outsourced?</b>
<b>9. Are the implemented systems upgradeable?</b>



<p><b>10. What of the business plan are reflected in the IS/IT plan?</b></p>
<p><b>11. What are the effects by implementing a new IT system?</b></p> <p>(i) (ii) (iii) (iv) Others:</p>
<p><b>12. How do you adjust for these effects?</b></p>
<p><b>13. How does the alignment affect the business?</b></p>
<p><b>14. Do the IT staff realise the expectations of the business?</b></p>
<p><b>15. Describe the overall effect of IT systems implementation in the business?</b></p>
<p><b>16. What other business processes could be improved by IT proposals?</b></p> <p>(i) (ii) (iii) Others:</p>

Appendix 2: Template of Business related questions

<b>1. What is your role in the planning and implementation of the IT systems?</b>
<b>2. What are the business processes in the organization?</b> <b>(i)</b> <b>(ii)</b> <b>(iii)</b> <b>(iv)</b> <b>Others:</b>
<b>3. What planning is done for designing business processes?</b>
<b>4. What is the contribution of Business Planning (BP) function in the implementation of IT systems?</b>
<b>5. Which IT systems automate business processes?</b> <b>(i)</b> <b>(ii)</b> <b>(iii)</b> <b>(iv)</b> <b>Others:</b>
<b>6. What is the effect on business process by the implementation of new IT systems?</b> <b>(i)</b> <b>(ii)</b> <b>(iii)</b> <b>Others:</b>
<b>7. How do you adjust for these effects?</b>

<p><b>8. What of the Information systems (IS)/IT plan reflected in the Business Plan?</b></p>
<p><b>9. What is the effect of alignment on business?</b></p>
<p><b>10. What expectations do the business planners have from the IS/IT?</b> <b>(i)</b> <b>(ii)</b> <b>(iii)</b> <b>Others:</b></p>
<p><b>11. Describe the overall effect of IT systems implementation in the business?</b></p>
<p><b>12. What new IT developments could help improve the business processes?</b> <b>(i)</b> <b>(ii)</b> <b>(iii)</b> <b>Others:</b></p>

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